

E-BOOK

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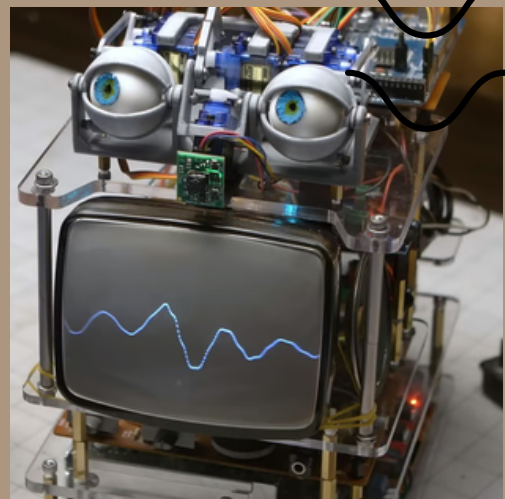
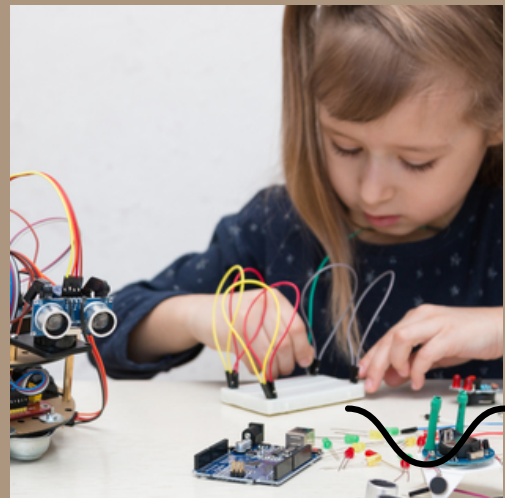
E-BOOK

JILID 1

INVENTORI PROJEK AKHIR PELAJAR

JKE, PSA

WAN MOHD ZAMRI BIN WAN AB RAHMAN
YAAKUB BIN OMAR
NORANIZAH BINTI SARBANI



**INVENTORI
PROJEK AKHIR PELAJAR JKE
PSA**

JILID 1

**WAN MOHD ZAMRI BIN WAN AB RAHMAN
YAAKUB BIN OMAR
NORANIZAH BINTI SARBANI**

JILID 1

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WAN MOHD ZAMRI BIN WAN AB RAHMAN

YAAKUB BIN OMAR

NORANIZAH BINTI SARBANI

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Terbitan Edisi 2023

Hak cipta terpelihara Tiada bahagian daripada terbitan ini boleh diterbitkan semula,disimpan untuk pengeluaran atau ditukarkan ke dalam sebarang bentuk atau dengan sebarang alat,sama ada dengan cara elektronik,gambar dan rakaman serta sebagainya tanpa kebenaran bertulis daripada Jabatan Kejuruteraan Elektrik, PSA terlebih dahulu.

Diterbitkan oleh:

Jabatan Kejuruteraan Elektrik

Politeknik Sultan Salahuddin Abdul Aziz Shah

40150 Shah Alam, Selangor

KATA ALUAN KETUA JABATAN KEJURUTERAAN ELEKTRIK

Assalamualaikum dan Salam Sejahtera.

Pertama sekali marilah kita memanjatkan kesyukuran kepada Allah s.w.t. kerana dengan izinNya Jabatan Kejuruteraan Elektrik PSA telah berjaya menerbitkan satu penulisan ilmiah dalam bentuk e-book yang dikenali sebagai buku INVENTORI PROJEK AKHIR PELAJAR JKE PSA. Buku ini mengumpulkan projek akhir pelajar yang telah dihasilkan oleh pelajar program Diploma Kejuruteraan Elektronik Kawalan (DJK), Diploma Kejuruteraan Elektronik Komunikasi (DEP) dan Diploma Kejuruteraan Elektronik Perubatan (DEU), PSA pada tahun 2023.



Buku ini diterbitkan bertujuan untuk memberi ruang dan peluang kepada pelajar JKE berkongsi penyelidikan ilmiah masing-masing dengan pihak lain dalam usaha mengembangkan lagi ilmu pengetahuan. Ilmu memainkan peranan penting dalam pengembangan teknologi masa kini seterusnya dapat meningkatkan kemajuan negara. Proses pencarian dan pemindahan ilmu baru terutamanya di dalam bidang TVET perlu terus berlaku di kalangan seluruh warga politeknik.

Saya amat berharap agar setiap tahun semua pelajar JKE, PSA akan tampil merebut peluang bagi menyumbangkan hasil penyelidikan ilmiah masing-masing. Tidak lupa juga ucapan syabas dan tahniah yang tidak terhingga kepada jawatankuasa kerana telah memberikan komitmen tinggi dalam menjayakan penerbitan e-book ini.

PRAKATA

E-book hasil projek akhir pelajar ini turut berfungsi sebagai platform untuk pelajar mengembangkan potensi, mempamerkan keupayaan dan mempraktikkan ilmu yang telah dipelajari melalui percambahan fikiran dan penyelesaian masalah secara inovatif bagi menghasilkan projek yang bermutu. Diharapkan ianya dapat dimanfaatkan sebaiknya dalam memperkasakan pelaksanaan projek pelajar di Politeknik Malaysia di samping menjadi pendorong untuk melahirkan graduan TVET yang berkualiti dan holistik, selaras dengan hasrat Pelan Pembangunan Pendidikan Malaysia 2015-2025 (Pendidikan Tinggi) dan mesra industri. Kursus Projek 1 (DEE40082) memberi pengetahuan berkenaan kaedah pelaksanaan dan pembangunan projek berdasarkan perkakasan atau perisian atau gabungan perkakasan dan perisian. Kursus ini memberi pendedahan kepada pengurusan projek dan kewangan, teknik untuk membangunkan projek dan penyediaan cadangan. Manakala Projek 2 (DEE50102) adalah kesinambungan kursus projek 1. Kursus ini memberi tumpuan kepada kaedah pembinaan litar, ujian, penyelesaian masalah, penyahpepijatan, pembaikan dan juga penyiapan projek yang telah dirancang pada semester sebelumnya. Kursus ini juga memerlukan pelajar untuk menguruskan projek berasaskan kejuruteraan ekonomi, menyediakan laporan projek dalam format tertentu dan menyampaikan pembentangan projek pada akhir semester.



Tentang Penulis

Inventori Projek Akhir Pelajar JKE



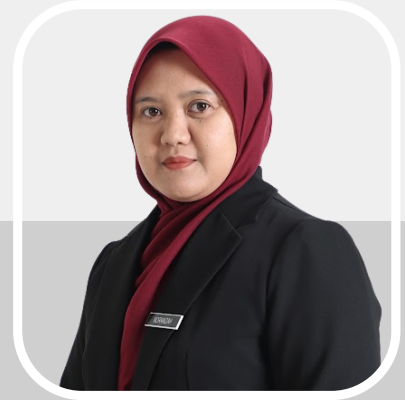
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART PROTECTIVE LUGGAGE WITH GPS
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD SAFWAN HARIZ BIN SHAHRAN
Penyelia:	WAN MOHD ZAMRI BIN WAN AB RAHMAN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1) Security is the most important issue in the community, the objective of this project is to design and implement lockers with a high security system supported by fingerprints. 2) To make smart and affordable locks.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1) Finger-pin 2) Improve feature extraction and machine algorithms 3) Securing fingerprint based biometric system
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This study describes the creation and innovation of adaptable travel bags. This shows the kick scooter built inside the travel bag, the biometric lock, the GPS tracker, and the integrated backup power source. The goal of the study is to make sure that travellers are at ease while driving or in any other situation where luggage bags are employed. The device not only makes passengers comfortable, but also protects bags using biometrics. The travel bag has a built-in power bank that can be used to charge gadgets, thus it was opened and entered using a fingerprint reader, and it was monitored using a GPS device. The travel bag also includes a kick scooter. to the travel bag so that carrying the luggage is convenient and easy. The system was introduced and put to the test locally. bus stops The study's results supported its adaptability, operability, beauty, and safety with evidence. group, highlighting the need for creativity and more luggage.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	BACKWASH TURBIDITY SENSOR USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	PREMKUMAR A/L SIVAKUMAR
Penyelia:	WAN MOHD ZAMRI BIN WAN AB RAHMAN
Objektif Kajian/Projek:	One of the main objectives of this project is to build a working system that can detect the quality state of water and to ensure the water consumed is good in quality . Moreover, by the end of this process, this project also helps us to prevent health issues due to unhealthy water consumption.
Skop Kajian/Projek:	In today's world of modern technology, many products are invented to make them easier and faster for people. The Backwash Turbidity Sensor project aims to ensure that the project is carried out in a way that achieves the requirement. The purpose of the project is to be able to detect the quality state of water. Apart from that, this project also can helps us to prevent consumption of contaminated water so that it can helps us to get rid of cholera, diarrhea, dysentery, hepatitis A, typhoid and polio.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Terlibat dalam menghantar proposal dan merekebentuk model.
Abstrak Kajian/Projek:	Wireless communication developments are creating new sensor capabilities. The current developments in the field of sensor networks are critical for environmental applications. Internet of Things (IoT) allows connections among various devices with the ability to exchange and gather data. IoT also extends its capability to environmental issues in addition to automation industry by using industry 4.0. Water supplied to residential areas is prone to contaminants due to pipe residues and silt, and therefore resulted in cloudiness, unfavorable taste, and odor in water. As water is one of the basic needs of human survival, it is required to incorporate some mechanism to monitor water quality time to time. Around 40% of deaths are caused due to contaminated water in the world. Hence, there is a necessity to ensure supply of purified drinking water for the people. Turbidity, a measure of water cloudiness, is one of the important factors for assessing water quality. This paper proposes a low-cost turbidity system based on a light detection unit to measure the cloudiness in water and also the pH level. In this paper, we propose a low cost system for real time water quality monitoring and controlling using IoT. This system consists of turbidity sensor. The turbidity detection unit consists of a Light Dependent Resistor (LDR) and a Light Emitting Diode (LED). Once the turbidity level reached a threshold level, the system will trigger and send notification to the display panel and also android phone using WiFi. Not only that, it also has the access for DC water pump to drain in chlorine to stable the pH level of water.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	WIRELESS AUTONOMUS CARRYING ROBOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NURUL ASDAQ BIN ABDUL HALIM
Penyelia:	WAN MOHD ZAMRI BIN WAN AB RAHMAN
Objektif Kajian/Projek:	<p>The purpose of this project was to create an autonomous carrying robot that can move goods for those who have a smartphone connected to it via the BLYNK app. Because it uses the Nodemcu esp8266 microcontroller board, which includes a wifi and GPS module, and multiple consumers can connect with this robot at the same time using the BLYNK app, this robot can avoid colliding with obstacles while following the user while carrying heavy items, and it can also monitor the battery capacity and easily connect with smartphone. These projects have included a weight sensor with a maximum load of 5KG, making it simple for the consumer to specify how much weight load has been carried by viewing the entire weight on the robot in the BLYNK app on their phone. Not to mention, if the maximum weight load exceeds 5KG, a buzzer will sound to warn that the item has beyond the maximum level. This robot could minimise the number of plastic bags used by customers who go to the store without purchasing another plastic bag, as well as indirectly reduce plastic bag pollution in our environment, potentially saving more endangered flora and wildlife.</p>
Skop Kajian/Projek:	<p>These robot carry objects and travels autonomously by utilising GPS on a smartphone that is Connected to the robot. This robot also has an ultrasonic sensor to assist it in moving forward and backward. Users may monitor the battery life of this wireless carrying robot by connecting it to a smartphone, and this robot can transport large items from the shop, making it simpler for consumers not to forget the cart or swap it with someone else. This robot can do a variety of indoor and outdoor tasks, including transporting goods across difficult surfaces. Reduce the likelihood of spinal illness or a slide disc for some customers. Then , this robot have maximum load around 5KG things without any trouble. Although have the maximum load weight these robot was using the weight sensor to indicate weight by showing the output in the BLYNK app , which made the consumer easy to indicate the weight of thing and if the sensor was detect more than 5KG load has been insert the buzzer will automatically on which showing the load was to been pass the limit, then sometime the user was dind't have to open the app to observe the weight of the stuff because of the buzzer will sounded.</p>
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek

Abstrak
Kajian/Projek:

This project focuses on a simple and uncomplicated approach for autonomous carrying robots utilising a NODE MCU ESP32 as a microcontroller board and an ultrasonic sensor to minimise collisions between static and moving items. Typically, people must visit the supermarket and wholesale supermarket to obtain necessities and culinary ingredients. People are forced to carry a huge number of plastic bags and heavy products in this manner, making housewives and older citizens feel burdened with items carried to the parking lot. This robot will reduce spinal cord injuries in the elderly by alleviating the stress of hauling large and massive objects. These projects have included a weight sensor with a maximum load of 5KG, making it simple for the consumer to specify how much weight load has been carried by viewing the entire weight on the robot in the BLYNK app on their phone. Not to mention, if the maximum weight load exceeds 5KG, a buzzer will sound to warn that the item has beyond the maximum level. Then, in order for the user to activate this robot, they must connect to a wifi phone, and the robot will automatically follow the user's phone without the need for human control by using the BYLNK app. The app can offer information on the battery life of the robot's owner and the weight of the things on the robot.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	WATER TANK LEVEL DETECTOR WITH IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD HAFIY BIN ABDUL HADI
Penyelia:	JULIA BINTI MARJUKI
Objektif Kajian/Projek:	Through the use of phone apps, a water tank detector will gauge the water level and alert homeowners. In the absence of water, this tool can reduce water consumption. Additionally, when the water level exceeds, this device will send a warning signal to homeowner.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Used in the home and shop. 2. Being a water tank is safer and can help you save water. 3. A simple IOT system for users.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk projek
Abstrak Kajian/Projek:	This project is dedicated to detecting the water level in the water tank using IOT, which can detect the level of water level based on predefined levels. A water tank in the home is required to store water supply in order to avoid water shortages. At home, this project can assist us in preventing the water tank from leaking or water from exceeding the level and damaging the house's roof. For example, we can detect the water level in a water tank by connecting an IOT system to the tank; the level of water can be seen depending on the application used.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART FLOOD DETECTOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MOHAMAD NUR HAKIMIN BIN MOHD YUSOF
Penyelia:	JULIA BINTI MARJUKI
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. They create flood detectors with safety features based on the latest technology and developments. 2. Provide flood warning signals to vehicle owners through sirens. 3. Send a notification to the mobile phone of the vehicle owner
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Basement parking lot 2. Car owner
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk projek
Abstrak Kajian/Projek:	<p>Smart flood detector is a tool to detect the rise of water level in a parking lot, especially in the basement located in a mall.this tool aims to detect a flood disaster that is likely to occur suddenly in a place.this tool will provide an initial condition through the sound of a siren when the water level reaches a dangerous level.this tool also will give a signal to the car owner. Who park a vehicle in the basement of a mall via mobile phone when the sensor detects the water level has reached a flood warning such as the level of a quarter tire. The car owner will receive a notification via their phone due to the iot technology built into this smart flood detector.so, the car owner had time to divert their vehicle to a safe place before the flood disaster happened.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	PULSE ALERT USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	HARITS FIRDOUSE BIN ZAKARIA
Penyelia:	JULIA BINTI MARJUKI
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Provide facilities to nurses in the hospital 2. Reduce the risk of the nurse contracting a disease 3. Nurses are more alert to patients
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Critical patients in the hospital 2. Infected nurse
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk projek
Abstrak Kajian/Projek:	In the hospital, the nurse has to go to the patient three times a day to check the oxygen level in the Patient's body and the patient's heart rate. With this tool, it will make it easier for nurses. For example, nurses do not check patients too often. The nurse needs to connect the device to the phone and use the app to know the pulse reading rate. The data will be saved into the app.

