SECD 2523 - Database

PROJECT PHASE 2

PROJECT NAME: INTERN DOCTOR

LECTURER: DR. NOOR HIDAYAH ZAKARIA

SECTION: 01

GROUP 5

GROUP MEMBERS:

NO	NAME	MATRIC NO
1.	GUI YU XUAN	A20EC0039
2.	PHANG CHENG YI	A20EC0131
3.	FELICIA CHIN HUI FEN	A20EC0037
4.	GOH YITIAN	A20EC0038

1.   INTRODUCTION

The internship website is a platform for college students to find the workplace to gain experience. The internship is important for college students to apply the knowledge from the class to a real working environment. This is a chance for college students to develop their professional skills and strengthen their personalities. There are a few internship websites on the Internet for college students to look for a position such as LinkedIn and Intersheep.com. The reason why internship websites are becoming more and more popular is because of the development of networks around the world. Companies can easily promote the positions they are looking for through the website while college students can easily find the positions they want through the promotion of the company. The main reason is that the company can view the resume of college students from the internship website to determine whether the interviewee is the person they want. This results in saving time for the company and interviewee.

Universiti Teknologi Malaysia has developed an Industrial Training System for college students to apply for internships. With this system, the administrators are able to ensure all the college students have applied for an internship program. College students are also able to search for the company through the list of companies in the system.

2. PROBLEM STATEMENT

The first issue with the Universiti Teknologi Malaysia's Industrial Training System system is that it does not provide a platform for both data administrators and the company to observe each other. The data administrators are unable to observe the company to which the students have applied, while the company is unable to obtain the student's resume. This is significant because students may be involved in job scams and go unnoticed, while the company is unable to select students based on their preferences. Second, the system does not provide a progress bar for students to see whether or not their application has been approved. Third, this system does not provide students with reminder settings such as application due date, number of applications for documents, and so on. This makes it difficult for students to locate themselves in the systems.

Next, the system does not provide an interface through which the company can advertise itself. The advertisements are capable of providing opportunities for students to easily find internships while also assisting the company in promoting themselves among students. Furthermore, the system does not provide a communication interface for the company, data administrator, and students to communicate with one another, where students can send their resumes or chat with the company directly. Furthermore, the system does not provide an interface for the company to conduct online interviews or pitch sessions with students. Last but not least, students are unable to demonstrate a history of internship employment in some of the system's companies. This makes it difficult for students to demonstrate their abilities and makes it difficult for companies to select them for internships.

3. INFORMATION GATHERING PROCESS

3.1. METHOD USED

Method used for collecting the information in this project is an interview. Interview method able to gather the problem of the current system faced by users when using the current system and the satisfaction of the users when using the current system. The stakeholder of the project, Dr. Noor Hidayah Zakaria had been interviewed in the Google Meet platform. The interview is in a pyramid structure. The interview starts with closed questions and works toward open-ended questions.

3.2. SUMMARY OF METHOD USED

In this project, we had an interview with our stakeholder, Dr. Noor Hidayah Zakaria to collect the information about the current Industrial Training System and the requirements of the new system. Below are the questions that have been answered by the stakeholder.

Type of Question	Questions	Answer
closed	Who is using the Industrial Training System?	The student who has passed their Final Year Project 1 and has at least completed 90 credits.
closed	What do students need to do in the Industrial Training System?	Students have to update their personal details, IC photo size, and the resume that will be used for the application of the company.
closed	How does the supervisor know the students undergo the internship program?	Supervisor will get a name from aimsweb and students can access the system.
closed	How do students find the company?	Students can search the company from any

		online internship platform such as LinkedIn. However, UTM has cooperated with some companies such as Huawei. These companies will offer our students to intern in their company.
closed	How legit is the company that has been applied by students?	We can't tell the legacy of the company. There are no systems that track the company's legacy. In order to make sure that students work in a legacy company, they need to update and upload a BLI-1C form to their administrator. The BLI-1C form will help the administrator to check the legacy of the company.
closed	How does the supervisor know students have been accepted or rejected?	If the students get the offer letter from the company, students must upload the proof of application in Google Drive. If the application had been rejected by the applied company, students need to obtain the evidence of rejection from the applied company, and upload the proof and update the checklist in Google Drive.
closed	What to do if the students reject the offer letter from the company and wish to apply for a new company?	Students need to upload the evidence and proof of the rejection, and provide the reason for rejection by sending the email to the administrator before the student rejects the company. If the supervisor allows it, then students can reject the company. After that, the administrator will change status and the student can apply for a new company.
open-ended	Since the system cannot tell the legacy of the company, what are your suggestions for students to determine the legacy of the	I suggest that the student need to get the organization information from website, contact potential organizations, check information of

