POLITEKNIK BANTING SELANGOR

BASECOMPHUB

NAME	MATRIX NO
NIK ALIA SURAYA BINTI NIK MOHAMMED	24DAM22F1010
YOGANANDA A/L RAMU	24DAM22F1055
IKHMAL HAFIZ BIN ABDUL MALEK	24DAM22F1040
SASHVIN RAAO A/L MUNESPARO RAO	24DAM22F1061

DEPARTMENT OF AIRCRAFT MAINTENANCE

SESSION 1 2024/2025

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A REPORT SUBMITTED TO DEPARTMENT OF AIRCRAFT MAINTENANCE IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR A DIPLOMA ENGINEERING IN AIRCRAFT MAINTENANCE

SUPERVISOR:

MR. MOHAMMAD SUFFIAN BIN ABDUL LATIB

REPORT ENDORSEMENT

This report is being submitted, reviewed, and endorsed to fulfill the conditions and requirements of report writing as specified.

Checked by:

Supervisor's Signature :

MOHAMMAD SUFYAN BIN ABDUL LATIB
Pensyarah
Jabatan Penyenggaraan Pesawat
Politeknik Banting Selangor

Supervisor's Stamp:

Date: 22/11/2024

Endorsed by:

Project Coordinator's Signature :

Project Coordinator's Stamp :

KHAIRUL IZWAN BIN ISMAIL
Pensyarah
Jabatan Penyenggaraan Pesawat
Politeknik Banting Selangor

Date : 3rd December 2024

CERTIFICATION OF PROJECT ORIGINALITY & OWNERSHIP

BASECOMPHUB

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"We hereby declare that this report is the result of our own work, except excerpts that we have outlined its sources and this project will be the ownership of polytechnic.

SIGNATURE : WRITTER 1

SIGNATURE: WRITTER 2

SIGNATURE: WRITTER 3

SIGNATURE: WRITTER 4

Endorsed By,

(SUPERVISOR SIGNATURE)

(SUPERVISOR's STAMP)

DATE: 22/11/2024

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Finally, I would like to express my sincere gratitude to everyone who helped me finish this thesis. I am grateful to have had the chance to work with such remarkable people, and your advice, encouragement, and support have been priceless.

ABSTRACT

As composite materials become used in an increasing number of applications in various fields, their understanding is becoming more critical for characterization and operation processes. This project aims to design an interactive learning website on composite knowledge with interactive elements to enhance learner engagement and understanding. For this, immersive visual experiences, along with elaborate 3D models and animations, will be employed to intuitively communicate complex concepts. Interaction with the subject matter is enhanced through the inclusion of games and quizzes, allowing for a more hands-on interactive learning experience. The website attempts to bridge the gap between theoretical knowledge and practical application by integrating education with innovative digital tools, thereby affording learners an enjoyable and accessible means of mastering the concepts of composite materials.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Nowadays if anyone would like to work with composite repair in aviation industry, they need to learn theory first then take a practical class to test their skills. Learners usually learn theory with a physical book or online notes that is not organised.

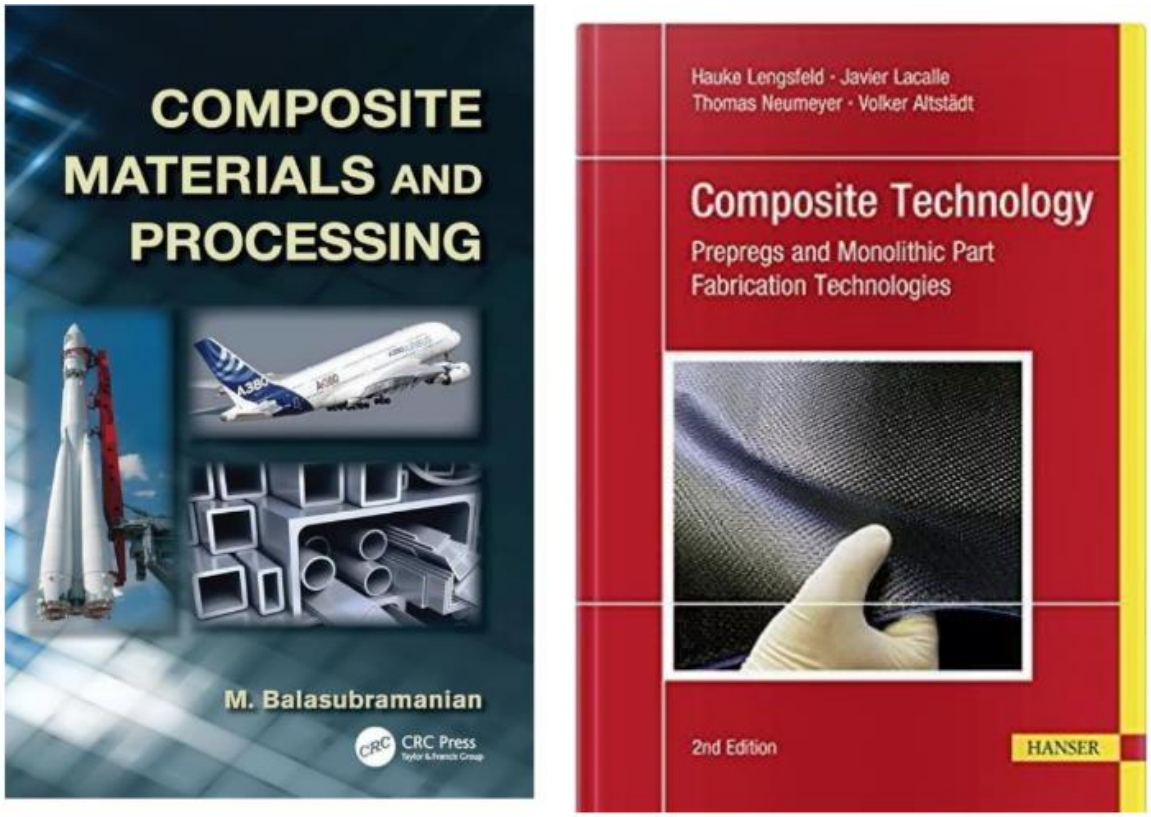


Figure 1 : Physical Book (goole.inc)

Physical book is so heavy and not convenient to bring to class because it is too thick. Students can be lazy to bring a thick book to class. Online notes sometimes can be boring to read if the content is full of text and picture only. Readers will not be interested to learn composite by just reading and reading.

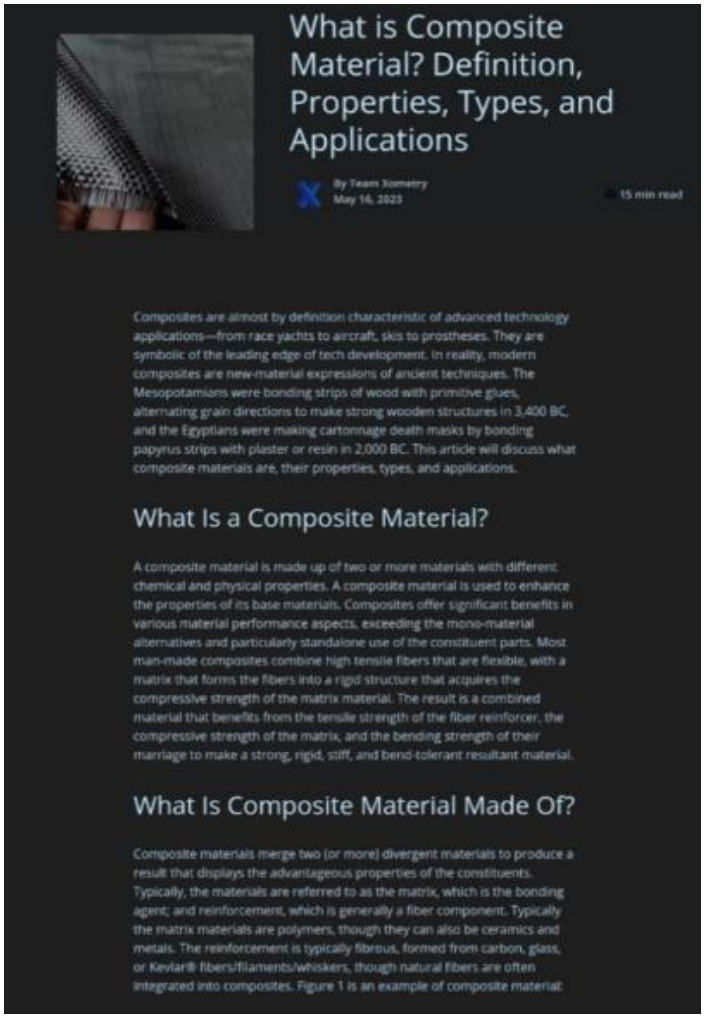


Figure 2: Example of website notes (theengineeringchoice.com, Inc, n.d)

We found out from our survey that we conduct, most of students like to study while playing games. This can help them to stay focus and enjoy the study too. Game such us Kahoot! It's a free games-based learning platform that makes it fun to learn.

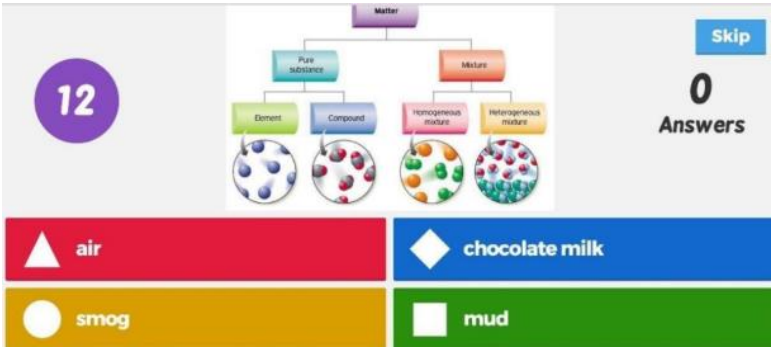


Figure 3: Example of Kahoot! Game (kahoot.it, Inc, n.d)

1.2 PROBLEM STATEMENT

Lightweight characteristic is an important priority to aircraft nowadays because it helps them to use less fuel. The main groups of materials used in aircraft construction are steel, aluminium alloys, titanium alloys and fibre reinforced composites. Nowadays, the use of composites has been expanded up to 52% of total weight of the aircraft by covering most of the secondary structures and some of primary structures. For example, on Airbus A350 XWB, the wing structures and fuselage was made from carbon fibre reinforced plastic. Over 53% of the aircraft fuselage was composed of composite materials to ensure convenient maintenance and minimising weight and fuel consumption.