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Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SAFETY MOSQUE FUND
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AQIM AHMADAN BIN MUNIR
Penyelia:	JULIA BINTI MARJUKI
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To track stolen mosque funds using GPS 2. To be able to reduce cases of theft of mosque funds 3. To make the theft process difficult with the presence of a buzzer. 4. To fabricate a new concept of user friendly
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Use a buzzer to get a sound signal when mosque funds are stolen 2. Esp 8266 used to track mosque fund carried out with wifi gps 3. Wifi gps is used to make it easy to handle
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project focuses on methods to reduce cases of theft of mosque funds and also improves in terms of technology used in the past. Currently, The security features on the mosque furniture are very few, for example There are locks or latches and some are just tied to the pillar. Mosque. Therefore, with the security features of the mosque fund that was very Unsafe before. Therefore, we have planned to improve the safety features Of the mosque tube including adding a buzzer and also a gps tracker, the Gps tracker function works when the tube is taken out of the main unit To be installed. To the wall. There is this 'safety mosque fund' project to detect thieves if such funds are taken by thieves. Next, the function of the buzzer is to warn the thieves at the same time it can also aware the people about the mosque fund in a dangerous situation. Then, every time the fund moves from a place that has been determined we will get a notification will be sent to the smart phone. That, we have made a buzzer with on/off button.</p>

