



UTM

UNIVERSITI TEKNOLOGI MALAYSIA

Assignment type	Group 5
Semester/Year	Semester 1 2020/2021
TitleDesign Thinking	Biometric Authentication System
Title Chapter	Chapter 9: Privacy, Security and Ethics
Prepared for	Dr. Zuraini binti Ali Shah
Section	08
Submission Date	15.11.2020

Prepared by	1) Muhammad Harun bin Marzuki (A20EC0212) 2) Syamimi Amirah Binti Zamros(A20EC0226) 3) Muhammad Muizzuddin Bin Kamarozaman(A20EC0214) 4) Aum Jeevan A/L Aum Nirangkar(A20EC0017) 5) Amirul Iman Bin Ahmad Keflee(A20EC0183)
-------------	---

REPORT FOR BIOMETRIC AUTHENTICATION

1. INTRODUCTION

Design thinking is a non linear, iterative process aimed at educating customers, questioning and redefining issues and developing innovative design and test solutions. This skill requires the inventors to have critical thinking to fulfill the user's requirement and provide the solution to solve the problems.

Based on our topic we decided to implement fingerprint scanner and face id for our elearning application in order to make a more secure security system.

2. DETAIL STEP AND DESCRIPTION **EMPATHY**

Empathy is where to try to understand what the issues are surrounding our topic. We made a Google form and shared it among student in order to have some insight on security issues on elearning apps

DEFINE

Define is where you store the knowledge generated and obtain during the empathy phase. We found out that most people who stores information online think they are not safe from cyber crime and had a meeting to discuss the solution for this problem

IDEATE

Ideate stage which ideas are generated. The problems are viewed in an alternative way to find out innovative solutions. So at the end of the discussion that we did,using rational, intermediate and Biometric Authentication was the final solution.

PROTOTYPE

Prototype is the preliminary version of a system which used to explain the idea and also the design of the other forms. Our product is an integrated system in our elearning application that requires you to scan your fingerprint and scan your face if enabled. We did it virtually because it is a system and has no physical property

TESTING

Testing is where people start to use our product and give feedback on any pros and cons so that we can further improve the usability of our product. We demonstrate how the prototype works and let them interact with it.

3. DETAILED DESCRIPTION

PROBLEMS

After making a survey, we discovered that personal information are getting stolen because of lack of security with login systems since we only require to use username and password.

A PROPOSED SOLUTION

After we amalgamate the problems and opinions given by interviews and data collection, we decided to do a brainstorming session between our groupmates. We came to a conclusion that implementation of Fingerprint Scanner and Face ID Scanner is a great initiative to improve the platform's security. Hence, students or staff of UTM will be less worried about their privacy and security on UTMSmart. However, we cannot make a real prototype due to the current situation. We decided to explain our prototype thoroughly via google slides to let the reviewers receive deep understanding regarding our solution.