	company?	application procedure, look for the internship duration, check whether allowance is provided, make sure company have project give to student. Most important is that students have to check the location of the company by visiting or checking the google maps, investigate the environment and nature of the company, survey on the parking fees, and students have to make sure they have transport and family grants.
Open-ended	What is the downside of the system?	Sometimes, the company doesn't reply to the request for the application of the students, the students need to email the company to inform them of the intern request that has been applied. Furthermore, there is no platform for companies to promote the place or position they are looking for. Then, students need to fill the BLI-IC form every time they look for a new company, and administrators need to check the form manually. Moreover, there is no platform to communicate between administrator, student and company. Last but not least, it is better if there is a CV template for students to apply to the company.
Open-ended	Any requirements you want for the new system?	Giving the suggestion by listing the companies based on preferences of students such as tally with requirement. Second, provide a chat box in the system for the communication between the users. Thirdly, provide an interface for the company to have an online interview with students. Fourth, students know application progress such as apply, rejected, approved, hired and the company can monitor the progress

		of the application made by students such as how many people apply, who are applying and whether the company wants to reject or approve. Fifth, students can only choose a maximum of 3 companies. Sixth, provide a deadline notification for students and companies. Seventh, provide a resume template for students and advertisement platform for companies for promotion. Eighth, provide an interface for students to know the history of employment of the company.

4. REQUIREMENT ANALYSIS

Through the interview with Dr. Noor Hidayah Zakaria, we learned that the industrial training system is an important system for UTM students to complete industrial training projects. However, it has many shortcomings that need to be improved in order to provide a safer workplace for students. In addition, the current system needs to improve its effectiveness and efficiency to provide better system performance.

Therefore, we are trying to modify the current system by upgrading some functions to solve the problems faced by users in the current system. Our team is trying to add some functions according to the requirements of the interviewee and make some changes to make the system better.

4.1. CURRENT BUSINESS PROCESS

Third year UTM students must undergo industrial training. After completing their final year project 1 and owning at least 90 credits, students will be enrolled in the UTM Industrial Training System. After students have

access to the Industrial Training System, students need to update their personal information such as name, matric ID, IC number, email, address, phone number and more. Students also need to update their own IC size photo for others to recognize. After filling the personal details, then students need to upload the resume.

After updating all the personal details and uploading the important files, students have to identify the internship company. First, students have to search for the company they wish to apply to. After choosing the suitable internship company, students need to fill in the BLI-1C form and attach the organization's profile. Students can choose a maximum of three internship companies. BLI-IC form is the details of the company that students need to fill in. Students send an email to the administrator after filling in the BLI-1C form. Then, the administrator will determine whether the request of the students will be approved or rejected. Students have to update the checklist file in Google Drive for the administrator to know which companies have been applied by students and which companies have been rejected by students.

Then, students need to obtain a verification letter from the administrator. Sending the email that contains a filled verification letter, BLI2A form and student's resume to the internship company and administrator. If the students get the offer letter from the company, students must upload the proof of application in Google Drive. If the application had been rejected by the applied company, students need to obtain the evidence of rejection from the applied company, and upload the proof and update the checklist in Google Drive. Then, students must notify the administrator so that the administrator can change the student's status. Now, students need to search for a new company and repeat the above process. If students wish to reject the application that has been made, students have to email the administrator by providing the reason for the withdrawal. Students can withdraw the application after getting the permission of the administrator.

