Technology and Information Systems (SECP1513)

PROJECT- Part 2

Date: 22ⁿᵈ January 2022

Section: 05

Group: 4

Lecturer's Name: Dr. Sarina Binti Sulaiman

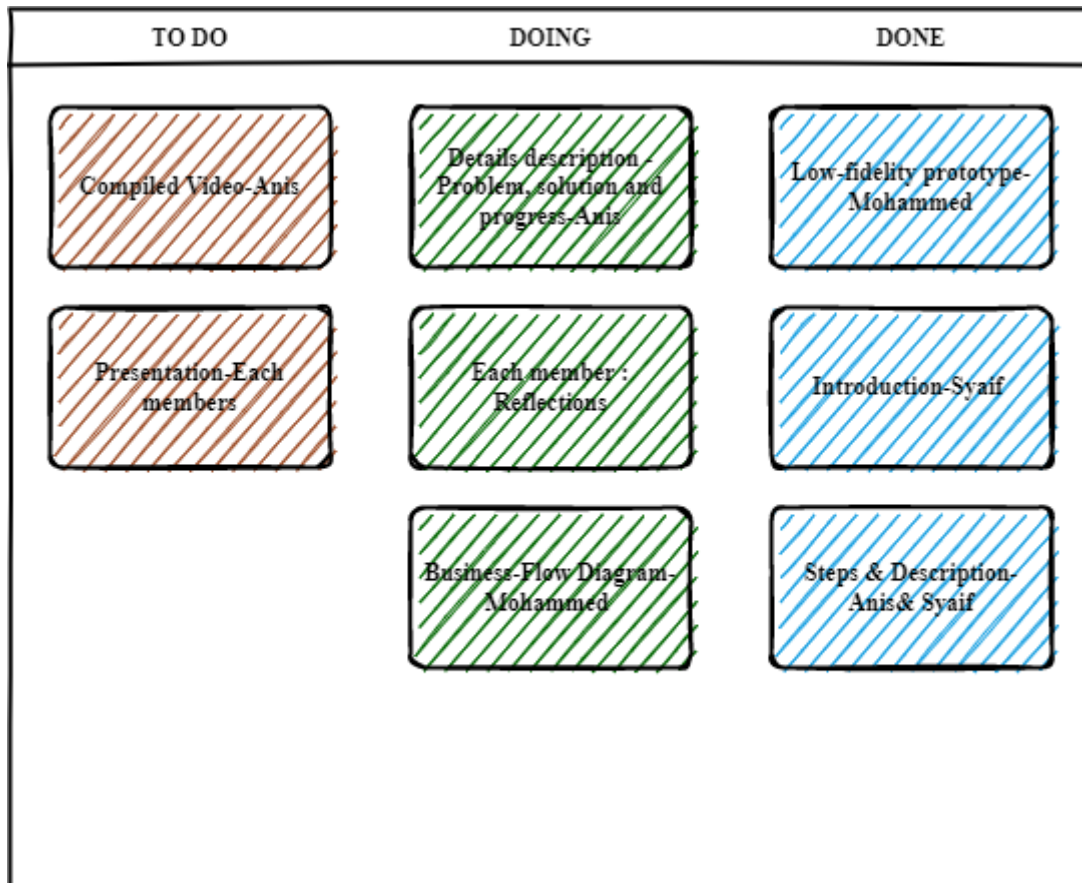|	Name	Matric Number
1	Anis Sofea Asyikin Binti Abdullah	A17KM0045
2	Mohammed Abdulsalam Abdulrahman Abu Amoud	A21EC0268
3	Muhammad Syaif Alfariz Bin Ilyas Susanto	A21EC0094