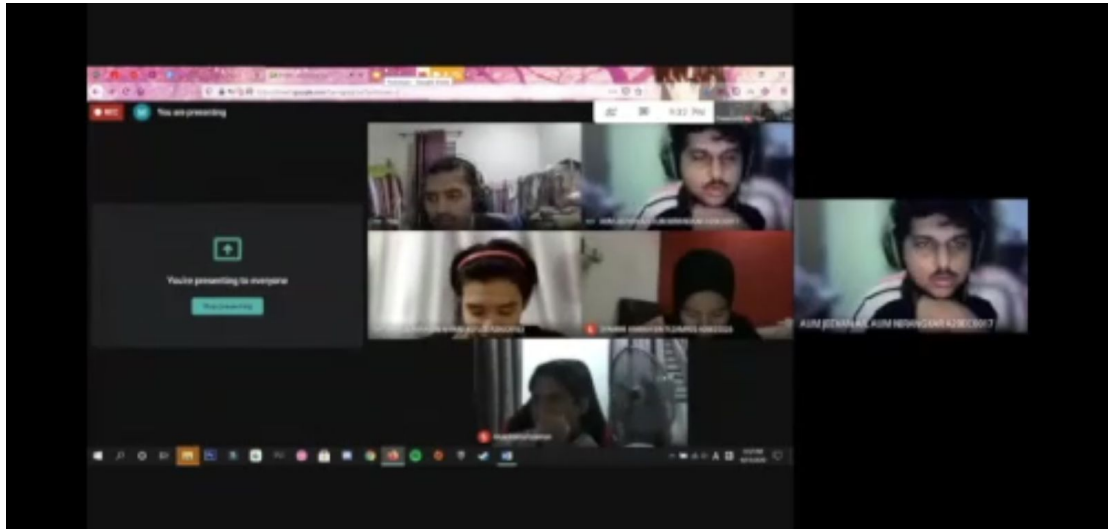
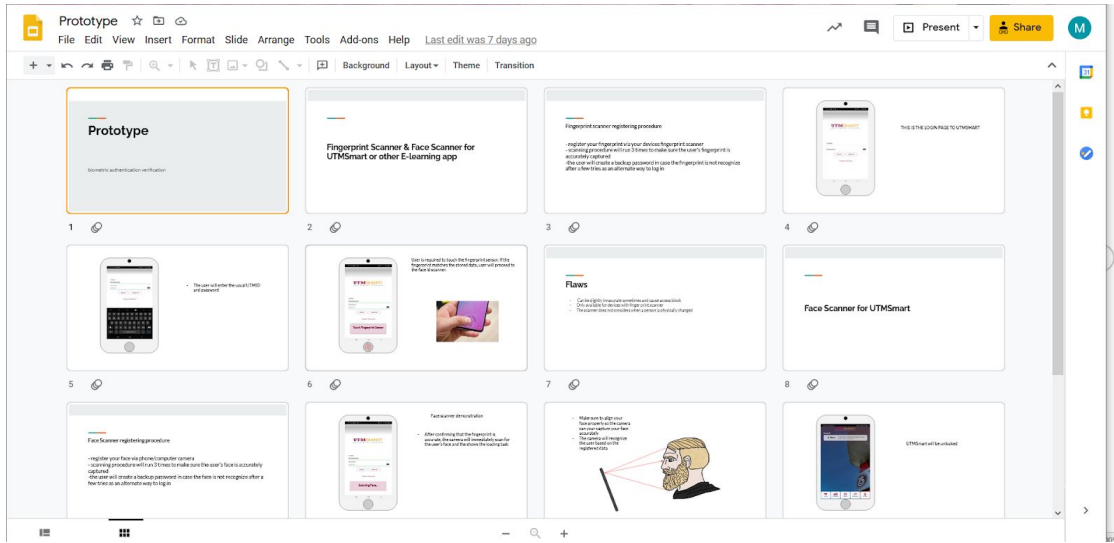
TEAM WORKING AND TIME MANAGEMENT

<u>DATE</u>	<u>TIME AND PLATFORM</u>	<u>ACTIVITIES</u>
<u>27/10/2020</u>	<u>Google Meet</u> <u>8.00 a.m. - 11.00a.m.</u>	<ul style="list-style-type: none">• Briefing about project by Dr. Zuraini during lecture
<u>28/10/2020</u>	<u>Whatsapp</u> <u>8.45 p.m. - 9.45 p.m.</u>	<ul style="list-style-type: none">• First meeting with group members• Distributed the tasks for each group member for the chapter video recording which is each member needs to prepare slides for 6 pages of notes and also 1 Q&A

		fingerprint scanner on google slides
<u>7/11/2020</u>	<u>Google Form</u>	<ul style="list-style-type: none"> • Get user review through google form • Demonstrate how the system works to the users using the prototype
<u>Before 15/11/2020</u>	<u>Google Docs</u>	<ul style="list-style-type: none"> • Each member writes a reflection based on the outcome of this project • Final editing and look through video and report

