

SQUEEZE BAG



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DIPLOMA IN BUSINESS STUDIES

SESSION I: 2024/2025

POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH

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A project report submitted in partial fulfilment of the requirement for the award of Diploma in Business Studies.

COMMERCE DEPARTMENT

SESSION I: 2024/2025

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SESSION I: 2024/2025

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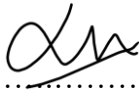
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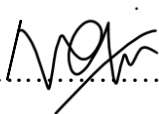
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We declare that the work in this final year project paper was carried out in accordance with the regulation of Polytechnic. It is original and is the result of our own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any diploma or qualification.

We, hereby, acknowledge that we have been supplied with the Academic Rules and Regulations for Undergraduate, Polytechnic, regulating the conduct of my study and research.

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ABSTRACT

In response to the increasing demand for multifunctional travel accessories, this paper introduces the Squeeze Bag, an innovative solution designed to cater to the diverse needs of modern travelers. This cutting-edge bag features a built-in compartment for a portable mat, providing users with a clean and comfortable surface for relaxation or any activities, regardless of their location. Sustainability is a core principle of the Squeeze Bag's design, as it is constructed from recycled canvas, which minimizes environmental impact and promotes responsible consumer practices. The bag offers ample storage capacity with multiple compartments specifically designed for optimal organization of gadgets, documents, and personal items, making it suitable for commuting, travel, or outdoor adventures. Its versatile design allows for effortless transitions between different carrying styles, enabling users to adapt it as needed whether as a backpack or a traditional bag enhancing flexibility during travel. Furthermore, the Squeeze Bag prioritizes user comfort and ease of use, ensuring that essentials are easily accessible while maintaining a stylish appearance that fits various settings. In conclusion, the Squeeze Bag represents a holistic solution to contemporary travel challenges, combining practicality with cultural sensitivity and setting a new benchmark in the travel accessories market through its focus on functionality, style, and sustainability. This project is essential to the preservation of the environment since it not only addresses the problem of textile waste but also encourages an Eco-conscious lifestyle. Other than that, this product also supports for Sustainable Development Goals (SDG) which is SDG 12, Responsible Consumption and Production and SDG 13 Climate Action.

ABSTRAK

Sebagai respons kepada permintaan yang semakin meningkat untuk aksesori perjalanan multifungsi, kertas ini memperkenalkan Squeeze Bag, satu penyelesaian inovatif yang direka untuk memenuhi pelbagai keperluan pengembara moden. Beg canggih ini dilengkapi dengan kompartmen terbina dalam untuk tika mudah alih, memberikan pengguna permukaan yang bersih dan selesa untuk berehat atau sebarang aktiviti, tanpa mengira lokasi mereka. Kelestarian adalah prinsip utama dalam reka bentuk Squeeze Bag, kerana ia diperbuat daripada kanvas kitar semula, yang meminimumkan impak alam sekitar dan mempromosikan amalan pengguna yang bertanggungjawab. Beg ini menawarkan kapasiti simpanan yang luas dengan pelbagai kompartmen yang direka khusus untuk organisasi optimum alat elektronik, dokumen, dan barang peribadi, menjadikannya sesuai untuk perjalanan harian, pelancongan, atau aktiviti luar. Reka bentuknya yang serbaguna membolehkan peralihan tanpa usaha antara pelbagai gaya pembawaan, membolehkan pengguna menyesuaikan mengikut keperluan sama ada sebagai beg gelas atau beg tradisional meningkatkan fleksibiliti semasa perjalanan. Tambahan pula, Squeeze Bag mengutamakan keselesaan dan kemudahan penggunaan, memastikan bahawa barang keperluan mudah diakses sambil mengekalkan penampilan bergaya yang sesuai dalam pelbagai suasana. Kesimpulannya, Squeeze Bag mewakili penyelesaian holistik kepada cabaran perjalanan kontemporari, menggabungkan praktikaliti dengan sensitiviti budaya dan menetapkan piawaian baru dalam pasaran aksesori perjalanan melalui fokusnya terhadap fungsi, gaya, dan kelestarian. Projek ini penting untuk pemeliharaan alam sekitar kerana ia bukan sahaja menangani masalah sisa tekstil tetapi juga menggalakkan gaya hidup mesra alam. Selain itu, produk ini juga menyokong Matlamat Pembangunan Lestari (SDG) iaitu SDG 12, Penggunaan dan Pengeluaran Bertanggungjawab serta SDG 13 Tindakan Iklim.

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

In a world where sustainability and outdoor convenience are becoming increasingly vital, imagine owning a product that not only enhances your camping and picnic experiences but also contributes to environmental preservation through its eco-friendly design.

Many outdoor enthusiasts face challenges in finding a versatile and sustainable bag that meets their needs for storage, navigation, and comfort during their adventures. Traditional outdoor bags often lack the functionality required for a seamless experience, leaving users to compromise on either practicality or sustainability. Furthermore, these conventional products frequently neglect the importance of integrating features that enhance safety, such as navigation tools or tracking capabilities, leading to inefficiencies and frustrations during outdoor activities.

This project introduces the Squeeze Bag made from Recycled Canvas, a thoughtfully designed product that not only simplifies outdoor experiences but also promotes environmental consciousness. Equipped with multiple compartments for efficient storage, an integrated mat for comfort, a built-in compass for navigation, and a tracker for added security, the Squeeze Bag is a game-changer for camping and picnics. By doing so, the project aims to bridge the gap between functionality and sustainability, empowering users to enjoy outdoor adventures with ease and confidence.

In the development of the Squeeze Bag, the project embraced design thinking as the guiding methodology. This approach placed the end user's campers, hikers, and picnickers at the centre of the process, fostering a deep understanding of their needs and challenges. Through extensive user research, including interviews and surveys, the project gathered valuable insights that informed critical design decisions. Ideation sessions encouraged the generation of creative solutions, and rapid prototyping enabled quick iterations based on user feedback. This user-centric approach, grounded in design thinking, was instrumental in creating a product that is not only durable and practical but also aligned with the values of sustainability and outdoor enthusiasts.

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This chapter will introduce the study by first exploring the background and context, followed by the problem statement, project objectives and questions, and the significance and scope of the study.

1.2 PRODUCT BACKGROUND

According to Wikipedia, A bag (also known regionally as a sack) is a common tool in the form of a non-rigid container, typically made of cloth, leather, bamboo, paper, or plastic. The use of bags predates recorded history, with the earliest bags being lengths of animal skin, cotton, or woven plant fibers, folded up at the edges and secured in that shape with strings of the same material. Bags can be used to carry items such as personal belongings, groceries, and other objects. They come in various shapes and sizes, often equipped with handles or straps for easier carrying.

Although tote bags are great for carrying a variety of items, they often lack proper closure, leaving contents exposed. On the other hand, backpacks provide better support and security with their zippers and straps. Despite the many styles and materials of bags available, each type has its drawbacks, such as being too bulky for everyday use, not fitting on certain occasions, or being made from materials that aren't environmentally friendly.