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Introduction

We choose the Internet of Things as our 4th Industrial Technologies because nowadays there are a lot of IoT devices out there that have different functionality and we can access it just by connecting it to the Internet. The objective of this project is to make an application that can help people with their storage. We select two of the clients that most have problems with their storage which are students of School computing and also the staff that include the lecturers and office management. The use of this application to students mostly to store files of their assignments. . Even if they have large storage in their phone or laptop, they also need backup storage for their files and photos. This application that we invented is cloud storage. We know that there is a lot of cloud storage out there but what we do is make innovation from that and create more secure, more organised, friendly, and easy to use. The first step that we took was to discuss first what kind of prototype we want to make, so we came up with two different ideas which are security for the house and cloud storage. Everyone in our group chose cloud storage for our prototype. Then we discuss the features that can be in the application to make it easier to use which also include the cloud storage, time table scheduler, and also organiser file. After that, we discussed the design for our application to make it more organised where we have made different types of files platforms such as excel, word, pdf, and more. This will prevent the user from forgetting where he stored his files. The cloud architecture for this we have the front-end which are the devices used to access the application, the back end which will be the storage and servers, and the last one is the internet which is the connector for both front-end and back-end. These technologies will create a cloud architecture where the resource can be shared across a network. The business flow diagram basically is to visualise the cloud architecture which has the front-end, back-end, and the internet. In a low fidelity project mock-up, we design the application for students and staff of FSKM .
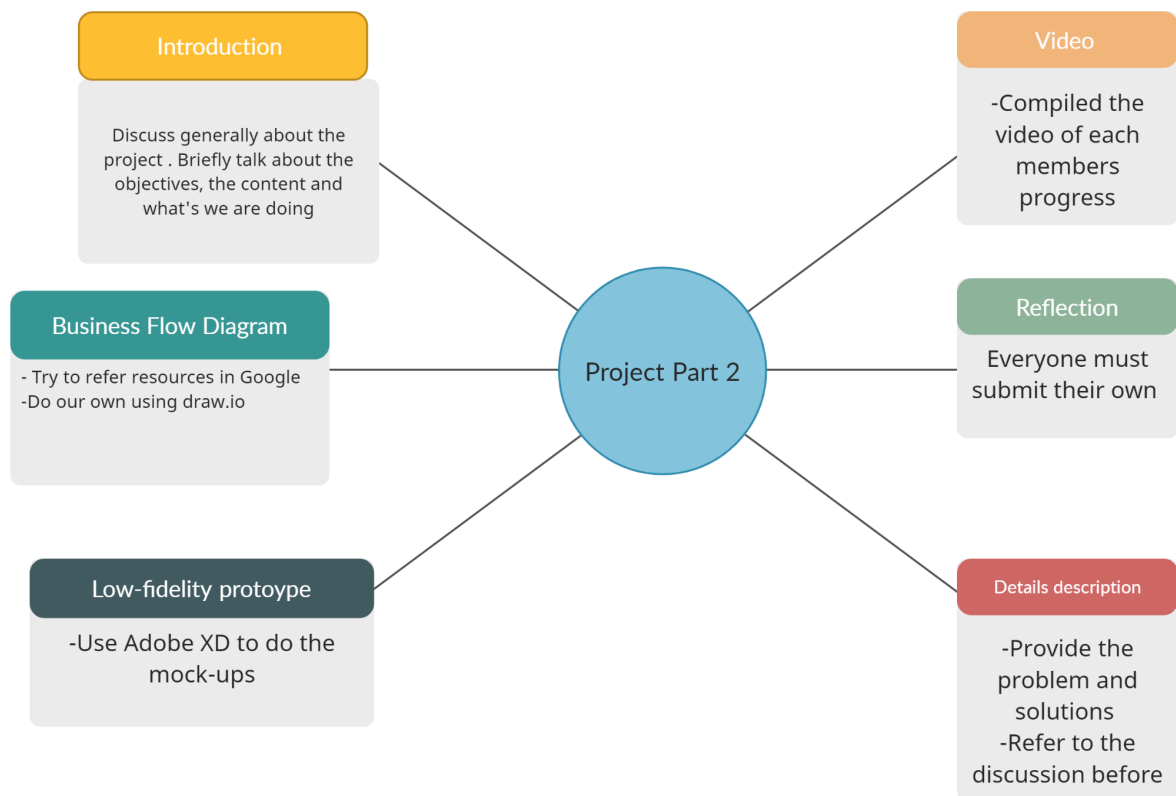
Detail steps and descriptions related to the project

Name	Task progress
Anis Sofea Asyikin Binti Abdullah	Doing detail description: Provide the problem and solutions by referring to the discussion before. Making the video: Compiling the video of each other members as video proving
Muhammad Syaif Alfariz Bin Ilyas Susanto	Making the introduction: By discussing generally about the project, stating the description of the prototype, details steps from the beginning until the project is done and explaining the cloud architecture.
Mohammed Abdulsalam Abdulrahman Abu Amoud	Making the business flow diagram: By referring to the resources in Google. Using draw.io to draw the flow diagram. Making the low-fidelity mock-ups: Using Adobe XD and Proto.io to do the mock-ups.

Team Progress By Task

TO DO	DOING	DONE
Compiled Video-Anis	Details description - Problem, solution and progress-Anis	Low-fidelity prototype-Mohammed
Presentation-Each members	Each member: Reflections	Introduction-Syaif
	Business-Flow Diagram-Mohammed	Steps & Description-Anis& Syaif

In doing the project, we made the team progress as it helps us to be more systematic and organised. We also know which part has been done and which parts haven't been done yet.