4.DESIGN THINKING EVIDENCE

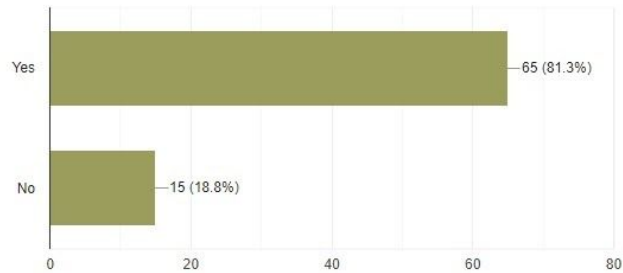
Workings and discussion



Empathy

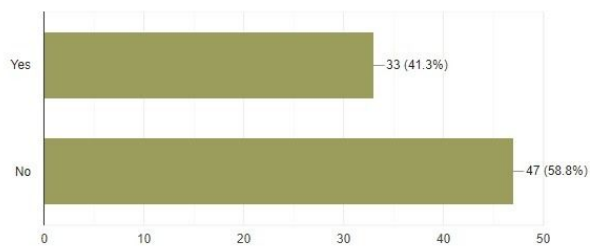
You as a UTM student or user store personal data on UTMsmart, E-learning or other platforms. Do you think fingerprint scanner or Face ID recognition in order to login into those platforms is a good initiative to protect your personal data?-CHOOSE ONE ONLY

80 responses



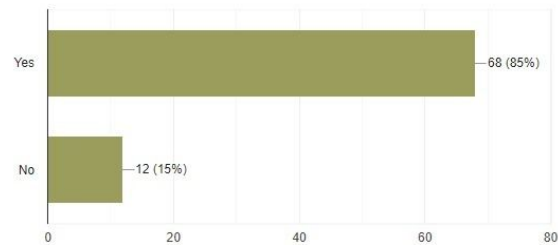
Do you feel that the information you stored is safe and sound from any sort of cyber attack?- CHOOSE ONE ONLY

80 responses



Do you store information about yourself online? (Example photos, birthday and education info)-CHOOSE ONE ONLY

80 responses



Ideate

Possible solution after brainstorming is shown as table below :

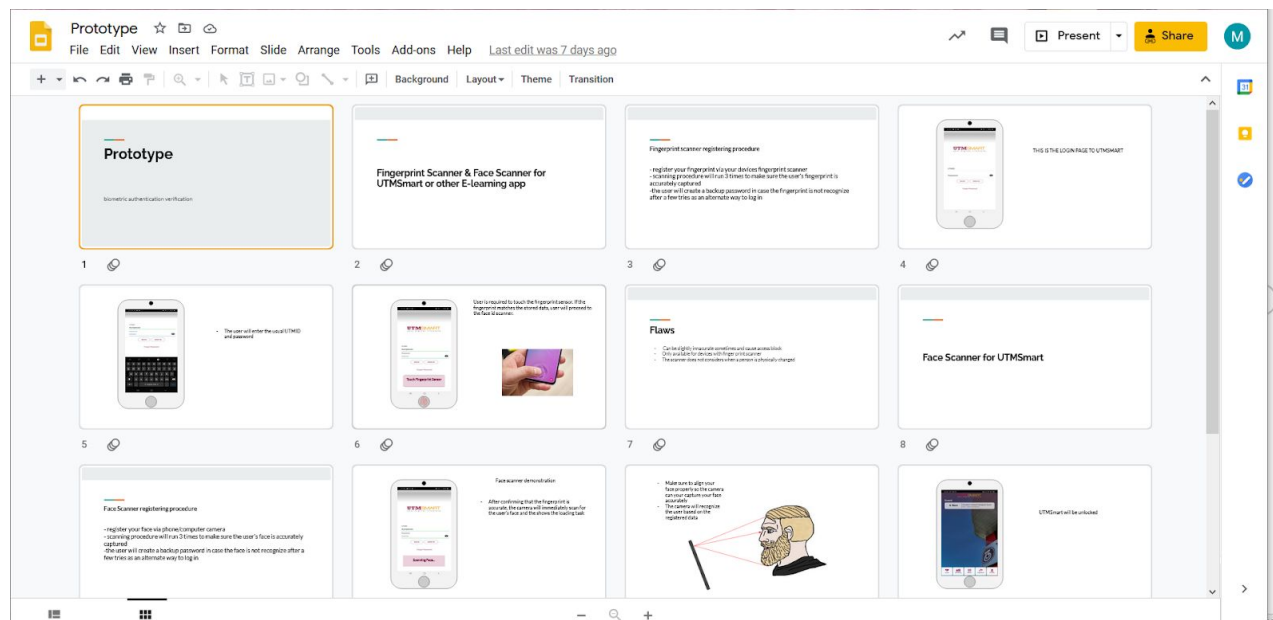
Rational	Intermediate	Radicle
<ul style="list-style-type: none">· well educated with awareness and always advise to be alert· do not share informations with untrusted people	<ul style="list-style-type: none">· create a secure passwords with combinations of alphabets, numbers and symbols	<ul style="list-style-type: none">· integrating a face id and fingerprint scanner for elearning apps