The material used in making a bag significantly affects the user experience, so it's essential that the fabric is of high quality. It should provide durability while also being breathable and lightweight, ensuring that it doesn't cause discomfort during use. Additionally, the right material can help protect the contents from moisture and wear, preventing any damage to the items inside.

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1.3 PROBLEM STATEMENT

Despite the increasing demand for multifunctional bags that align with modern lifestyles, there remains a notable gap in the market for products that seamlessly blend practicality with sustainability. Many current offerings fall short in terms of organization, leaving consumers frustrated by insufficient storage options for their personal items. Moreover, while traditional mats are crucial for various activities, they often lack portability and convenience, making it challenging for users to access a clean, designated surface when needed. Additionally, most travel bags or picnic bag on the market are made from non-eco-friendly materials, raising environmental concerns and failing to resonate with consumers who prioritize sustainable and ethically sourced products. This situation results in limited choices that cater to both organizational needs and a commitment to sustainability. To address this gap, there is a pressing need for the Squeeze Bag a multifunctional travel bag designed with multiple compartments and an integrated stored mat, all crafted from recycled canvas and raincoat. This innovative solution aims to fulfil consumers' needs for organization, practicality, and environmental responsibility, offering a convenient way to carry belongings while ensuring access to a clean surface whenever necessary.

1.4 PROJECT OBJECTIVE

Objectives of our product are:

1. To design a bag that is not only functional but also lightweight and easy to carry, suitable for everyday use, travel, or outdoor activities.
2. To develop an environmentally friendly, reusable squeeze bag made from recycled materials that reduces fabric waste, promotes sustainability, and provides consumers with a durable.
3. To evaluate the level of importance of use among people who like to do outdoor activities with their loved ones.

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1.5 PROJECT QUESTIONS

1. What fabric is suitable to be used as a bag to carry goods?
2. Who is suitable to use this product?
3. What additional features can be added?

1.6 SCOPE OF PROJECT

The Squeeze Bag is made to be a useful and adaptable solution that blends lots of storage space with special features like several pockets and a built-in folding mat. It is perfect for a variety of activities, such as everyday commuting, outdoor excursions, and picnics, guaranteeing that users can easily carry their necessities while having a cozy mat ready for activities or leisure. Important characteristics include several compartments for orderly storage that prevents things from mingling and waterproof protection with PVC tarpaulin vinyl nylon to keep contents dry in damp weather. By offering a practical and versatile carrying option, this design improves the user experience.

The Squeeze Bag represents a promising innovation that addresses the need for convenience and versatility in daily activities. By combining functionality and practicality, this project has the potential to significantly enhance the experiences of individuals engaged in various outdoor. The project aims to deliver a product that meets the needs and expectations of its users, thereby contributing to their overall comfort and mobility.

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1.7 SIGNIFICANCE OF PROJECT

SWOT ANALYSIS

STRENGTH <ul style="list-style-type: none">• Custom size -We can custom the size of the product according to customer request.• Diversity of use - Can be used to carry things and can be mat.• Easy to find the main material -Can get the material for free and still in good condition.	WEAKNESS <ul style="list-style-type: none">• Lack of funding -limited capital
OPPORTUNITIES <ul style="list-style-type: none">• High number of potential users -People are looking for something convenient for them.• Market expansion -Use Instagram, Facebook, X to expand our product.• Using recycle material -We use waterproof PVC Tarpaulin Vinylon Nylon material.	THREAT <ul style="list-style-type: none">• Increasing competition -New competitors in the industry.• Changing user preference - Customer easily change preferences when purchasing products.

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1.8 OPERATIONAL DEFINITION

We named this project as Squeeze Bag because of the solution we have identified. This specific solution has been chosen after many brainstorming sessions, along with because some of the ideas or solutions have already implemented but made no change. A squeeze bag for picnics is a flexible, reusable container designed to store and dispense food easily while on the go. A squeeze bag with compartments is designed to hold various types of food, including snacks, making it versatile for activities like picnics. These bags often feature multiple sections or compartments within a single unit, allowing users to store different types of food separately. For example, snacks like nuts, dried fruit, or small crackers can be placed in one compartment, while softer foods like dips, sauces, or purees can be stored in another. This design helps keep the food organized and prevents mixing, while still providing the convenience of a compact, portable container. Each compartment is typically sealed securely to maintain freshness, and the bag is often flexible and easy to clean, making it ideal for carrying a variety of snacks and meals during outdoor trips. Besides, A canvas can be used to create a new product by serving as a flexible, visual workspace where ideas, designs, and components are developed and organized. It allows teams or individuals to brainstorm, sketch, prototype, and refine various aspects of a product, such as its features, structure, and functionality, in one cohesive space. By providing a clear overview and interactive environment, the canvas helps streamline the creative process, making it easier to innovate and bring new products to life.

1.9 SUMMARY

In conclusion, a canvas is a versatile workspace for creating new products, allowing for the organization and development of ideas, designs, and components in a cohesive environment. A squeeze bag is a reusable, food-safe container ideal for carrying snacks for picnics, with compartments to keep different items separate and fresh. These bags are lightweight, portable, and convenient for outdoor activities, helping to keep food organized and accessible. Both tools offer practical, flexible solutions for innovation and convenience in product creation and everyday use.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

This chapter focuses on the literature reviews that tailor the material to the project's objectives. The following information and other features were required.

2.2 WASTAGE IN CANVAS

Waste canvas's environmental problems are mostly caused by the overuse and disposal of materials, which lead to pollution and resource depletion. For example, the fast fashion model, which pushes customers to throw away apparel after little wear, unsold inventory, and defective products all contribute to the fashion industry's high waste output. Because synthetic textiles can take hundreds of years to break down, releasing toxic compounds into the soil and waterways, this cycle not only results in overflowing landfills but also adds to environmental damage.

Additionally, non-renewable resources and environmentally damaging methods are frequently used in the actual production of canvas. Cotton, which is used to make many canvases, uses a lot of water and pesticides, which degrades the soil and causes water shortages in the areas that produce them.

2.3 ECO FRIENDLY PRODUCT

Canvas, especially when made from organic cotton or hemp, is increasingly recognized for its eco-friendly properties and is used in various sustainable products. A study by Global Organic Textile Standard (GOTS) highlights the environmental benefits of organic cotton canvas, which is produced without synthetic pesticides or fertilizers, leading to a lower carbon footprint and reduced water usage compared to conventional cotton. Hemp, another material often used for canvas products, is naturally resistant to pests, grows quickly, and requires minimal water, making it an even more sustainable option, according to research published by The European Industrial Hemp Association (2018).

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Eco-friendly canvas products, such as tote bags and backpacks, have been gaining popularity as replacements for single-use plastic items. Research by The Environmental Protection Agency (EPA) in 2020 revealed that replacing plastic bags with canvas tote bags can significantly reduce plastic waste in landfills. The study emphasized that a single canvas tote bag can be used multiple times, extending its lifespan and reducing the need for disposable alternatives. The global shift towards reducing plastic usage has led companies and individuals to increasingly adopt canvas for everyday items, promoting a circular economy and reducing the environmental burden of single-use plastics.