Brainstorm Ideas

Introduction

Discuss generally about the project . Briefly talk about the objectives, the content and what's we are doing

Business Flow Diagram

- Try to refer resources in Google
-Do our own using draw.io

Low-fidelity protoype

-Use Adobe XD to do the mock-ups

Project Part 2

Video

-Compiled the video of each members progress

Reflection

Everyone must submit their own

Details description

-Provide the problem and solutions
-Refer to the discussion before

We jotted down all the ideas that we had during the meeting and made it in a mind-map version as it will help us to easily do our task. We also point down the software that we are going to use in this project.

Detailed descriptions

Problem

School of Computing students claim that they need an application that they can save all their files, e-portfolio, and software in one application as it will save their money, time, and space so they can refer to it from time to time. Also, they need to have a timetable scheduler for their registration and pre-registration because they said that sometimes they have to manually check for the vacancy in the section. Not only that, for students that have a problem with their registration and need to reschedule their timetable back, it would be a burden as they have to manually check for the section.

Solution

- Create cloud storage which eases students of Computing to save all the files.
- Make a timetable rescheduler for registration subjects where students put all the subject code and their course using a filter engine and it will reschedule the timetable without any clash. Therefore, it will help students to avoid clashes during the registration period.
- Our application is basically to help students for the school of computing to be more organized when it comes to the timetable and storage so they can manage their time well.
- They can avoid doing last-minute assessments given by the lecturer and end up doing poor quality of work.

AWS Cloud Architecture
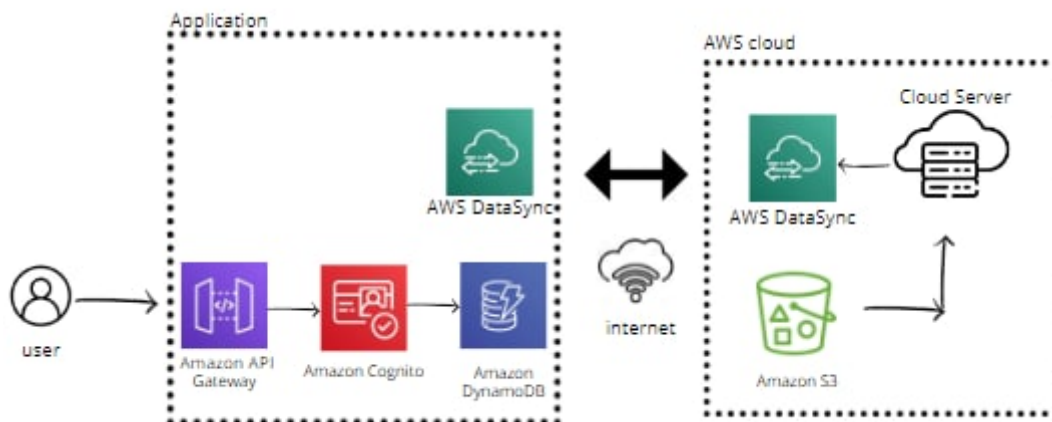
Description:

This is the AWS cloud architecture of our application that consists of Amazon API Gateway, Amazon Config, Amazon DynamoDB, Amazon DataSync, Amazon S3 and Amazon Storage Gateway. First the user will open the application and enter the user login interface. Amazon API Gateway will manage the service for the application and make it easy for developers to maintain and monitor at any scales. Amazon cognito used to be a simple user identity and data synchronisation service that helps to securely manage data for the user. Amazon DynamoDB used to run the high performance applications and can solve the bad internet traffic. This Amazon Web Services will improve the performance of the application. For the AWS cloud, it has Amazon S3 where it is object storage built to store and retrieve any amount of data from anywhere. Then it will store the data in the cloud server and lastly the Amazon DataSync used to transfer data between AWS storage services so it can replicate, archive and share data easily.