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Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	WATER TANK LEVEL DETECTOR WITH IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AHMAD NAJMI BIN EIDHAE'
Penyelia:	JULIA BINTI MARJUKI
Objektif Kajian/Projek:	Through the use of phone apps, a water tank detector will gauge the water level and alert homeowners. In the absence of water, this tool can reduce water consumption. Additionally, when the water level exceeds, this device will send a warning signal to homeowner.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Used in the home and shop. 2. Being a water tank is safer and can help you save water. 3. A simple IOT system for users.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk projek
Abstrak Kajian/Projek:	This project is dedicated to detecting the water level in the water tank using IOT, which can detect the level of water level based on predefined levels. A water tank in the home is required to store water supply in order to avoid water shortages. At home, this project can assist us in preventing the water tank from leaking or water from exceeding the level and damaging the house's roof. For example, we can detect the water level in a water tank by connecting an IOT system to the tank; the level of water can be seen depending on the application used.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART BADMINTON DEVICE
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	VIGNESSHWARAN BALAKRISHNAN
Penyelia:	IDRIS BIN KAMARUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Develop a sensor system that can accurately measure the speed of the shuttlecocks. 2. Design and implement a microcontroller-based system that can receive and process the data from the sensors and display the speed on a screen. 3. Develop a battery monitoring system that can provide real-time information about the battery level of the shooting machine.
Skop Kajian/Projek:	The scope of this project is to design and develop a smart badminton device, shooting machine that can monitor the speed of shuttlecocks, as well as the on/off status and battery level of the machine. The device will use sensors to measure the speed of the shuttlecocks and will provide real-time data on a mobile application. The device will also include a mechanism to turn the machine on and off remotely via the mobile application. Additionally, the device will have a battery monitoring system that will send alerts when the battery level is low and needs to be charged. The device is expected to improve the training experience for badminton players by providing accurate data and allowing for remote control of the machine.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	This project aims to design and develop a smart badminton device which is shooting machine that can monitor the speed of shuttlecocks, as well as the on/off status and battery level of the machine. The system includes sensors to detect the speed of the shuttlecocks as they are launched from the machine, and a microcontroller to process and display the data. The on/off status of the machine is monitored using a switch or similar component, while the battery level is monitored using a sensor or voltage regulator. The data is displayed on a screen or sent wirelessly to a device such as a smartphone or tablet, providing users with important information about the machine's performance. The resulting system will allow users to adjust the machine's settings and optimize its performance, providing a valuable tool for badminton players and coaches alike.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART IOT VACUUM CLEANER
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NURUL FATIHAH BINTI ABDUL GHANI
Penyelia:	IDRIS BIN KAMARUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Produce a vacuum machine with IOT that can help and facilitate users in cleaning the surface more effectively. 2. Reduce the use of energy and time in cleaning the surface. 3. Can do another task while cleaning using vacuum.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This design uses an existing vacuum machine and has been modified and renewed by enlarging the garbage disposal space by using IOT principles and also solar panel. 2. Has its own interesting movement can be controlled by using 2 option: <ol style="list-style-type: none"> a. Application found in mobile phone(IOT) Such as,when pressed 'F' capital,the vacuum will move forward b. Solar Panel Will start to move when it receives a direct light such as the sun.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This System using a Solar based on floor cleaner robot and it can cleaning the outdoor spaces.In general,mechanical movement is used to make a movement resource that is an input through process to produce some other movement to create the output.Such as,for this project movement of Smart IOT Vacuum Cleaner is designed special,it has an interesting movement that can be controlled by using 2 option which is with application found in Mobile Phones to control the vacuum Left,Right,Front (Forward) and at the Back.Second option is,move by Solar Panel,the vacuum will start to move when receives a direct light,such as the Sun.It is because this solar can absorb the sunlight as an energy source to produce an electricity.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SOIL MOISTURE DETECTOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD SYAZRIL AZIM BIN WAN HASHIM
Penyelia:	IDRIS BIN KAMARUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Analyze the first automatic watering system to be modified to be more perfect. 2. Adds inputs to the system i.e., for valve opening time period and valve opening amount. 3. Produce a new program that combines all the functions in this watering system. 4. Redesign the control circuit to reduce component usage and project cost.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The soil moisture sensor is related to the agriculture sector. 2. The scope of the research is limited to farmers.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project is called Soil Moisture Sensor. This product is used to measure soil moisture level. Some of those who are involved in the agriculture sector are having difficulties monitoring their soil moisture level. Not all of those who are involved in the agricultural sector can afford a soil moisture sensor because it is expensive and if the sensor's component broke, it cannot be replaced. The purpose of this innovation is to help farmers and gardeners monitor their soil moisture level easily. All plants need to be in a specific soil moisture level to grow. It is important to monitor the soil moisture level because it affects the plant growth. This product is affordable, and the components are replaceable. This soil moisture sensor uses a 9v battery to operate. The 9v battery can be either rechargeable or the normal 9v battery. Arduino Uno R3 is used as the main chip of this product and acrylic is used as the outer shell. This product requires a coding process to synchronize all the components and function properly. Surveys are carried out to get reviews of the product and the feedback is positive. A few upgrades can be made to improve this product. The casing design can be improved to make it more comfortable to hold and the sensor can be upgraded to a better sensor if it is possible.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART KITCHEN SAFETY SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD SHAHROL NAIM BIN FAHRURRAZI
Penyelia:	IDRIS BIN KAMARUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Develop A Hardware Prototype For Users In The Kitchen When Cooking 2. Reduce Adverst Event.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Kitchen Or Restorans -Apply Various Techniques To Make The System More Secure 2. Sensor MQ2 For Detect Gas And Smoke, Sensor DHT11 For Temperature, Sensor Flame For Detect Fire
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>We used Node MCU to implement an IoT-based smart kitchen with monitoring. In addition, a separate section has been dedicated to Smart Kitchen. Various appliances and their applications in the smart kitchen have been described. Kitchen-related accidents have recently grown in both commercial and residential kitchens. People frequently visit the kitchen to prepare food. However, if there is a leak in the gas cylinder, the situation becomes perilous. Our goal is to use the Internet of Things to eliminate dangers in the kitchen. These mishaps may be prevented by utilising IoT technology such as monitoring the entire kitchen from a device such as a phone. From the side of integrated software Node MCU and mobile applications have been used. This system allows the monitoring of gas leaks, the presence of smoke and fire in the kitchen and thus leads to faster response time in the event of a dangerous situation and during the night if there is a gas leak for example we can see in the application.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	HUMAN DETECTION ROBOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AIMAN AZFAR BIN MOHD ALI
Penyelia:	IDRIS BIN KAMARUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. One of the main objectives of this project is to propose a wireless robot operated by electronic devices such as a laptop or mobile phone that can show images via a camera, manoeuvre around regions, and locate humans in need of assistance. 2. The robots can be considered future rescuers without putting human lives at danger.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The project's goal is to detect humans who are trapped within the structure. 2. Aside from that, this initiative may assist us in avoiding or increasing the number of victims.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Gempa bumi, kebakaran hutan, letupan bom, tanah runtuh, taufan dan banjir hanyalah sebahagian daripada bencana alam yang sentiasa mengingatkan kita bahawa tiada daya yang lebih besar daripada alam semula jadi. Dengan perkembangan sains dan teknologi yang tidak terkawal, serta pembinaan struktur pengikis langit, kediaman, dan pencerobohan di mana-mana, bahaya kehilangan nyawa akibat tragedi sedemikian telah berlipat kali ganda. Tambahan pula, dengan kemajuan teknologi nuklear, bahaya bencana buatan manusia seperti letupan nuklear dan kebocoran sinaran nuklear telah mencapai tahap tertinggi sepanjang masa. Apabila bencana alam atau buatan manusia melanda sesuatu tempat, ramai orang terbunuh serta-merta. Ramai yang lain tertimbus di bawah runtuhan selama berjam-jam atau hari kerana kewujudan mereka tidak dapat dikenali dengan mudah oleh kru penyelamat. Akibatnya, mereka mati dalam kesakitan kerana bantuan tidak dapat sampai pada masanya. Kawasan tertentu di kawasan yang dilanda bencana sedemikian adalah terlarang untuk kru penyelamat. Jika mereka berbuat demikian, seorang pekerja penyelamat mungkin menjadi mangsa sendiri. Akibatnya, kami mencadangkan robot pengesan orang yang boleh mencari individu yang masih hidup di antara serpihan dan memberikan bantuan segera kepada mangsa.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	HIDDEN SECURITY LOCK
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR IQLYMA NORMASRI
Penyelia:	FA'IZAH BINTI YA'ACOB
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. The objective of a smart security lock is to provide a secure and convenient way to control access to a property. 2. To increase the level of security and control over access to a property.
Skop Kajian/Projek:	The scope of research on RFID parking includes investigating the potential benefits and challenges of implementing RFID technology for parking management, evaluating the effectiveness of RFID parking systems in terms of improving parking efficiency, reducing congestion, and enhancing the user experience, and developing best practices and guidelines for implementing RFID parking systems.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	Car parking issue is a major contributor and has been yet a noteworthy issue with limited parking spots in urban communities. In this paper we present an IoT based smart parking system for large parking lot that can be used to efficiently manage the parking system by providing information on the nearest parking slot available through the mobile application and thereby reducing the congestion of parking seekers. In order to efficiently manage the parking system, a successful cloud-based smart parking system solution using the Internet of Things technology is been developed to guide the user to the nearest parking spot available.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	LOCK IT (SMART DOORLOCK)
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AIDA FARZANA BINTI NOR SAFFUAN
Penyelia:	FA'IZAH BINTI YA'ACOB
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a smart door lock that can be used in the long term. 2. To eliminate the use of physical key and padlock. 3. To receive real time alert through Telegram as a security feature.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on how the smart automation system works to unlock the door. 2. The concentration to improve safety systems in daily life.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Security is a major concern in our day-to-day life, and digital locks have become an important part of these security systems. Fingerprint sensor-based is one of the safest doors locking system as it could identify and distinguish every person individually without making any error. The fingerprint-based security system can be used in many places like Industries, Offices and Colleges or even at our home. In addition, carrying a bundle of keys has become a cumbersome matter as in this era, houseowner should strive and change to a minimal/keyless lifestyle. So, in this project, we will make an ESP32 Fingerprint Sensor Based Door Lock. We will simply interface the R307 Fingerprint Sensor Module with ESP32 Development Board. We will use a Solenoid valve to lock /unlock the door. The LCD will display the status of matched /unmatched finger and door locking and unlocking status. In addition, if 3 failed attempts are recorded, buzzer will turn on and text message will be sent to alerting the owners.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	ROBOT DUSTBIN
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AHMAD TAJUDDIN BIN MOHAMAD
Penyelia:	FA'IZAH BINTI YA'ACOB
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design Robot using IoT technology for detect level of garbage in dustbin. 2. To carry out garbage disposal when the garbage is full after receiving instructions 3. To develop and keep clean and healthy environment.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on software and hardware. 2. The main controller is using ESP 32 which is control the project.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>In this modern age, we have witnessed incredible technological changes and innovations. However, we still strive to deal with cleanliness, a clean and healthy society, including our garbage and waste. Therefore, this study aims to build robot dustbin based on cleanliness using IOT technology to minimize costs to improve the management of our garbage system. In the same way, we can also get an alert message that will send a signal when the bin is full. In daily life, we can see and notice that the trash can is very full and there is always spillage out of the trash can. In addition, it will cause an unhealthy environment because it will cause a bad smell. Therefore, this project can help us to overcome and control excessive garbage because it can notify and send a message as a signal for cleaning. In addition, this Robot Dustbin is concerned with cleanliness by using IoT technology that can reduce costs at the same time will help save time and also make it easier for workers to collect garbage. In this project, a hygiene-based smart trash can using IOT technology is built on Node MCU ESP 32 with several types of sensors. Internet Of Things application open source software is used to store and retrieve data from using HTTP and MQTT protocols over the internet or Local Area Network. Finally, a ESP 32 with an ultrasonic sensor can prevent waste from going out and will also help create a healthy environment. The data taken from the sensors can make the waste management system more efficient and more optimal.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT-BASED PATIENT MONITORING SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MOHAMAD FAIZAL BIN ASAN
Penyelia:	FA'IZAH BINTI YA'ACOB
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To integrate blood pressure sensor with network topology for remotemonitoring. 2. To design blood pressure monitoring system that will alert (with alarm) if theblood pressure is close to critical level.
Skop Kajian/Projek:	Main of this project is to used for education, it is when the student can understand how the blood pressure works and can measured the values with manual using iot. . This limitation is added to simplify our project and ensure it is achievable with the restricted time and resources available. Since the target subjects for this device are hospital, institution and home. The most important feature of this device is that it must be easy to use.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project is about designing blood pressure monitoring system that integrated with wireless technology. The concept design of the system is consisted of multiple blood pressure sensors and a single telephone. The blood pressure level is measured by blood pressure sensor than the information is sent through a wireless technology to the telephone . The number of patients in hospital keep increasing every year and, some patients's blood pressure must be measured by medical staff regularly. This means that the medical staff need to attend to the patient routinely and several readings are required in each session to make sure the results are accurate. Therefore, there is a need to simplify the monitoring process inside hospital in Malaysia. In this work, IoT Blood Pressure Monitoring System (IBPMS) is designed to monitor patient's blood pressure remotely. This project use Blynk app as a gateway to view the value of blood pressure online. Result showed that the design is capable to transfer data from blood pressure detector through the network using esp8266 serial cable which is directly attached to the Blynk app. User can also view the blood pressure reading continuously from Telephone. Furthermore, the system can measure the value of blood pressure accurately when user is in sitting position.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	HEART RATE MONITORING SYSTEM USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SYAZWAN B. ALI MUNAWAR
Penyelia:	MASLIZAH BT MUNAHDAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Detecting the heart beat of the patient in order to monitor the risk of heart attack and also the regular checkup 2. To recognize the cardiac patients condition and monitor status in emergency situations
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project can monitor the patient remotely by collecting patient data in the application and then will send it using iot without going to the hospital. 2. This project uses esp32 wifi module which can provide any microcontroller access to WiFi network so blynk app can work 3. The main controller uses the esp32 that has been set on the coding to output heart rate and body temperature readings according to the sensor used pulse oximeter if it detects heartbeat signal on finger.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	Heart Chronic Failure is nowadays common in all over the world. These days' various people are losing their life to coronary failure and lack of clinical consideration regarding heart at right stage so heart rate monitoring become a fundamental part of keeping up heart wellbeing. Individuals from various ages have diverse pulse, the checking framework must be sufficiently proficient to handle this circumstance. In this paper, the heart rate and heart attack detection recognition system using IoT is discussed. Mainly, the patient will convey equipment having sensors with android application and the heartbeat sensor will permit checking heart beat readings and transmit them over the web.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT VEHICLE GPS TRACKING SYSTEM USING ESP32
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NIROSH NAIR A/L THILAGAR
Penyelia:	MASLIZAH BT MUNAHDAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To see where vehicles last located 2. To find lost vehicle easily 3. To increase security
Skop Kajian/Projek:	Suits for vehicle owners and other people. Global Positioning System has numerous applications. The earliest application was military. Boaters were the first civilians to use GPS extensively for navigation, as dead reckoning is prone to error. Many high-end cars have a GPS navigation system which serves much the same purpose as a marine GPS. Some athletes are turning to GPS to track speed and distance. A few digital cameras have a GPS receiver which records the location where the picture was taken. So far, I've listed only one-way applications. Two-way applications include cell phones when calling the emergency number and vehicle tracking.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>GPS stands for Global Positioning System, which is a worldwide radio-navigation system. Vehicle tracking system is a well-established technology in this era which is used by fleet system and owner of vehicle all over the world. The design is an embedded application, which will continuously monitor a moving vehicle and report the status of vehicle on demand. To track the location of the device, the GPS tracking system uses the Global Navigation Satellite System (GNSS) Network. This network consists of a range of satellites that uses microwave signals to transmit the data which will be received by the GPS receiver module. This project requires few components which is ESP32, GPS Module, OLED display module, jumper wires and a breadboard. Previously we used GPS with Node MCU ESP8266 to build a Vehicle Tracking System and Accident alert system. In this project, we are going to build an IoT based GPS Vehicle Tracking System using ESP32 where we will display the latitude and longitude values on OLED Display as well as on Blynk App so that it can be monitored from anywhere in the world. When the request by user is sent to the number at the modem in the form of SMS, the system automatically sends a return reply to the mobile indicating the position of the vehicle in terms of latitude and longitude via SMS. We will also view the position of vehicle on a digital mapping on Google map with the help of software via Internet.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	ON/OFF TRAINER USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD SYAHRUL NAIM BIN SELASAIN
Penyelia:	MASLIZAH BT MUNAHDAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design mature and able to attract attention 2. To implement system iot 3. To develop people's interest in this trainer after adding the iot system
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing young people and also in the learning system. 2. The emphasis is to spm release who don't know if they want to continue in the desired field, maybe this can attract their interest 3. The main controller is using esp32.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	This trainer is often used or used by students to find out the value of output and input and we will use a multimeter to measure the value of this output. I want to simplify the way of use in finding the value of output and input. I also want to highlight this project to the environment of young people as the basis of the use of trainees who are able to draw their attention towards this electronic cost.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT MANHOLE BASED MONITORING SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MOHAMAD ASRAFF BIN AZMAN
Penyelia:	MASLIZAH BT MUNAHDAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Detection of drainage water level and blockages in the drainage. 2. Checking water flow rate continuously, as well as sending automatic mail, display on the monitor if the water level is outside of an expected normal range.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This technology benefits the general population as well as lowering the risk of mortality for manual scavengers who clean the underground drainage 2. DC Motor- Typical voltage values for DC fans are, 5V, 12V, 24V and 48V. In contrast, the alternating current fans, or AC fans, are powered with a changing voltage of positive and of equal negative value.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>MANHOLE's IOT-based monitoring system is to provide the community with cleaner and better facilities. When creating a smart city, smart subsurface infrastructure is an important component to consider. Monitoring the drainage system is important to maintain the cleanliness and well-being of cities and villages. Because human monitoring is ineffective, drainage issues are addressed slowly and take longer to fix. The system, which uses a wireless sensor network consisting of sensor nodes, was created to address all these problems. The proposed system alerts the management station through a message when any trough exceeds its threshold value. It is low cost, low maintenance, and Internet of Things based. This technology benefits the general population and reduces the risk of death for manual scavengers who clean underground drains.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KAWALAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SUMMING AMPLIFIER USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	ADZMAR ABDULLAH
Penyelia:	MASLIZAH BT MUNAHDAR
Objektif Kajian/Projek:	Make it simpler for instructors and students to carry out experiments for a long time. They are also capable and allowed to conduct experiments without the instructor's supervision. But it also attempts to base designs on the most recent developments in electronics. The instructor can therefore view the multimeter readings from the students' experiments even if they are not in the classroom.
Skop Kajian/Projek:	<ol style="list-style-type: none"> Both electronic companies and educational institutions would benefit from this project. Additionally, this Project would be suitable for any technician who has an interest in electronics.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>If the input resistors, R_{IN}, of the summing amplifier double in value for each input, for example, 4k, 10k, 12k, etc., then a digital logical voltage, either a logic level "0" or a logic level "1," on these inputs will result in an output that is the weighted sum of the digital inputs. The total number of bits in the input data word and the DAC summing amplifier circuit together define the output step voltage as a percentage of the full-scale analogue output voltage. An amplifier is a device that makes a stronger version of the signal it receives as input. However, not all amplifier circuits are made equal because they are divided into several groups based on their circuit designs and modes of operation. Small signal amplifiers are frequently employed as parts in "electronics" because they can convert a relatively small input signal, like that from a sensor like a picture device, into a much larger output signal to power, for example, a relay, lamp, or loudspeaker. The Internet of Things (IoT) allows connections among various devices with the ability to exchange and gather data. IoT also extends its capability to environmental issues in addition to the automation industry by using Industry 4.0. The Internet of Things (IoT) enables connections between various devices so that data may be collected and exchanged. By utilising Industry 4.0, the IoT expands its application beyond the automation sector to environmental concerns as well.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	DETECTOR OF MICROSLEEP FOR CAR DRIVER USING EYE DETECTOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SITI SARAH BINTI KAMARUL BAHAROM
Penyelia:	SITI HAJAR BINTI ABDUL HAMID
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To develop a device that can aid drivers in maintaining concentration while driving. 2. To signal the driver to resume concentration on his driving after a microsleep. 3. To lessen the chance of microsleep-related auto accidents.
Skop Kajian/Projek:	The focus of this project is to give the early signs before the driver experiences the microsleep. The buzzer and the vibrating system will be activated when the early signs of microsleep are detected. The main controller of this project is using Node MCU.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The percentage of road accidents in Malaysia that are caused by microsleep is around 20%, and the number of incidents caused by microsleep rises year-round. Microsleep can have a variety of causes. One of them is the body's attempt to combat drowsiness, exhaustion, and inadequate sleep. For instance, a microsleep-related occurrence occurred in July 2020. Amin Faizz, a university student, perished in a motorbike accident in Linggi, Negeri Sembilan. The deceased was returning from his university in Serdang, Selangor to Kluang, Johor at the time of the event. This is due to the fact that Amin Faizz, who was striving to resist tiredness, had twice experienced microsleep before his motorbike crashed. By monitoring the driver's eye blinks, this initiative aims to identify microsleep before it occurs. The driver will wear spectacles with an LDR sensor placed in them so that the application Blynk can measure the blink rate of the driver's eyes. The driver must then modify the offset rate in accordance with the value of eye blink rate. For the LDR sensor to be able to detect the light reflected off the cornea of the eye, there is an LED on the glasses. The LDR sensor can detect the onset of microsleep if it notices that the driver's eye blinks are becoming weaker and fewer in number relative to the rate value. The buzzer and vibration system will turn on as a result, giving the motorist a heads-up to concentrate again while driving or to pause and take a breather. For repeated usage, this device can be recharged. The red LED will turn on as it charges. The LED will be blue if the charge is complete. On the Blynk app, drivers can also examine their driving information. A graph of their blinks will be shown by the Blynk app. In conclusion, because this programme contains a security component, it is particularly</p>