Figure 4: Composite material applications on A350 XWB

Thus, basic knowledge of composite materials is very important for maintenance personnel to work with. Banting Polytechnic doesn't provide composite courses. They only provide theories of composites as a subtopic in Module 6: Material and Hardware. They didn't provide practical learning scope for students. Some students took composite workshops outside but not all of them will understand and pass. Some of them won't retake the course because it's expensive.

1.3 PROJECT OBJECTIVES

General Project Objective

- Developing an interactive learning website about composite knowledge
- Help learners engagement through immersive visual experience and interactive games.

Specific Individual Project Objectives

Product Structure (Nik Alia)

- Design the framework for the website, including logical page hierarchies, navigation, and layout.
- Ensure scalability and adaptability of the website for future content updates.

Product Mechanisms (Sashvin Raao)

- Develop interactive modules that simulate composite repair processes.
- Incorporate real-time feedback mechanisms to guide users through repair scenarios.

Software / Programming (Yogananda)

- Write and implement code for website functionality, including interactive features and content display.
- Integrate a database for storing repair resources and user profiles.

Accessories & Finishing (Ikhmal Hafiz)

- Create a visually appealing interface using appropriate design principles.
- Add finishing touches, such as responsive design and cross-platform compatibility, to ensure a seamless user experience.

1.4 PURPOSE OF PRODUCT

- Serve as an educational platform for students and professionals learning composite repair.
- Simplify access to repair guidelines, tutorials, and tools.
- Enhance the efficiency and effectiveness of composite repair tasks through digital resources.

1.5 SCOPE OF PROJECT

General Project Scopes

- Provide comprehensive information on composite materials and repair techniques from notes and games.
- Include interactive modules and video tutorials for hands-on learning.
- Ensure accessibility and ease of use across devices and platforms.

Specific Individual Scopes

Product Structure (Nik Alia)

- Develop a detailed sitemap and organize content into logical sections (materials, repair techniques, tutorials).
- Ensure easy navigation with clearly labeled menus and submenus.

Product Mechanisms (Sashvin Raao)

- Implement features like step-by-step guides, damage diagnosis tools, and repair calculators.
- Develop repair simulation modules to enhance user engagement.

Software / Programming (Yogananda)

- Use appropriate programming languages and frameworks to build the website and games (Wordpress and Unity).
- Integrate backend functionality to support user accounts, resource downloads, and data analytics.

Accessories & Finishing (Ikhmal Hafiz)

- Finalize the visual design, ensuring consistency in typography, color schemes, and imagery.
- Optimize website responsiveness and loading speed for different devices.

CHAPTER 2

LITERATURE REVIEW

2.1 GENERAL LITERATURE REVIEW

Education Industry in Malaysia

Compared to different informal and non-formal forms of socialisation, education is the field that studies teaching and learning strategies in classrooms or settings similar to schools. Lectures and students typically have something to do with education. These days, there are many different kinds of learning methods. Students had a lot of trouble accessing information about their studies in the 1990s because the internet had not yet developed, and they were having a hard time studying because the only way they could obtain information was through their books. These challenges only affect people who were born in the 1990s after the advancement of education.However, we now live in a modern era with the internet and a variety of educational tools that are applicable to our sector. Since there are numerous strategies to make studying easier, education has become more effective for students.

Aircraft Composite Repair Workshop Explanation

A composite repair shop for aircraft is a type of machine room that deals with unique challenges related to the maintenance or restoration of advanced composite products belonging to many modern example of aviation. With the fundamental necessity of tools, equipment and skilled professionals to repair structural damage like delamination, cracks and pockmarks on these aircraft, these workshops provide a key function in preserving safety through performance. Composite materials, prized for their strength-to-weight ratio and durability, have made these workshops key players in the aviation sector.

These workshops come equipped with advanced tools and technology to cater to diverse repair needs. Curing ovens, autoclaves, vacuum bagging systems and ultrasonic inspection devices for non-destructive testing (NDT) are examples of essential equipment. Repair is performed under dedicated clean rooms ensuring no contamination, and special temperature- and humidity-controlled zones enable accurate handling of the materials. Divided workspaces also help with crucial phases such as sanding, lay-up, bonding and curing at the highest accuracy and quality.

Besides repairs, these workshops also act as educational and training centers. They offer actual hands-on experiences for technicians, apprentices, and engineering students to learn the advanced composite repair techniques like resin application, structural bonding, and the fiber lay-up methods. Additionally, the places of these activities are the sites of research and development efforts, where the repairing techniques that are now available are tested and improved to be in accordance with the technology that is evolving in the aircraft sector.

In addition, these composite repair workshops support the industry and also the academia through the cooperation with the aviation authorities and the manufacturers. They are the ones that assist in the testing and also the certification of the repairing methods and they are also the ones that help in the making of the tools and fixtures that are specialized for the maintenance operations. This dual emphasis of being on the one side very practical and on the other side being innovative, is the reason why workshops always remain at the forefront of the advancements of composite repairs.

Through the integration of high tech equipment, well-trained professionals, and a steadfast devotion to quality, composite repair workshops form a mainstay of the aviation industry. They eliminate the risk of aircraft losing their structural integrity, not passing the safety tests, and becoming inefficient as a result of wear and tear during their working life.

Types of basic aircraft composite repair in websites

1. Delamination Repair: The delamination repair procedure consists in the preliminary step of carefully removing the damaged layers of composite material, treating the exposed surfaces, and thus bonding the layers back together to Refurbish the aircraft's structural integrity and its original strength.

2. Crack Repair: This technique consists of, first of all, examining the cracks that are developed in the composite material, washing the adjacent area, and then closing and uplifting the cracks to avoid the expansion of the damage, thus confirming the aircraft's safety and performance as well.

3. Puncture Repair: The job extends to filling and reinforcing holes that are caused by impacts or other external damage and a special material is used to make this repair. A composite material is used to regain the aircraft's strength and durability in order to meet safety standards.

4. Bonding and Laminating: The process of rebuilding and strengthening the damaged structure starts with the resin and fabric application followed by the careful bonding and laminating of these materials, thus the damaged ones gained back their strength and structural performance.

5. Surface Repair: This method that is used for cosmetic damages, such as scratches, dents, or gouges on the aircraft's surface, employs advanced composite fillers and coatings to give the aircraft a smooth, aerodynamic finish, as well as the aerodynamic performance that it had before.

6. Structural Reinforcement: This repair technique by the addition of layers of composite material in the high-stress areas of the aircraft, thus preventing the damage from happening and at the same time making the aircraft strong enough to withstand different operating conditions.

7. Patch Repair: A composite patch is applied to cover the damaged area as a quick repair technique for the aircraft to become integral. Such materials that typical parts have been made of, are used to create a permanent and well-functioning plus beneficial solution.

2.1.1SPECIFIC LITERATURE REVIEW

Storyboard

One method of accessing our website is by clicking the shared link we provide. Upon accessing the website, it will immediately direct you to the homepage that includes the document and all the features of the website. The main page will display information on notes, videos, and games.

Prior to accessing the activity, the user must create an account on the website where they can find information on notes, video demonstrations, quizzes, and games. By clicking this button, users can explore composite materials, focusing on important topics like types of fibers, honeycomb structures, and fiber orientation. If users choose either option, they will see detailed information about each type of composite material. Users are also given a back button option to return to the home page and select other notes they wish to study. Every note offers accurate details regarding the composite material. Users are also given an additional back button for returning to the menu.

Apart from that, the homepage also features a video that demonstrates how to use the composite material. By clicking on this button, users will also be directed to the video selection section. This time, when you choose the video, it will display a tutorial on how to use composite materials. Users are also given a back button to return to the video selection area and view other video demonstrations on various composite repair techniques, as well as a next button to access a variety of composite repair options. Users can choose not to watch the tutorial by

simply pressing the back button in the video selection area and returning to the menu to explore different features.

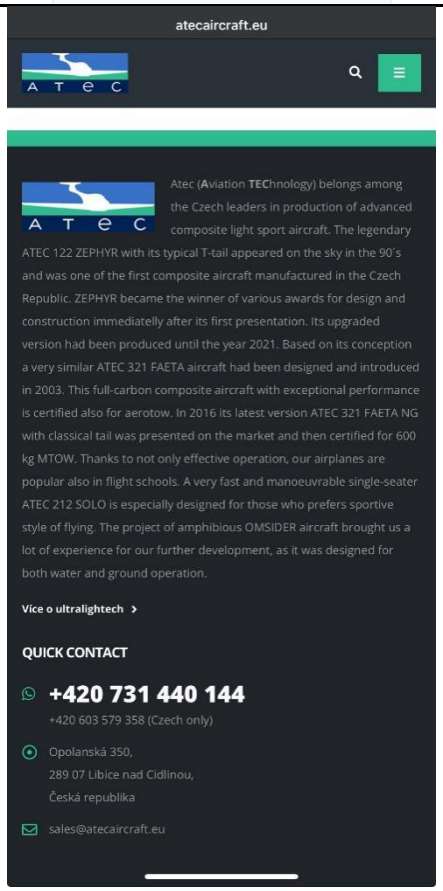
The following function is the "games". By clicking on this button, users will be presented with information regarding practical composite repair conducted in the workshop. It also comes with a back button for returning to the menu and choosing different options. Furthermore, the game website also offers a "quiz" feature. This function assesses the user's knowledge through a series of quiz questions. Pressing this option will display the quiz choices once more. Users have the option to select any games or quizzes they prefer, and be directed to the website supported by "UNITY".