Business flow diagram with descriptions
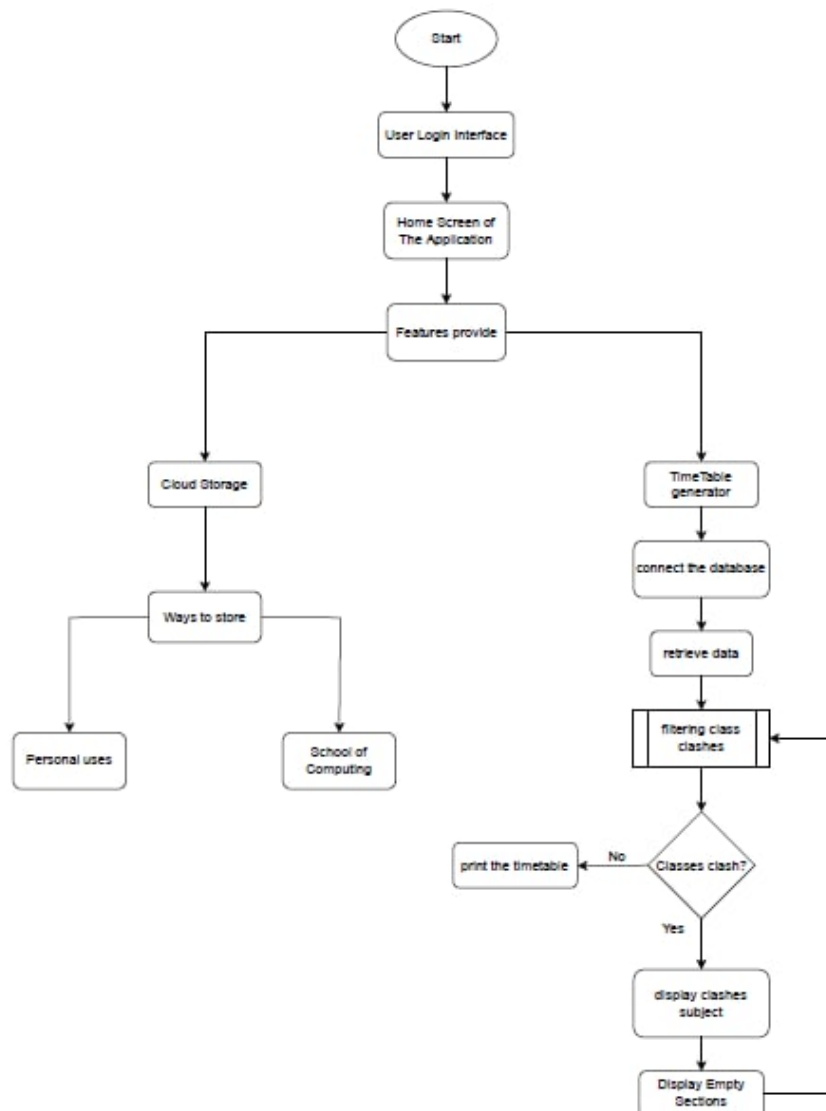
Description:

The first step, the user will login to the app using the UTM ID and password. Next, at the home screen they can choose the features provided in the app which are cloud storage and timetable generator. If they choose the cloud storage, they will have options to use the cloud storage to store personal files and also files that are related to the school of computing. This can help students differentiate personal and work things. If they choose the timetable generator, they will connect to the course registration database and retrieve the data. Then, the system will filter the class subjects that are related to those students. If the system finds out that the classes are clashing, it will display the subjects that are clashing and give the option for the students to change other empty sections. If the classes don't clash, it will display the timetable. The user can print it and upload it to the cloud storage

