SCHOOL OF COMPUTING∆FACULTY OF ENGINEERING

SECP1513-07

TECHNOLOGY AND INFORMATION SYSTEM

BASIC APPLICATION SOFTWARE

SECTION: 07

COURSE: Bachelor Of Computer Science •SOFTWARE ENGINEERING

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1.INTRODUCTION

Basic application software is known as a general-purpose application or productivity applications. Application software(app for short) is a type of program designed for end-users. Examples of application software are spreadsheets, PowerPoint, Word, photo editor, video game editor, web browser and media player, etc. Basic application software we use in our daily life. There are three types of application software :

1.General purpose application.

2.Specialized applications and

3.Mobile Application

We are very familiar with the mobile application because we use them daily or we use them on our daily basis. Mobile apps like Facebook, Messenger, Instagram, UTM smart, etc. we use daily. General-purpose applications like Microsoft office 365, spreadsheet, database management system, etc. also we use on our daily basis.

2.DETAIL STEP AND DESCRIPTIONS

We come to the idea of adding an e-wallet in the UTM smart app. Why this idea take our attention? This is because e-wallet is a kind of payment method where we can pay with a touch on our mobile and we thought this is very useful in this covid-19 situation because it is a cashless payment method. Our teammates worked hard to make this design thinking. we are pleased with our team works. Our teammates were punctual and convenient with their works. We gradually make our chapter 3 presentation then the design thinking video. We take an interview with UTM officials regarding our works. We have faced a lot of difficulties throughout the idea thinking that does it really helpful? Then our group members suggested that it is useful in many ways. In the next step, I will describe this immensely. After finishing our design thinking works we took a user interview from our batchmate. According to his say, this app is really good for UTM works or this app is really convenient inside UTM for cashless payment. I am adding our team meeting picture below :
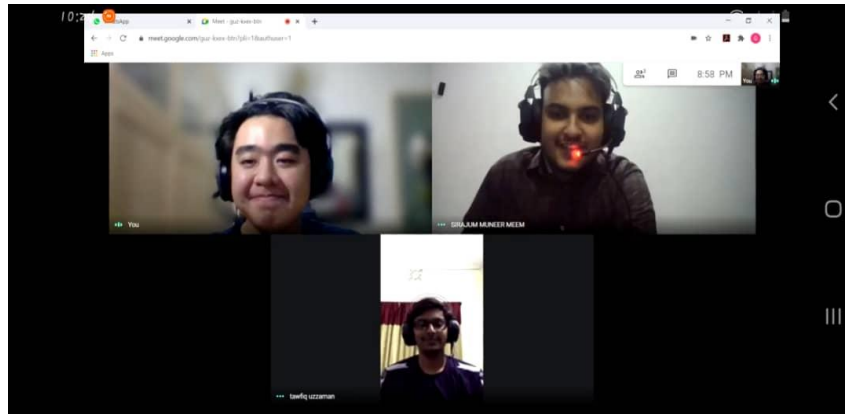
Our team meeting day.
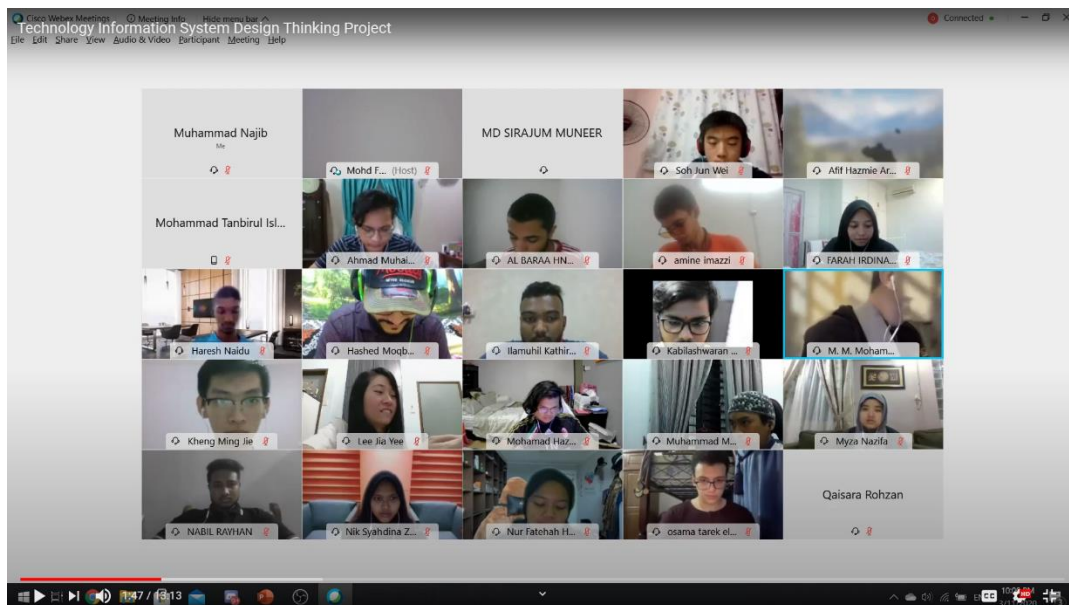