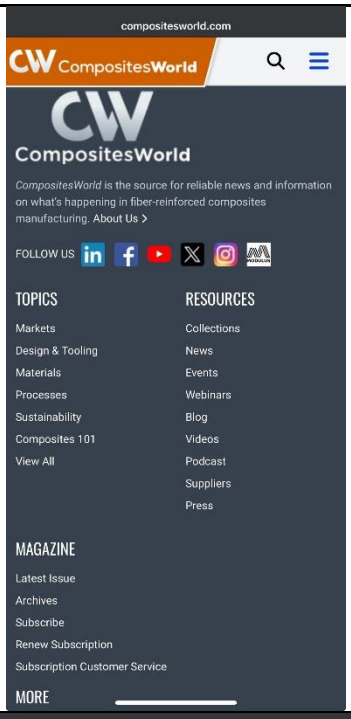
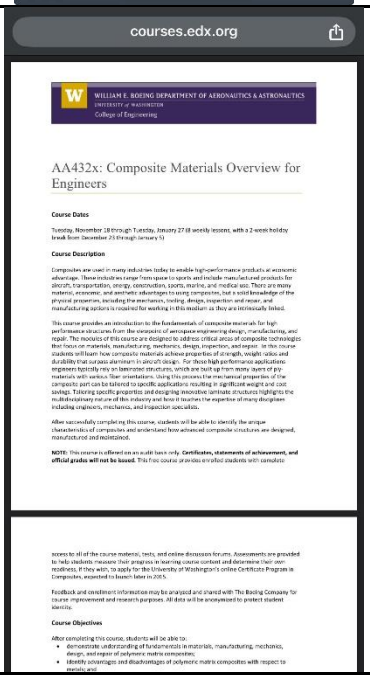
Users are also given a back button to return to the games selection area, menu, quiz on gaming tools, and a next button to display additional quizzes for selection. Users can simply press the back button while in the games selection section if they don't want to answer the quiz and return to the menu to choose other features. The quiz contains 10 questions. When you press start, the timer will begin, and the duration of time spend answering the question will be noted. Every question comes with multiple choice options. If users respond correctly or incorrectly, the quiz will move on to the next question. Finally, it will display the solution, whether it is incorrect or accurate.

Once users have responded to all the questions, they will be placed on the leader board based on their performance. The leaderboard will list the position, name, points, and duration. Players have the option to leave the games by tapping on the home icon located in the top right corner of the screen. A notification will pop up giving the option to exit the apps with two choices: yes or no. Choosing yes will take users back to the menu, while selecting no will return them to the game. The last feature pertains to the developer details. Pressing this button reveals developer information that users can read. It also offers a back button for users to return to the menu after finishing reading the developer's information.

2.2 REVIEW OF RECENT RESEARCH AND RELATED PRODUCT

Recent Market Products

NO	Marketed Product	Patent Summary
1.		**Product Name:** FAA Advisory Circulars Access Portal **Inventors:** Federal Aviation Administration (FAA) **Description:** The FAA Advisory Circulars Access Portal provides aviation professionals and students easy access to critical FAA Advisory Circulars, including AC 43-214A. It offers up-to-date guidance on aircraft maintenance, with a focus on composite repair, materials, and techniques, helping users stay informed on FAA regulations, safety standards, and best practices.
2.		**Product Name:** ATEC Composite Repair Training Program **Inventors:** Aviation Technician Education Council (ATEC) **Description:** The ATEC Composite Repair Training Program provides aviation professionals with the skills needed for aircraft composite repair. Offering FAA-compliant training materials and hands-on workshops, it covers composite materials, repair techniques, and safety protocols, preparing students for careers in aviation maintenance.

3.			**Product Name:** Composites World **Published Date:** Ongoing (regular updates) **Inventors:** The team at **Composites World**, part of **Gardner Business Media** **Description:** CompositesWorld is a leading online platform providing news, technical resources, and industry insights on composite materials, including aerospace applications. It offers articles, case studies, and webinars, serving as a key resource for professionals and students in composite repair and manufacturing, with a focus on FAA-compliant practices.
4.			**Product Name:** Coursera/edX Composite Repair Courses **Inventors:** Coursera, edX, or relevant course creators **Description:** Coursera and edX offer online courses in composite repair, materials science, and aircraft maintenance. These accredited programs cover composite fabrication, repair techniques, and FAA-compliant procedures, providing flexible learning and certification options for students and professionals looking to enhance their skills in aircraft composite repair.

2.3 COMPARISON BETWEEN RECENT RESEARCH AND CURRENT PROJECT

Product A Vs Our Product

Product	FAA Advisory Circulars Access Portal	BASE COMP HUB
Design		
Data usage	YES	YES
Purpose	Become well-versed in the concepts of basic composite repair.	Explains the basic principles of composite repair that should be covered in workshop
Features	Describe in detail the basic composite repair	Easy explanation
Target	Everyone	Aviation students and instructor
Platform	Android and IOS	Android and IOS

Table 2.4.1: Product A vs Our Product

Product B Vs Our Product

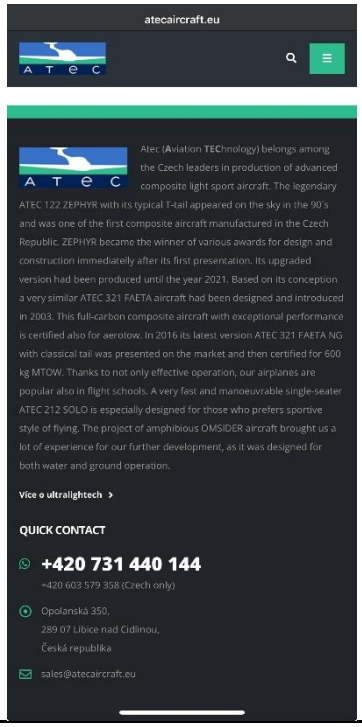
Product	ATEC Composite Repair Training Program	BASE COMP HUB
Design		
Data usage	YES	YES
Purpose	An overview of key ideas in basic composite repair in the form of compact chapters	Explains the basic principles of composite repair that should be covered in workshop
Features	Knowledge-testing tests	Easy and straightforward assessment quizzes
Target	Everyone	Aviation students and instructor
Platform	Android and IOS	Android and IOS

Table 2.4.2: Product B vs Our Product

Product C Vs Our Product

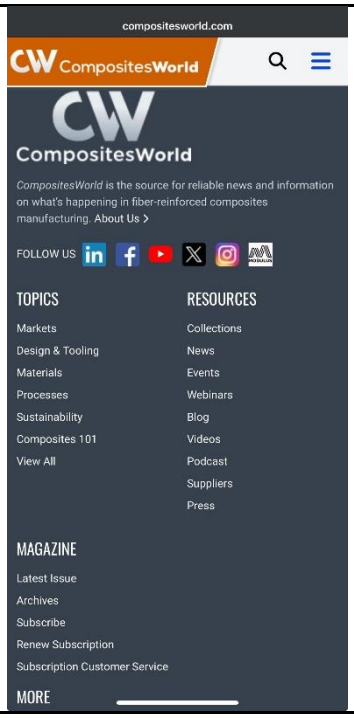
Product	Composites World	BASE COMP HUB
Design		
Data usage	YES	YES
Purpose	Website that contains MCQ Quiz for basic composite repair	Explains the basic principles of composite repair that should be covered in workshop instruction.
Features	Subscription to access	Free software to make this website
Target	Everyone	Aviation students and instructor
Platform	Android and IOS	Android and IOS

Table 2.4.3: Product C vs Our Product

Product D Vs Our Product

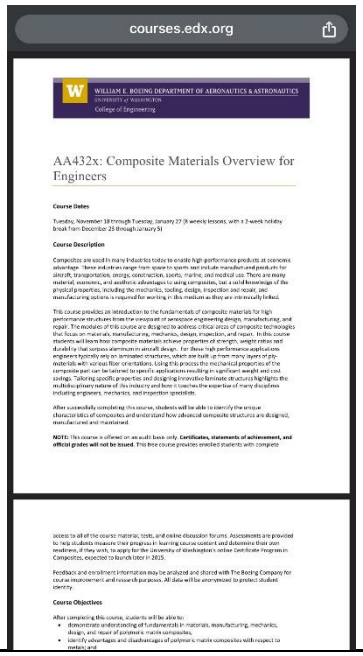
Product	Coursera/edX Composite Repair Courses	BASE COMP HUB
Design		
Data usage	YES	YES
Purpose	Discuss the materials, techniques, and methods used in composite repair.	Explains the basic principles of composite repair that should be covered in workshop instruction.
Features	Explanation of wording	Explanation of videos
Target	Everyone	Aviation students and instructor
Platform	Android and IOS	Android and IOS