	advantageous to people from all backgrounds and genders. The result may contribute to a decrease in traffic accidents. At the same time, it is feasible to prevent significant losses on assets that are priceless to everyone.
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	RFID BRACELET REGISTRATION SYSTEM FOR BUS PASSENGERS
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	HAZIM BIN ABD. AZIZ
Penyelia:	SITI HAJAR BINTI ABDUL HAMID
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design an RFID bracelet tag for the bus passengers 2. To design a circuit that can detect RFID tags using an RFID reader.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project is focusing on bus passengers rather than any other public transport service. 2. The main focus of this project is it only allows pre-registered bus passengers to board the bus.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>In Selangor, Malaysia, to use a free bus service, passengers require to scan before getting on the bus. The scanning action is to register bus passengers into the registration system. The purpose of the registration system is for the daily count or data collection of the number of passengers who use the bus. The data collection can obtain information for scheduling, forecasting and service-related decisions. The action consists of the passenger scanning a QR code using a particular app on their phone before getting on the bus. In hard times, passengers have problems with the standard procedure before getting on the bus. Problems such as the phone camera taking too long to scan, getting logged out from the app before scanning, getting scolded by the bus driver for not scanning (due to not having the app downloaded), and not being capable to take out their phone to scan (carry many items at the same time). To ease the passenger's situation before getting on the bus, this project is made for the passenger doesn't need to use their phone to register into the registration system and just walk into the bus leisurely. This project comes up with a wearable device that automatically registers bus passengers into the system. A wearable device, which is in bracelet shape, automatically registers bus passengers as they enter the bus using an RFID transceiver. When the passenger is successfully registered into the registration system, it will notify the bus passenger (the RFID bracelet user) that the passenger is successfully registered into the registration system. It also notifies the bus driver by a sound that notifies the passenger is allowed to take the bus.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	BLOOD PRESSURE WITH IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD AQIL BIN JUMRI
Penyelia:	SITI HAJAR BINTI ABDUL HAMID
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a blood pressure 2. To develop the ordinary blood pressure into a blood pressure that could save data into smartphone.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Photoplethysmographic (PPG) Sensor Place At Finger Used To Estimate Blood Pressure. 2. The Patient Who That Suffered With Hypertension Disease.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Blood pressure is very important nowadays because it is a tool to measure blood pressure. At the same time, this wireless blood pressure can measure the pulse. This tool is easy to use, just put the "cuff" on the wrist. Machines that measure blood pressure on the market today do not have a feature that allows users to save blood pressure data directly through a smartphone. With the availability of this blood pressure IOT, a feature is added to store data from the blood pressure machine into the smartphone. The size of this blood pressure machine is compact and easy to carry anywhere.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART DUSTBIN AUTO SANITIZER
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR ADRIENA FARHANIM BINTI ANUAR
Penyelia:	NORHAYATI BINTI CHE HUSIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. It mainly focuses on sanitization and segregation of waste without human intervention. 2. It will help to prevent the emission of harmful gases from the decayed waste.
Skop Kajian/Projek:	The aim of this project is to create a basic, healthy lifestyle to make everyone always in hygiene. It is include automatic system.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project is to design and develop a “SMART DUSTBIN AUTOMATIC SANITIZER”. Nowadays, maintaining good health is an essential part of our lives. Countries around the world are facing health related problems due to the spread of emerging and re-emerging infectious diseases. These infectious diseases can not only transfer from person-to-person but can also infect them by using or touching the waste generated by an infected person, so we need to ensure that the disposed waste does not lead to transfer of infection among others. This has increased the demand of an advanced waste managing system. However, inventions are proposed to manage the collection and disposal of waste but need to design a secure and smart waste management system. In order to do so, I have designed a system called 'Smart Dustbin Auto Sanitiver'. It works on the basic fundamental of sensors. The main idea of this project is to create a clean, hygienic and disease-free environment.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	HOME AUTOMATION SYSTEM BASED ON IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SARVIND A/L MUKAIYA
Penyelia:	NORHAYATI BINTI CHE HUSIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design one system that is related to home appliances using NODEMCU 2. To implement home appliances that can help user to control the devices at home. 3. To develop a good condition of the housing area that will prevent any loss and damage to the property of any organization.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project is focusing on hardware and the software that is being used. 2. The emphasis includes controller and program 3. The main controller is using NODEMCU
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The home automation system is implemented for decades but due to the cost and budgeting of the project, it remains a niche product for high-end consumers. The Intelligent Home Automation System, security is one of the major factors that does not implement the home automation system. The hectic daily life routine sometimes makes them forget to switch off their devices at home. The clumsy attitude plus our packed daily routine life sometimes makes us in hurry a situation that sometimes makes us forget to switch off the lamps. It will cause the electricity bill to rise sharply. Besides, it is one of the electricity wastages that will lead the earth became an unhealthy one. The strength of this project is to control devices such as lamps, fans, and doors at home using a smartphone. The system is related to home appliances using NODEMCU. Home appliances can help the user to control the devices at home and develop a good condition of the house area that will prevent any loss and damage to the property of any organization. The hardware that is being used in this project is a relay, fan, door lock, bulb holder, and bulb. Meanwhile, the software part is Telegram. Telegram is the main software that is being used in this project. Telegram application is being used as a platform to give the command. Most of the projects that are related to home automation or known as home appliances most of it using the Blynk apps and rarely use telegram. This project is using a smartphone to give commands compare to another project that is using tablets, laptops, and others which is much more convenient to users.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	WATER QUALITY MONITORING SYSTEM USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	DHISALENY A/P RAMAN
Penyelia:	NORHAYATI BINTI CHE HUSIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. The project of this water quality monitoring system using internet of things is to find the quality of the water i.e. how the pH content varies and sending message to the corresponding to the smartphone. 2. I am going to implement this project at river, and drinking water reservoir. 3. We are using an Arduino board for finding pH value and GSM module for message technique.
Skop Kajian/Projek:	Users can know the quality of the water used. Then, users can identify the type of water. Lastly, users can accessed information by their via smart phone.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Water pollution has been an increasing problem over the last few years. Water personal satisfaction may be a standout amongst those primary variables with control well-being and the state of sicknesses. Lakes and waterways would be those fundamental wellsprings about drinking water, which impressively rely on upon water personal satisfaction (refers to the physical, chemical, and living aspects of water). The purpose of this project is due to water pollution has been an growing hassle over the previous few years. Water non-public delight may be a standout amongst those number one variables with manipulate nicely-being and state for illnesses. Lakes and waterways would be those fundamental wellsprings about ingesting water, which impressively rely on water private satisfaction to the physical, chemical, and living components records approximately water). Water is a completely important need for everybody, this makes the community very worried about the best of the water they use. Due to the fact they didn't know the quality of water that using in daily life.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART AUTOMATIC HANDWASH
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	PUTERI KHAIRUL BARIYAH BINTI MOHD SULAIMAN
Penyelia:	NORHAYATI BINTI CHE HUSIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To ensure that users use liquid Sanitizer to help prevent germs after washing their hands cleanly. 2. To reduce user movements when refilling liquid soap and sanitizer without having to open a large part of the product. 3. To design a complete model of automatic hand washing that can be operated automatically and does not complicate the use
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1) Place: <ol style="list-style-type: none"> a. Hospital and Clinic b. Shopping Mall and Super Market. c. Workplace and Lab. d. Event 2) Target user: <ol style="list-style-type: none"> a. All level age
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Nowadays, there are almost of the entire place for example at hospital, restaurants, public area, houses, offices/industry, school, colleges and universities have the hand washing tool. The functions of this tool are to wash and dry the hands. But normally these tools operate by semi automatic or manual. To give this tool can be more systematic and particular "automatic hand wash" for automatically washing and drying the hands is proposed. This project will design to combine four functions in one device which is the soap, water, dryer and sanitizer. The project consists of the microcontroller chip, an infra-red (ir) sensor and any other device. The main component that must be used to make sure an automatic hand washing and drying machine operating for automatically is a microcontroller chip, Arduino program.this microcontroller used to control the whole machine which is water, soap, dryer and hand sanitizer. The ir sensor consists of an ir transmitter sensor and an ir detector sensor. The ir transmitter sensor will continuously emit an ir wave, forming a straight light from the ir transmitter to the ir detector. When the ir wave between ir transmitter sensor and ir detector sensor is interrupted by user hands, a signal will be sent to the microcontroller. Then the icrocontroller will analyze the signal and the Machine will operate whether it produces water, soap and continue the drying process will happen. Smart automatic hand wash is specially designed to make it easy for someone to wash</p>

	<p>hands and maintaining cleanliness within a period of time with the combination of several products that are integrated. It uses soap, then rinses with water again automatically, followed by hand drying using tissues and hand drying machine and end the program with sanitizer rinse to remain hygiene. Use of hand sanitizer is placed after washing and drying hands. Sequence of all automatically intermittently performed in the sequence that will be produced through a program special. In addition, there is a flow place to re-add the soap and sanitizer liquid without opening an important part of the product. It is placed on the right side of the product with a suitable door to place the funnel for filling the such liquid. The quantity of liquid addition is determined to ensure that the soap and sanitizer container is full and does not exceed the required quantity. To find out the quantity of liquid consumed, the program can be executed without any liquid issuing at the such time interval, as an example when the period of soap is out only the lcd displays the interval of the thing without issuing the soap liquid. When the liquid is determined to be running out, so the user can refill the liquid with the specific quantity set for the user to use the product completely again.</p>
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	HOSPITAL SMART CARD
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SITI NUR ANTASHA ALAINA BINTI JEFRI
Penyelia:	NAAGAJOOOTHI A/P ADIN NARAINA
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Semester 1 - Create a rough interface layout and exact information for the system, as well as tools for Arduino programming. 2. Semester 2 - Create and test the prototype, database, and client terminal system in preparation for successful implementation.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The focus of this project is to give ease to the patient of hospital with build hospital smart card. 2. Saving the tree at the forest and facilitating the patient with using smart card.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Smart cards have grown in popularity in recent years due to their capacity to securely store and process massive amounts of data. Smart cards have the potential to revolutionize patient care in the healthcare industry by providing a safe and effective means of managing patient information. This study focuses on the creation of an RFID-enabled smart card system for hospitals. A smart card holder identifier, an access controller for hospital doors, and a smart card reader/writer are all part of the system. Electronic circuit design, operation principles, serial communication with a computer, and software are all thoroughly studied. The smart card system offers various advantages to hospitals, including enhanced security and access management. Only authorized staff can use the smart card to get entry to restricted locations such as patient rooms, laboratories, and pharmaceutical storage spaces. Furthermore, the smart card can contain critical patient information such as medical history, medications, and allergies, which can be accessed at any time by authorized healthcare practitioners. A comprehensive access control network for hospital doors is being discussed to deploy the smart card system. This entails installing smart card readers at all entrance points and creating software to manage access control rights. Overall, smart card use in hospitals has the potential to significantly improve patient care and safety. Hospitals may ensure that patient data stays confidential and that only authorized staff have access to sensitive areas by securely storing and accessing patient information and providing access control to restricted areas.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	PORTABLE WIRELESS ECG MACHINE
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AHMAD USAMAH BIN HADI
Penyelia:	NAAGAJOOOTHI A/P ADIN NARAINA
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Semester 1 - Make tools for programming the Arduino platform, a rough interface layout, and the system's precise details. 2. Semester 2 - To ensure a successful implementation, create and test the prototype, database, and client terminal system.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The main focus of this project is that to give a ease to people about their state of heart condition and educate them about how to prevent heart disease from happen in the future. 2. This project will save a lot of lives because it will help each one of them to measure heartbeat anomalies during daily activities.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>In our daily lives, machine can be so helpful because it makes human works becomes much easier. It doesn't matter in what sector you working on, sometimes it teaches us about how to do something. Nowadays a lot of people don't take their heart condition health seriously, its becoming much worse day by day. This project can help a lot of people also educate them. It is designed to with wireless and portable so you can bring them henever you got to go on the road. You don't need to worry about the wire if its broke because it doesn't have it. Applying our skills and knowledge to choose the finest option from the many choices available, we discovered that several excellent machines were offered at reasonable costs. Therefore, in order to choose the best product, a consumer must consider the essential criteria, the available features, and the budget.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART PARKING SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	RAAHUL SURESH
Penyelia:	NAAGAJOOOTHI A/P ADIN NARAINA
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a system that allows the users to easily search for their vehicles in shopping 2. To save time finding parking spots 3. To create a systematic parking environment
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Wireless Mobile-based Car parking System (WMCPS) has been developed using mobile app service approach. 2. This particular system will search for an available parking space using shortest path algorithm (BFS algorithm) and print the specific parking lot ID on the ticket that the driver taken before they enter the car park.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>In recent times the concept of smart cities have gained great popularity. Thanks to the evolution of Internet of things the idea of smart city now seems to be achievable. Consistent efforts are being made in the field of IoT in order to maximize the productivity and reliability of urban infrastructure. Problems such as, traffic congestion, limited car parking facilities and road safety are being addressed by IoT. In this paper, we present an IoT based cloud integrated smart parking system. The proposed Smart Parking system consists of an on-site deployment of an IoT module that is used to monitor and signalize the state of availability of each single parking space. A mobile application is also provided that allows an end user to check the availability of parking space and book a parking slot accordingly.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	DESIGN A TEMPERATURE BASED FAN SPEED CONTROLLER WITH MOTION SENSOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SHARMITHAA A/P MOGAN
Penyelia:	NAAGAJOOTHY A/P ADIN NARAINA
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design and develop a hardware and software of microcontroller based ceiling fan. 2. To design a motion sensor based on human resence.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The aim of this project is to design a home automation system that is ceiling fan based on the advanced technology without only using choke.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project is to design and develop a “the Microcontroller temperature based fan speed controller with motion sensor”. This project will present the design, development, control and analysis that can be implemented for home automation system. The home automation system is pic microcontroller based project which focused on a system to automatically control the speed of a ceiling fan according to the surrounding temperature and the motion sensor detects on human presence. This ceiling fan system and motion sensor contains combination of sensor, controller, driver and motor with integration of embedded controlled programming which means in this case using pic microcontroller as the main controller. This project also presents the expected performance of the automatic fan system and motion sensor, construction of hardware and software development to gather the performance data. Finally, this system performance will be analysed by comparing performance data to the theoretical. End of this project will produce an advance technology with programmable features which control the speed of the fan is depending on the changes in room temperature and the motion sensor detect the presence of a person.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	BIOMETRIC FINGERPRINT SENSOR TO LOCK AND UNLOCK DOOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SHANKARI NAIR A/P MURALI
Penyelia:	NAAGAJOOOTHI A/P ADIN NARAINA
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design the current fingerprint censoring method more dependable and accessible to people of all ages and demographics 2. To implement the outcomes in order to determine the accuracy and effectiveness of the fingerprint system. 3. To develop a censoring system for the entrance in order to develop a system with superior security.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The aim of this project is to create a basic, key less lifestyle and improve home security. It also includes the system act as a manual.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project is to design and develop a “THE BIOMETRIC FINGERPRINT SENSOR TO LOCK AND UNLOCK THE DOOR”. In our everyday lives, security is a top priority, and digital locks have emerged as a key component of these security systems. One of the safest doors locking systems is fingerprint sensor-based because it can accurately identify and distinguish everyone without error. The fingerprint- based security system can be employed in a variety of settings, including workplaces, educational institutions, and even our homes. Additionally, having a set of keys has become a hassle because modern homeowners should try to live a minimum, key less lifestyle. Fingerprint door locks use tried-and true technology. The most developed and tried form of biometric technology is fingerprint reader scanning. Recent biometric research has demonstrated that the fingerprint method is more precise and economical than the hand method. This fingerprint-based door lock system's circuit is made up of an Arduino Mega2560, which manages every aspect of the project, as well as a push button, buzzer, and LCD. The entire process is managed by an Arduino Mega2560. The push button is connected directly to the Arduino Mega2560's pins A9 (ENROL), A10 (OK/DEL), A11 (UP), A12 (DOWN), and A8 (CLOSED) with respect to ground. A 10-ohm resistor is used to connect the red and green LEDs to the Arduino Mega2560's digital pin D4 and D3, respectively, with respect to ground. Rx and Tx of the Fingerprint Module are directly linked to Arduino Mega2560's Software Serial or Digital pins D11 and D10. The fingerprint module is powered by a 5-volt supply and attached to an Arduino Mega pin. A servo</p>

	motor is also connected to Arduino Mega2560's PWM pin D5. A 16x2 LCD is set up in 4-bit mode, and the RS, EN, D4, D5, D6, and D7 of the Arduino Mega2560 are directly linked to those pins. The buzzer is linked to the Arduino Mega2560's Digital pin D14 with regard to the ground. DHT is attached to the Arduino Mega2560's Digital Pin D2 and to ground and Vcc. LCD is connected to the center pin's potentiometer (Vo).
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	AUTOAUTOMATIK RECYCLE WATER SPRINKLER ROOF VIA APP 2022
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD AIMAN NURUDDIN BIN ABDUL JALIL
Penyelia:	KHAIRUL NAPISHAM BIN ABD RAZAK
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Use water wisely 2. Created a device to cool the roof using water from the rainwater catchment.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project focuses on working users. 2. The main focus of this project is to cool the roof from heat automatically by using a heat detector
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	Water sprinkler on the roof automatically by using the application. This tool aims to cool the roof from heat automatically by using a heat detector. When the heat detector detects a temperature that exceeds 35C. This device automatically sprays water to cool the roof of the house. The water from the rainwater will be collected and filtered and then stored in the storage tank for the purpose of activating the sprinklers. More water will be shot towards the growth that is around the house.

