



اَوْبُوْرَسِيْتِيْ تِيْكْنُوْلُوْجِيْ مَارَا  
UNIVERSITI  
TEKNOLOGI  
MARA

## **FACULTY OF INFORMATION MANAGEMENT**

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### **BACHELOR OF INFORMATION SCIENCE (HONS.) INFORMATION SYSTEM MANAGEMENT (IM245)**

=====

### **ADVANCED WEB DESIGN AND CONTENT MANAGEMENT (IMS607)**

#### **INDIVIDUAL ASSIGNMENT:**

#### **EXAMINATION MANAGEMENT SYSTEM (EXAMS)**

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#### **DATE OF SUBMISSION:**

13 DECEMBER 2018

## **ACKNOWLEDGEMENT**

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Other than that, I would like to thank my parents for their support in completing this assignment. Without their moral and financial support, perhaps I would not have been able to do it.

Finally, this task could not be done on time if it wasn't because of my class members and also friends motivated. I really appreciate their help in encouraging me and help me to complete this assignment in good ways.

### ABSTRACT

*Examination is a basic requirement of an educational system at any level, however the main focus is always towards the examination questions. Another essential element of an examination is about how educational institutions are able to manage its examination. In current situation, there are **limited numbers of online platform** for students and lecturers to view and monitor the examination schedule that provided by the exam unit. Also, in some circumstances, students, lecturers and exam invigilators need **to fill the attendant form manually** where it requires a lot of information to be filled in repetitively. In addition, **exchanging invigilators duties also requires a step-by-step time-consuming process**. Another problem arises when the invigilators have to submit **examination session monitoring reports in manual form which could result in large collections of paper-based reports** for one particular semester. Thus, The Examination Management System (EXAMS) is a system that aimed to provide online platform where students and lecturers not only could check the examination schedules, but also record the attendances. Another feature are invigilators will be able to exchange their duties and submit examination session monitoring reports electronically. Moreover, non-members of the institutions will be able to apply jobs as assistant exam invigilators. Electronic records allow user to save physical space and retain the records for a long time. This system will have a user-friendly interface for each type of users. Furthermore, EXAMS can be commercialized as a mobile application that can be downloaded from online store.*

**Keywords:** examination management, invigilators, monitoring reports

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## 1.0 INTRODUCTION TO EXAMINATION MANAGEMENT SYSTEM (EXAMS)



Figure 1: Logo of EXAMS

The Examination Management System (EXAMS) is a system created with the objectives to assist various types of users to manage and monitor the examination activities. The system aims to provide people that involved with examination an ease to manage and maintain the examination that will be conducted every end of the semester.

Basically, every end of semester there will be an examination that will be conducted for all students to test their knowledge of what they learn for the entire semester. However, even examination is done ever the end of the semester, the system to manage all the examination information is not yet seen until now. It was reported that invigilators find difficulties in checking examination schedule as there was limited online platform, as well as attendance of invigilators and students are recorded manually by filling paper-based forms. It is also reported that the examination department found it is hard to organize the examination because there are limited online platform to do so.

Therefore, users which are invigilators, students and the examination department can be benefited from the system by being able to monitor the examination schedule through online platform anywhere. Students will be benefited on the ease of acquiring their current examination schedule, the overview of all examination schedule and also allow them to print

out their attendance slips online. The attendance of students also will be recorded for each examination session which will be accomplished by scanning their student ID cards that will be done by the invigilators. Furthermore, invigilators also can view their current examination schedule and overview of all examination schedule and allows them to change their schedule between invigilators and other invigilators if they required to do so. They also can generate reports for any issues during the examination. The most benefits of this system would be the examination department where the examination department can manage the examination information such as examination schedule, students' information and invigilators' information online. The examination department also can arrange the examination schedule by assigning each of the invigilators to be responsible to selected exam session on the system.