2.4 SQUEEZE BAG

The squeeze bag, designed using canvas lorry fabric, offers a durable and eco-friendly solution for outdoor activities like picnics. Canvas lorry material, known for its toughness and water-resistant properties, ensures that the bag can withstand various outdoor conditions, making it ideal for carrying food and supplies. The use of canvas also aligns with sustainability efforts, as it reduces reliance on plastic or synthetic materials that are harmful to the environment. The rugged design provides durability while maintaining a stylish and functional appearance, suitable for families or individuals who enjoy picnics and outdoor gatherings.

What sets this squeeze bag apart is its smart design, featuring compartments specifically made to store food and snacks properly. These compartments allow users to organize items such as sandwiches, fruits, and snacks, ensuring they remain fresh and protected during transport. The interior is often lined with insulated material to help maintain the temperature of the food, making it ideal for both hot and cold items. This thoughtful design not only keeps food organized but also maximizes space, ensuring everything fits neatly for a hassle-free picnic experience.

2.5 SATISFACTION TOWARDS ECO FRIENDLY PRODUCT

Consumer satisfaction towards eco-friendly products, including canvas-based squeeze bags, has shown a positive trend, especially as sustainability becomes a key concern. Research from Nielsen (2018) indicates that 81% of global consumers feel strongly that companies should

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help improve the environment by offering sustainable products. This aligns with growing preferences for eco-friendly items, where consumers appreciate the durability and re-usability of products like canvas bags. The same study shows that consumers are willing to pay more for products that are environmentally friendly, especially when they meet functional needs, such as compartments for organizing food in picnic bags, which enhances convenience and usability.

In addition, a report by the Harvard Business Review (2019) revealed that products marketed as sustainable experienced faster growth compared to traditional alternatives, driven by increased customer satisfaction. Eco-friendly canvas squeeze bags cater to this demand by offering practical features like insulation for food storage, further increasing consumer appeal. Customers appreciate the combination of functionality, durability, and the environmental benefits of using fewer plastic-based products, contributing to high levels of satisfaction and repeat purchases.

2.6 DESIGN THINKING

According to Graham Tuttle 2021, Design Thinking is a process for solving problems by prioritizing the consumer's needs above all else. It relies on observing, with empathy, how people interact with their environments, and employs an iterative, hands-on approach to creating innovative solutions. Design thinking is "people-centered," which implies it makes use of data on actual consumer (human) interactions with a product or service as opposed to assumptions made by others or by an organization. To be human centered, designers must observe how users interact with a product or service and adjust enhance the user experience. The "iterative" aspect of design thinking is this. It encourages speedy prototyping and testing as opposed to protracted research or contemplation. Design thinking only functions if it is iterative, as opposed to conventional problem-solving, which is a linear process of recognizing a problem and then brainstorming solutions. It is more of a way to continuously develop your thoughts and respond to customer wants than a way to arrive at a single solution. Design thinking process involving five phase which is Empathy, Define, Ideate, Prototype and Test. It is most useful to tackle problems that are ill-defined or unknown.

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Empathy:

Gaining a thorough understanding of the consumers' needs is the first stage. In order to understand the difficulties, drives, and preferences of the user, research, interviews, and observation must be done. By putting yourself in the user's shoes, you can discover their pain spots and better comprehend the context of the problem. This entails investigating the common problems that owners of current bags encounter like Zippers might be difficult to close when a bag is too full or unorganized the annoyance of having to bring large, non-waterproof bags when going outside, forgetting necessary things, like mats, when they're needed.

Define:

Clearly defining the problem is the next step after obtaining information. This stage involves combining your empathize stage findings to identify the main problems or needs of the user that your solution should solve. As a result, a problem statement or "point of view" is developed, which directs the remaining steps of the procedure. The following are the main concerns that have been identified from Squeeze Bag such as disorganisation and trouble getting to things in conventional luggage and the incapacity of current bags to provide water resistance.

Ideate:

This is the stage of brainstorming where you come up with a tonne of different possible fixes. The objective is to not limit yourself to traditional thinking, but to think creatively and generate as many ideas as you can. Innovative thinking and a diversity of viewpoints are frequently promoted through collaborative brainstorming sessions. Ideas included creating a squeeze bag using nylon and recycled PVC tarpaulin vinyl to make a strong and designing a bag with multiple compartments.

Prototype:

The next stage after coming up with ideas that seem promising is to build inexpensive, basic prototypes of possible solutions. Models, drawings, and digital mock-ups are examples of these prototypes. Here, it's important to immediately assess the ideas' viability and get input from stakeholders or consumers. For Squeeze Bag a portable design with a creative compartment layout for simple organizing, an outer covering made of recycled tarpaulin that is waterproof

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and keeps objects dry in all-weather. A squeeze closure system that makes opening and shutting simple without sacrificing toughness.

Test:

Prototypes are tested with actual users in the last phase. Testing yields feedback that is gathered to improve the solution and prototypes. Iterative in nature, this step involves testing and refining solutions several times in response to input until the optimal result is obtained. For Squeeze Bag Feedback was gathered on aspects like ease of use and accessibility of the compartments. Durability and waterproofing in different weather conditions

2.7 SUMMARY

This chapter explains the progress of the case study and outlines why the Squeeze Bag project was selected. Several case studies related to environmental issues are referenced, particularly those highlighting waste pollution. These stories emphasize the increasing need for sustainable solutions to reduce fabric waste and environmental harm. As a result, in Chapter 3, the focus will be on the methodology of the project, detailing how it is structured and how it aims to contribute to solving the issue of waste pollution through the design of a Squeeze Bag.

CHAPTER 3 METHODOLOGY

3.1 INTRODUCTION

The purpose of methodology is to establish an underlying paradigm that supports the chosen research. Certain data collection procedures are covered under the research methods. The study, the participants, the methods (questionnaires, interviews, observations, etc.) used to gather research data from participants, as well as how to assess the information gathered from participants; will all be covered in this chapter. Any requirement to analyze the process to gain insights consequently. The technique also requires a systematic process to satisfy the requirements of scientific, scientific methodology, and quality. In this chapter, the term "methodology" refers to the process of putting a research or piece of knowledge into practice to achieve its goals. The study will be more meticulous and organized overall.

3.2 PROJECT DESIGN

Squeeze Bag has determined that adopting the Design Thinking Process as a framework in the design and development of the product is the most effective method to proceed. Other than that, a qualitative research method was applied to produce this product, in which we distributed a questionnaire to 30 participants among the researchers and collected their responses to know the respondent's feedback on our product Squeeze Bag.