Low-fidelity mock-ups
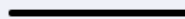

FSKM Cloud

Sign in

12:26

Sign in

Sign In Heading

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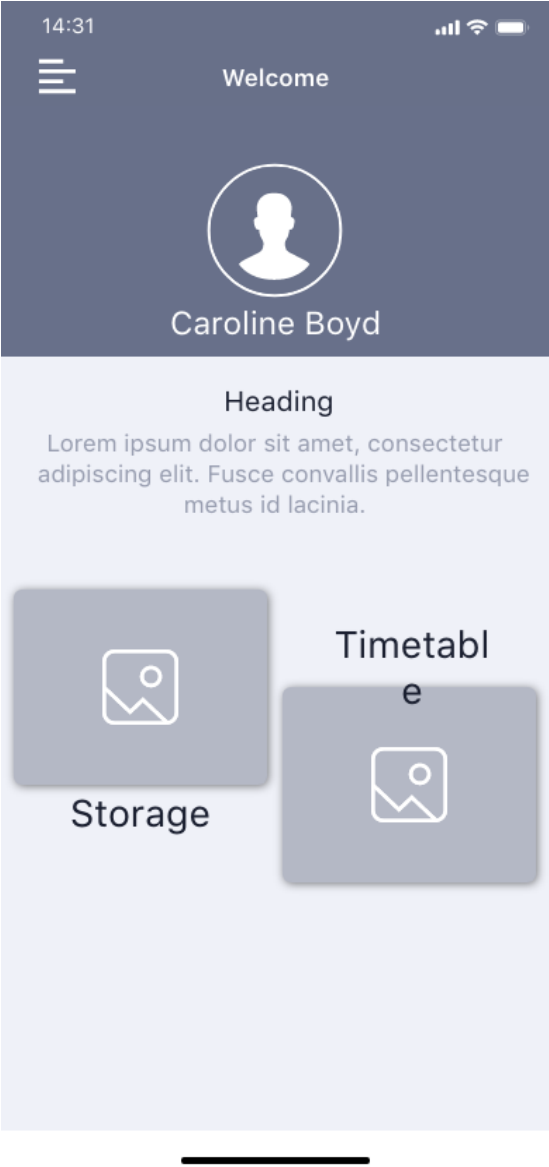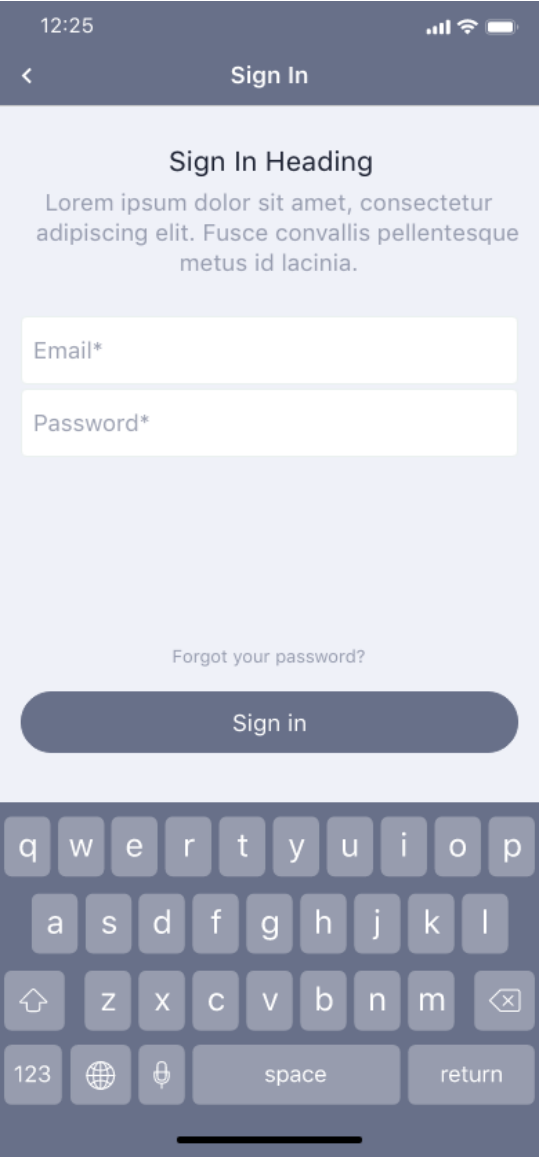