After finishing the above process, students can prepare themselves for the internship in the applied company.
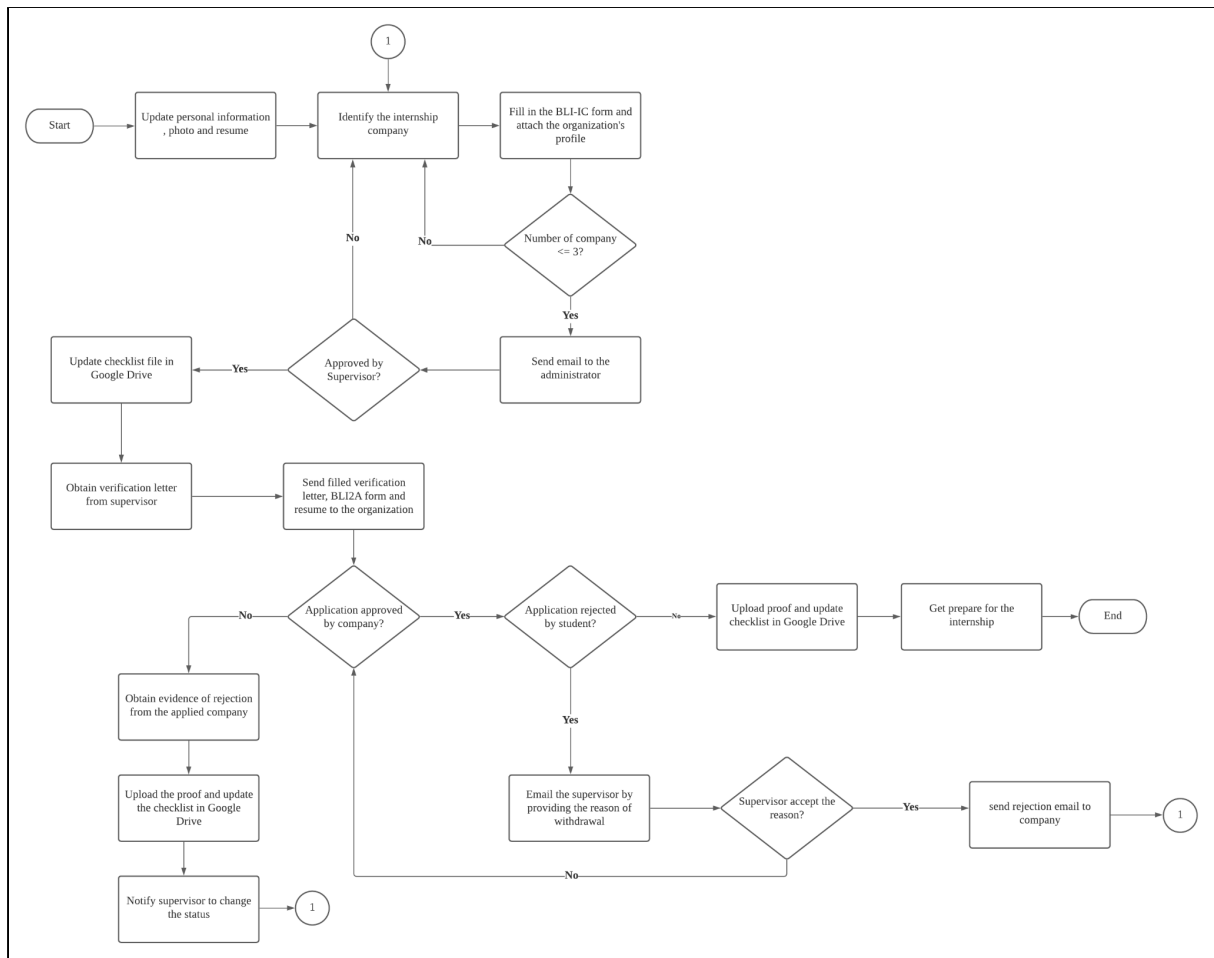
Figure 1: Work flow of the system

4.2. FUNCTIONAL REQUIREMENT

Functional requirement is very important to users because it helps users to verify the functionality of the system.

FLOWS	DESCRIPTION
Input	1. Students, administrators and supervisors should enter their ID and password to enter the system. 2. Students should update their personal information. 3. Students should update their passport size photo. 4. Students should update the resume. 5. Student status in the system should be changed by administrator
Process	1. Students have to update the company information and fill in the documents. 2. Students have to send the company information and documents to the administrators. 3. Administrators should verify the authenticity of the company. 4. Students have to update the checklist file in Google Drive. 5. Students have to obtain the documents from the administrators and send it to the internship company that wishes to apply. 6. Students have to update the application progress in the checklist file in Google Drive.
Output	1. Student status in the system should be viewed by students and supervisors. 2. Students look for a new company or students will be hired by the company. 3. Administrators update the student's status based on the document provided by the student in the google drive.

4.3.   NON-FUNCTIONAL REQUIREMENT

The non-functional requirement is essential to ensure the usability and efficiency of the system. It specifies the quality constraint on the design of the system.