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3.2.1 FLOW CHART DESIGN

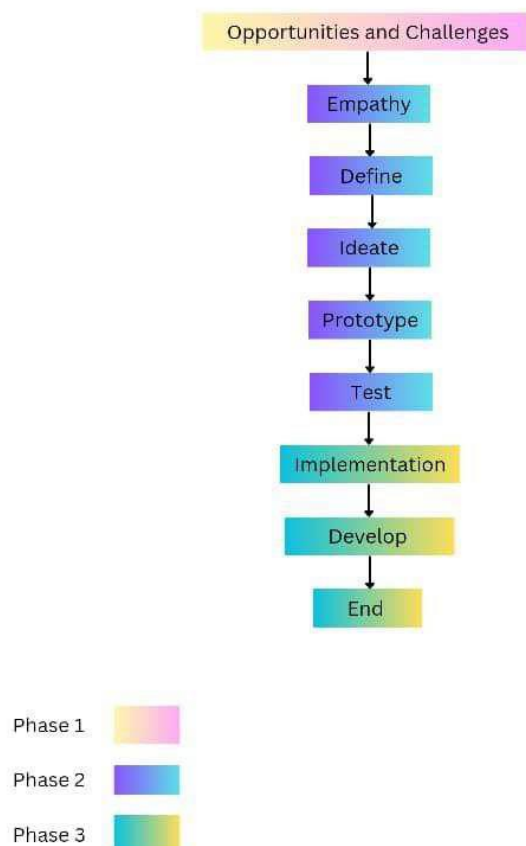


FIGURE 3.1: PROJECT FRAMEWORK

3.2.2 OPPORTUNITIES AND CHALLENGES

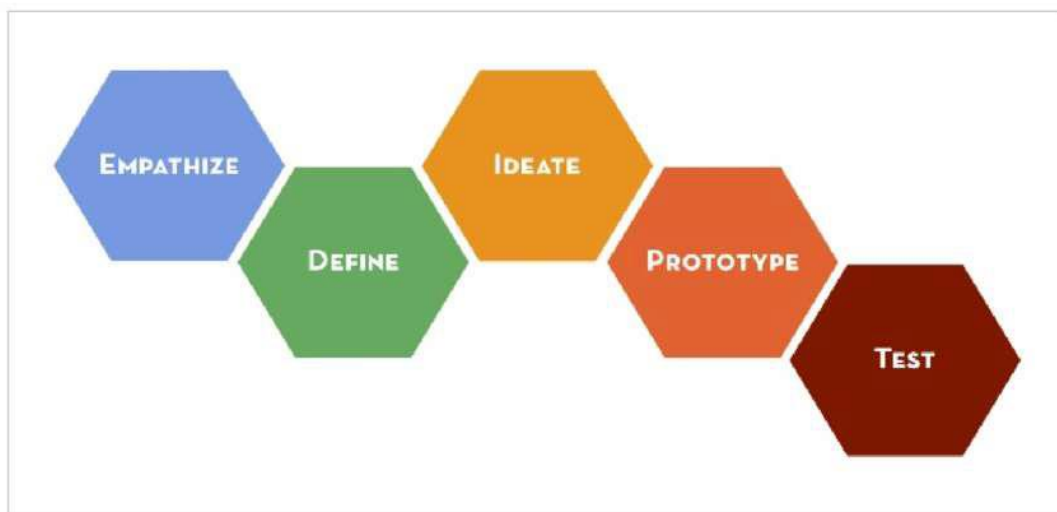
The opportunities that we have in doing this project of creating a Squeeze Bag is that we are recycle truck canvas that is changed every 6 months. We view this as an opportunity to help protect the Earth from rising temperatures caused by the release of harmful gases from waste incineration. As a result, we have decided to repurpose discarded canvas to create new, useful, and beneficial products. Our goal is to assist society in reducing global waste as much as possible while producing items that offer value to everyone.

Next for the challenges we face, people have limited awareness of the benefits of repurposing truck canvas into new products. Since they have never seen or bought products made from truck canvas, it becomes challenging to convince them to make a purchase.

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3.3 METHOD /PROCEDURE /PROJECT PRODUCTION TECHNIQUE

The Design Thinking Process was used to design the product in this project. It takes a significant amount of time to Empathize, Define, Ideate, Prototype and Test to guarantee that the product development process follows all the necessary procedures. Aside from that, this strategy is extremely beneficial to our project because having clearly defined stages make it easier to create great multipurpose bag, which in turn helps our product follow all the aspects necessary to achieve the objective of creation Squeeze Bag.



3.3.1 EMPATHY

Empathy was done by interviewing and handing out questionnaires young to middle age people. From the questionnaire and interviews we found out that, some young people struggle when leaving the house because they face difficulties carrying all their belongings in one bag. The limited space makes it hard to separate personal items from other things.



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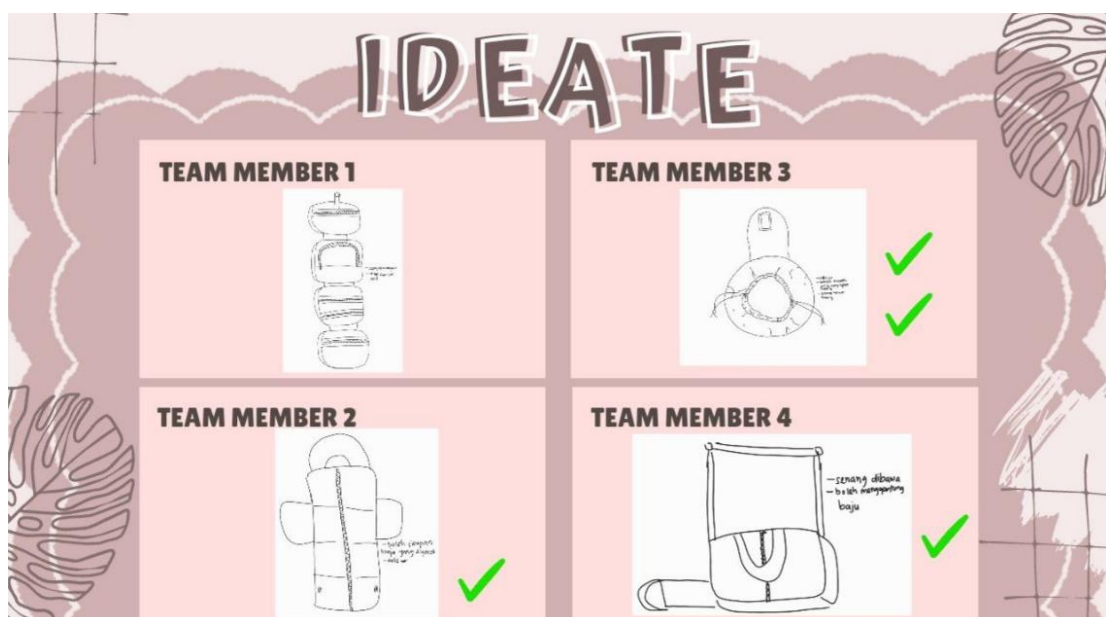
3.3.2 DEFINE

After empathizing, a small sample revealed that many young people bring too many bags when they go on picnics and they think it's not convenient. They said it was hard to find a bag that could carry their item as well as their mat. They want to find a bag that can accommodate all their belongings without the need to carry multiple bags when going for a picnic or hiking.