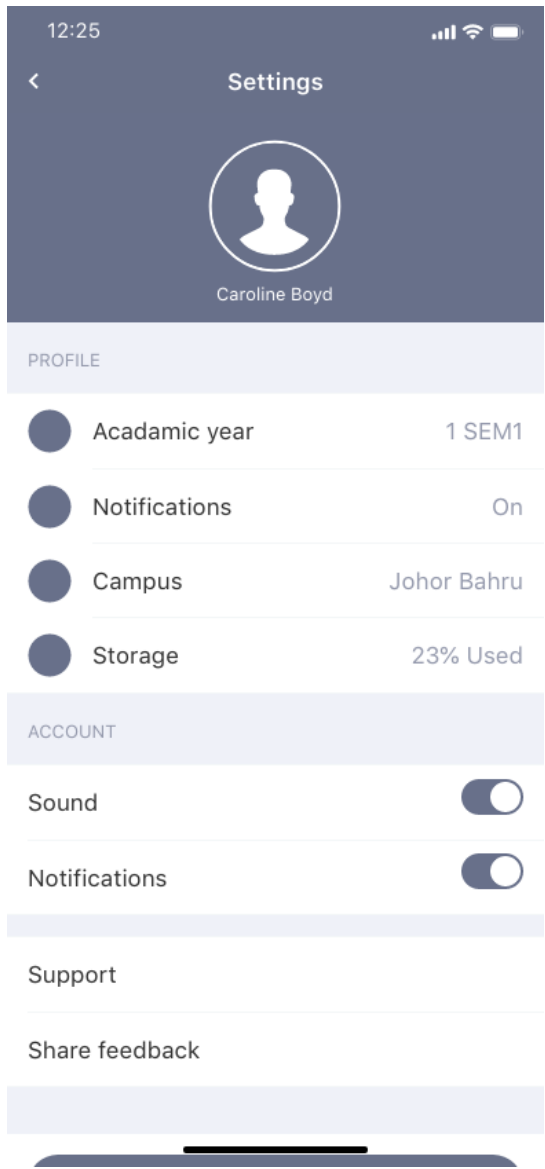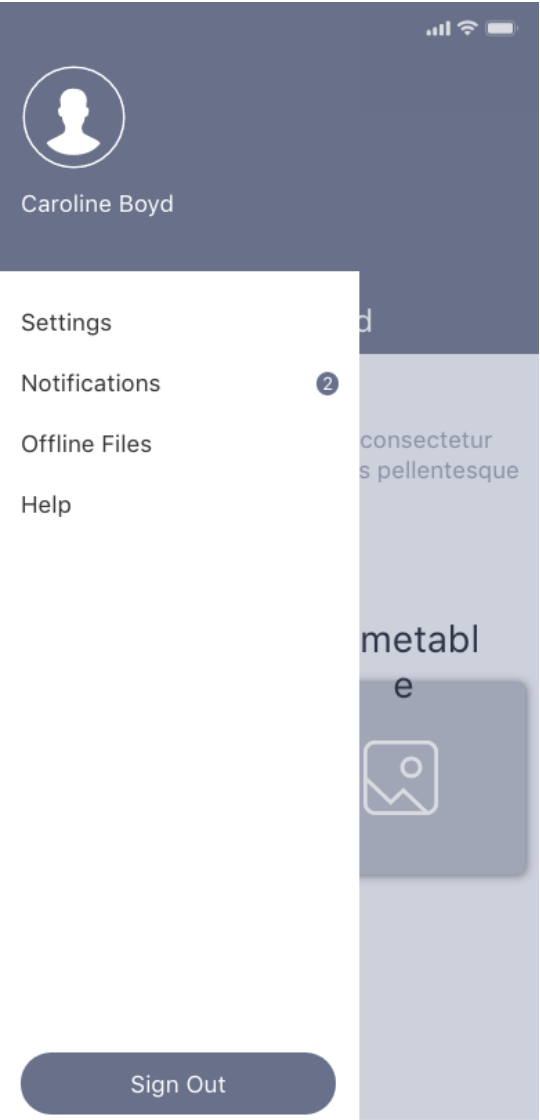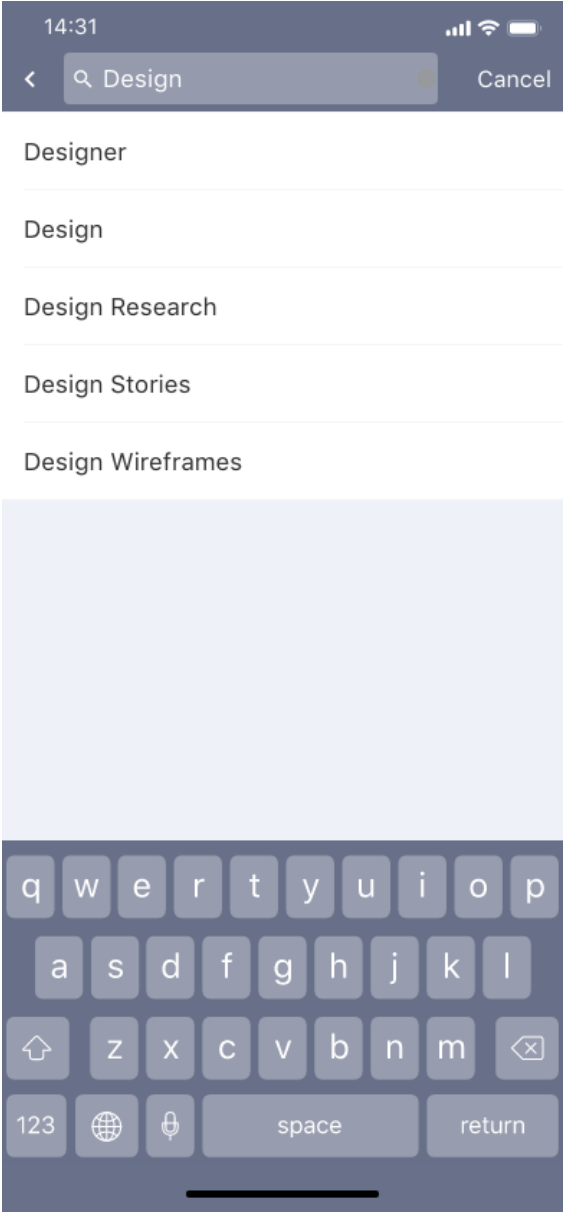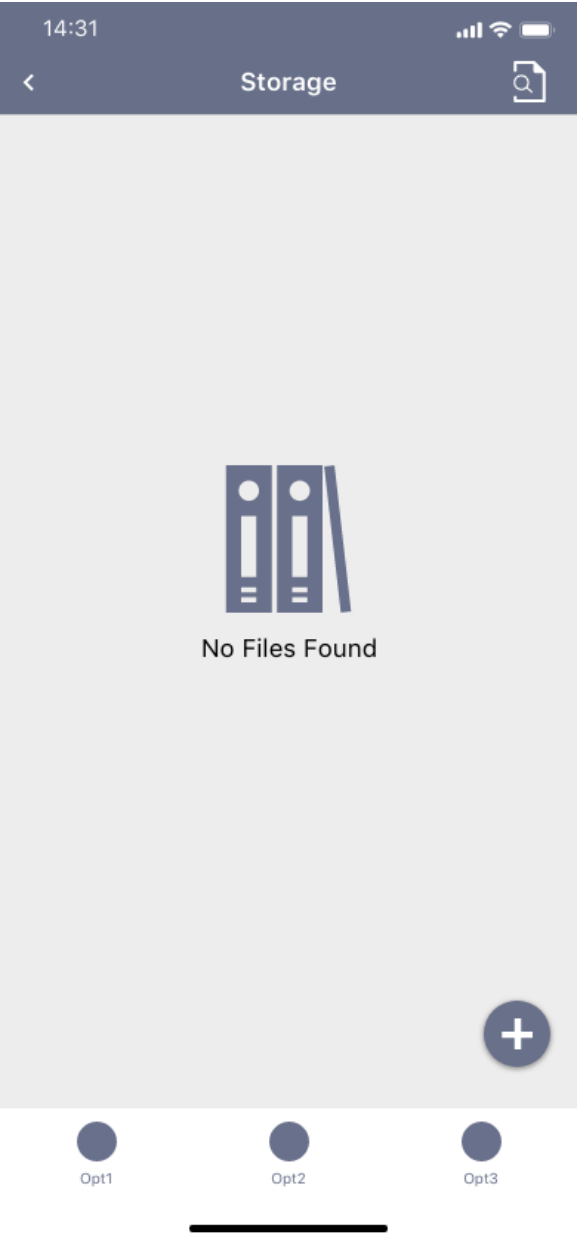
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Password*