- Performance
    - ITS only allow students to do three applications for the internship at the same time.
    - ITS able to support and store many students' information for the internship.
    - The administrator is able to update the students' status immediately after they choose the update option.
    - ITS does not provide notifications for students or administrators when the student's status is updated or students have uploaded their application documents.
    - ITS does not provide an interface for companies to directly evaluate students based on their resume.

- Control
    - Only students with approved status are able to go to internship.
    - Only administrators are able to update the students' status and give approval in the ITS.

- Usability
    - ITS provides a friendly user interface such as clear oriented dashboard, proper navigation bar and user manual.
    - ITS does not provide an interface for students to upload their application document which causes them to upload their application in the google drive for the administrators. This is very ineffective for both administrators and students.

5. DATA REQUIREMENT

ENTITY	DATA TO BE STORED	REQUIREMENTS OF DATA
Student	1. Student Name 2. Student ID 3. Student MatricNo 4. Student Email 5. Student Level 6. Student Register Date 7. Student Status 8. Student Gender 9. Student Home Number 10. Student Mobile Number 11. Student Permanent Address 12. Student Current Address 13. Student password 14. Student login status	[2]Students' matric numbers specially identify each other when applying for an internship.
Administrator	1. Administrator name 2. Administrator ID 3. Administrator IC 4. Administrator Gender 5. Administrator address 6. Administrator email 7. Administrator Faculty 8. Administrator Department 9. Administrator Mobile Number 10. Administrator Office Number 11. Administrator Home Number 12. Administrator password	Administrators need to enter their [2]ID number and [12]password to log in to the system to track and update students' internship progress.
Supervisor	1. Supervisor name 2. Supervisor ID	Supervisors need to log in by [2]ID number and [3]password.

	3. Supervisor password 4. Supervisor email 5. Supervisor contact	
Document	1. BLI-1C form 2. Verification letter 3. BLI2A form 4. Resume	[1]Students fill in company information for verifying the legacy of company [2]Verification letter from the supervisors to allow the students to be hired by the company. [3]Students pass the form to the company to fill in the application progress of students. [4]Students submit resumes to apply to the company.
Google Drive	1. Checklist 2. Proof	[1]Students update the application progress of the company [2]Students update the proof according to the application status

6. TRANSACTION REQUIREMENT

Entity	Data	Data Entry	Data Update	Data Deletion	Data Query
Student	Student Name	Sign in by studentsS	Update info by students	Delete student information by administrator	Query on students data by supervisor/ administrator
	MatricNo				
	IC Number				
	Student Password				
	Student Email				
	Student AA/ supervisor				
	Student Course				
	Student Gender				
	Student Home Number				
	Student Mobile Number				
	Student Permanent Address				
	Student Current Address				
	Student Programme				
	Student Programme				

	Session				
	Student CGPA				
	Student login status				
Administrator	Administrator name	Sign in information by administrator	Update info by administrator	Delete information by administrator	Query on administrator data by students/ supervisor
	Administrator ID				
	Administrator password				
	Administrator IC				
	Administrator Gender				
	Administrator address				
	Administrator email				
	Administrator Faculty				
	Administrator Department				
	Administrator Mobile Number				
	Administrator Office Number				
	Administrator				

	Home Number				
Supervisor	Supervisor Name	Sign in information by supervisor	Update info by supervisor	Delete information by administrator	Query on supervisor data when need system maintenance
	Supervisor ID				
	Supervisor Password				
	Supervisor email				
	Supervisor contact				
Documentation template	BLI-1C form	Download by students	Update by students		Query on the information in the form by administrator and students
	Verification letter	Upload by administrator	Update by administrator		Query on the information in the letter by administrator and students
	BLI2A form	Download by students	Update by students		Query on the information in the form by administrator and students
	Resume	Write by students	Update by students	Delete by students	Query on the information in the resume by students
Google Drive	Checklist	Upload by	Update by	Delete by	Query on the