3.3.3 IDEATE

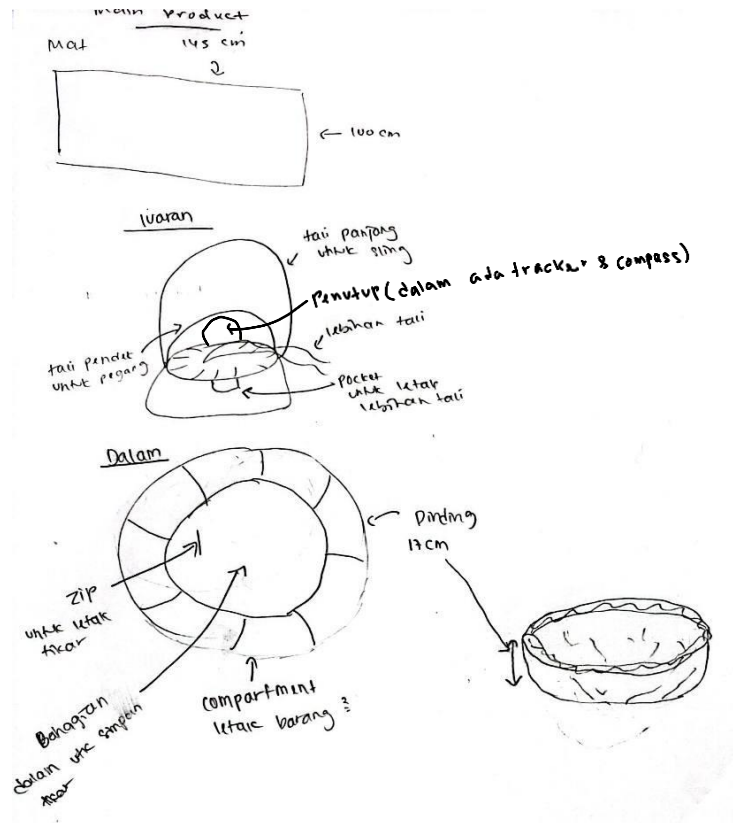
After clearly identifying the issues, we conducted a brainstorming session to explore various ideas for solutions. By eliminating those already implemented by the government, readily available to the public, or offering only temporary fixes without addressing the root of the problem, we narrowed down our options to a few promising ideas. These will be used to create a prototype for our users.



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3.3.4 PROTOTYPE





After shortlisting our ideas, we brought our ideas to life by creating a prototype. The rough prototype was named Squeeze Bag by putting in the solutions to test it out and highlight any constraints or flaws. We added device tracker and compass to our product.



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3.4 MATERIALS AND EQUIPMENTS

This phase is very important because every group member helps ensure the product is made and finished on time. The steps to complete the product are as follows:

Equipment/ Materials	Picture
1. PVC WATERPROOF TARPAULIN VINYLON NYLON.	
2.RAINCOAT WATERPROOF PVC	
3.VELCRO	
4.TALI NYLON	

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3.5 METHOD OF COLLECTING DATA

The data for this study will be collected from respondents ranging from young to middle-aged individuals using a questionnaire. The questionnaire is provided via Google Forms, accessible through this link https://docs.google.com/forms/d/1X_V-KVkiPYNILBH68IG_VuVYt_AurEj3Do0aHgFzjuU/edit . A total of 40 respondents will participate in the survey. Based on their responses, we will analyse the data to achieve our study objectives. If any respondent declines to participate, the questionnaire will be distributed to another individual within the same target group.

3.6 SUMMARY

The Squeeze Bag project is being implemented using the Design Thinking Process, as it provides a more effective approach to achieving our product objectives. Several factors must be carefully considered to avoid any shortcomings. The choice of materials is crucial to the successful creation of the Squeeze Bag, requiring thorough research and careful execution throughout the production process. Additionally, feedback from respondents will influence the design and ensure high demand for the product once it is launched.

CHAPTER 4: RESULT AND DISCUSSION

4.1 INTRODUCTION

This chapter will discuss the analysis of data that has been carried out for this project. The layout of this chapter is divided into several subtopics that illustrates on the method of analysis for this project. This section will explain the details results from the testing and survey that has been conducted.

4.2 RESEARCH / TESTING FINDING

Data analysis was performed using Statistical Package for Social Sciences (SPSS) Version 22.0 software. Descriptive statistical methods of mean score evaluation and standard deviation are used to measure the level of knowledge on the nine pillars of 4IR in education. The percentage analysis of the demographic information of the respondents is presented in Table 4 in the findings section. Additionally, the mean score analysis for the level of knowledge regarding the application of the 9 pillars of 4IR in education is shown in Table 7 in the findings section as well. The interpretation of the mean score value refers to Landell (1977), as shown in Table 5 below:

4.2.1 TESTING

The prototype testing phase for the Squeeze Bag was conducted to assess the usability, functionality, and overall user experience. The primary goal was to gather user feedback and identify potential improvements before moving into the final development /implement phase. Users feedback were categorized using feedback grid as shown below.

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Table 4.0 : Feedback and Suggestions for the Squeeze Bag

Category	Feedback/Suggestions
What worked well	<p>The bag's multiple compartments make it convenient for organizing camping and picnic essentials.</p> <p>The integrated mat is highly practical for outdoor use.</p> <p>Eco-friendly design using recycled canvas appeals to environmentally conscious users.</p> <p>Built-in compass and tracker add value and functionality for outdoor activities.</p>
What could be improved	<p>The bag's weight could be reduced for easier portability during long hikes.</p> <p>The tracker sometimes shows slight delays in location updates.</p> <p>Limited colour options may not appeal to diverse user preferences.</p>
Questions	<p>How durable is the bag under extreme weather conditions?</p> <p>How easy is it to clean the recycled canvas material?</p> <p>Can the bag accommodate heavier loads without wear and tear?</p>
New ideas	<p>Offer additional sizes to cater to solo travellers and larger groups.</p> <p>Introduce waterproof compartments for storing electronics and valuables.</p> <p>Enhance the tracker with SOS functionality for emergencies.</p> <p>Include modular attachments for added versatility, like detachable bottle holders or utensil pouches</p>

The prototype testing phase was successful in uncovering insights into the user experience. Overall, users found the prototype engaging and user-friendly, but identified specific areas that require refinement. Based on the above feedback, participants provided valuable feedback on the prototype, highlighting both positive aspects and areas for

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improvement. Common themes in the feedback grid include: What worked, what could be improved, new ideas and new question. It was identified that users are satisfied with the Squeeze Bag because it offers practical features like multiple compartments, a built-in mat, and eco-friendly materials, making it ideal for outdoor use. However, the bag's tracker sometimes experiences delays in location updates. There is room for improvement in enhancing the tracker's real-time functionality for better reliability during outdoor activities.

4.2.2 PUBLIC RESPONSE TOWARDS SQUEEZE BAG

The Landell method was used to grade the mean score to 3 main criteria, as in Table 4.1 In this study, the researcher selected the Landell method, due to the mean score range value for the best level (Good / Agree), is high at 3.80 - 5.00. This high mean score value gives reliable analysis results because the range for the score is high.