Table 2.4.4: Product D vs Our Product

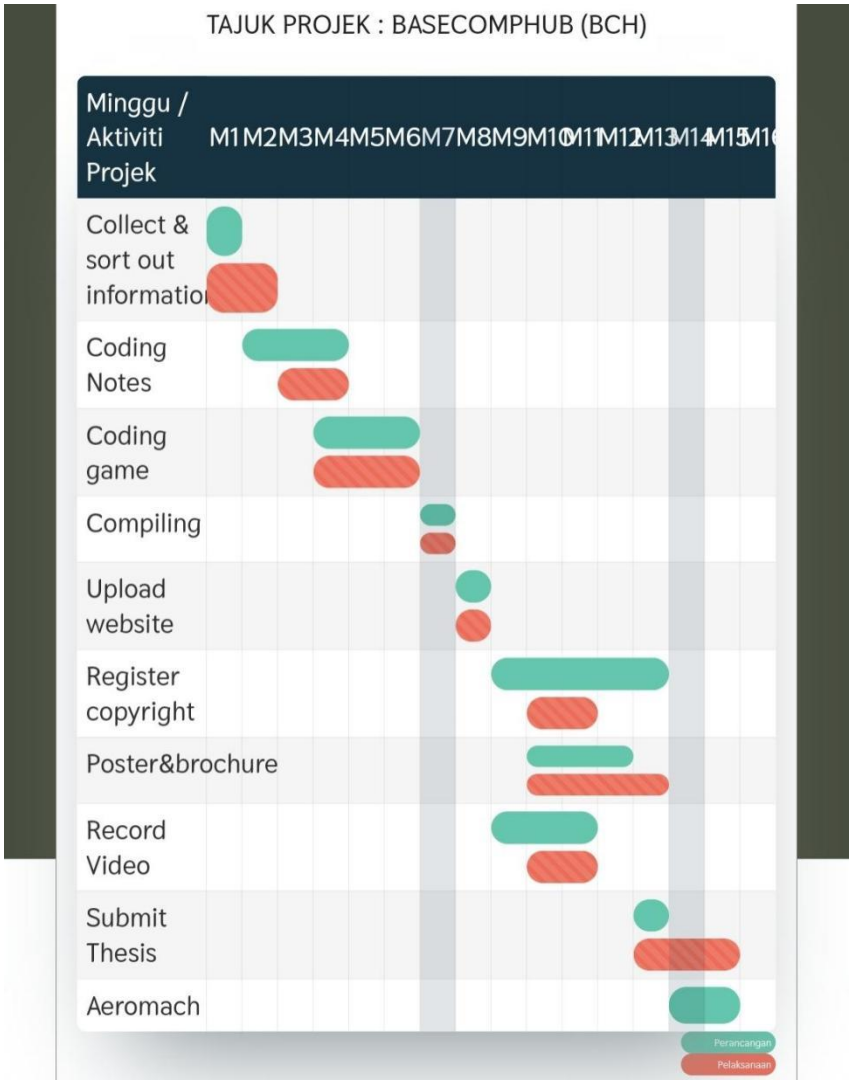
CHAPTER 3

RESEARCH METHODOLOGY

3.1 PROJECT BRIEFING & RISK ASSESSMENT

In this section, we will look in our website and the procedures that must be followed in order for it to function properly and be available to everyone in order to support our aims and objectives. The process of building our website involves several steps, which are covered in this course: designing, editing, developing, and testing the final product. Regardless of the fact that our product is software, each member of the team took significant precautions to avoid any unanticipated situations.

3.2 OVERALL PROJECT GANTT CHART



3.3 LIST OF MATERIALS & EXPENDITURES

No.	Items	Unit	Price/Unit	Total RM
1	Power Point	1	RM 0	RM 0
2	Canva	1	RM 0	RM 0
3	i-Spring Suite	1	RM 7	RM 7
4	Subscribe Wordpress	1	RM 500	RM500
GRAND TOTAL:				**RM 507**

3.4 Concept Design PUGH MATRIX

PUGH MATRIX : CONCEPT 1 AS DATUM

Criteria	Factor	Concept 1	Concept 2	Concept 3	Concept 4
Security	0.3	3	DATUM	2	3
Accessibility	0.2	3		2	1
Functionality	0.3	2		3	1
Interface	0.2	3		1	2
Total score	1.0	2.7		2.1	1.8
Rank	-	1		2	3

Score: 3(+); 2(=); 1(-)

When using Concept 2 as a datum, we can see Concept 1 take the lead as the first place from other concept with 2.7 total score.

PUGH MATRIX: COMPOSITE REPAIR(CR) WEBSITE AS DATUM

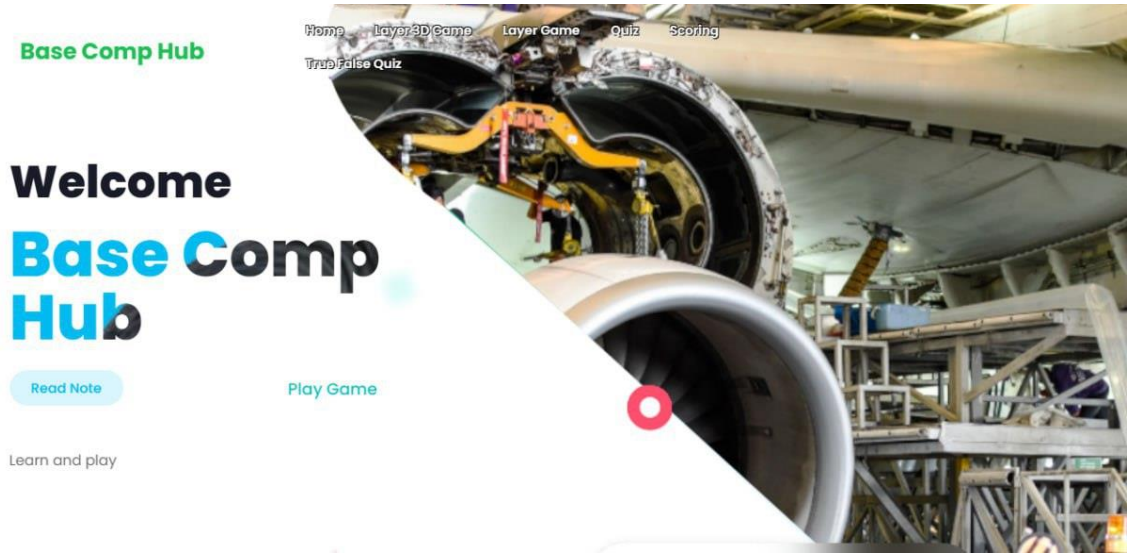
Criteria	Concept 1	Concept 2	Concept 3	CR Website	Concept 4
Security	3	2	1		3
Accessibility	3	3	2	DATUM	1
Functionality	3	2	1		1
Interface	3	1	1		2
Total score	12	7	5	-	7
Rank	1	2	3	-	2

Score: 3(+); 2(=); 1(-)

From Pugh Matrix above, we listed the important aspects that suit for our composite repair website development. Based on all concepts above, we decided to choose concept 1 because it has the highest score for Pugh Matrix.

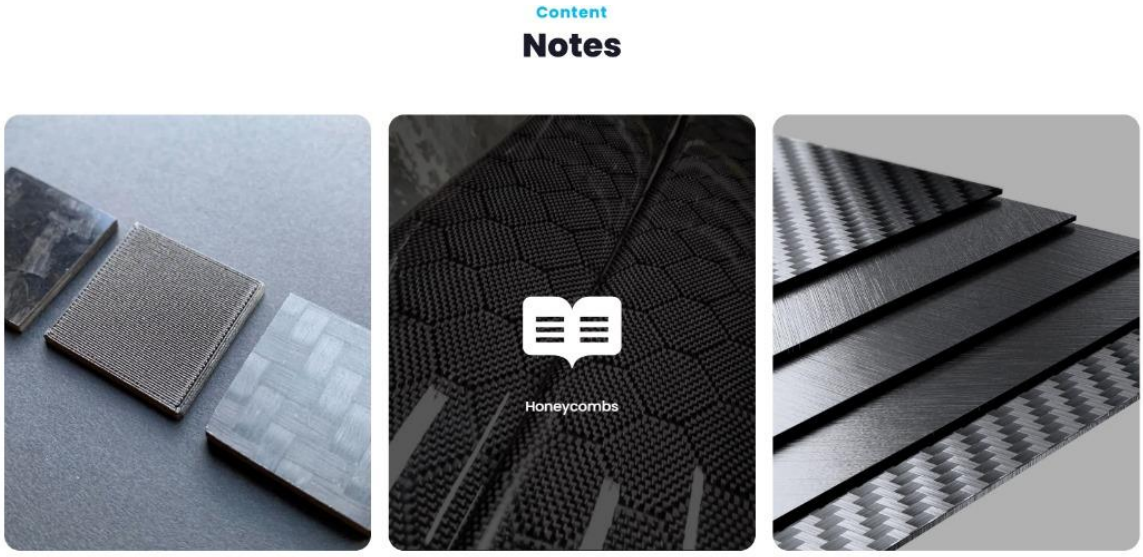
3.5 INTERFACE LAYOUT

General Product Interface Layout



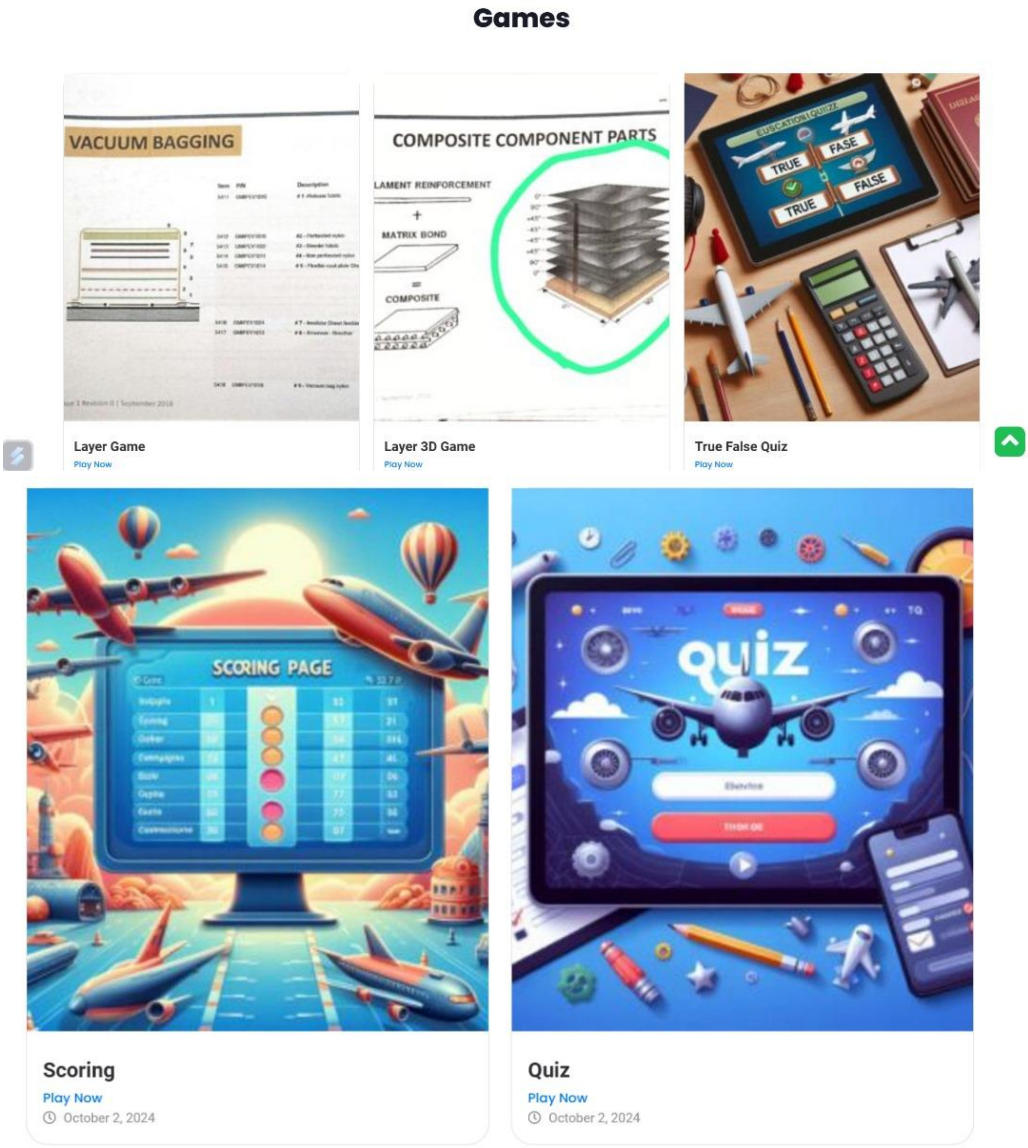
General Product Interface Layout

This interface will appear when you visit our website, and you can select the destination you wish to visit. Students can read the notes, watch a video demonstration of how to do composite repair, take a quiz with general questions about composite repair to test their knowledge.