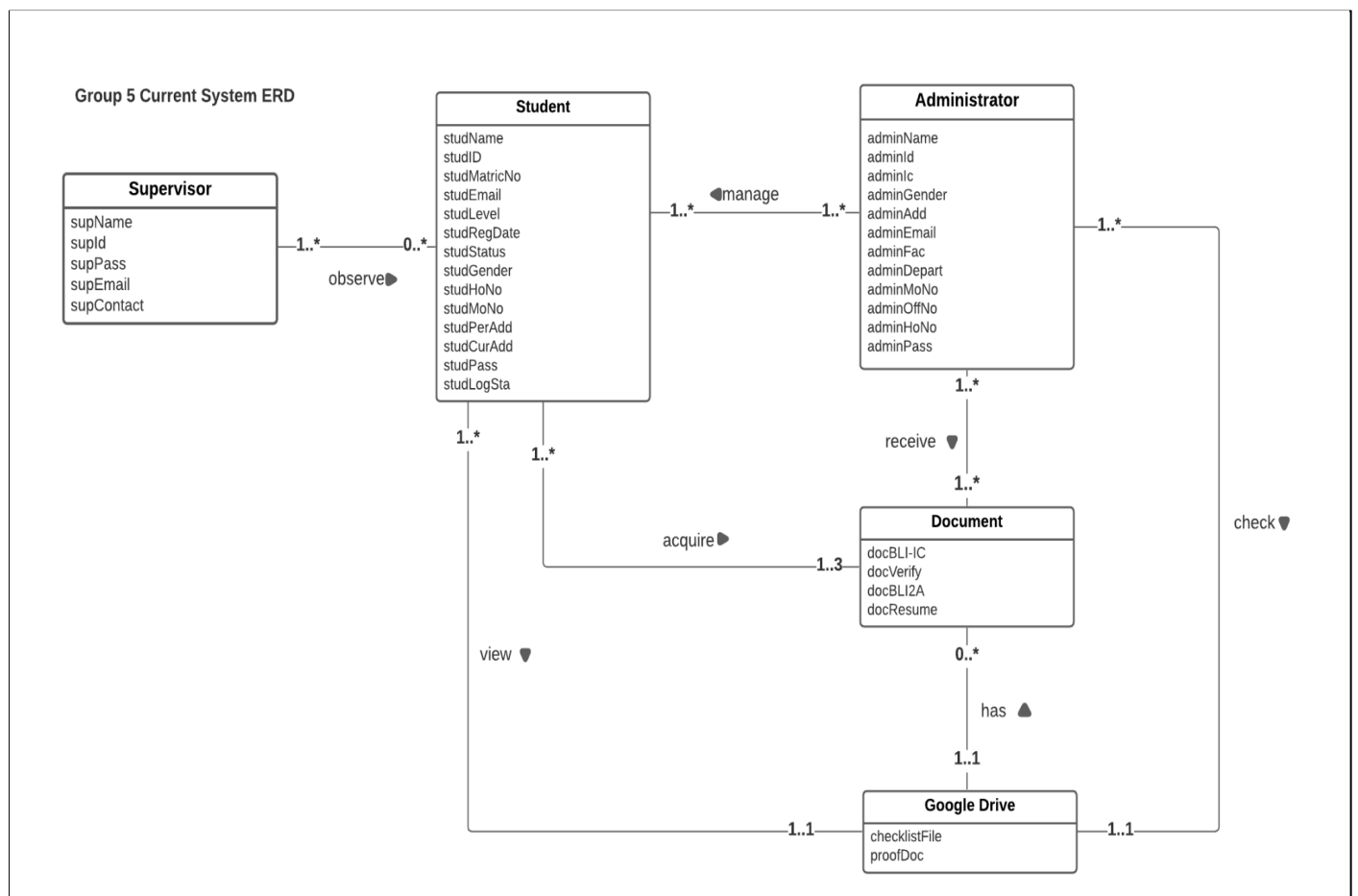|		students	students	students	checklists by administrator and students
	Proof	Upload by students	Update by students	Delete by students	Query on the proof of student's application

7. ERD

Figure 2: ERD of current system

8.   SUMMARY

In the phase of data gathering, we use an interview method to collect the problems existing in the current system. There are two types of questions used in the interview which are closed questions and open-ended questions. In order to produce an efficient and effective new system, the user's opinions and experiences are very crucial for us to find out the user requirements and make some improvements in the to-be system.

From the interview with the stakeholder, Dr Noor Hidayah Zakaria, we learned that there are a lot of shortcomings in the current system. For example, the students cannot make sure of the legacy of the company they found in other platforms, the unavailability of companies to promote their offer or position, the students need to manually update the documents every time they make a new application and there is no platform for direct communication between administrators, students and companies.