MEETING WITH OUR UTM OFFICIAL.

3.DETAILED DESCRIPTIONS

i)PROBLEM: We face various kinds of problems about money matters inside UTM. So we thought if we just add an e-wallet in UTM smart it will be useful for everyone. It can be useful to the students and the staff. A few days ago one of my friends had to submit his visa to UTM international so that he had to pay. For paying the money he had to waste a lot of time like calling a grab then go to the CIMB Bank (Malaysia) then pay the money than print the receipt and again come back to UTM international. What if all the works are done by just a click on the UTM smart app? Again I saw that students have to suffer a lot for paying the tuition fees. That can also be done with the e-wallet with just a touch. Few days ago I was eating in ARKED MERANTI, after eating I noticed that I don't have enough cash so that I had to borrow from one of my friends there. This problem can be sought out by e-wallet. We faced a lot of problems while doing the design thinking, first of all, we thought is it really

possible? We were really confused at a certain point about this then our group members decided that it can be possible because people with many countries using touch n go e-wallet very easily and we thought for UTM, it is not a very difficult job to maintain the e-wallet in UTM smart. There a lot of problems we also faced like designing the interface for the users, working frequently, maintenance cost, etc. but these problems people often face while developing an app or upgrading an app. now let's talk about these solutions ..

ii)SOLUTION: When there is a problem, there must be a solution. So, we found our solutions by discussing these problems among our group members. About the user interface problem, we were very confused about the e-wallet logo and its interface then we took some idea from the touch n go e-wallet. After that, we(the group members) made our user interface. Hope everyone will like it. we faced difficulties with maintenance issues but after discussing we came to a decision that it would not take so much cost. We think that UTM can easily maintain it. This e-wallet will solve the problems like giving tuition fees, visa fees, payment to various food courts inside UTM. We were in confusion about the security and safety issues because it is a money matter. But UTM provides the matric card and everything will be saved in the memory of UTM smart, this means this e-wallet will take a record of every transaction so no one can cheat or there will be no misunderstandings. These problems we faced and solved together by discussing them.