Notes

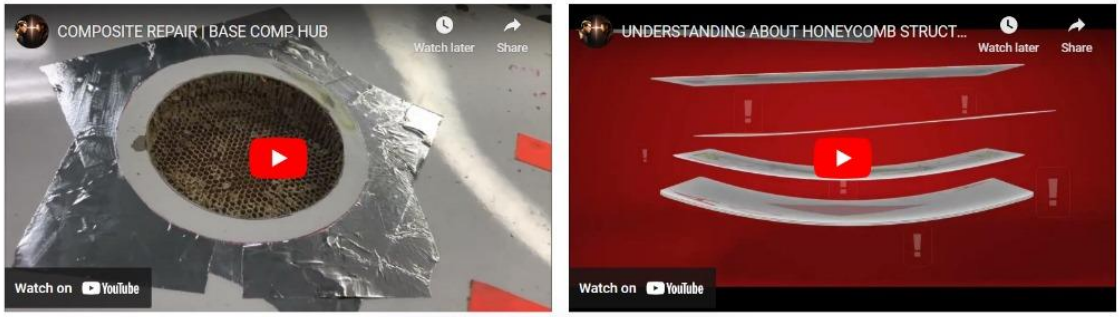
After you scroll down, there is so many option you can choose about the notes you want to learn or know about.



Quiz and games

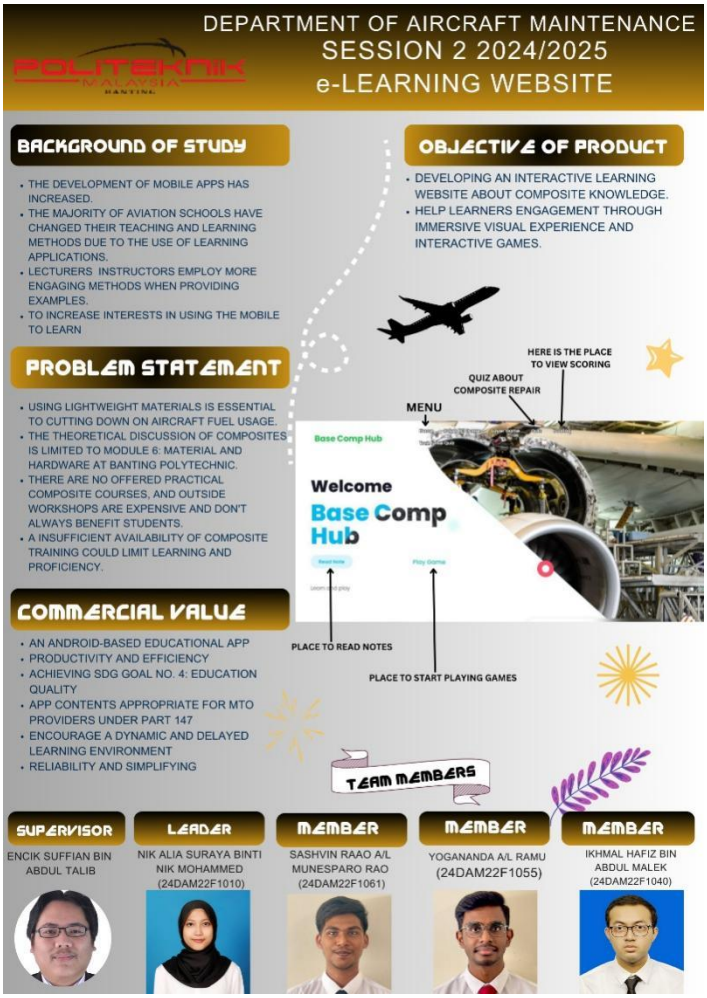
After another scroll , the quiz section also including all the games that we provided as a quiz to make sure the students really understand about the basic composite repair and lastly you can see your scoring by clicks in. This can help their knowledge.

Videos



Video Demonstration

For the video demonstration part, you also can choose many options for the composite repair you want to learn about and the video will autoplay and the video is done by us practically.



About Us

Lastly, we have a poster about our section that tells people about all of our goals and objectives so they can understand why we created this website. In order to prevent product stealing, we also wish to attach our credit.

3.6: DEVELOPMENT OF PRODUCT

Material Acquisition

Description	Material
As a platform for app design and editing.	
As a starting point to create our user interface.	
The program that allows the conversion of PowerPoint slides to HTML.	
As a website for students that can access to answer our quiz.	

Table 3.6.1: Material Acquisition

DEVICES

Personal laptops

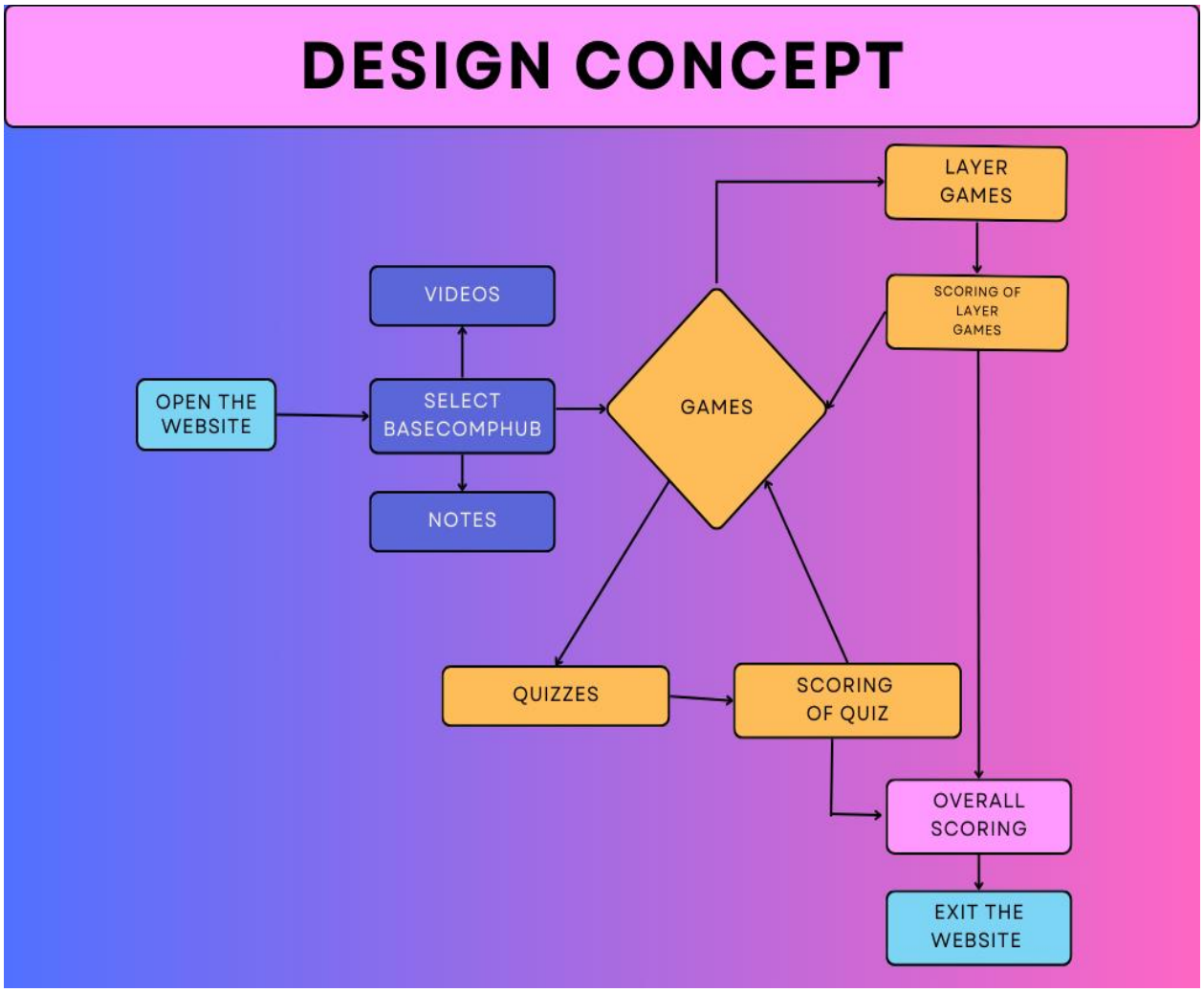
To efficiently create and set up the BaseCompHub website the hardware needs to meet standards, for performance. The operating system must be either Microsoft Windows 10 (64 bit) or macOS 11 (Big Sur version or newer). A minimum processor speed of 2 GHz is necessary though its advised to use a 3 GHz quad core chip, like Intel Core i7 or AMD Ryzen 7 for multitasking. To ensure the system runs smoothly and efficiently it's best to have 8 GB of RAM. While 16 GB would offer an even better experience. As, for storage a 256 GB SSD should suffice,. Opting for a 512 GB SSD or more is recommended for handling files and backups. When it comes to graphics having a resolution of 1920 x 1080 (Full HD) with Color Display is essential for good visual quality with a preference for 2560 x 1440 or 4 K, for greater precision. Make sure you have 6 gigabytes of free storage available, for the software and allocate extra space for backups as needed too! Having a high speed internet connection is crucial for collaboration and testing while working on your project using modern browsers like Chrome, Edge, Firefox or Safari. These requirements are important to ensure that your website design and development process runs seamlessly and results in an user friendly website, in the end. To efficiently create and set up the BaseCompHub website the hardware needs to meet standards, for performance. The operating system must be either Microsoft Windows 10 (64 bit) or macOS 11 (Big Sur version or newer). A minimum processor speed of 2 GHz is necessary though its advised to use a 3 GHz quad core chip, like Intel Core i7 or AMD Ryzen 7 for multitasking. To ensure the system runs smoothly and efficiently it's best to have 8 GB of RAM. While 16 GB would offer an even better experience. As, for storage a 256 GB SSD should suffice,. Opting for a 512 GB SSD or more is recommended for handling files and backups. When it comes to graphics having a resolution of 1920 x 1080 (Full HD) with Color Display is essential for good visual quality with a preference for 2560 x 1440 or 4 K, for greater precision. Make sure you have 6 gigabytes of free storage available, for the software and allocate extra space for backups as needed too! Having a high speed internet connection is

crucial for collaboration and testing while working on your project using modern browsers like Chrome, Edge, Firefox or Safari. These requirements are important to ensure that your website design and development process runs seamlessly and results in an user friendly website, in the end.

