**MINUTES OF MEETING**

The meeting was scheduled to be every Monday at 10am. The first meeting was held on 6th of May, 2019.

**06TH MAY, 2019 – DELIBERATION ON THE TOPIC (ONLINE COMPUTATION SYSTEM)**

We deliberated on the topic of my project, he started by asking me how the existing system work, I explained the existing system, it compositions and how involved I am with the existing system.

My supervisor, asked if I will be working on building the system with more functionalities other than calculating just averages, he advised to think of how and what could be done better in every level or comment of the system, including critical thinking of what is required for better functionalities.

**13TH MAY, 2019 - DETAILED DESCRIPTION OF THE PROPOSED SYSTEM AND PREPARATION FOR ETHIC COMMITTEE APPLICATION**

I handed to my supervisor a more detailed description of the proposed system, including some paper sketches of the proposed interfaces.

He advised me to prepare the entire necessary document for ethic committee application, which he said I can find online. This is to help me start work on the prototype and evaluation to gather requirements.

I presented an Entity Relationship (ER) Diagram, we looked into it and there was a need for modification. He advised I make the modification.

20th May, 2019 – Corrected ER diagram and ethic forms presentation

I presented the corrected ER diagram and we concluded it is ok, also I presented the forms for the ethic committee that I got online with necessary adjustment made to be submitted to the ethic committee. My supervisor find out that the Form A I worked on is not the required one, he asked me to check online again for the correct form. He advise I start looking into other related systems for more ideas, and not to forget considering security. That I should think about the question to ask for evaluation.

**27TH MAY, 2019 – EVALUATION**

We discussed about evaluation, where I explained how I am going to do the evaluation and the people that will be involved are my colleagues from Nigeria studying in Dundee. He advised I include others too.

My supervisor looked into the draft evaluation questions I drafted. He advised I should observe the participants using the system.

I told my supervisor how I have read on the security issues concerning my project and what I have learnt.

**3RD JUNE, 2019 – ETHIC FORMS**

I presented the forms (participant information sheet, consent form, evaluation questions, and Form A). We deliberated and he advised me to make some corrections on the forms and send to him for perusal before submission.

**10TH JUNE, 2019 – SECURITY ISSUES AND PROPOSED SYSTEM USER ROLES**

I explained some security (user access) issues relating to my project. I talked about how to deal with password length, stripped unwanted characters from user input, use of BCRYPT hashing function, and prepared statement to tackle possible threat or attack. My supervisor advised I talk to a professional (Dr. Sasa) regarding the issue of security.

I explain the user roles of the system to be three and my supervisor suggested that we have more user roles making it five user roles. I asked if I can continue working on developing the system and he asked me to go ahead.

**17th JUNE, 2019 – USER ROLES AND MEETING with Dr. SASA**

My supervisor advised me to discuss the different user type and related security issue with Dr. Sasa. I told my supervisor that I have implemented additional user roles making it 5, I explained the difference in privileges for all the users. I explained my success in implementing the hashing of password, stripping unwanted characters from user input, use of prepared statements. We agree on the next task to work on as registration pages, Broadsheet pages, uploads and my meeting Dr. Sasa.

Meeting with Dr. Sasa, I started by explaining what my system is all about, I explained the user roles. I asked him why I should use long passwords, and how do I deal with users memorising their password without writing it down.

Dr. Sasa responded as follows:

If this is accessible to the public then it is necessary to have long password, because attackers would keep striking and short password can be easily brute force.

He stated that limiting login attempt is not an option, because if the password is long enough, there will be no rules required. For access control since the system have user roles, creating use case diagram is required to identify real users / malicious users, what they can do, the diagram will show all possible attacks and solutions to those attacks.

Long password is the only option and users should be able to memorise their password, it is either they keep it in mind or write it down in a secured place or using password manager, as it is only possible to have a secured system if the password characters are long enough.

**24th JUNE, 2019 – ETHIC COMMITTEE RESPONSE AND FINALISE THE USE CASE DIAGRAM.**

My supervisor asked if I have received the ethic committee response, he asked me to look into it and do what is necessary. I told him how far I have gone creating the use case diagram and he asked me to finalise it for further discussion with Dr. Sasa, then continue with developments of other parts.