iii)TEAM WORKING: Though it is a covid-19 situation, we give our best to make everything possible within the deadline. Because of this outbreak situation, we haven't met face to face but we did our job by virtual meetings. We met several times when our group members had any problems. We tried to solve it together and by the grace of Allah, we made this possible within Time. Tawfiq did a splendid job by making the user interface, the video editing works and everything is well maintained by Sirajum and Najib. The report writing is not so easy, so we divided our works between three and Sirajum did a splendid job by finishing the report within time. We took a user interview whose name is Md Mahi, a student of UTM. I am giving some evidence of our teamwork below :
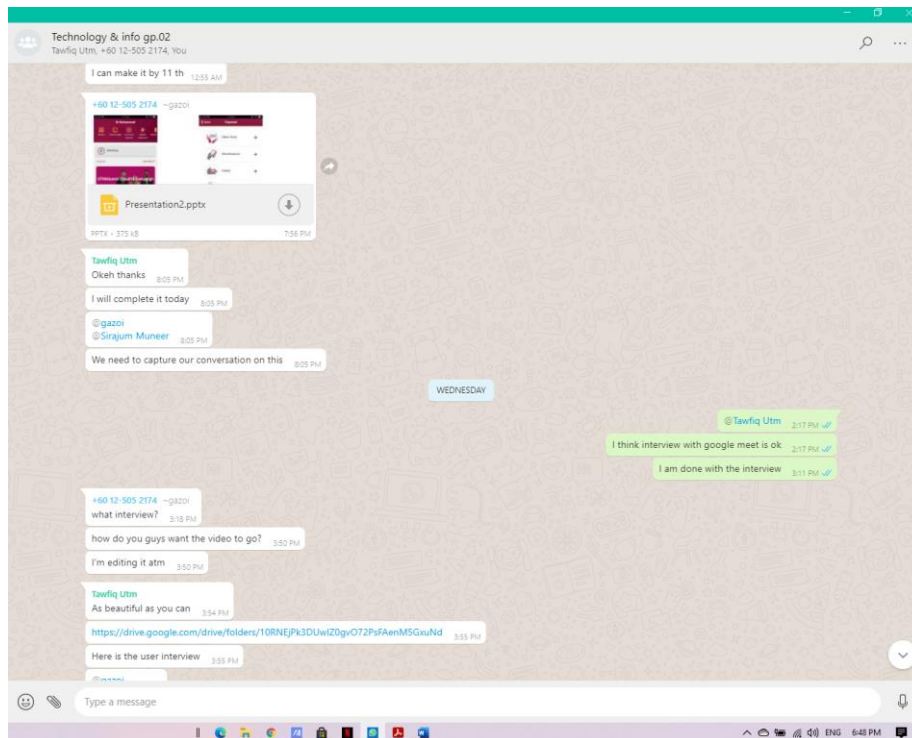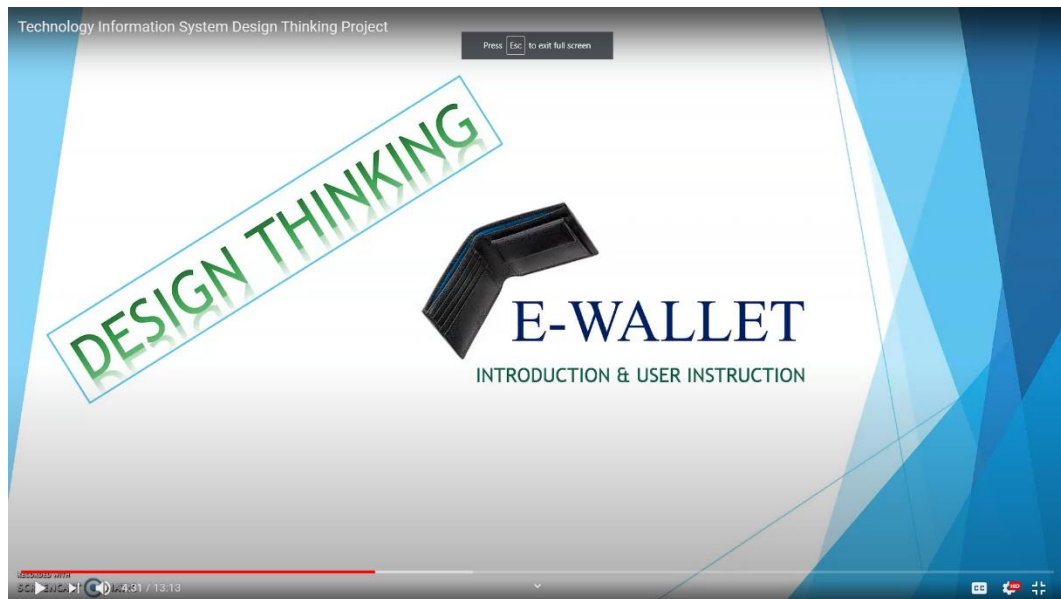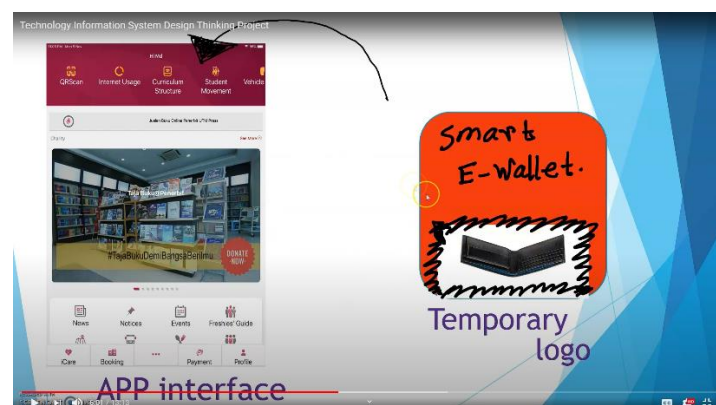
Our virtual discussion on whatsApp