Phones and Tablets

The devices used should fulfil specific requirements for seamless performance and compatibility in order to guarantee the BaseCompHub website's best testing and accessibility. It is ideal for testing smartphones to be no more than three or four years old because old hardware can lead to problems that software cannot fix. For seamless website navigation and interaction, phones with at least 4 GB of RAM are advised. Accurate visuals also depend on the quality of the display, and types like AMOLED, Super AMOLED, IPS LCD, OLED, Retina, LED, and TFT offer a good selection of choices. A shared link can be used to access the website directly on iOS devices, guaranteeing compatibility without the need for extra apps. As stated in the previous specifications, desktops and laptops should be able to meet the fundamental requirements for web development and browsing. These specifications guarantee a consistent user experience and dependable website performance across devices.

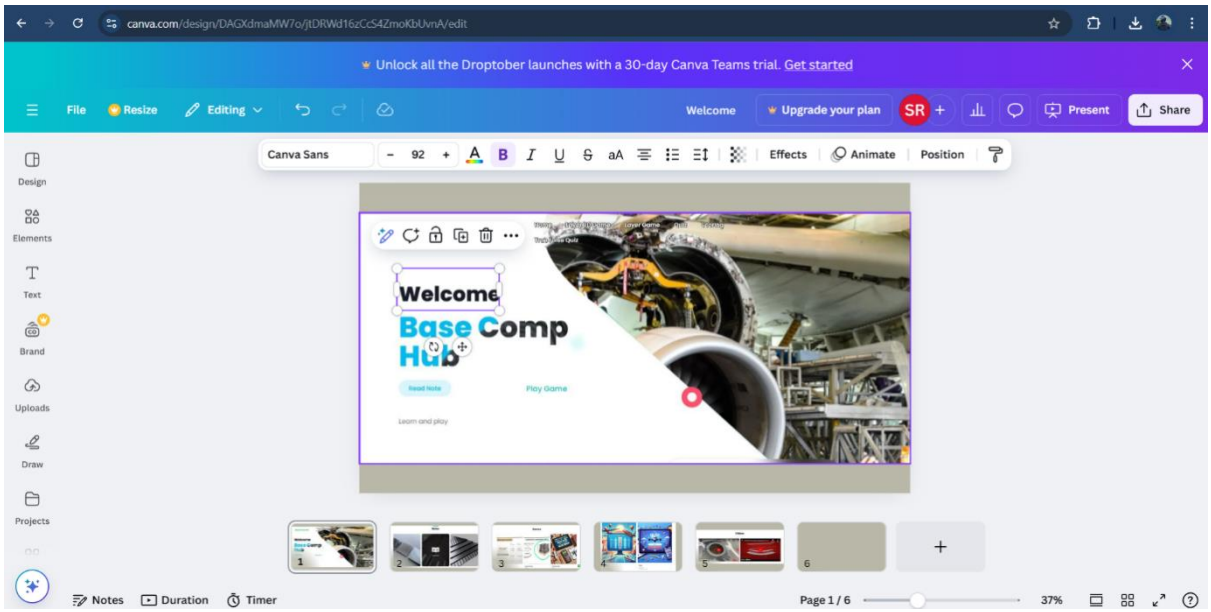
3.7 Overall Learning Website Flow



Overall Learning Web Flow

3.7.1 App Design

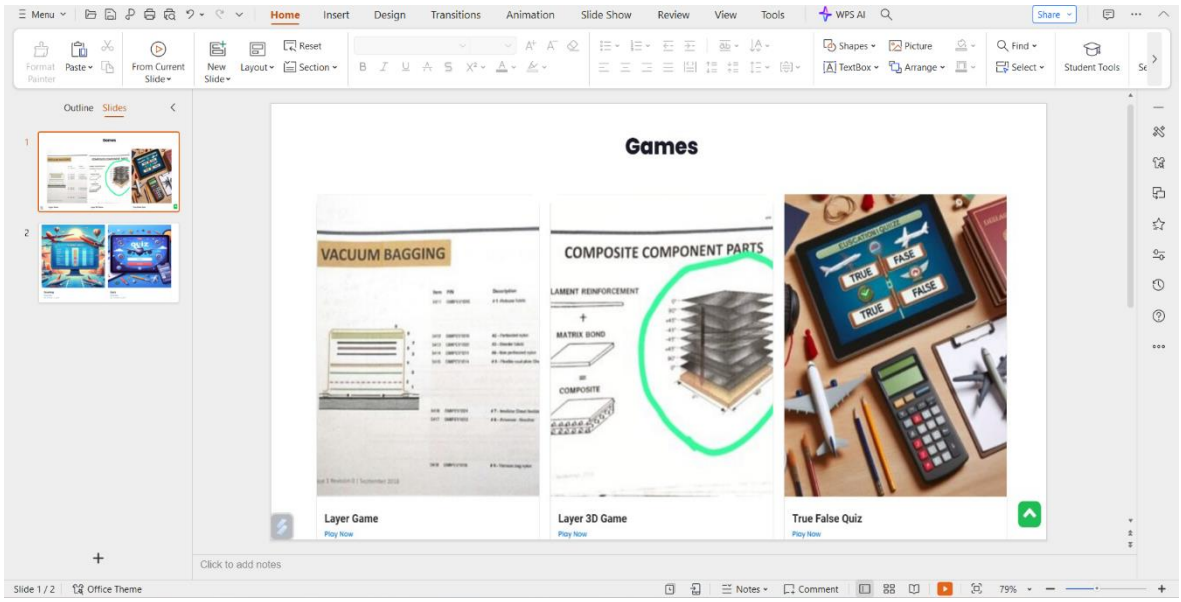
3.7.1.1 CANVA



BASECOMPHUB Design from Canva

The website interface was created via the Canva website and then transferred to PowerPoint, which is currently our primary tool for website development. All of the designs were initially created using Canva, which became our idea generation platform. We are using Canva as a design platform because it offers a wide variety of designs and layouts.

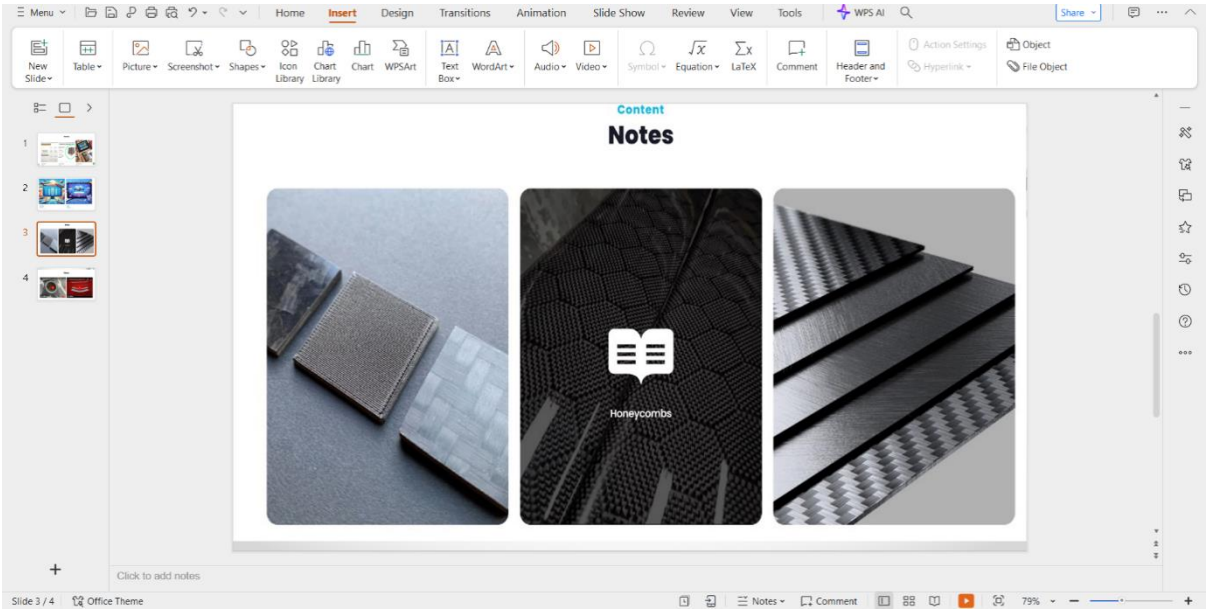
3.7.1.2 PowerPoint



BASECOMPHUB Design from PowerPoint

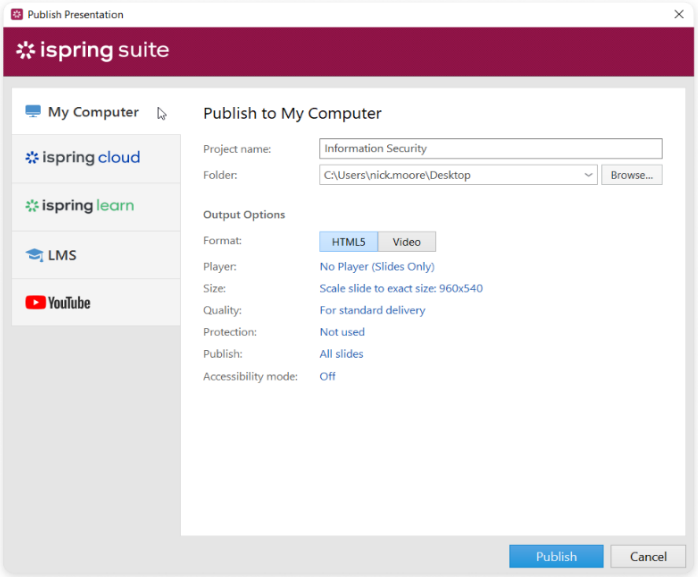
The Canva design that was previously used was simply copied and pasted into PowerPoint. We moved the Canva design to PowerPoint because we wanted to use PowerPoint to create the website rather than Canva.