Thus, this system is relevant to any educational institutions that practice examinations as part of their teaching and learning activities to measure students' performance. Examinations activities eventually can be managed at ease and evidence of each examination session are kept digitally. This will ensure users' satisfactions by having productive works which equipped with user friendly interface.

## **2.0 STATEMENT OF PROBLEMS**

### **2.1 Difficulties in checking examination schedule**

Based on observation and personal experience, survey done in Universiti Teknologi Mara (UiTM) Machang Branch Kelantan, students are having difficulties to check their examination schedule as the only way to check the schedule is by downloading the schedule in excel version. The schedule is packed using Microsoft Excel, then by using student ID, student can acquire their schedule. It is difficult where they need to download the new excel type of schedule to access through the current semester's schedule. Also, it only can be opened using PC or laptops, so it is not compatible and convenience to be used.

### **2.2 Scattered examination information**

For students in UiTM Machang Branch Kelantan, the information about examination is scattered everywhere. For the examination schedule, students need to download the excel version that will shared on communication platform such as Whatsapp, while students need to print out their examination slip that available in the UiTM student portal. It is somehow hardening the new students to adopt this.

### **2.3 Time consuming on filing paper-based forms**

Every student that goes through an examination need to fill up an attendance form before the examination begin. They must fill in their student information such as name, student ID, faculty, program, course, table number, exam time and others which could lead to waste of time during the examination session.

### **2.4 Time consuming on changing schedule between invigilators**

As interviewed, for lecturers in UiTM Machang Branch Kelantan, they are having the difficulties on changing their examination schedule when they required to do so. The process on changing schedule takes about three working days which unsuitable for someone that need to change their schedule immediately.

### 3.0 DEVELOPER PROFILE (CV)



## PROFILE SUMMARY

Fully motivated system developer with hard work spirit and discipline. Great decision maker with willingly commit to full task to be in IT field.

Positive attitude and able to work with high pressure. High leadership skills with great experience during studies.

## EDUCATION

UNIVERSITI TEKNOLOGI MARA KELANTAN  
(2017-2020)  
Bachelor of Information Science (Hons)  
Information System Management  
Current CGPA: 3.56

UNIVERSITI TEKNOLOGI MARA JOHOR  
(2014-2016)  
Diploma in Information Management  
CGPA: 3.60

## RESPONSIBILITIES

EXCO MULTIMEDIA (2017-2019)  
Society of Information System Management, UiTM Machang, Kelantan

PRESIDENT (2014-2016)  
Information Management Society (IMS), UiTM Segamat, Johor

EXCO MULTIMEDIA (2014-2016)  
Voluntary Police (SUKSIS), UiTM Segamat, Johor

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1. HTML/PHP/MYSQL  
2. PHOTOSHOP  
3. MS OFFICE  
4. CSS

Figure 2: Developer profile

#### **4.0 AIMS & OBJECTIVES OF THE PROJECT**

Examination Management System (EXAMS) is developed in order to solve the issues and problems mentioned on statement of problems and to acquire these following objectives:

- 4.1 To assist various types of users on managing and monitoring the examination activities.
- 4.2 To reduce the time taken for every examination activities during examination session of every end of semester.
- 4.3 To develop a tool on managing and monitoring examination information at one place.

## 5.0 SCOPE & LIMITATION OF PROJECT

The scope and limitation of Examination Management System (EXAMS) is it is limited to three types of users only. It can be used by three different types of users which are the examination department, the invigilators or lecturers, and for the students. EXAMS also limited on which this system will be useful during the examination session only which usually being conducted once per semester for universities. However, EXAMS is developed in online method and web pages so that the activities can be done effective and efficiently. EXAMS include many others functions that suit for specific purposes.

### 5.1 Registration

Firstly, EXAMS include a registration function which enables the exam department to register examination information includes students and invigilators information. The information will be kept in the system database and will be preserved and protected with secure. After the examination information is registered, then all users can use the system by logging into the system by using their student ID and IC number as will be set by the developer.