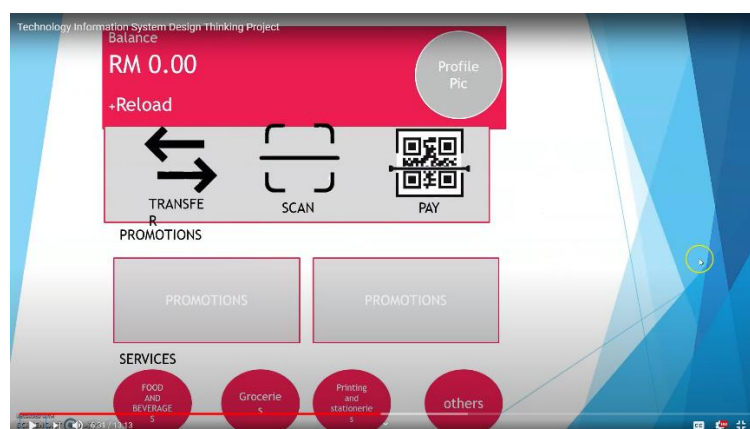Our virtual meetings and discussions.

4.DESIGN THINKING EVIDENCE

a) **So the** design thinking evidence I am giving below which are done by the group members

This is our design thinking e-wallet

The temporary logo of smart e-wallet

**This is the evidence of how it works . A user can reload it through bank DEBIT card or CIMB clicks. Then when it is time to pay they just have to scan the QR code which will be individual for individual works. **

b)i)Empathy: These are the question and answer from our user, MD MAHI ANAN, STUDENT, SCHOOL OF COMPUTING, SOFTWARE ENGINEERING :

Questions: Mr. Mahi Anan you are using UTM smart E-wallet right so, how was your experience with it?
Answers: Well some of the students of UTM made this new feature called UTM smart E-wallet and I'm using it for some weeks. It's a very convenient way to make any payment inside and outside of UTM. During the covid-19 pandemic, it helped a lot.

Question: So, do you think it's an effective way, and students will be pleased by using it?

Answer: Yes, obviously it's very effective for UTM students beause they don't experience any kind of payment feature in UTM smart. So, I think it's a very good decision to add this feature with UTM smart.

Question: What can we do to spread the use of this feature?

Answer: Yah you guys should make an advertisement to promote this feature. And you guys also can add maps and medicine features in this.