Table 4.1 Landell method

Score Landell	Comprehension / Acceptance Level
1.00 – 2.39	Unsatisfactory / Strongly Disagree
2.40 – 3.79	Moderate / Disagree
3.80 – 5.00	Good / Agree

Table 5:
Mean Score Interpretation

Mean Score	Level
3.68 – 5.00	High
2.34 – 3.67	Moderate
1.00 – 2.33	Low

Source: Adapted from Management by Menu (p432), by Landell (1977). London: Wiley and Sons.

Descriptive Statistics

Respondent's	Demographic	Frequency	Percentage %
Age	18-21	28	70%
	22-24	5	12.5%
	25-27	0	-
	28 and above	7	17.5%
Gender	Male	10	25%
	Female	30	75%
Occupation	Employed	10	25%
	Self-Employment	4	10%
	Students	26	65%
	Other	0	-

Table 4.2 : Profile of Respondents

The table presents the demographic profile of respondents who provided feedback on the Squeeze Bag. Most respondents (70%) are aged 18–21, followed by 12.5% aged 22–24, with no respondents in the 25–27 age group. Regarding gender, 75% are female, while 25% are male. In terms of occupation, the majority (65%) are students, followed by 25% who are employed, and 10% who are self-employed.

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Code		Number of respondents	Mean	Std. Deviation
POL 1	The squeeze bag met my expectations for durability and quality.	40	3.78	0.475
POL 2	I found the squeeze bag appearance appealing and aesthetically pleasing.	40	3.29	0.716
POL 3	The squeeze bag is worth the money spent on them.	40	3.68	0.567
POL 4	Using the squeeze bag felt like an environmentally friendly choice.	40	3.78	0.419
POL 5	I would consider recommending the squeeze bag to others.	40	3.63	0.581
Valid N (list wise)		40		

Table 4.3 : SSPN Analysis of Respondents

Squeeze Bag provides important statistical information to analysis and make a decision that enable to accomplish tasks. Table 2 shows that the highest mean score is POL 1 and POL 4 which is “The squeeze bag met my expectations for durability and quality” with a mean score of 3.78 and “Using the squeeze bag felt like an environmentally friendly choice” with a mean score of 3.78. The standard deviation for the questions is 0.475 and 0.419 which means a standard deviation shows that the data are clustered closely around the mean (more reliable). The lowest mean score is " I found the squeeze bag appearance appealing and aesthetically pleasing.", with a mean score of 3.29. The standard deviation for this question is 0.716 which means a standard deviation shows that the data is widely spread (less reliable).

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4.3 DISCUSSION

Based on the data presented in the table, we can analyse the responses from participants regarding their experiences with the squeeze bag. Each item has been evaluated based on the mean and standard deviation scores, which provide insight into the respondents' overall perceptions. The highest mean score, at 3.78, is shared by two aspects: *"The squeeze bag met my expectations for durability and quality"* (POL 1) and *"Using the squeeze bag felt like an environmentally friendly choice"* (POL 4). This indicates that respondents strongly valued the product's durability, quality, and its eco-friendly characteristics. These results highlight the importance of these factors in influencing customer satisfaction and affirm the bag's alignment with sustainability trends in the market. On the other hand, the lowest mean score, 3.29, is associated with the aspect *"I found the squeeze bag appearance appealing and aesthetically pleasing"* (POL 2). While this score still indicates a relatively positive response, it suggests that there is room for improvement in the bag's design and visual appeal to better meet user expectations. The remaining items, *"The squeeze bag is worth the money spent on them"* (POL 3) and *"I would consider recommending the squeeze bag to others"* (POL 5), have mean scores of 3.68 and 3.63, respectively. These results reflect that respondents generally perceived the bag as a valuable purchase and are likely to promote it to others, suggesting a strong potential for word-of-mouth marketing. The standard deviations for all items are relatively low, ranging from 0.419 to 0.716, indicating consistency in the responses among the participants. This consistency supports the reliability of the data collected. In summary, the survey results underscore the squeeze bag's appeal in terms of functionality and environmental friendliness, while also suggesting potential for design enhancements. The overall positive feedback suggests that the product has strong potential for success in its target market, particularly with targeted improvements to its aesthetic appeal.

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4.4 SUMMARY

The survey results indicate that the Squeeze Bag is perceived as an innovative and highly practical product for camping and picnics. Users appreciate its functionality, eco-friendly design, and versatility, which cater to outdoor enthusiasts. Equipped with multiple compartments, an integrated mat, a built-in compass, and a tracker, the Squeeze Bag offers convenience, safety, and adaptability for various outdoor activities. Since its introduction, the bag has garnered positive feedback for its thoughtful design and sustainable materials, demonstrating its appeal to environmentally conscious users. Key features, including the ample storage space, portability, and added tools for navigation and relaxation, are particularly valued. In conclusion, this eco-friendly product enhances the outdoor experience by combining practicality and sustainability. Continuous attention to user feedback and potential feature upgrades will ensure its lasting appeal and may broaden its functionality to meet evolving user needs.

CHAPTER 5 :CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

This chapter presents the conclusion of our analysis of the Squeeze Bag, a unique, multifunctional travel accessory created to meet the diverse needs of modern consumers. Our research and market analysis highlighted a strong demand for products that combine convenience, organization, and versatility. The Squeeze Bag addresses these needs with features such as multiple compartments for optimized storage and a dedicated space for a portable mat, which provides users with a clean, comfortable surface whenever needed.

Our findings suggest that the Squeeze Bag's innovative design resonates well with the target market, positioning it as a competitive offering in the travel accessories sector. Its emphasis on organized storage and multifunctionality appeals to consumers seeking a product that can seamlessly integrate into various travel and lifestyle scenarios. Based on these insights, the Squeeze Bag holds significant potential for success in meeting consumer preferences within this market.

5.2 CONCLUSION

In conclusion, the main goals stated at the beginning of the project have been effectively met by this final year project, "Squeeze Bag." We addressed important consumer concerns, particularly those related to portability, ease of use, and packaging. Squeeze bags are a creative solution that provide a practical, eco-friendly, and space-saving substitute. We were able to create, test, and develop the squeeze bag during this project, and we were able to do so by getting insightful input from our target market.

Choosing materials, testing for durability, and making sure the design was user-friendly were some of the difficulties that arose during the research and development stage. But by working together and addressing problems continuously, we were able to get beyond these obstacles and create a working prototype that satisfies customer expectations. Our product testing yielded encouraging results, with customers expressing satisfaction with functionality, storage efficiency, and convenience of use.

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We were also able to learn a lot about market trends, consumer preferences, and the environmental effects of different packaging materials thanks to this initiative. We were able to develop our product and make well-informed decisions on its production and future enhancements thanks to the data that was gathered. The squeeze bag can help several industries by offering a convenient and mess-free solution.