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	AUTOMATIC CLOTHSLINE CONTROL BY APPS AND RAIN SENSOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR AFIFAH FAIHA BT RAHIM
Penyelia:	KHAIRUL NAPISHAM BIN ABD RAZAK
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design an automatic clothesline 2. To design a circuit that can detect rainwater using a rain sensor. 3. To create and develop an application for this automatic clothesline system.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project focuses on working users. 2. The main focus of this project is to protect clothes from rain, thunder and storm.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Malaysia is above the equator causing rainy and humid conditions throughout the year. This sometimes causes problems for women, especially those who work and live in big cities when the clothes that are washed are not dry plus there is an unpleasant smell. Those who live in terraced houses have the problem of limited drying room to dry clothes. Therefore, a cloth drying system was developed in the form of a car jack concept and it is a system that controls the drying process automatically and includes three important aspects which are simple, fast and safe. The Malaysian female labour force always working at least nine hours per day. Thus, it can interfere their time to do some chores especially laundry. Since Malaysia is located on top of the equator line, it causes to experience rain state and damp during the year. This matter sometimes cause problem to the female labour force when washed clothes are not dry and have unpleasant smell. In order to lighten their burden, the project proposed an automatic Clothesline System. Automated Clothesline System is a system that can detect the rain and bring the clothes to a sheltered place automatically. This project uses sensors, microcontroller and motor. The sensor used for the system was water sensor. The microcontroller used was Arduino UNO and DC motor was used for the motor circuit. All circuits were constructed and tested and the microcontroller was programmed so that the tor control system can be implemented. The circuits were integrated and tested before the prototype was fabricated in a miniature model that represented the whole system. This project was found to be viable that it can detect rain and bring the clothes to sheltered place.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART TROLLEY WITH BARCODE SCANNER VIA APP
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NURZAFIRAH HANIS BINTI MOHD ASMADI
Penyelia:	KHAIRUL NAPISHAM BIN ABD RAZAK
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To make a trolley with a barcode scanner 2. Make an automatic sensor which scan the product that put into the trolley 3. The product description (name, weight, price, quantity, ingredients, etc) will be appear on the user smartphone
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Only valid if the supermarket registered with relevent party and be used especially in supermarket 2. The descption of the item will be display on a screen via application 3. Using a barcode sensor and application
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentu Projek
Abstrak Kajian/Projek:	<p>Trolley is a device used for carrying loads or things from one point to the other point easily. For different types of application, various types of trollies are available in the market. In other words, trolley can be called as shopping cart too. It is alsodepending upon the specific use the one will select the trolley, but it is limited to do specific work or things. To overcome this problem, a new trolley was designed which could be used for another purpose. There are various types of trolley available in the market like at the airport, shopping malls, industries, hospital, etc. To carry light oe heavy loads. Specifically for the trolley that usually used in the supermarket, it is only have one purpose which is to carry a items or a things that we want before we check out them at the cashier. This trolley will be design with a sensor for scanning the barcode of the item. It will make our live easier. One more advantageous feature added to the design is it will be connected with the application which can be much easier for the user to see the item that they choose and put it into the trolley. They also can easily remove or delete the item from the trolley if they dont want them and it can also deduct and add the total price of the items.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	WIRELESS PORTABLE CAR JACK VIA APP CONTROLLER APPLICATION TECHNOLOGIES
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD AMIR FARHAN BIN NOOR AZMAN
Penyelia:	KHAIRUL NAPISHAM BIN ABD RAZAK
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. This research aims to include electronic control with necessary mechanism that will make the work of jacking car for maintenance easier and friendly. 2. The system will control the upward movement of the car jack through the remote control. This will help to conserve energy and save time.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. My main focus of the wireless portable car jack via app controller application technologies is to complete the technologies environment for the future. 2. make people feel more save time and energy by just controlling it from a smartphone.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>A car jack is a device used to lift up the cars while changing the tires during an emergency. Car jacks are available at the market has some disadvantages such as requiring more energy to operate, are not suitable for women and cannot be used on the uneven surface. The purpose of this project is to modify the design of the existing car jack in terms of its functionality and also human factors considerations. To optimize the existing design, the hand lifter has been replaced by technology as it can reduce energy usage. In addition, ergonomic factors are also taken into consideration in order to reduce and simplify how to use a car jack. In the process of obtaining a suitable design, the customer needs will be translate to the engineering characteristic to obtain the concepts that need to be modified and fabricated. The best concept had been selected using the weighted rating method, next step was to determine the part and component that can be modified by arrange the part with the component according to the function or system. From this step, it can be determined which component can be reduced or modified. Then the configuration design was analyzed according the function factor and critical issue so that the design that had been implementing was according to the specification and customer requirement.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART ENCLOSED SHOES RACK
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	BATRISYIA AUNI NADHIRAH BINTI MOHD ALIFUDIN
Penyelia:	IRMA BAIZURI BINTI MOHD AKHIR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To develop a new automatic product with two liquid which is shoes deodorant and shoes sanitizer . 2. To reduce the movement of users in ensuring the quantity of shoes deodorant and shoes sanitizer when the data limit can be issued through the application on the phone as a sign of shortage . 3. To innovate the shoes sanitizer and shoes deodorant in shoes rack to keep shoes in good condition .
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Ultrasonic Sensor <ol style="list-style-type: none"> a) Investigating liquid level , percentage of liquid 2. Place: <ol style="list-style-type: none"> a) Home b) Office 3. Target user: <ol style="list-style-type: none"> a) All level age
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>At this time, playing sports is a step taken by most people to continue to maintain health, it is because playing sports has also become a great trend as soon as it can help someone stay healthy because when we play sports there is a lot of sweat production even by walking for 30 minutes. Among the important criteria to be followed before, during and after. Among them is dressing and wearing appropriate shoes, most people will emphasize clothing, especially the right type of fabric, but many also do not know how to take care of a person's body, which is the skin. Especially the feet, shoes actually need appropriate care methods and are very important to ensure that the user is in good condition. The way to ensure shoes are in good condition is to use shoes deodorant and shoes sanitizer. As we know, shoes deodorant has the role of a pleasant fresh smell, while shoes sanitizer provides protection and maintenance of hygiene before someone uses the shoes. The idea of producing this product is to help users stay fragrant and have a layer of protection. Smart Enclosed Shoes Rack consists of ESP32 as a microcontroller. The ESP32 is a low-power chip (SoC) that has built-in WiFi and Bluetooth modules. It is a continuation of the popular ESP8266 chip. This product does not use the ESP8266 module because the ESP32 has better features and is also more stable. Battery 18650 is also used with volt 2200mAh because they are lighter weight, very small battery memory effect, and can be</p>