3.7.2 Product Development Software



Product Development Software

This how the notes page looks like, after entering inside there are many types of notes about aircraft basic composite repair.



Editing of Interface

Additionally, choose the browse setting and give the folder a name. Select the folder that you wish to publish or save as. After that, click the publish button.

Website 2 APK Builder

Finally, launch Website 2 APK Builder and select the same checkmark as shown in this picture. The output for the application will then go to the desktop, so you can select desktop as the output directory. Then, select the file with your app name and published tag under Directory of Local Website. After that, you can customise the icon to your liking by selecting the file containing the image you want the app to look like on the phone. To view the outcome, click the Build Android APK button at the end.

BASECOMPHUB

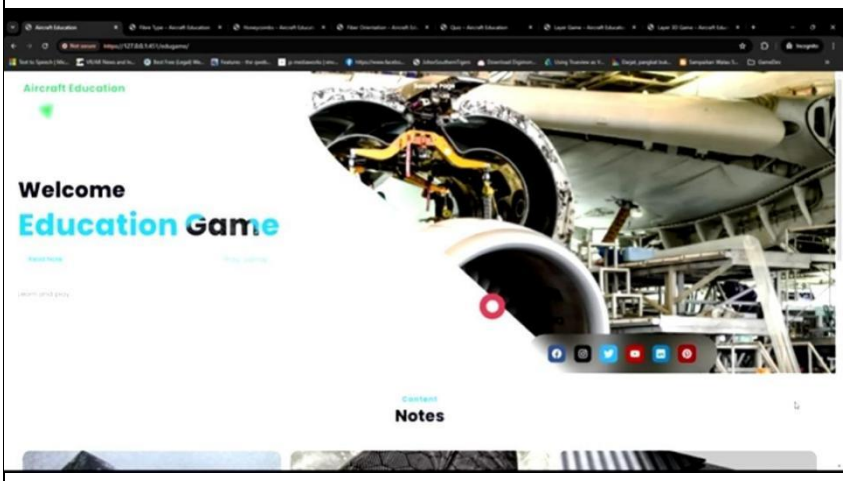
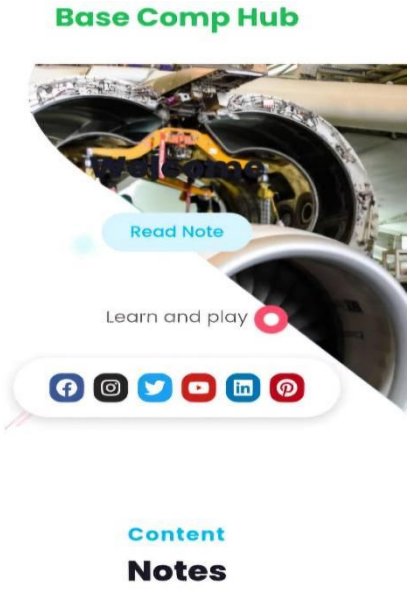
http://basecomphub.com/

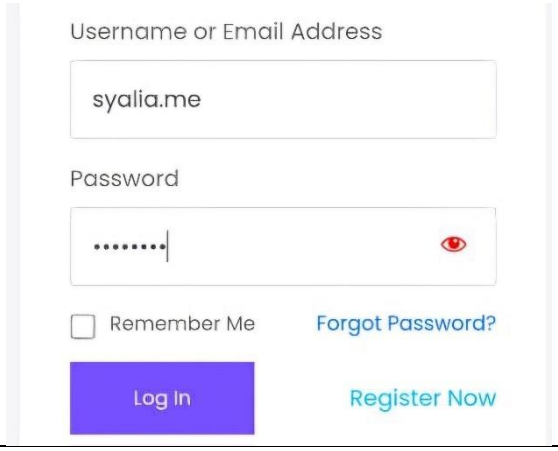
Our website is finally finished and will look like this. After that, you can test it out to make the final product.

CHAPTER 4

RESULT AND DISCUSSION

4.1 Genaral Product Features Description

Features	Product
Accessibility	This e-learning website is accessible on desktop or even phone.  

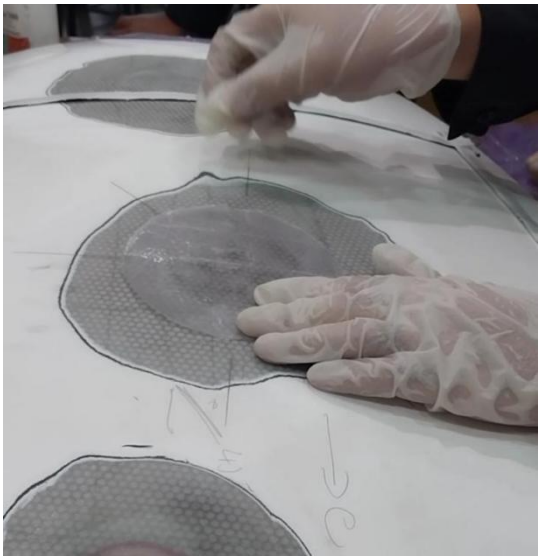
Functionality	One of example is the search bar that can find the results that the user looking for. 
Security	User can create their own account and login into their own account to have a better access of games. 
Content	Notes, games and videos is working very well.

4.1.1 Operations of Product Features

Our educational learning website BaseCompHub aims to empower users by giving them the knowledge and guidance that they need to confidently navigate the world of training composite. Our special features can help user to improve their training skills, knowledge and abilities.

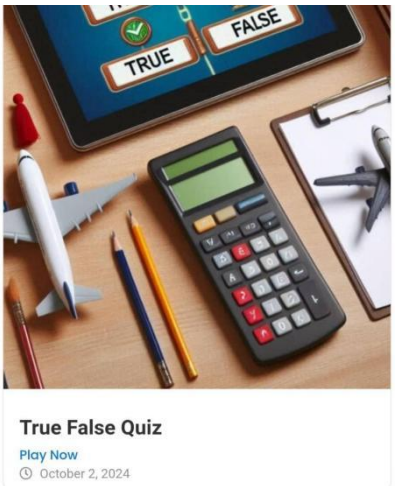
•Video Demonstration

Our video demonstration provide a visual guidance that is needed to strengthen their understanding towards composite repair. This video demonstration also contain explanations for every action in the video.



•Quizzes

Quizzes that we provide such us true or false and multiple choice questions also can strengthen user knowledge. Each topic have quizzes to evaluate user understanding for the topic.



4.2 Impact of the Project

We can make it easier for students to understand how to do their task in during class

Our BaseCompHub learning method was created to help students to understand how to complete the task given during workshop. This e-learning portal can help students to study independently and finish their task base on our tutorial and instructions. With this, students can do their own task at their own pace while they confidently finish the task on their own.

Students can understand the fundamental concepts on their own without overly relying on lectures

Our BaseCompHub can guide students to study the fundamental of composite repair on their own and reduce reliability on lecturers. Students can do explore composite fundamental through our notes , tutorial videos and interactive quizzes.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Base on the feedback survey that we made, we can conclude that our website is an interactive website because of interactive games that we provide. Resources that we provide such as demonstration video and interactive games can encourage learners engagement with our learning website.

5.2 Improvement & Suggestions for the Future Research

We planned to improve our learning website by adding more interactive games such as matching game and flash card. We also would like to add more video demonstration video in the future so that user can explore more about composite world that's not only in aviation field.