ii)Define: This will bring a lot of career possibilities in future. We discussed some problems which are faced by the user. From this, we came to a point that the solution might bring us to another level of design thinking which will be effective for us.
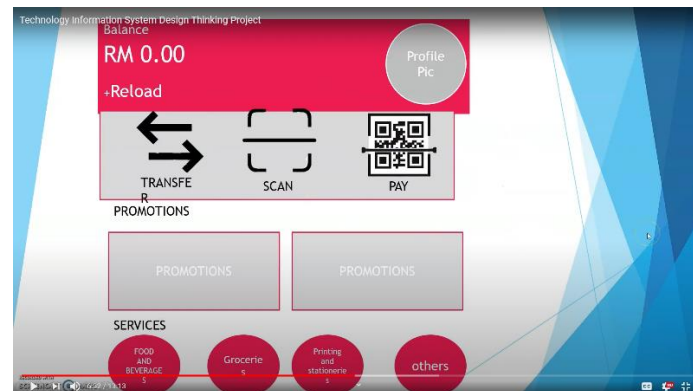
iii)Ideate: Now we move on to encounter the problems that are faced by the users. This is important for us to check each and everything has a proper solution. Then we start designing our module.
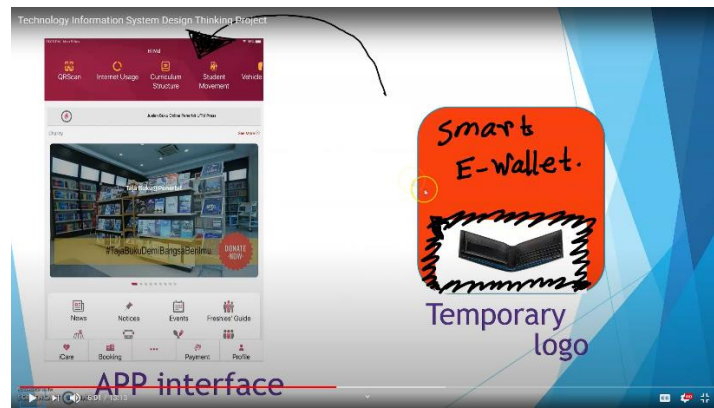
E-WALLET MODULE
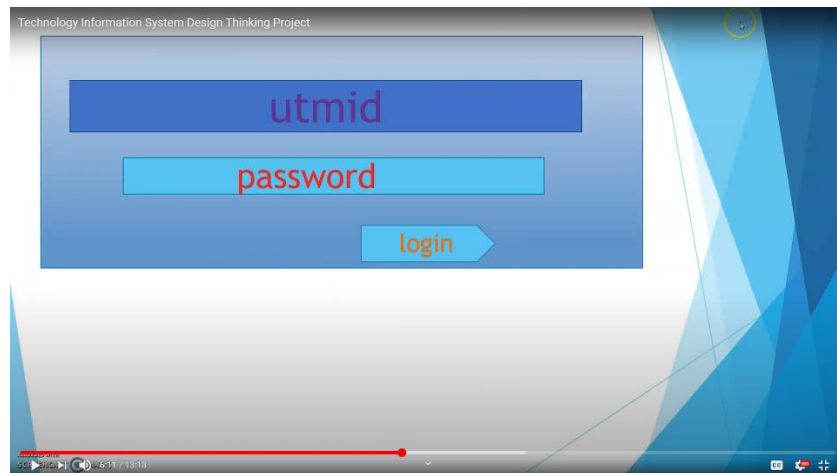
USER HAVE TO LOGIN FIRST TO ENTER IN UTM SMART E-WALLET

AFTER LOGGING IN AN USER CAN PAY WITH THE E-WALLET. THEY JUSY HAVE TO SCAN THE QR CODE. IT COULD INCLUDE FOOD AND GROCERIES ALSO AS WE DISCUSSED THE TUITION FEE AND VISA PAYMENT ALSO.

IV)PROTOTYPE :

-We used the interface of the UTM smart app then we added the logo of the e-wallet which we have shown in previous points

-After adding the logo we discussed the login method. So for login, it requires the UTM id and passcode.

-After tapping on the e-wallet logo a user can see the reload option which can be done by any bank or debit card or CIMB clicks.

-After reloading, the user can pay by scanning the individual QR code.

-When the payment will be done he will be notified by the bank and the payment is done and it will automatically generate a pdf of receipt.

-It will notify like this when the payment is completed :
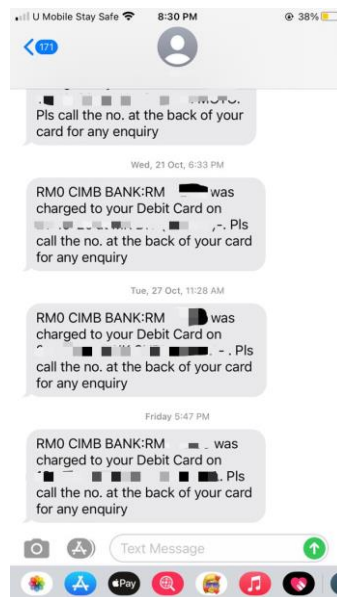
Due to privacy issue, some words are blurred 😊