Prototype

Link for our prototype design for more detailed view

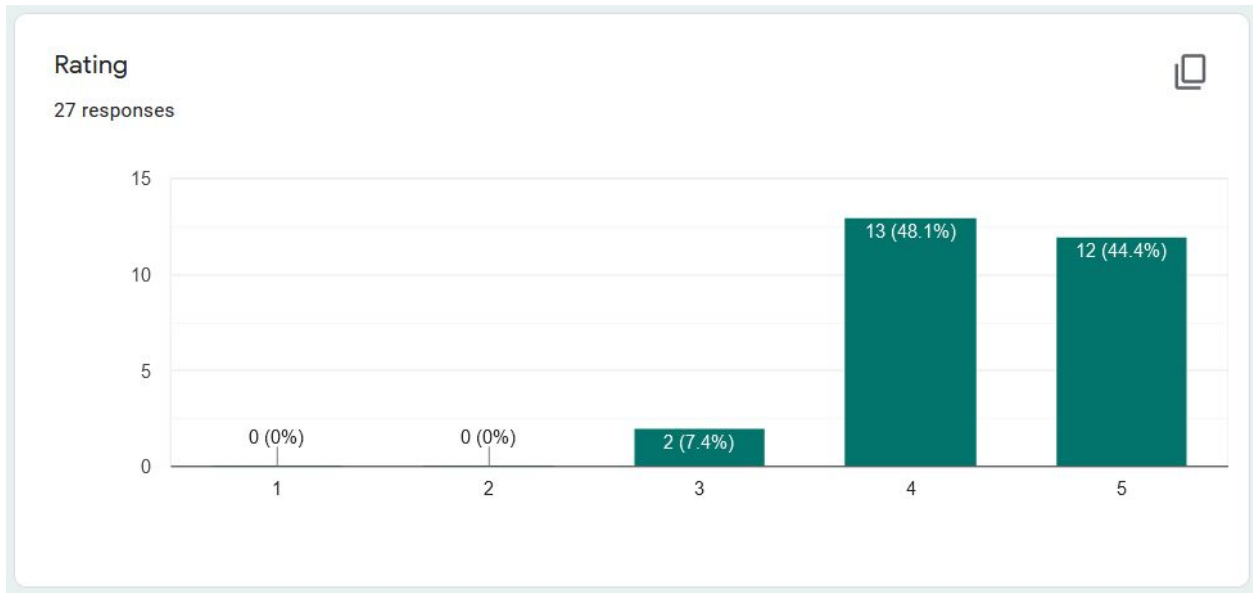
https://docs.google.com/presentation/d/1BioAGb_efuQgp6QZW5NyW3iSUNnDkTQkLPovbuCDscU/edit?usp=sharing

Overview of the prototype slide



Test

We didn't do any field testing but we had done a google form asking for user review by giving them the link to the slide to have an overview of the prototype