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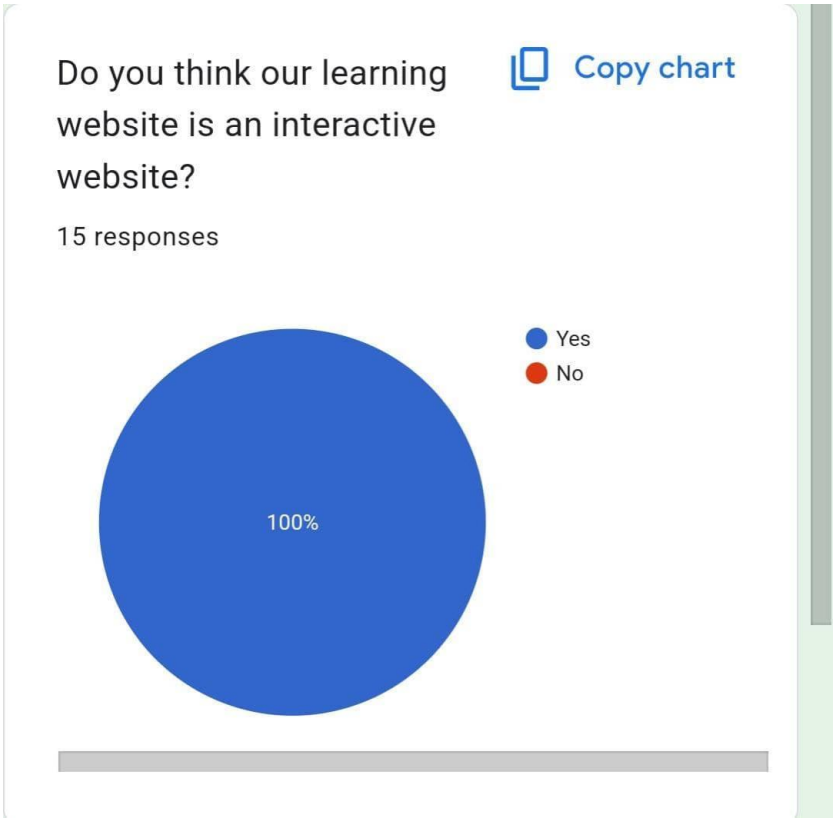
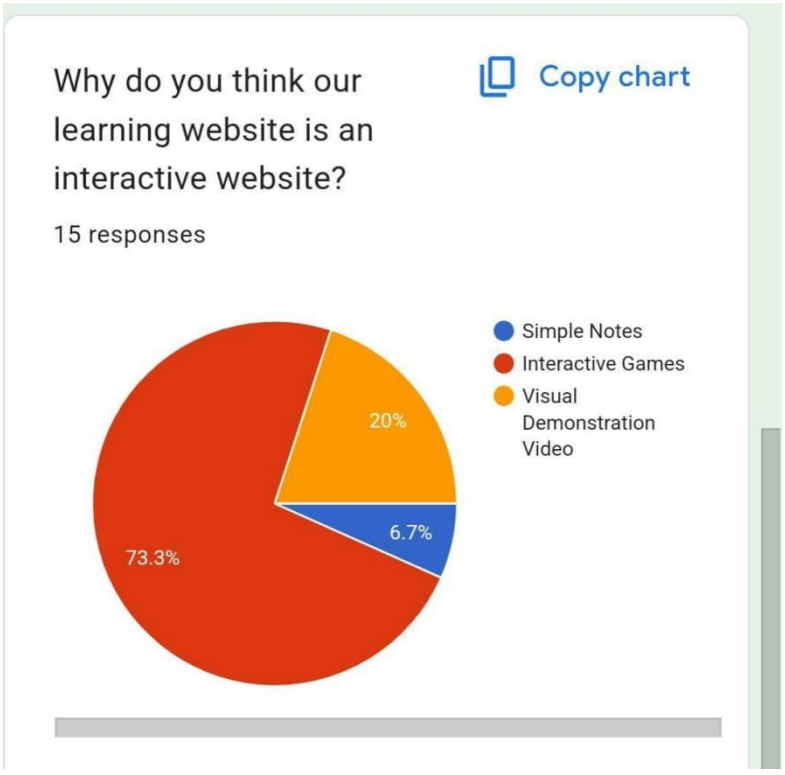
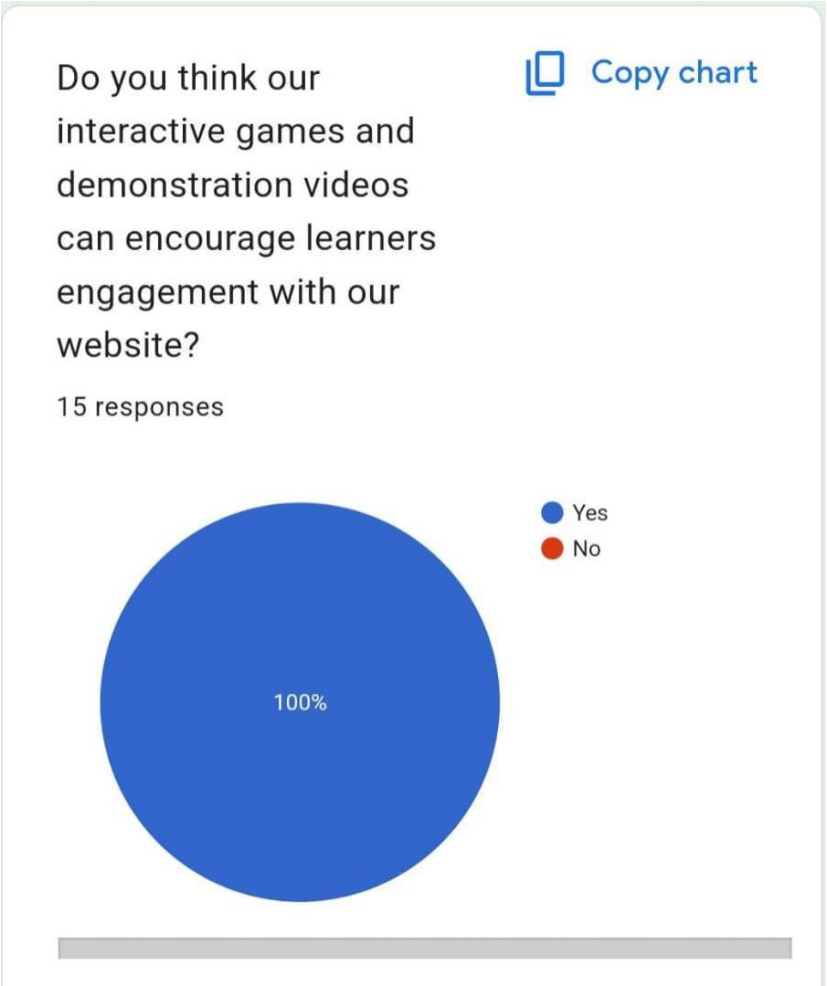
APPENDIX A: DECLARATION OF TASK SEGREGATION

SUBTOPIC	DESCRIPTION
IKHMAL HAFIZ BIN ABDUL MALEK	
1.1	Background of Study
1.2	Problem Statements
1.3	Project Objectives
1.4	Purpose of Project
1.5	Scope of Project
SASHVIN RAAO A/L MUNESPARO RAO	
2.1	General Literature Review
2.2	Review of Recent Research
2.3	Comparison between Recent Research & Current Product
YOGANANDA A/L RAMU	
3.1	Project Briefing and Risk Assessment
3.3	List Of Expenditure
3.4	Concept Design
3.5	Interface Layout
3.6	Development of Product
3.7	Overall Learning Website Flow
NIK ALIA SURAYA BINTI NIK MOHAMMED	
3.2	Overall Project Gantt Chart
4.1	Product Description
4.2	Contribution or Impact of the Project
5.1	Conclusion
5.2	Improvement & Suggestions for the Future Research
APPENDICES	A & B
	Table of Content

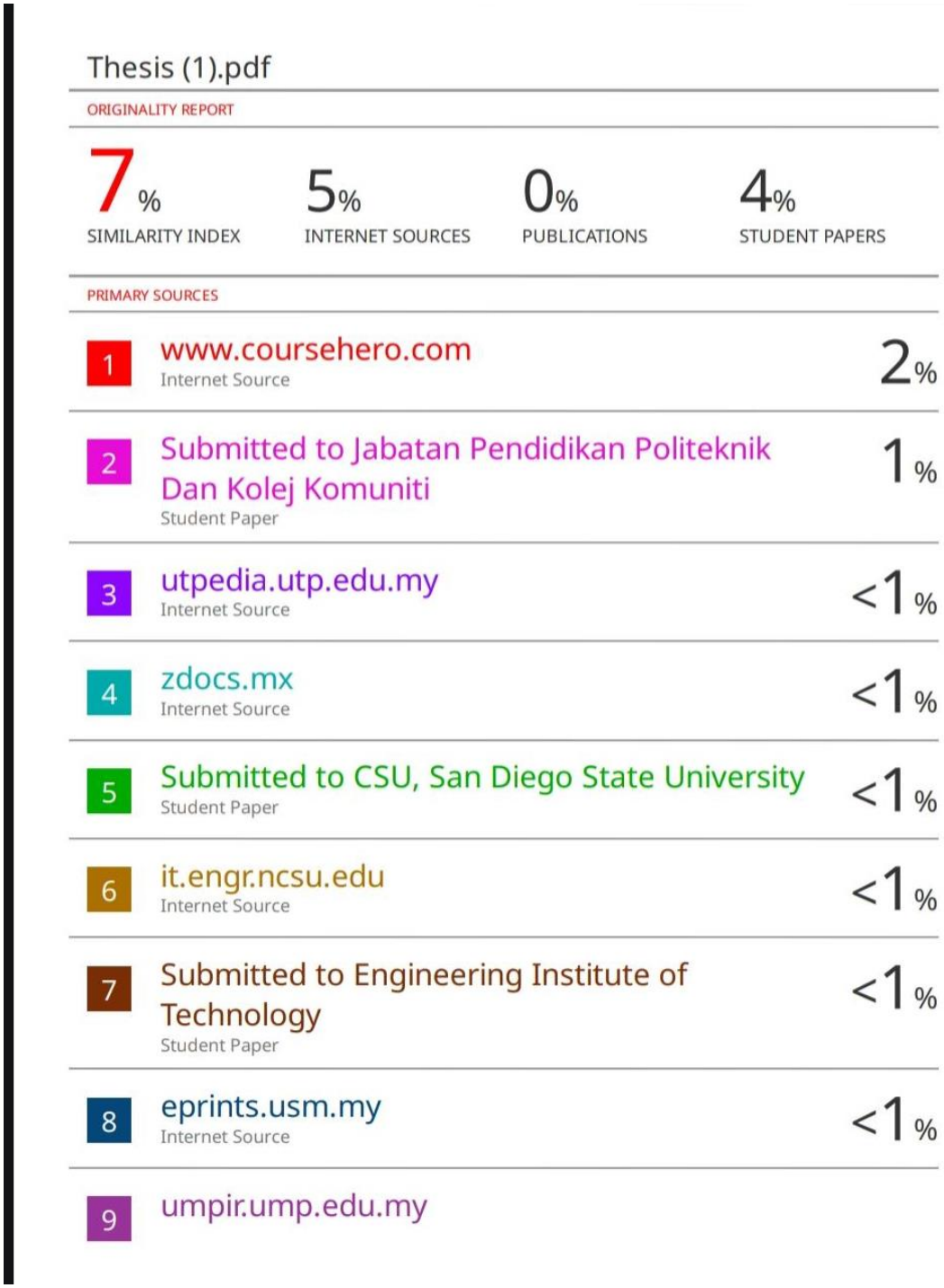
Appendix B : Feedback Survey






Do you think our interactive games and demonstration videos can encourage learners engagement with our website?
Copy chart
15 responses
Yes
No
100%

APPENDIX C: TURNITIN TEST



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