In the end, the squeeze bag's price, usefulness, and sustainability make it a competitive product in the market. We think that consumers seeking a more effective and environmentally responsible method of packaging and using liquids or semi-solids will embrace the squeeze bag with further development and promotion. In addition to improving our knowledge of product development, this project has given us the ability to address practical design and innovation problems.

5.3 RECOMMENDATION

To maximize the Squeeze Bag's potential in the travel accessories market, we recommend a focused marketing strategy that highlights its unique features, such as the multi-compartment storage system and portable mat compartment. Targeted campaigns could emphasize its value to frequent travellers, outdoor enthusiasts, and individuals looking for a versatile everyday bag. Collaborating with influencers in the travel and lifestyle sectors could further enhance brand visibility and credibility among key consumer segments.

Additionally, incorporating sustainable materials in the Squeeze Bag's production process could attract eco-conscious consumers, adding a competitive edge in the growing market for environmentally friendly products. Expanding customization options—such as different colours, sizes, or interchangeable compartments—would allow consumers to personalize their bags to fit their unique needs, potentially boosting overall customer satisfaction and brand loyalty.

5.4 PROJECT LIMITATIONS

When it comes to product development, there will always be benefits and drawbacks, and these difficulties are what spur innovation. There are certain limitations on our squeeze bag that may affect how it is made and used. The success of the product depends on overcoming these limitations, which may change over time. Here are several important limitations:

1. To design a bag that provides optimal organisation and functionality.
2. To provide a premium, multipurpose bag at a reasonable cost.
3. To develop an attractive, practical design that appeals to a wide audience.

The first limitation is the difficulty of designing a bag that offers the most storage and utility. Although there are a lot of bags available, not many provide the degree of variety and organisation that our Squeeze Bag seeks to offer. Our objective is to provide a number of sections, a movable mat section, and convenient storage without sacrificing the bag's total weight or size. It is challenging to create a product that achieves this balance, though, and calls for rigorous preparation and creativity.

Affordability is the second constraint. Although there are already multipurpose bags on the market, many of them cost more because of the materials and cutting-edge functions they contain. Our task is to design a bag that offers similar functionality at a cost that a wider range of consumers, particularly those who might be on a tight budget, can afford. Our goal is to provide a cost-effective solution without compromising on essential features or quality, which calls for effective material sourcing and production.

Creating a visually appealing and useful design is the last constraint. In addition to prioritising utility, we also want the bag to appeal to a wide range of consumer preferences. It is challenging to determine the optimal design direction in this category due to the absence of a definite market leader. Furthermore, we must strike a balance between originality and pragmatism due to our limited budget for design development to guarantee that the design appeals to customers without going above our means. By removing these limitations, we can endeavour to produce a premium, reasonably priced, and useful squeeze bag that satisfies the demands of a broad spectrum of consumers.

5.5 SUMMARY

In summary, during this final year project, we have determined the project's limitations and suggestions. While working on this project, we also optimised the squeeze bag's production cost to enhance both its design and functionality. This is because our target market consists of people looking for an eco-friendly, practical, and convenient packaging solution. Based on this squeeze bag project, we were able to provide a product that is inexpensive, reusable, long-lasting, and easy to use to maximise user pleasure. As proof, we got a lot of good feedback from the squeeze bag's product testing, which shows that people really like it.

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APPENDICES

GANTT CHART

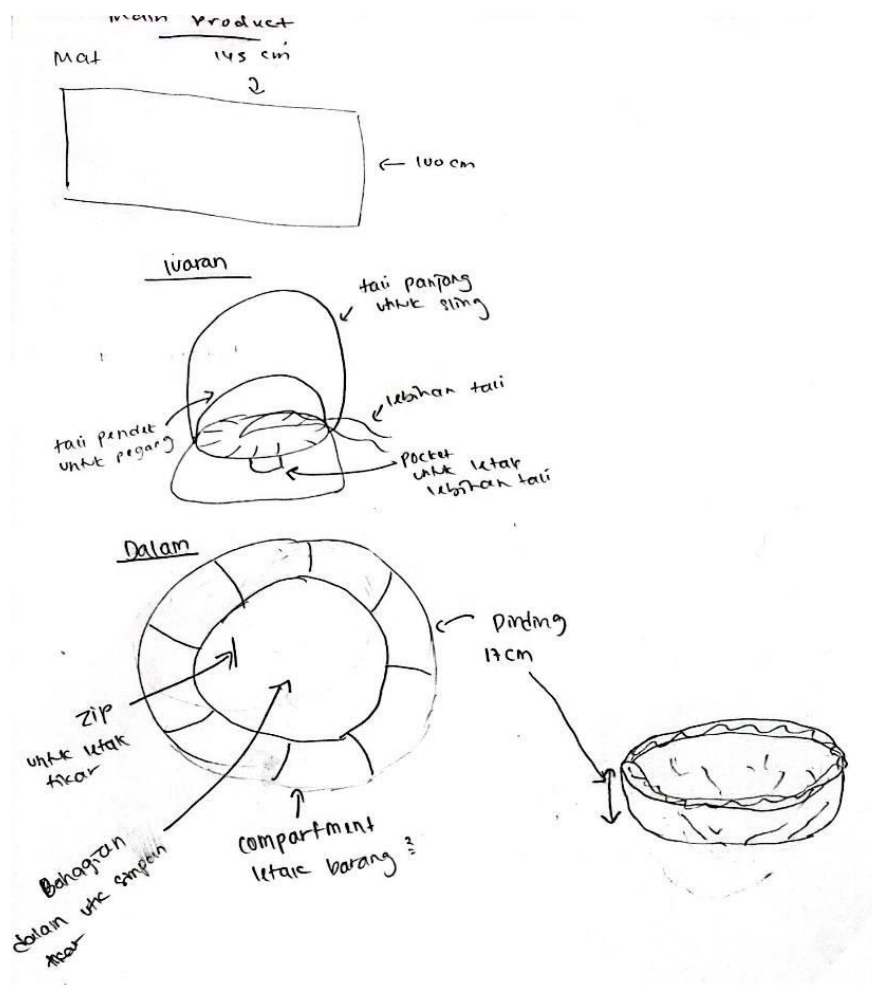
GANTT CHART	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9	W1 0	W1 1	W1 2	W1 3	W1 4
Title determination														
Literature review														
Supervisor consultation														
Proposal preparation														
Instrument and data collection preparation														
Data analysis														
Project draft writing														
Revision and Final draft														
Final project submission														

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PROJECT COST ESTIMATE

MATERIAL AND EQUIPMENTS	UNITS	RM
Canvas (recycle)	1	0
Raincoat (recycle)	1	0
Tailor's fee	1	100
	TOTAL	100

PRODUCT SKETCH



SQUEEZE BAG

QUESTIONNAIRES

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B *I* U [↗](#) ~~X~~

Thank you for spending time to answer this survey. We appreciate your time and honest feedback. This survey is about our final year project called Squeeze bag.

⋮ *

The squeeze bag met my expectations for durability and quality .

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

⋮ *

I found the squeeze bag appearance appealing and aesthetically pleasing.