**1ST JULY, 2019 – SECURITY (CSFR), REFACTORING**

I explained my work progress which includes; creating all user role functions, registration pages, broadsheet pages and upload. I reminded my supervisor that I will be meeting with Dr. Sasa to discuss the diagram. I explained one of the challenges I was facing as the Cross Site Forgery Request (CSFR) attack implementation.

We concluded that I will be working on the challenge, do code refactoring and meet with Dr. Sasa.

**3rd JULY, 2019 - MEETING WITH Dr. SASA**

I showed Dr. Sasa the diagram and explained it to him. He recommended as follows:

* I should worry more about the abuse that might occur from the side of the real system user.
* Make sure there is protection for unauthorised views.
* Map all possible threat to functionalities on the diagram.
* Asked me to meet with Dr. Craig for further assistance, as he is a professional in use case diagram.
* Most of the threat can be handled form implementation.

Furthermore, he said use case diagram is too specific, and I suggest if I can decompose the diagram by simply grouping the functionalities to enable me map the threat to more functionalities.

**8TH JULY, 2019 – BACKUP FEATURE**

I explained the outcome of our meeting with Dr. Sasa and the suggestion he made to meet Dr. Craig.

I brought the issue of creating a backup future in the system. My supervisor asked if the backup will be manually, or automatic, which we concluded to have it combined.

He asked how to use the backup file. I explained that the backups created will be imported when needed, since backups created will include date and time. The meeting was concluded that I would:

* Meet Dr. Craig
* Look into evaluation of the prototype
* Complete the refactoring of code and
* creation of user logs

Meeting with Dr. Craig

I explained what my system is all about and the use case diagrams I have created and discussed with Dr. Sasa.

He said the diagrams looked okay and he recommended:

* To combine the included functionalities, they should not be standing alone as inclusion
* He suggested decomposing the diagram, creating each actor in a separate diagram.
* Use documentation to explain the use case diagram as it will make the diagram less cumbersome.

We concluded that I will meet him again after working on the recommendations.

**15TH JULY, 2019 – USE CASE DOCUMENTATION AND MEETING WITH PARTICIPANTS**

I told my supervisor that I am working on the use case documentation and separation of the use case diagram, I explained to him that I have created personas too, considering user experience in the development. I told him that I have completed the refactoring, implemented user log functions and CSFR, also that I have met with the participants to arrange meeting.

We concluded to; do the prototype evaluation, and finish the use case documentation.

**24TH JULY, 2019 – RESCHEDULE APPOINTMENT**

We could not meet on 22nd of July, 2019, due to my illness, and we reschedule to meet on 24th of July, 2019. I explained to him that I could not do much because of my illness and I am still working on what we concluded to work on from the last meeting. I told him I will be meeting with Dr. Craig the following day to further discuss the diagram and documentation.

25th July, 2019 – Meeting with Dr. Craig

Dr. Craig checked the diagram and documentation I presented to him and he asked why I included more cases after the major once. I explained that the reason was because of the misuse case diagram, so I can show the mitigation.

He concluded that the diagram and documentation are fine.

**5TH AUGUST, 2019 – USER NAVIGATION MENU CONTROL, CREATING BLANK FILE FORMAT, AND FINAL EVALUATION AND TESTING**

I explained the outcome of my meeting with Dr. Craig, we discussed more on the validation of user input on all the user input form in the system. I told him that I have included menu control to the system manager’s user role, to be able to control user menu by enabling or disabling the menus. I explained how I controlled the possible errors that might occur due to wrong column arrangement in the file format and the use of wrong file format. He suggested if I can include a way of creating the blank .csv file format to avoid user making such errors.

We concluded that I will do final user evaluation and testing of the system, then work on the report and that I will send part or the report for his perusal.

**12th AUGUST, 2019 – WORK PROGRESS AND COMMENTS ON THE REPORT.**

I explained that the user evaluation and testing has been done and that I am working on the remaining part of the report. I asked question about the comments made on the part of report I sent to him, he responded by explaining more and advised me to use more examples, and express my thought as much as I can. He said- “explain everything even if it seems obvious ”.