Write a review

27 responses

- Details explained very well, prototype brings benefits to the students
- Pretty convinient rather than me typing which took a lot of time
- more secure and less time spent
- The idea is good and can help to improve the security of personal data
- it's more convenient to log in
- Nice
- Good innovation
- It's interesting but maybe it will be better if all devices can use
- Simple and easy to understand but the slides can be improved a lot with some designs

5. REFLECTION FROM MEMBERS

Muhammad Harun bin Marzuki(Leader)

My name is Muhammad Harun bin Marzuki, the leader of the group. Regarding my goal, I am still pondering about my future so I have no clear goal yet. Chances are I might not even be in this career line in the future. Next, being the group leader kind of makes you have more responsibilities, so it should make me a better person in the future. As for my plans to improve for the foreseeable future, I'll maybe take more management duties so I can better perform as a team.

Syamimi Amirah Binti Zamros

My name is Syamimi Amirah Binti Zamros, I did the editing part of the video with the help of Amirul. I can say that this project/course helps me to develop and enhance my creativity which is something that i am not used to. Since everything is online these days, I discovered that working with random people is hard but i found it was a great experience. Maybe it will help me in the future when dealing with clients. I had good group members, working with them without knowing their faces and communicating through online meetings can still give this project a success. Online platforms are not a bad option but still need practices to adapt and make it in our normal life. This project/course opened my eyes even wider to acknowledge technology can improve students' learning.

Muhammad Muizzuddin Bin Kamarozaman

My name is Muhammad Muizzzzuddin Bin Kamarozaman, the members of the group. Throughout the whole duration of working towards the success of this assignment, there are many things that happened. Working as a group is pretty hard especially if you just suddenly get randomized into one, with people you've never met or ever seen face two face before. The biggest problem is probably the interview, prototype, and testing. Finding opportunity to ask questions is hard since there were many people. Prototype couldn't be made physical since this is online, presenting the prototype in Google Slides was decided. Lastly, testing. With no physical prototype, we can't really do any proper testing. From this experience I have learned to work with the group with great cooperation. Being a member of this group is too many challenge and lot of experience also knowledge i gain

Aum Jeevan A/L Aum Nirangkar

My goal is to become a professional software engineer that has the ability to contribute to a wide range of industries and companies. I plan to train myself with the ability to make short-term critical decisions, which is very crucial in nowadays-industrial fields. I aim to increase my knowledge and deepen my understanding about the course I am currently taking.

Amirul Iman Bin Ahmad Keflee

My name is Amirul Iman bin Ahmad Keflee , one of the members of the group. My job is helping Syamimi to edit the video of our presentation and for our prototype.Editing a video is a new experience for me as i never even try to do it before.Luckily other group also help me to gain my experience and trust me to do it.This experience hopefully can be useful in the future as because my ambition to become a software engineer so i want to enhance my skill in IT and technologies.Besides I learn a lot of thing from my team member as for leadership and always help each other in teamwork.Even we only can record our video virtual online meeting but this does not mean it hurdle we cannot solve for us to work together.Besides I also learn how to be creative by editing the video and try do new thing to improve my skill in IT.

TASK ASSIGNMENT

Muhammad Harun bin Marzuki(Leader)

1. Recording footage of meeting
2. Making slides for prototype
3. Making google form for review
4. Editing of report

Syamimi Amirah Binti Zamros

1. Editing footage of chapters presentation
2. Making the video and editing for design thinking

Muhammad Muizzuddin Bin Kamarozaman

1. Demonstrating and presenting the prototype
2. Interviewing experienced UTM personnel

Aum Jeevan A/L Aum Nirangkar

1. Writing and editing of report
2. Making slides for prototype
3. Making google form for the empathy
4. Research for design thinking regarding our topic

Amirul Iman Bin Ahmad Keflee

1. Creating and editing of design thinking video
2. Interviewing experienced UTM personnel

VIDEO LINKS

DT

<https://youtu.be/r6SvA26l3CQ>

CHAPTER 9 Presentation

<https://youtu.be/ojDej1e8rVM>