v)TEST: We tested this method to a shop, we ate foods of RM 15.00 and it was successful to make a payment through e-wallet. This is how it looks after making a payment with it :
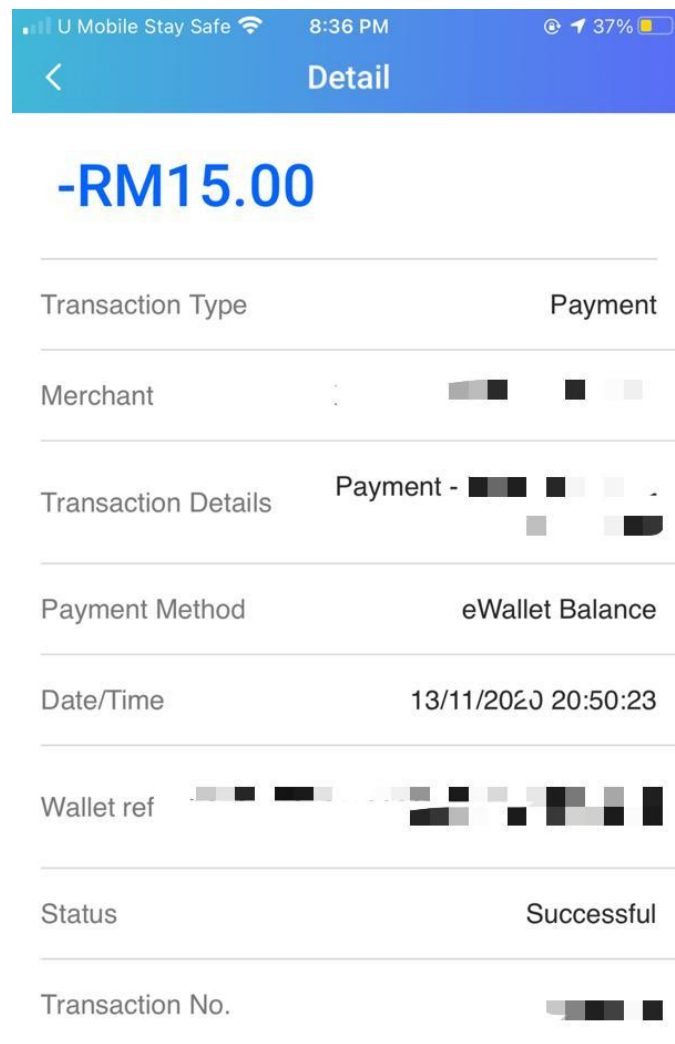
So, we tested and it was successful 😊

5.REFLECTION :

5.1. Sirajum Muneer's Reflection:

a) Our goal is to be a good software engineer in the future and we want to rule all over the world and want to prove that UTM students are always innovative. We want to go to the 1st world countries after finishing graduation here.

b) This design thinking upgraded me towards making something new. It will inspire me while making software or developing software in the future.

c) for improving the potential to the industry I need more lab works, I want to have face to face practical and I need experience maybe in a software company so that I can give my own business like IT firms.

5.2. Muhammad Najib's Reflection:

a) To be a competent software engineer and become a functioning member of the society in order to make changes in the world.

b) It allows me to gain new ideas and due to the current problems faced around the world it allows me to think of new ideas to adapt to it.

c) In order to improve myself, I must be more active working in groups, be more responsive and I need to gain more experience in working with content creation software so that I can be even more useful in the industry.

5.3 Tawfiquzzaman's Reflection:

a) Design thinking is like creative thinking. Alhamdulillah, we did our best on it. It will inspire me in the future and will give me the motivation to do respective works. This project was a good experience for me. I hope that it will help me in the future.

b) This project is very much a practical project so I learned how to work with a group and how to maintain group work so it will be helpful for me in the future. This project is also like a real project so it can teach us how our future projects will be. I learned how to present something I mean how to make a presentation. It will also be helpful for me.

c) This was the first time I need to improve my self for future group tasks and also for future professional life. So, I need to work hard obviously and try hard to get success in life.

6.Work Distribution :

Members	Task
MD SIRAJUM MUNEER A20EC4035	-Report writing -User Interview -Idea Contribution
MD TAWFIQUZZMAN A20EC4036	-Prototype Presentation -Prototype Testing -Idea Contribution
Muhammad Najib bin Jamaludin A20EC0215	-Recording Interviews -Video Editing -Idea Contribution

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