	<p>shaped as desired. LiPo batteries have a higher energy density than other types of batteries. In other words, this battery can accommodate more energy with a lighter weight. And this battery can be recharged by using b3 compact charger. Push button (yellow) in this product works to start in the program cycle. The buzzer plays a role with a beep sound when the liquid either shoes sanitizer or shoes deodorant wants to spray and a beep sound 2 times when the liquid stops. A switch acts as a device that can disconnect an electrical circuit, stop the flow of electrical current or change the direction of flow from one conductor to another. The function of the 2 channel relay module is as a connecting switch for two networks at once. Ultrasonic Sensor to measure the percentage of liquid in the Smart Enclosed Shoes Rack. Inside this Smart Enclosed Shoes Rack there is a place to hang shoes and under the shoe hanger a special space to place the product.</p>
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	PARKING OKU USING SMARTCARD
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR ANIS KARMILA BINTI RAMLI
Penyelia:	IRMA BAIZURI BINTI MOHD AKHIR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. The irresponsibility of some in the abuse of parking that has been reserved by people with disabilities 2. Oku sticker paste system does not affect some parties from using their parking 3. It can be inconvenient for people with disabilities to use the facilities that have been reserved by them if there is a party that is less concerned
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The RFID Card System can access the parking lot 4 by touching the card inside the scanner. People with disabilities will touch sensors in the parking lot and the bar will be opened. 2. Parking card is special in that it is designed using the identity of a disabled person.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The disabled people in Malaysia is known as Orang Kurang Upaya (OKU). OKU people are given some privileges such as having their own car parking lot. However, said parking lot is often being abused by citizen who lacks awareness and civic. This paper presents a system that use preventive measure at the early stage to prevent citizen from abusing the parking lot. The system proposes an installation of a mechanical barrier inside the parking lot that prevents people from entering it. The parking can only be accessed through an OKU RFID card issued by local authorities. Upon successful verification, the mechanical barrier will lower down and the user can use the parking lot. The implementation of the system is expected to prevent citizen from abusing the OKU parking lot and improve the quality of life for them.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	AUTOMATED POND WATER LEVEL CONTROL SYSTEM USING APPS AND MOTOR
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	ENGKU EZRYATUL ANIISA BT ENSKU ZAILANI
Penyelia:	IRMA BAIZURI BINTI MOHD AKHIR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design an automated pond water level control system using apps and motor. 2. To reduce water waste by preventing overfilling of the loss of water due to evaporation. 3. To develop the proper water level in a pond is critical for the health of the ecosystem.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing to conserve water and reduce the cost of water usage. 2. The emphasis is to improve the overall health of the pond and promote the growth of aquatic life. 3. The main controller is using Blynk apps to control the water level.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This paper focusing on implement a water level control system that is used for water tanks in agricultural facilities to perform crop watering activities. This will improve monitoring of water level in water tank if this sector facing a water crisis such as water supply cut off. This will help the farmers to prepare the next step with help water level control system that gives accurate water quantity in water tank or storage. Water Level Control System is helpful to the farmers knowing the actual amount of water in the water tank for agricultural usage. Blynk application as the Internet of things (IoT) platform that will give all the information about the water level and monitoring the activities of water consumption at a certain time. Hence, from the findings of the study, the water level monitoring system is successfully developed according to monitor the water level in the water tank. Based on the result analysis shows the Water Level Control System is capable of monitoring water level and also the Blynk application successfully displays the water level and notifies if the water level is at higher condition.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (PERUBATAN)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	AUTOMATIC GAS LEAKAGE WITH PHONE CALL
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NORAIMIE ELYANA BINIT NORDDIN
Penyelia:	IRMA BAIZURI BINTI MOHD AKHIR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a system that can detect leaked gas by using MQ-6 sensor such as LPG gas. 2. To make a direct call to user alert that the gas leaked by using GSM 900C Module and programming language C in NODE MCU ESP32
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on households. 2. The focus of this project is to blow out the gases that leak, turn off the valve gas and call the owner when there are not at home . 3. The main controller is using ESP32.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>LPG is widely used for cooking. Hence, it can leak both as a liquid or as a gas if it is not handled cautiously. If the gas leakage is not detected in the early stages, then it can lead to a very big disaster. The main objective of the project to build a gas LPG leakage detector using an LPG gas sensor and micro-controller. It developed a security system by providing an early warning system to give a sign if there is a smell of gas around home. If this system has been the existence of leakage and smell of LPG gas, then the system will give an early warning of the system such as the system will call the number right after the MQ-6 detect the gas leak. It can work with the GSM SIM900C Module combine with ESP32 then can make a call . It becomes essential to protect gas leakage from damage and accident.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT GARBAGE MONITORING SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	`AMAR HAZIQ HUSNI BIN AZAM HUSNI
Penyelia:	ZABIDAH BINTI HARON
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design garbage monitring system 2. To implement cleanliness in places secluded or not 3. To develop way to make garbage disposing much easier and consume less time
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on waste monitoring 2. The main controller is using Internet to send notifications, Wi-Fi that requires login credentials will not work.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Nowadays certain actions are taken to improve the level of cleanliness in the country. People are getting more active in doing all the things possible to clean their surroundings. Various movements are also started by the government to increase cleanliness. We will try to build a system which will notify the corporations to empty the bin on time. In this system, we will put a sensor on top of the garbage bin which will detect the total level of garbage inside it according to the total size of the bin. When the garbage will reach the maximum level, a notification will be sent to the corporation's office, then the employees can take further actions to empty the bin. This system will help in cleaning the city in a better way. By using this system people do not have to check all the systems manually but they will get a notification when the bin will get filled.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT-BASED SMART KITCHEN
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR HASYA INSYIRAH BINTI AHMAD NOR HISHAMUDDIN
Penyelia:	ZABIDAH BINTI HARON
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a complete kitchen automation system. 2. To collect the data through a microcontroller and send it to IoT. 3. To design an alarming system if conditions become worse.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. It is well known that temperature and humidity sensors (DHT11) can only get new data once every 2 seconds. 2. We need to monitor the sensitivity of all sensors, especially HC-SR501, which can be out of users' ability.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>In this project, We Implemented an Internet of Things (IoT) based smart kitchen with Automation & Monitoring system using NodeMCU ESP32. The different technologies such as RFID, WSN, Cloud Computing, Networking Technology and Nanotechnology support the IoT and their applications in various fields, i.e., Smart Home, Smart City, Smart Grid, Smart Health, and Smart Farming, have been covered. In addition to this, special coverage has been made concerning Smart Kitchen. The description of various appliances and their application in the bright kitchen has been enumerated. Recently, kitchen-based accidents have increased in both commercial and domestic kitchens. People regularly go into the kitchen to cook food. But it will become dangerous if there is leakage in the gas cylinder. We aim to reduce the risks in Kitchen using the Internet of Things. These accidents can be avoided using IoT technologies like monitoring the entire kitchen from remote areas. To implement this research, both hardware and software will be utilised. The hardware side gas sensor, temperature sensor, humidity sensor, alarm, Arduino IDE, and load cell NodeMCU ESP32, the heart of this project, have been used. The integrated NodeMCU ESP32 and mobile application have been used from the software side. Our system provides results in various forms. The system enables monitoring of kitchen gas leakages, leading to a faster response time in the event of a leakage condition. During night conditions, if a gas leakage happens suddenly, the person may switch on the light, which may lead to a blast. To avoid that, the main power supply will be automatically off, monitoring the kitchen appliances and notifying the user.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT ELECTRICAL APPLIANCES CONTROLLER AND VENTILATION SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	EMYLIA BALQIS BINTI ELLY SHAHRULNIZAM
Penyelia:	ZABIDAH BINTI HARON
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To control the use of electrical appliances through wifi. 2. To manage various electrical appliances using apps. 3. Create a monitor level for the electrical value in Musalla
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Its own remotely and switching on and off any electrical appliances. 2. Data transmission speed. 3. Ring connection.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Due to the rapid development in the field of the Automation industry, human life is becoming more advanced and better in all aspects. In the present scenario, automated systems are being preferred over the non-automated system. With the rapid growth in the number of consumers using the internet over the past years, the Internet has become an important part of life, and IoT is the newest and emerging internet technology. Internet of things plays an important role in human life as well as in the educational field because they can provide information and complete the given tasks while we are busy doing some other work. The proposed system consists of a hardware interface and software interface. In the hardware interface, the integration of ESP8266 Wi-Fi technology for controlling electrical appliances, and an application is provided for controlling to multiple users of home, with smart phones. This system is one of the best methods for controlling electrical appliance with ease with multiple users. This system is also expandable for controlling various appliances used at Musalla as long as it exists on Wi-Fi network coverage.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT BASED WHEELCHAIR FALL DETECTION
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AINA RAIHANA BINTI MOHD TAHZIM
Penyelia:	ZABIDAH BINTI HARON
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design an intelligent and effective fall detection and alert system using smartphone and wireless sensor node. 2. To implement a reliable and cost-efficient fall detection and alert system. 3. To develop a fall detection system that is user-friendly and helpful in providing quick assistance.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. To make it simple to monitor and be attentive to the user's condition when they are in a risky scenario, 2. Concentrated on patients who are in hospitals and on those who have family who use private wheelchairs.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>A fall is among the worst things that may occur to a wheelchair user. With more people utilizing wheelchairs, there is an urgent need for fall detection devices. Due to the rapid advancement of sensor networks and the Internet of Things (IoT), human-computer interaction with sensor fusion has been seen as a viable approach to the issue of fall detection. A device to stop the wheelchair from falling is suggested in this study. The idea for this wheelchair falls detection system is to determine whether the user's position or the algorithm's position suggests a potential fall. The most crucial factor in this study is the ability to identify wheelchair users' movements to ascertain when they require assistance from their loved ones or carers. The initiative asserts that by detecting a person's fall and alerting them by email via a secure application, it can assist in sending help in the event of an emergency. It can assist in avoiding dangers that could endanger life if there is any serious damage. This system's components a 6-axis MPU6050 Gyroscope/Accelerometer sensor that can be configured to regulate every circuit and its functioning and an ESP8266 NodeMCU wifi module allow the product to be connected to Blynk applications and controls from as far away as possible.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT UNDERGROUND FIBER OPTIC TYPE CABLE FAULT DETECTOR PROJECT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	WONG GUAN CHENG
Penyelia:	ZABIDAH BINTI HARON
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To develop a project that save money, manpower and time in fiber-optic fault detector. 2. To quickly locate the fiber-optic cable fault, and just the problematic area needs to be dug up in order to check and repair the fault. 3. To allows authorities to monitor and test issues via the Blynk Application by IOT technology in this project.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Difficulty in obtaining the greatest and most appropriate sensor, which may cause this project not work perfectly, 2. In order to obtain accurate results, the IR Brightness Sensor cannot be used in a bright environment. 3. Need to create a tool comparable to a photo-cell or light detector to ensure that the IR Brightness Sensor can accurately receive the light source from the fiber-optic connection.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Optical fiber technologies are now crucial in providing end customers with genuine broadband connectivity. Monitoring and identifying fiber failures are crucial for ensuring that clients continue to receive service. As a result, any service disruption caused by a fiber catastrophe could cause telecom carriers to incur large financial losses. An intelligent fault detection system in an optical fiber is proposed in the developed concept to pinpoint the specific location of a problem in the fiber optic cable. The most significant parameter in this project will be monitoring the received light source. Similarly, various factors can be used to monitor the cable's fault. This project proposed developing a system that can assist repairmen in detecting underground cable faults in developing a project that saves money, manpower, and time in fiber-optic fault detector with rapidly locate the fiber-optic cable fault, and only the problematic area needs to be dug up in order to check and repair the fault while also allowing authorities to monitor and test issues via the internet using IOT technology in this project. The system is built with ESP 32 and an IR Brightness Sensor, which is programmed to control all of the circuits. The testing data and outcomes have been included and analyzed in the Blynk Application.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	BLYNK IOT AUTOCLOTH LINE SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	WAN MUHAMMAD IMRAN SYAFIQ BIN WAN SHAHRUL
Penyelia:	YAAKUB BIN OMAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To Design and fabricate the automated cloth hanger. 2. To Apply the right source code for the device to connect with the cloth hanger. 3. To Produce the minimum cost but high quality and efficient product.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on students and parents to dry their clothes with low consumption of electricity. 2. The emphasis is for parents to control the cloth hanger from anywhere. 3. The main controller is using ARDUINO UNO.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The S.M.A.R.T Automated Clothesline is equipped with a rain sensor module innovation where individual clotheslines will be retrieved and pulled out when the system detects a change in surrounding weather. This innovation project was developed to help people stay busy and focus on daily tasks outside and prevent their clothes from getting damp from the rain. The aim of this project is the development of new and improved innovation of clothesline. This project is guided by three main objectives, which are: (i) to design and build an automated clothesline that is climate-friendly; (ii) to control the automatic suspension system using an Arduino microcontroller; and (iii) to forecast the problem using the automated clothesline in a real-world environment. The prototype model is used hardware such as Arduino UNO rain sensor module, 5v 2ways channel opto isolator relay module, 12v actuator, 12 batteries, WIFI shield for Arduino, breadboard with the help of Arduino IDE software and BLYNK . SAC showed that when it rains, the sensor will pull the clothesline down to the roof, and when it gets hot, it will be released again. SAC prototype system was successful in achieving all of its objectives after implementation. As for commercial value, SAC has a high potential to be marketed to individuals living in apartment housing areas as it offers practical added value. Prominently, the SAC enables the use of flexibility, time-saving, and an affordable price. This innovation project is beneficial for relieving people's stress and burden about managing their clothes during absence from home, ultimately allowing them to stay focused on other daily tasks</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	KIOSK CHARGING PHONE USING RFID
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD RAFIQ IZZUDDIN BIN ROSLAN
Penyelia:	YAAKUB BIN OMAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Prevent the occurrence of theft or loss of the smartphone by using the RFID system. 2. Activate security by using an authentication card to open and close the locker-shaped kiosk.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Phone charging kiosks using RFID are built for safer use for staff and students. In addition, this system has also used waves or through sensors only to unlock the kiosk. 2. Staff and students can register access cards for phone charging kiosks using RFID on the side of the kiosk when picking up access cards.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>A smartphone is a type of cell phone that can do more than just make phone calls and send text messages. Smartphones, like computers, can access the Internet and run software programmes. Smartphones allow consumers to interact with them via a touchscreen. There are thousands of smartphone apps available, including games, personal-use, and business-use tools. The image depicts an Apple iPhone, one of the most popular smartphones on the market today. RFID is similar to barcoding in that data from a tag or label is collected by a device and saved in a database. RFID, on the other hand, provides certain advantages over barcode asset tracking software systems. The primary distinction is that RFID tag data may be read from a distance, whereas barcodes must be aligned with an optical scanner. RFID belongs to the Automatic Identification and Data Capture technology area (AIDC). AIDC approaches recognise items, collect data about them, and enter that data directly into computer systems with little or no human intervention. The Smartphone Charging Kiosk project's goal is to create smartphone charging kiosks that are safe and only accessible to persons with permission. The major RFID component is a card that is used to activate security by opening and closing a kiosk structured like a locker. The goal of this project is also to enable students utilise charging kiosks properly, with no occurrences of phone loss or theft.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	RFID ATTENDANCE SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD NABIL BIN NAINA MOHAMAD
Penyelia:	YAAKUB BIN OMAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. The main objective for this project is to record the attendance of students in a more faster and easier way. Moreover, this project can also be helpful in avoiding errors during the attendance record. This project also helpful in keeping the records of attendance. 2. This way is more easier than manual attendance recording system.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Use RFID technology 2. LCD screen to display confirmantion students attendance
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>RFID attendance system allows automatic attendance marking by using students matrix card tags. Every student has a unique barcode on their matrix card which will be used to record his/her attendance. For now, a lot of time is wasted for manual attendance procedures. For example, lecturer call out names to mark a students attendance. In such cases our system provides an instant and automated attendance marking system. Every authorised student has their details fed in. The barcode consists of a built-in integrated circuit that stores this data through modulating and demodulating transmitted using radio frequency signals. As soon as the card is placed in Infront of the RFID reader, the data in it is read and attendance for that student is registered. This is done with the help of an 8051-microcontroller interfaced with the reader. If it is a registered student, then a confirmation is displayed on an LCD screen, else a rejection message is shown that denies the attendance. All students attendance status later be further improved by adding attendance marking sheet or using biometric attendance systemstructured like a locker. The goal of this project is also to enable students utilise charging kiosks properly, with no occurrences of phone loss or theft.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	DOOR LOCK SYSTEM USING ARDUINO UNO
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AMMAR MUHAIMEEN BIN KAMARULZAMAN
Penyelia:	YAAKUB BIN OMAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design safety door lock project. 2. To help person is carrying a number of boxes or luggage.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing safety door lock 2. The emphasis is to those who are always careless 3. The main controller is using ARDUINO UNO
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>In this system, the electronic door lock using RFID and password based on Arduino UNO. It uses in doors and cupboards as electronic lock and so on. The security system is important at homes, schools, offices and industries in real life. The purpose of this paper is to develop a smart home security system using RFID and keypad. RFID is ID card reader to read ID on keypad. If password is true, lock style solenoid is unlocked. If password is false, solenoid is lock. The electronic door lock system for home automation is able to interact with security management system for users and smart cards. Smart card is easy to use and accept more secure in real life. And then password is traditional but that is more impressive and more secure for human life. The Arduino microcontroller is used to control the whole system. For every household, security is one of the main concerns. In this age of constantly increasing count of crime, various attempts have been made to secure the entrance and control the accessibility of the household. Traditional mechanisms such as lock and key, Deadbolts, Door chain and Mortise locks; they all have their limitations. Some of them are heavy in weight but fragile. Some others are more of an inconvenience than being a thing of actual benefits. This paper proposes a RFID-based secure door lock system and tries to draw upon its various advantages over traditional door security systems. Radio frequency identification (RFID) is a wireless technology that allows the development of scalable control systems with flexibility. The goal of this work is to develop a system in which ease of use comes together with better security but without any extra cost.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART SOCKET IOT WITH BLYNK
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	AHMAD BUKHORY BIN MOHD ADAM
Penyelia:	YAAKUB BIN OMAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Smart socket design and engineering. 2. Apply the right source code for the device to connect with the smart socket. 3. Produce the minimum cost but high quality and efficient product.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project focuses on students and parents to monitor low electricity consumption. 2. The emphasis is for parents or student to control the smart socket from anywhere. 3. The main controller is using ARDUINO UNO
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The abstract presents a smart socket IoT system integrated with the Blynk platform, aimed at enhancing energy management and control in residential and commercial settings. The system leverages Internet of Things (IoT) technology to enable remote monitoring and control of electrical devices connected to the smart socket. The smart socket is equipped with wireless connectivity capabilities, allowing it to communicate with the Blynk cloud-based platform. Through the Blynk mobile application, users can effortlessly manage and automate their electrical appliances remotely from anywhere with an internet connection. Key features of the system include real-time power consumption monitoring, scheduling and timer functionalities, and energy usage analytics. Users can monitor the power consumption of individual devices, set timers for device operation, and receive notifications or alerts based on predefined thresholds. The integration with Blynk enables intuitive and user-friendly control through customizable virtual buttons, sliders, and gauges, providing a seamless user experience. Additionally, the system supports data logging and visualization, allowing users to track historical energy usage patterns and make informed decisions for energy conservation. The smart socket IoT system with Blynk offers convenience, efficiency, and energy savings by empowering users to remotely manage their electrical devices. With its intuitive interface and comprehensive features, it presents a practical solution for smart home automation and effective energy management in various environments.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT BASED SMART SAFETY SOCKET
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MOHAMAD ZAIMIRUL HAIKAL BIN ZAMRIZAL
Penyelia:	NUR SURIYA BINTI MOHAMAD
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a safety socket system with a current sensor 2. to detect an overloading current. 3. to alert user through a mobile application.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. project is suitable for home and office because of the usage factor. 2. The size of your home will have an impact on your average home power usage.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The Internet of Things (IoT) describes the network of physical objects things that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet. These devices range from ordinary household objects to sophisticated industrial tools. With more than 7 billion connected IoT devices today, experts are expecting this number to grow to 10 billion by 2020 and 22 billion by 2025. IoT ecosystem consists of web-enabled smart devices that use embedded systems, such as processors, sensors, and communication hardware, to collect, send and act on data they acquire from their environments. IOT device share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analyzed or analyzed locally. The internet of things helps people live and work smarter, as well as gain complete control over their lives. In addition to offering smart devices to automate homes. Electric current refers to the flow of electricity in an electronic circuit, and to the amount of electricity flowing through a circuit. It is measured in amperes (A). The larger the value in amperes, the more electricity is flowing in the circuit. Energy current is a somewhat informal term that is used, on occasion, to describe the process of energy transfer in situations where the transfer can usefully be viewed in terms of a flow. It is particularly used when the transfer of energy is more significant to the discussion than the process by which the energy is transferred. For instance, the flow of fuel oil in a pipeline could be considered as an energy current, although this would not be a convenient way of visualising the fullness of the storage tanks.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	GAS LEAK DETECTOR WITH AUTOMATIC AIR EXHAUST AND NOTIFICATION VIA TELEGRAM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	HARIVARASHAN A/L SURESH
Penyelia:	NUR SURIYA BINTI MOHAMAD
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a system that can detect the presence of Liquefied Petroleum Gas 2. To implement MQ5 gas leak detector in the project 3. To develop a project that can prevent LPG gas leakage using Air Exhaust fan
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing homes, factories and restaurants 2. The emphasis is to alert the user when LPG gas leakage is detected
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Safety plays a major role in today's world and it is necessary that good safety systems are to be implemented in places of education and work. This work modifies the existing safety model installed in industries and this system also be used in homes and business premises. One of the preventive measures to avoid the danger associated with gas leakage is to install a gas leakage detector at vulnerable locations. A gas detector is a device that detects the presence of gases in an area, often as part of a safety system. Gas Detector where it can sound an alarm to operators in the area where the leak is occurring, giving them the opportunity to fix or leave. This type of device is important because there are many gases that can be harmful to organic life, such as humans or animals. Containment into any area where the gas should not be present must be avoided. Because a small leak may gradually build up an explosive concentration of gas, leaks are very dangerous. Nowadays, existing gas detector is less effective in usage because the user can only detect the gas leakage when they test by using gas detector. It is dangerous since gas leakage must be identified from early of the leak. That is why the Gas Leakage Detector with Notifier System was invented to avoid the fire or explosion occur in the houses or premises. This kind of gas detector will detect the gas continuously as long as there is power supply. This project used Microcontroller Arduino UNO at the processor where it process the input from the sensor and to GSM module to communicate with the user by sending an alert through SMS. The buzzer will ring until its dangerous concentration of gas is achieved. The benefit of these projects is to prevent the earlier stage of fire because of unattended cooking without a human supervision, could prevent the explosion because of gas leakage.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT BASED AQUACULTURE WATER MONITORING SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MAISARAH ZAFIRAH SHAM BINTI YUNOOS
Penyelia:	NUR SURIYA BINTI MOHAMAD
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To develop a system that uses remote sensors to detect water characteristics such as pH, temperature, turbidity. 2. To compile and transmitting data over the wireless channel once it has been collected from various sensor nodes. 3. Routinely sending information to a designated individual when the detected water quality does not meet the predetermined standards so that the appropriate action can be taken.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Difficulty in finding appropriate sensors and might take some time to get as order are from overseas. 2. Need to find a temperature sensor that is waterproof. 3. In circuito.io, sensors use in this project wasn't in the library.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>The practise of carefully raising aquatic organisms, particularly for human consumption, is known as aquaculture. Aquaculture is a growing industry in several parts of the world. It aids in food production and the restoration of endangered species. Additionally, it has gained popularity as a protein-rich food source. Other uses for aquaculture production exist as well. For instance, algae have been grown as an alternative fuel source that is cleaner and easier to cultivate than fossil fuel. Similar to this, numerous other research and development projects are taking advantage of the expansion of aquaculture, and there are lots of promising prospects for the future. Aquaculture is practised in tanks, on land, in freshwater ponds, rivers, and ocean water. The Internet of Things is advancing in the 4.0 agricultural era, yet many countries and local fish farmers are still lagging behind in their adoption of this technology. The Internet-of-Things (IoT) is a technology that has made significant strides in recent years and can be applied to the development of more efficient, secure, and affordable systems with real-time capabilities. Briefly, this investigation explores design suggestions for a productive system. A number of sensors are used to measure a variety of factors. This project proposed sensors such as temperature, pH level and turbidity sensors. The ESP32 is used to execute all the programs that have been sketched and written on the Arduino IDE. Without a doubt, this research will help the growing industry of aquaculture and also anyone interested in fishkeeping and fellow aquarist.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART CHILDREN MOVEMENT DETECTOR (WIFI SENSOR)
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NURULAIN NADHIRAH SHAHRUNNAJIB
Penyelia:	NUR HADIANA BT NASRUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design and create a system which uses GSM that can communicate with human 2. To implement the design of the model into Smart Children Movement Detector. 3. To develop the mechanical aspects of the detector an iterative design process to use, constructing and testing solutions searching for improvements for a more optimal design.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on solving problems parents face when they leave their child on the car. 2. The emphasis is to provide an alarm or notifications if any child is left behind unknowingly in the vehicle 3. The main controller is using Arduino
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>There are many cases related to the child being trapped inside a locked car with a window and engine closed, such as children being trapped inside the car due to the parents rushing to their workplace. Smart children movement detector is a proposed system that is designed to detect sound or voice and any movement made by the children that had been left behind in a vehicle. The child detector system alerts a parent of the presence of the child when they are alighting their vehicle. In order to save the children from being trapped inside a car, a safety reminder is created by connecting the PIR motion sensor and microcontroller with the mobile phone through an application. This system used the Internet of Things (IoT) which occurs during connecting the system with the phone. Besides, the motion sensor that is included inside the system has the ability to detect human movement inside the car. This system is believed to be useful towards the safety of children efficiently so that the children will live a happy life. When the system detected the movement of a trapped child inside the car, the system will send a notification to the parents through mobile application. There have been numerous cases of a child being left alone and forgotten in a car. Such cases often end in tragedy as the child dies from heatstroke. Smart children movement detector is installed in a car to detect when a child is crying when parents are not inside the car. It can also detect when a child is absence.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT SMART HELMET FOR CONSTRUCTION WORKERS
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR FIKRIZAHUSNA BINTI ANIZAM
Penyelia:	NUR HADIANA BT NASRUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a smart helmet for construction workers. 2. To develop an IoT smart helmet that can be remotely monitored by a supervisor. 3. To develop a system that uses temperature sensor, gas sensor and light sensor to ensure workers safety.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project is focusing on construction workers that using new technology smart helmet. 2. The emphasis is to building companies. 3. The main controller is ESP32 for IOT.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Before Covid-19 pandemic in Malaysia, the total of accident is the highest which is 326 construction accidents recorded in Malaysia and the number reduced from previous year due to the COVID-19 pandemic. Many reasons that contribute to the accidents such as communication, fails to wear safety gear and time taken to bring the injured worker to hospital for treatment. The goal of this project known as IoT smart construction helmet is to reduce construction sites accident which can be minor or major causes effect on the whole site as well as work of construction. In Malaysia, the use of helmets is mandatory at construction sites as per the government rules. The Use of a helmet protects the labor head against the impact of the falling object from any height. This project is designed with safety system that can be monitored by supervisor. There was a modification in the ordinary helmet into a smart helmet by adding gas sensor, temperature sensor and light sensor by using ESP32. In this project, the helmets will automatically be updating the work mode ON, if workers wear it because a clamp turns the system ON and information goes to the supervisor. The use of the temperature sensor while on the construction side is essential. for example, when the temperature rises above 38 degrees Celsius, the helmet will detect the high temperature and the data will be sent to the supervisor. therefore, the supervisor can know the state of the worker's environment. the same applies to the use of light sensors and gas sensors in IOT smart helmets. Same as this, there are one push button which indicate the task completion and about the emergency. Using the button, it helps the worker in many ways and manage the tasks and time also. For the IOT System are being used for the functioning of a helmet, Real-time signals will be sending constantly</p>