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

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The squeeze bag is worth the money spent on them. *

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree

Using the squeeze bag felt like an environmentally friendly choice. *

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree

I would consider recommending the squeeze bag to others. *

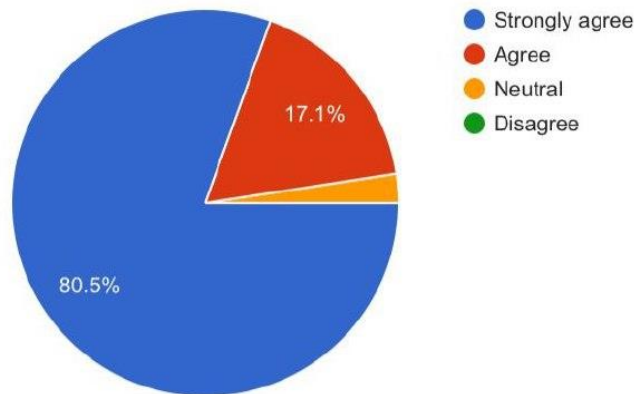
- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree

SQUEEZE BAG

 [Copy chart](#)

The squeeze bag met my expectations for durability and quality .

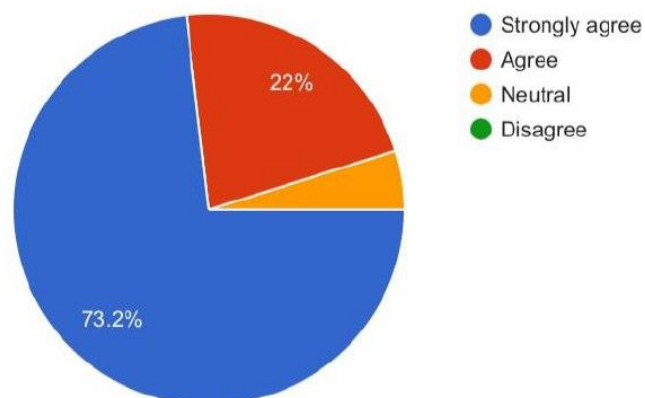
41 responses



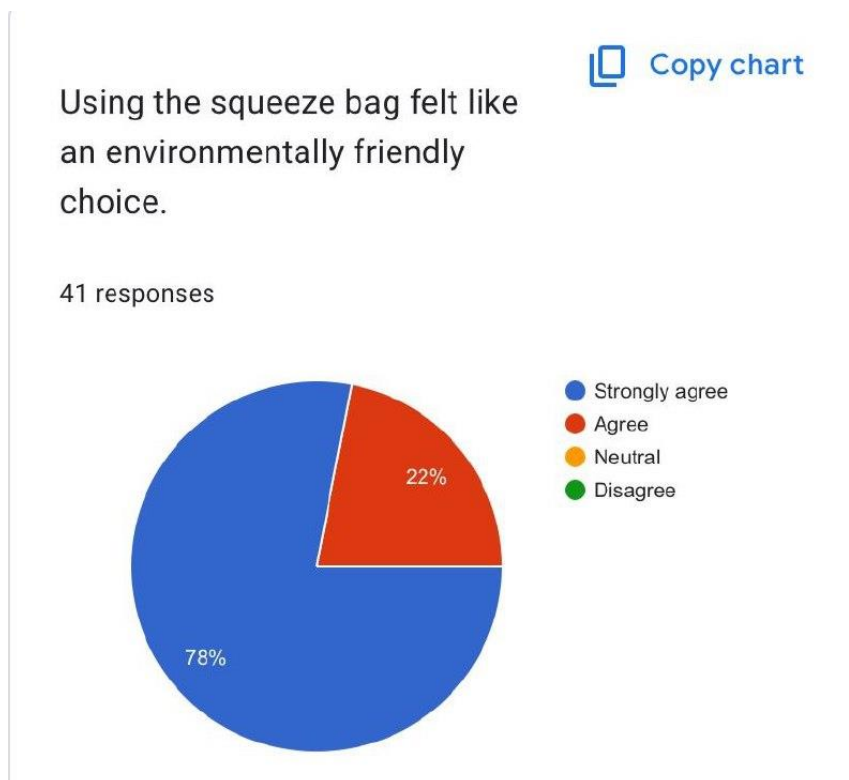
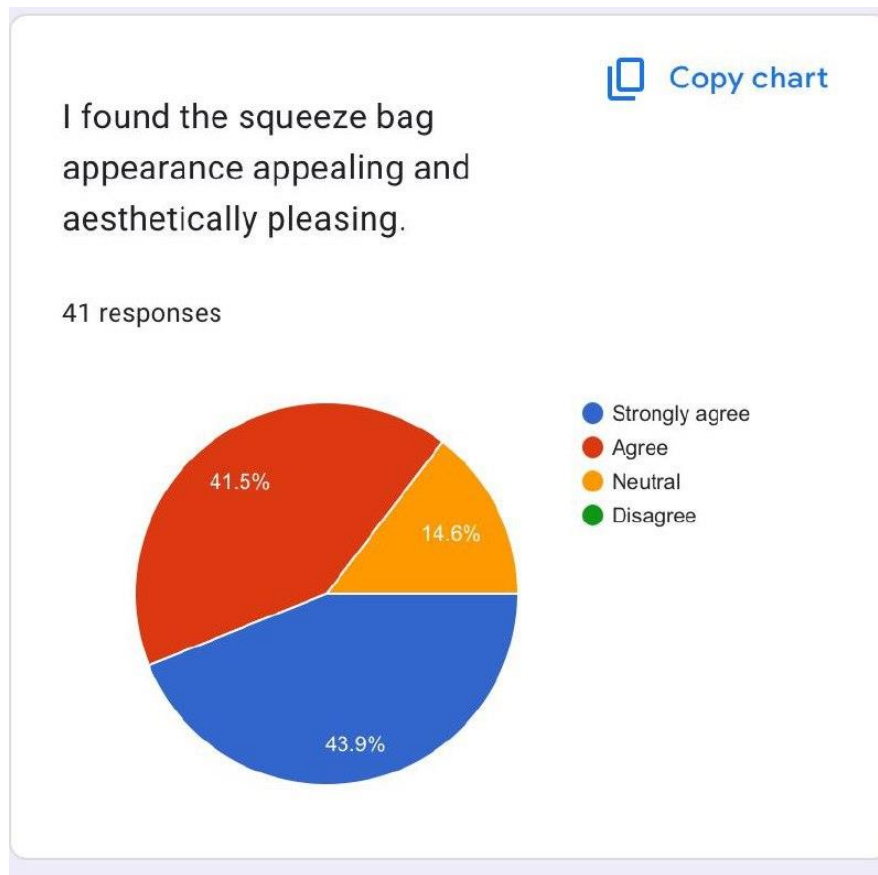
 [Copy chart](#)

The squeeze bag is worth the money spent on them.

41 responses



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I would consider recommending the squeeze bag to others.

 Copy chart

41 responses