Sign in
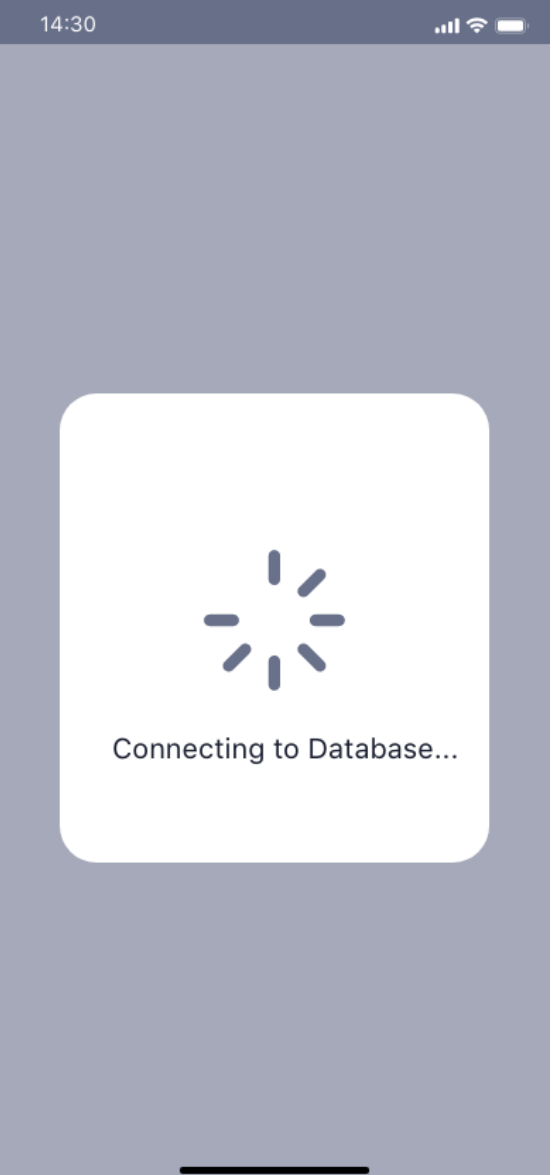
By proceeding you also agree to the Terms of Service and Privacy Policy