	<p>with the help of installed various sensors to monitor. The main objective of this study is to activate the installed components so that the various emergencies can be detected at the supervisor's room and somehow reduce time detect the actual location of the injuries worker and at the same time is the signal is send to the command office of the construction site. It is an Internet of Things (IoT) solution that helps make worksites safer by providing The live. By installing all the components in one construction helmet, the internet of things (IOT), can help to reduce the number of injuries and prevent the injuries to critical stage and it is also enhancing the awareness of the safety of construction workers.</p>
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	SMART SWITCH USING HAND GESTURE DETECTOR FOR DISABLED PEOPLE
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	ASILAH MAISARAH BINTI AHMAD NAZRI
Penyelia:	NUR HADIANA BT NASRUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design a smart switch for home application. 2. To design a smart switch through wireless control. 3. To develop application for controlling.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This project is focusing on solving problems for disabled people. 2. To make them more independent and not rely on others. 3. The main controller is using Node MCU.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Today's world many people are suffering from Physical disabilities and most of the physically disabled patient's dependent on care takers. In extreme cases, the patient may be speech impaired which makes it difficult for him to communicate with others and to express his needs. Providing solution to these inabilities is the prime motive of this proposed work. The physically disabled persons require special assistance from care takers or other persons to lead their normal life and even at home it is not convenient for them to control the home appliances according to their wish. In the modern life, they usually forgot to switch off the lamp after using it can cause electrical waste. This is the one of the major problem facing cities of the world. Because our busy life is a common thing that will happen to waste our electricity. The basic problems faced by disabled people in single day life in their own house to turn ON or OFF the equipment's like lights, fans and difficulty in analyzing switches are observed many times. And the side issue being faced are wasteful use of electricity. The aim in our project is to design smart switch using hand gesture detector for disabled people.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT SMART ELECTRONIC GATE
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	SYUHAIDA BALQIS BT MOHAMMAD SHARIMAN
Penyelia:	NUR HADIANA BT NASRUDDIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design Smart Electronic Gate 2. To implement an IOT by using Wi-Fi or Internet. 3. To develop a system that can open and close gates automatically.
Skop Kajian/Projek:	This Project is focusing on residential areas because it's about a smart gate, but the scope can also be large because this technology can be implemented at any other building that needs gate.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>A gate or gateway is a point of entry to or from a space enclosed by walls. The concept originally referred to the gap or hole in the wall or fence, rather than a barrier which closed it. Gates may prevent or control the entry or exit of individuals, or they may be merely decorative. The moving part or parts of a gateway may be considered "doors", as they are fixed at one side whilst opening and closing like one. There are various types of gate closers available, including electronic gate using remote control. Nowadays . People chose to use remote control to open and close the gate which easier for them than to open and close the gate manually but there are some problems that they had to face by using this remote-control method. Firstly, they often forget to bring the remote control with them, and they always forget where they put the remote control. Not just that, we knew that remote control would have to use battery as power source. Users will always have to change the battery and alert to bring the remote control with them as they go out from home for work, groceries, or other business. To overcome this problem, I have thought about making an electronic gate that can open and close by detecting the number plate. Not just making users easier but at the same time, security for house area is more secure than using remote control. Only vehicles that have registered the number plate can enter the house because the camera will only detect registered numbers and allow the gate to be open and close. Due to some reasons that can't be avoided, I designed a RFID gate with ESP-32 Cam and IR sensor instead of a gate that can detected number plate. This RFID gate is also facilitated users in many ways and secure for resident area, home, office and factory area.</p>