Besides, we have asked for the user requirements that wanted to be included in the proposed new system in the interview. There are several requirements stated by the stakeholder such as a suggestion list of companies for students based on their internship preferences, system embedded chat box, online interview interface, progress monitoring, deadline notification or reminder, resume template and history of employment of the company.

After gathering the user opinions and user requirements of the current system, we built a flow diagram based on the current business process to visualize clearly how the workflow of the current system. By listing down all the functional requirements and non-functional requirements, we are able to verify the functionalities of the current system and judge the performance of the current system. The data requirement and transaction requirement of the current system were also listed to show the data entry, data update, data deletion and data query. Lastly, an entity relationship model was built based on the data requirement of each entity.

In conclusion, the requirement analysis process is very important because it determines the success or failure of the proposed new system. The data that gathered, analyzed, summarized and documented from this phase is critical to use in designing a new system that complies with the user expectation.

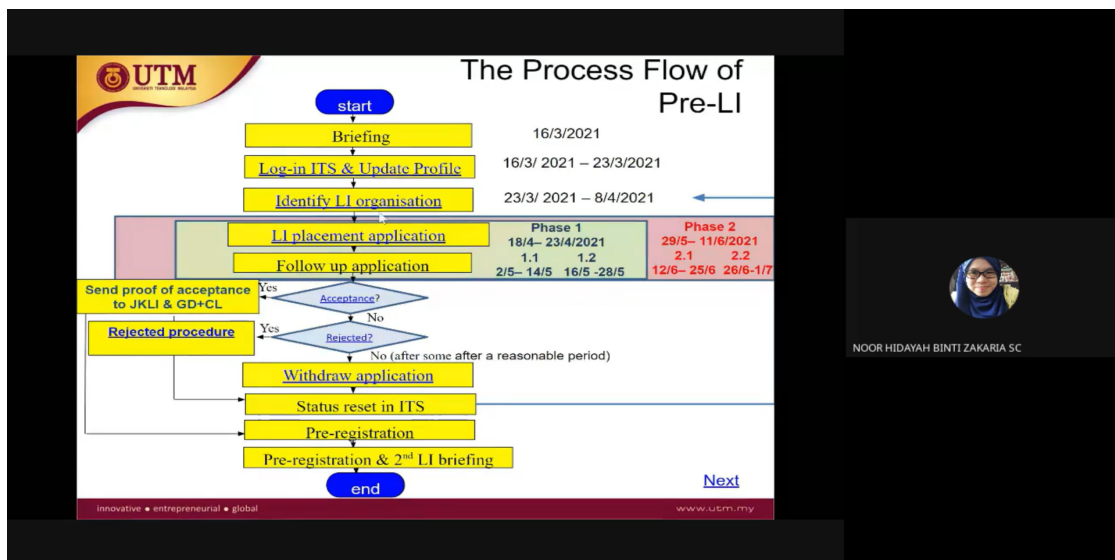## 9. APPENDIX

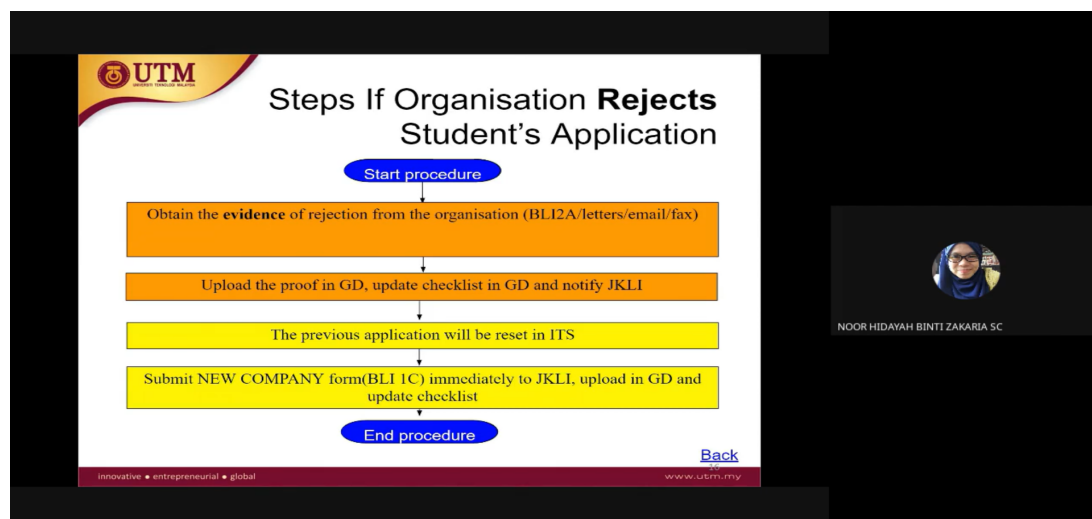**Workshop with stakeholders (Interview)**