Caroline Boyd

Settings

Notifications ②

Offline Files

Help

Sign Out

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‹ **Settings**

Caroline Boyd

PROFILE

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Notifications | On

Campus | Johor Bahru

Storage | 23% Used

ACCOUNT

Sound

Notifications

Support

Share feedback

14:31

Storage

No Files Found

Opt1   Opt2   Opt3

14:31

Design

Cancel

Designer

Design

Design Research

Design Stories

Design Wireframes

q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123   space   return

14:30

Welcome

Caroline Boyd

Profile | Activity Log

Text

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce convallis pellentesque metus id lacinia.

Generate Timetable

14:30

Connecting to Database...

Retrieving data...

14:30

< **Clashes**

CLASHES LIST
JUNE 4

Name	Details
Course 1 SECTION 04	2 Slots ⚠ WED 08:00AM
Course 2 SECTION 07	2 Slots ⚠ WED 08:00AM
Course 6 SECTION 04	0 Slots ⚠ SAT 08:00AM
Course 4 SECTION 04	2 Slots ⚠ SAT 08:00AM
Course 3 SECTION 04	2 Slots available ✓ MON 08:00AM

⬤ UPDATE   ⬤ CONTACT LECTURER   ★ DASHBOARD

Screen 1

‹ **Update**

UPDATE
JUNE 4

Name	Details
Course 1 SECTION 01	2 Slots WED 16:00AM
Course 2 SECTION 06	2 Slots WED 08:00AM
Course 6 SECTION 01	0 Slots SAT 14:00AM
Course 4 SECTION 11	2 Slots SAT 11:00AM

Update Section

Screen 2

‹ **Augusta Abbott**

Student course informations

17	6	0
Credits	courses	CGPA

Caroline Boyd

YEAR 1 Semester 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce convallis pellentesque metus id lacinia.

+

Upload to storage

1SECR Sem 2 Timetable 2020/2021-1

Save as pdf

Student's Reflections

1. Muhammad Syaif Alfariz Bin Ilyas Susanto

a. What I have learned while making the project is I learn new things that I have never done before such as using Adobe XD and proto.io to create a prototype for an application. Before this, I had zero experience doing this kind of project, but now I have the knowledge on how to create an application even if it is just a prototype. What motivates me to do this project in my perspective is because this is my first time doing a project like this so it makes me curious on what will happen when the project is done.

b. The issue that arises when doing the project is when we want to decide who would be the client for this project where at first we are a little bit confused on how to decide it. This is because a lot of people with different jobs would have the same idea.So the solutions for this issue is discussed thoroughly on what type of job mostly got the organising storage problem. Then, we come up with two types of jobs that mostly have problems with the storage which are students and management.

c. My direction after completing the project is to proof many people out there most likely to the people that doesn't accept the revolution of technologies, that technologies can be use to release some unnecessary burden and technologies doesn't make people be more lazy on doing their work because the function of technologies are to make people work fast and more efficient.

d. Improvements that are necessary to me are to improve in developing my ideas so that whenever we have problems in terms of technologies, I can develop ideas to solve the problem quickly so it will not affect the industries. The next improvement is about my interpersonal skills where I need to be a more interactive person in order to convince the public about my ideas. Lastly, I need to improve my communication skills, which are speaking clearly and confidently, so that I can communicate well with others and build good relationships with others.

2. Anis Sofea Asyikin Binti Abdullah

a. Many new things, such as information systems and technology (IS/IT) and emerging trends in IS/IT, as well as its applications in daily life at home and at work, are available to me. Various components of IS/IT will be covered, including hardware, software, networks, communications, the internet, multimedia, graphics, systems applications, 4IR, cloud computing, and data analytics. My motivation to complete this project is I want to understand all the problems and try to have a solution for them.

b. One of the issues is this project is quite new for us as we rarely do something about it and also we are required to use some of the unfamiliar software. However, we still can finish our task with the help of friends, notes, and also research on how to implement our task.

c. I think my direction is I would like to focus more on doing a Front End style as I guess I quite enjoyed doing the design and it helps you to be more creative.

d. I think the   necessary improvement needed is that we had to polish our problem-solving skills and also try to think out of the box. Other than that, if someone wants to excel in information and technology fields, try to excel not only in language but also in the architecture of the system design too.

3. Mohammed Abdulsalam Abdulrahman Abu Amoud

a. Doing this project was a new experience to me. It has got me introduced to new technologies such as cloud computing as well as practising some important skills like problem solving. I also found out while making the low fidelity mockup that I'm really interested in UI/UX design. I have also learned some basic knowledge and some skills using adobe XD when I work on designing the mockups. Overall it was an eye opening to new technologies and learning experience.

b. The problem that arises was to decide who would be the client for this project. There was some confusion on who the target audience will be. As many people who have different jobs would have the issues and struggles having organised and easy access storage. With that in mind, we have come up with two types of users that mostly have problems with keeping their work backed up and organised, which are students in school work and management work.

c. I think technologies can be very powerful and useful to overcome unnecessary overload like in our case of this project. Technology can function to help people to produce efficient work in ease with high pace and timely manner.

d. Skills can help me to improve my professional competency and perform better at work. Education and experience can also help me to learn new things and enhance my abilities. Thus,the more skilled you are at doing specific tasks, the more likely you are to land a job or even advance in the current one.