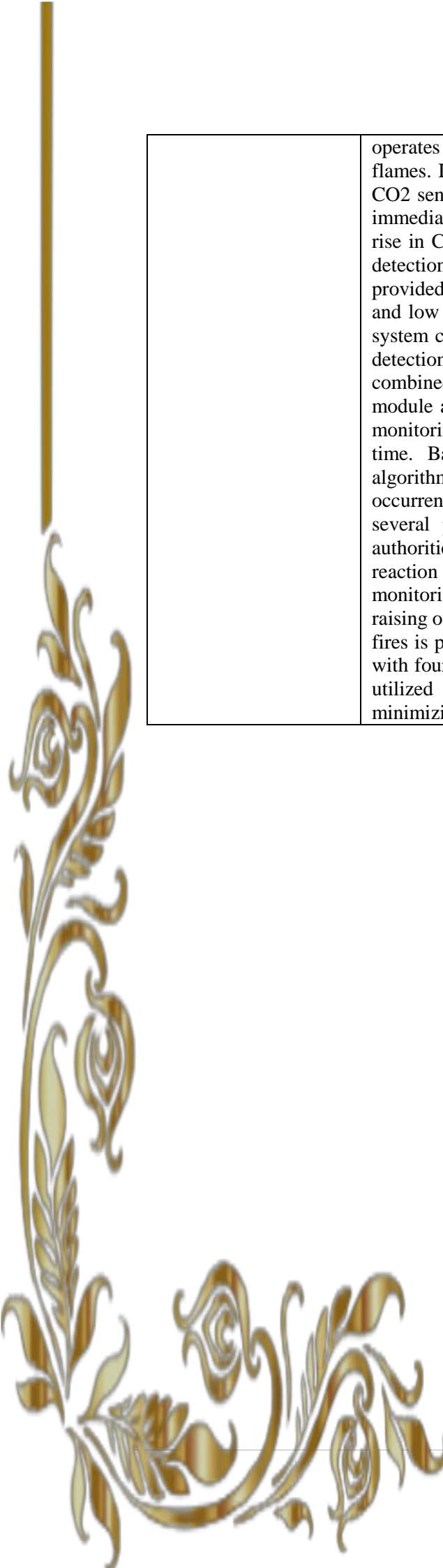
PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	VOICE HOME AUTOMATION USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD HAKIM BIN HUSMIDI
Penyelia:	AKMARYA SYUKHAIRILNISAH BT MOHD AMIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To design the Voice Home Automation Using project circuit. 2. To implement a Voice Home Automation project using Arduino uno. 3. To testing the functionality of the Voice Home Automation project circuit.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing at the hospital 2. Can detect voice at a distance of 5 meters. 3. The main controller is using Arduino Uno and MIT Apps 4. This tool is able to detect voices that have been registered using the phone only.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This Voice Home Automation Using IOT is intended to reduce movement and make it easier for users to open or close light and fan switches. Problem statements are marketed but not enough to use advanced technology to open and close lights and fans. In addition, the objective of the study is to design a sound system home automation project circuit and build a sound system home automation project as well as test the functionality of the sound system home automation project circuit. Next, the function of the project is to use a sound system to open and close the lights and fans as well. Finally, the conclusion is that this project can benefit all users and can be marketed for use to all users in need.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	AGRITECH MODERN FARMING
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	TENGKU ILYAS FAKHRI BIN TENGKU ABDUL AZIS
Penyelia:	AKMARYA SYUKHAIRILNISAH BT MOHD AMIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To investigate farmers to use technology that can reduce human workloads. 2. To construct farmers to monitor their farm using mobile phone. 3. To develop farmers to protect their plant from any harm.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing at farmers. 2. The emphasis is technology that can reduce human workloads. 3. The main controller is using nodeMCU esp8266.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This project is an android-based application that implements the Internet of Things (IoT) for plantation purpose. This project aims to develop an android-based application integrated with several sensors that might solve farmers problem. Farmers face many problems, such as unable to get quality crops because have been attacked by pests. This application will give notification that helps farmers to know when the pests attack their crops. Furthermore, the passive Infrared (PIR) sensor integrated with the application will detect any pests at farmer's crops. Farmers might also face problems getting information about their soil condition, whether the soil is dry or wet. Soil Moisture sensor integrated in the application will detect the soil condition and display the soil condition in the application. Lastly, this application will help farmers determine what substance they need to add to their soil, whether acidity or alkaline. pH sensor will check the soil and show the reading in the application.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	ELECTRONIC DEVICES OVERHEAT DETECTOR WITH IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD SYAHMI AKMAL BIN ZULKIPLI
Penyelia:	AKMARYA SYUKHAIRILNISAH BT MOHD AMIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To create a system that can help the user in terms of their safety using those electronic devices. 2. To design a project that helps people save money and time. 3. To develop a system that included IoT technology where enables authorities to monitor and test concerns over the internet.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Difficulty in obtaining the greatest and most appropriate sensor, which may cause this project not work perfectly, 2. The temperature sensor is insensitive.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Every electrical or electronic object in both homes and companies is controlled by IoT-based devices. Furthermore, the saved data from IoT devices may be handled from any place. Although smoke and fire detectors are industry standards for ringing the alarm, by the time they detect an outbreak, it may be too late. As a result, manufacturers of active fire detection systems, such as LICO, have developed technology that can detect heat and overheating before they become more significant problems. The sensor evaluates the graphical representation of the observed data in any point on the planet. This project makes use of an IoT-based Arduino board. The use of Arduino to monitor humidity and temperature is a fun and secure method. Furthermore, this adjustable system calculates the actuator using extra factors based on data maintained online. An Arduino, a temperature sensor, a 16x2 LCD, a variable resistor, a jumper wire, an ethernet cable, an Arduino Uno USB cable, and a rechargeable battery are all utilised. The temperature sensor detects whether the Arduino is linked to a 5V DC supply. When the temperature rises above 80 degrees Celsius, the LED blinks and the buzzer sounds, displaying the temperature on the LEDs of the Arduino board.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	PARCEL SECURITY SYSTEM USING IOT
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	MUHAMMAD AMIRUDDIN BIN MOHD HELMIE
Penyelia:	AKMARYA SYUKHAIRILNISAH BT MOHD AMIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. This project is carried out to create an innovation that provides convenience and a safe way for its users. 2. Reducing physical contact between the sender and recipient during this pandemic era can be achieved through the implementation of a parcel security system.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The project scope includes the dimensions of the parcel box, which are 5 inches x 4 inches x 6 inches, the automatic gate diagram, which is 17 inches x 1 inch x 6 inches, and the wall gate dimensions, which are 9 inches x 6 inches x 14 inches. 2. Furthermore, the system operates within the limits of having internet or Wi-Fi connectivity.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Autism is a lifelong developmental disability that affects how people perceive the world and interact with others. Most of these children have difficulty with fine motor skills which typically struggle with handwriting and fine activities in their routine life such as buttons, zips, laces and cutlery. Because fine motor activities encompass so many routine functions, a fine motor delay can have a measurable negative impact on a person's ability to handle daily practical tasks. This Project proposed a simple fine motor exercise aid plus game (exergame) for autistic children who discover from fine motor difficulties. The proposed exergame will blinking randomly and user need to bend their finger accordingly. It will notify to the user, whether they bend the right finger or not. The system is realized using Arduino, which is programmed to control all the operated circuit. It is shows that this Project successfully combines the use of the small muscles in the hands, in accordance with what the children's eyes see and very helpful in strengthening the finger muscles of autistic children.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	FOREST FIRE DETECTION USING IOT SYSTEM
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	NUR AISYAH AFIQAH BINTI MOHAMMAD
Penyelia:	AKMARYA SYUKHAIRILNISAH BT MOHD AMIN
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. To investigate more deeply about wildfires and their causes. 2. To develop an IoT system that will assist wildfire teams in their operation. 3. To construct a project that will prevent massive destruction.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. The project is focused on to assist wildfire teams to work effectively. 2. The sensor cannot sense accurately.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>On 28 October 2020, during Australian bushfire season, due to extreme drought in 2019 gave rise to bush fires of unprecedented intensity the fires burnt an estimated 14.3 million hectares, destroyed over 3,000 buildings (including 2,779 homes) and killed at least 34 people. A wildfire, forest fire, bushfire, wildland fire, or rural fire is an unplanned, uncontrolled, and unexpected fire that starts in rural and urban regions. Millions of hectares of forest are destroyed by fire every year. The area destroyed by these fires is huge and produces more carbon monoxide than the entire car traffic. Forests are protectors of the earth's ecological balance. Unfortunately, forest fires are usually only noticed when they have spread over a large area, making their control, and stopping difficult and even impossible at times. The ecology is harmed, the climate is affected, the biological features of the soil are ruined, and the forest fires also ruin the habitat for species. The forest fire detection is therefore a significant problem in the current decade. The forest fire must also be resolved as quickly as possible. Forest fire detector using IoT system shows the data by using application called Blynk. The ESP32 microcontroller serves as the system's central processing unit and has wireless connection capabilities. The sensors gather information, which is then analyzed and sent in real-time to a platform that is hosted in the cloud or a centralized monitoring station. The goal of this project is to develop a product that will assist wildfire teams in their operation. Most forest fires are occurred due to atmospheric temperature and occasional humidity which provide auspicious environments for fire to begin. This project using 4 sensor to detect which is carbon dioxide (CO2) sensor, flame sensor, temperature and humidity sensor. The flame sensor</p>



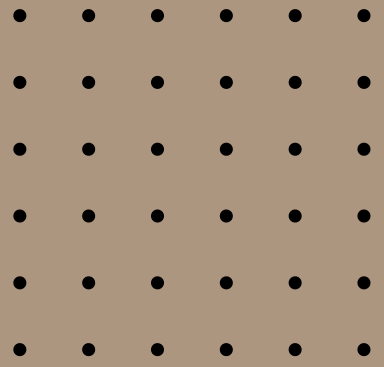
	<p>operates by monitoring infrared light emissions to find the presence of flames. It can detect a fire properly and activate the alarm system. The CO₂ sensor calculates the amount of carbon dioxide gas present in the immediate surroundings. The existence of a fire is indicated by a quick rise in CO₂ levels, which serves as an additional confirmation for fire detection. Contextual information about the environment is crucially provided by the temperature and humidity sensors. High temperatures and low humidity levels may indicate an increased danger of fire. The system can analyze trends and patterns to increase the accuracy of fire detection by continually monitoring these factors. The four sensors are combined with a central processing unit and a wireless connection module as part of the IoT system. A cloud-based platform or a central monitoring station receives, processes, and transmits sensor data in real-time. Based on specified patterns and criteria, machine learning algorithms may be used to analyze the sensor data and identify fire occurrences. When a fire is detected, the system may immediately start several processes, including turning on sprinkler systems, alerting authorities or pertinent staff, and starting the evacuation process. Quick reaction and prompt intervention are made possible by real-time monitoring and remote access, lowering the danger of fire escalation and raising overall safety. A reliable and proactive strategy for battling forest fires is provided by the suggested IoT-based forest fire warning system with four sensors. The potential of IoT and sensor technologies may be utilized to accomplish early detection and prompt reaction, thus minimizing the environmental and socioeconomic effects of forest fires.</p>
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PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT BASED MONITORING SYSTEM WITH FEEDER CONTROLLER
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	ZAIREE IZZUL HAIKAL BIN ZAIFUL AMRIL
Penyelia:	ABU BAKAR HAFIZ BIN KAHAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Design and fabricate the pet feeder with IOT. 2. Apply the right source code for the device to connect with the this project. 3. To develop project that will help people.
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. This Project is focusing on workers and family to feed their pet easily. 2. The emphasis is for people to control the pet feeder from anywhere. 3. The main controller is using ARDUINO UNO.
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>Pet is good accompany partner to human. It helps to reduce the stress from living life style and as a precaution to keep away burglars. Nowadays, pet treats as one part of the family member. Therefore, healthy level of the pet need to consider and focus on balance diet. Different size of the pet will have different amount on consuming and different nutrient needed. From the survey, the obesity problem among LI the pet is happened due to pet owner is busy with work. In additional to that, pet doesn't have ability to get the food itself, and it has to depend on the pet owner to feed them. Therefore, Controlled Pet Feeder is created and used to solve the problems feeding the pet on time with required portion. Controlled pet feeder is started popular among the choices of pet owner used to replace the traditional feeding method. The product brings convenience to pet owner by setting the feeding time and portion of the food, which it helps to make sure the pet receives the required diet through a day. The controlled pet feeder trains the pet how to consume food properly and consume at certain time.</p>

PERKARA	MAKLUMAT
Program:	DIPLOMA KEJURUTERAAN ELEKTRONIK (KOMUNIKASI)
Jabatan:	JKE
Semester/ Tahun:	5/2023
Tajuk Kajian/Projek:	IOT BASED MEDICATION ALARM AND PULSE RATE MONITORING SYSTEM FOR ALZHEIMER & DEMENTIA SUFFERERS
Jenis Kajian/Projek:	REKA BENTUK
Kategori Kluster Penyelidikan:	TEKNOLOGI DAN KEJURUTERAAN
Nama Pelajar:	ZAIREE IZZUL HAIKAL BIN ZAIFUL AMRIL
Penyelia:	ABU BAKAR HAFIZ BIN KAHAR
Objektif Kajian/Projek:	<ol style="list-style-type: none"> 1. Introducing an Android application whose objective is to remind the patients of their dosage timings through Alarm Ringing system. 2. Make it easier for users to remember the medicine that they need to take 3. Takes heart rate readings and saves a record on the phone
Skop Kajian/Projek:	<ol style="list-style-type: none"> 1. Patients with chronic diseases and the elderly. 2. Patients who need to take different types of medicine at the same time. 3. Patients who have high blood pressure and need a record of heart pulse readings
Penglibatan Pelajar: (merujuk kepada skop kajian/projek)	Merekabentuk Projek
Abstrak Kajian/Projek:	<p>This paper describes the design and implementation of a pill alarm and pulse rate monitoring system for Alzheimer's and dementia patients utilizing the Blynk platform and NodeMCU ESP8266. The device is designed to help carers monitor patients' vital signs and adherence to medication remotely, enabling prompt action in case of crises. The system makes use of a mobile app created on the Blynk platform, which communicates with a microcontroller called the NodeMCU ESP8266 that is linked to a pulse rate sensor and a pill dispenser. The pulse rate sensor enables continuous heart rate monitoring, and the pill dispenser is configured to distribute medication at predetermined periods. When medication is due or the patient's pulse rate deviates from the typical range, the system alerts carers in real-time. The results of the system's performance show that it is an effective tool for managing medication adherence and monitoring vital signs remotely, providing caregivers with peace of mind while ensuring patients receive the necessary care. Future research could examine additional uses for the technology in the healthcare sector. This system has the potential to dramatically improve the quality of life for people with Alzheimer's and dementia as well as their carers.</p>

RUJUKAN

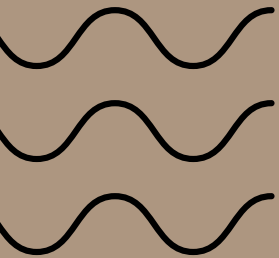
KEMENTERIAN PENGAJIAN TINGGI (2021). BUKU PANDUAN PELAKSANAAN PROJEK PELAJAR (PROGRAM DIPLOMA). Politeknik Malaysia, 138-139.



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YAAKUB BIN OMAR
NORANIZAH BINTI SARBANI