Figure 3: Stakeholders introduce ITS

Figure 4: Stakeholder introduce flow of student's application

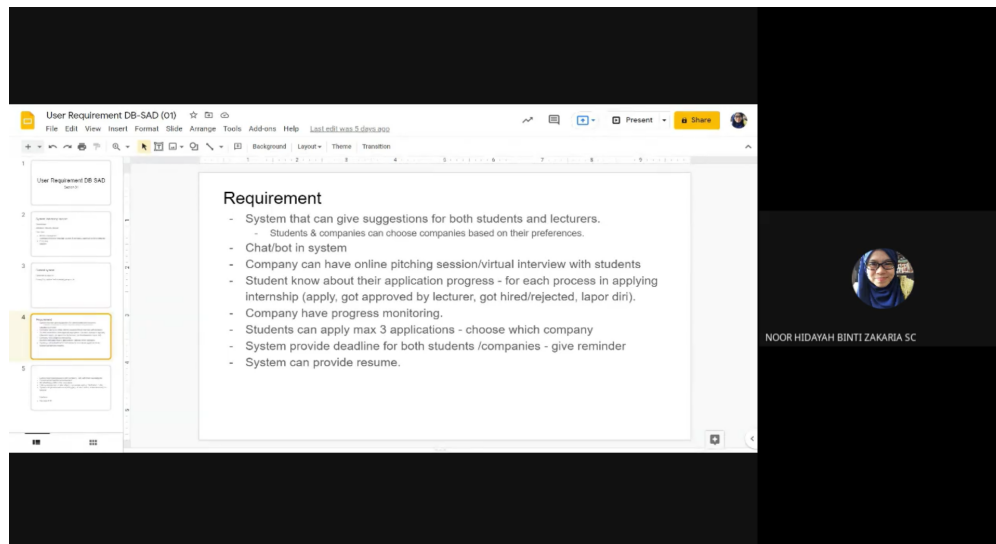*Figure 5: Stakeholder demonstrates how to use ITS*
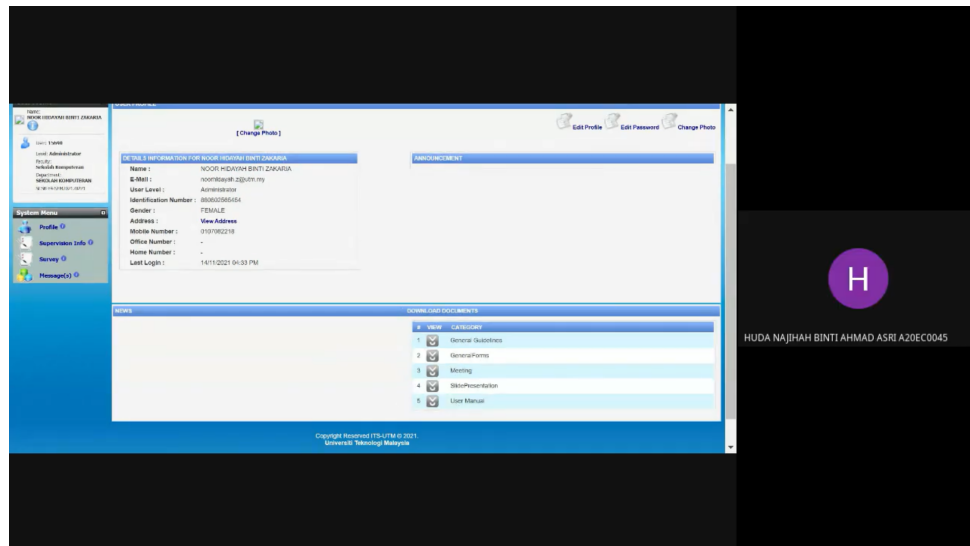

Figure 6: Stakeholder explains system requirements

Figure 7: Q&A session with stakeholder