### 5.2 Add/Update/Delete

Second, EXAMS include the platform to add, update and delete function. Every user can insert their own information to get the additional information. For students, they can insert their subjects or course that they take during the current semester to acquire examination information such as the date of examination, time of examination, and location of the examination. Also, they can delete the inserted information if they want to do so if they had mistaken insert other subjects or course. The subjects or course will be linked with the examination schedule, so they will never will insert a wrong code of their subjects. Also, for invigilators, they will be provided with a platform to insert the exchanging schedule information between invigilators. They are required to insert the examination information such as the date and time of the examination and the reason of applying to change the schedule to be approved by the top management. Last, for the exam department will have the biggest function for this system. The exam department can insert the whole examination information includes students' information, invigilators' information, the semester information, the faculty information, the programme information, and the course information that required to ensure the system can works perfectly to distribute the information to the right users. By allow the exam department to insert data, they are also allowed to update and delete each data that were inserted.

### **5.3 Scan function**

Third, on allowing the time reducing for examination activities, users can now use the scan function to input data through the system. The scan function as scanning the student ID card that will automatically input the information of the students into the database of EXAMS. This will be functioned to collect the attendance information of students on the examination. The information that will be recorded includes the student information and the time and date of the examination to verify their attendance during the examination. This function will be used by invigilators, so the invigilators information also will be recorded to ensure the person in charge of the attendance if there are problems regarding with the attendance.

### **5.4 Generates report**

This function is provided for invigilators which they can generates report that involved with the examination. For the invigilators, they are responsible to generate monitoring report for every examination that were conducted. They can do so by using this function. Also, if there are any cases like cheating that done by students, the invigilators also can generate the report by using EXAMS.

### **5.5 Feedback function**

This function is provided by all the users which they can rate and comment about the system to be used for future enhancement. With this, the developer of the system can receive feedback about the system from every of the users of EXAMS. It is also can be used as a complain platform if there are problems with the system, so it can be fixed as soon as possible.

### 6.0 MILESTONE & GANTT CHART

As a system developer, the most crucial thing is being punctual and precise to fulfil the clients' needs. It is important to plan the milestone and produce Gantt chart for the system that provides the start date and the finishing date of the system. The Gantt chart will be used as the main guidance to ensure everything goes according to plan.

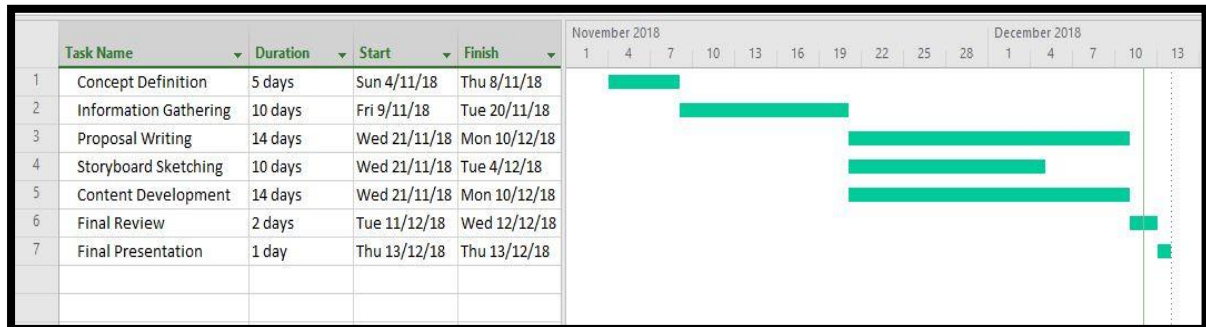


Figure 3: Gantt Chart to develop EXAMS

## 7.0 ESTIMATED BUDGET & COST REQUIRE FOR PROJECT

In order to develop Examination Management System (EXAMS), consideration on budget and cost required for finishing the project is important. The estimated budget and cost is really important to ensure that all of the matters related to the costs and budget is well-planned. It is important to ensure that EXAMS can be developed with sufficient costs. Thus, as for EXAMS, it did not require a massive budget and costs as the software that used to develop this system are the free version that available on the internet. The software that used to develop EXAMS includes Wamp Server and Sublime Text. So, there are no costs required for that matters. However, there are still software and hardware that requires to be purchased in order to develop EXAMS. For the example, laptop that used to create the system and the Adobe software. Below are the table of the estimated budget and costs required:

*Table 1: Estimated costs and budget*

NO.	ITEMS	DESCRIPTION	ESTIMATED PRICE
1.	Laptop	Aspire 5 (A515-51G-59Z0) Black	RM2,800.00
2.	Adobe Dreamweaver	Adobe Dreamweaver CS6	RM150.00
3.	Adobe Photoshop	Adobe Photoshop CS6	RM150.00
4.	Sublime Text	Sublime Text 3	No charge/Free
5.	Windows 10 Professional	Windows 10 Professional	RM399.00
6.	Wamp Server 64bit <ul style="list-style-type: none"> <li>• Mysql</li> <li>• Php</li> <li>• Apache</li> </ul>	Wamp Server 64bit	No charge/Free
7.	Web Browser	Google Chrome	No charge/Free
8.	<b>TOTAL</b>		<b>RM3499.00</b>

8.0 HARDWARE & SOFTWARE DETAILS USE IN PROJECT

8.1 HARDWARE

Table 2: List of hardware

ITEMS	DESCRIPTION	ESTIMATED PRICE
 <p data-bbox="293 916 595 943"><i>Figure 4: Laptop Acer Aspire 5</i></p>	<p data-bbox="708 479 1070 562"><b>Aspire 5 (A515-51G-59Z0) Black</b></p> <p data-bbox="708 577 919 611">Specifications: -</p> <ul style="list-style-type: none"> <li data-bbox="759 629 1054 663">○ Windows 10 Home</li> <li data-bbox="759 680 1082 808">○ Intel® Core™ i5-8250U processor Quad-core 1.60 GHz</li> <li data-bbox="759 831 1074 965">○ NVIDIA® GeForce® MX150 with 2 GB Dedicated Memory</li> <li data-bbox="759 987 1062 1115">○ 39.6 cm (15.6") Full HD (1920 x 1080) 16:9</li> <li data-bbox="759 1137 1086 1171">○ 4 GB, DDR4 SDRAM</li> <li data-bbox="759 1189 1086 1223">○ 1 TB HDD + 128SSD</li> </ul>	<p data-bbox="1174 779 1337 813"><b>RM2,800.00</b></p>

8.2 SOFTWARE

Table 3: List of software

ITEMS	DESCRIPTION	ESTIMATED PRICE
<ul style="list-style-type: none"> <li>• <b>Adobe Dreamweaver</b></li> </ul>  <p><i>Figure 5: Adobe Dreamweaver logo</i></p>	<p><b>Adobe Dreamweaver CS6</b></p> <ul style="list-style-type: none"> <li>○ This software program used in designing web pages, fully featured HTML web on create and edit web pages in a user-friendly environment.</li> </ul>	<p><b>RM150.00</b></p>
<ul style="list-style-type: none"> <li>• <b>Adobe Photoshop</b></li> </ul>  <p><i>Figure 6: Adobe Photoshop logo</i></p>	<p><b>Adobe Photoshop CS6</b></p> <ul style="list-style-type: none"> <li>○ This software majorly used for the task that involved with photo editing and designing. The creation of logo design is used on this software. By using Photoshop CS6, the graphic created will be in high quality.</li> </ul>	<p><b>RM150.00</b></p>
<ul style="list-style-type: none"> <li>• <b>Sublime Text</b></li> </ul>  <p><i>Figure 7: Sublime text logo</i></p>	<p><b>Sublime Text</b></p> <ul style="list-style-type: none"> <li>○ This software is a sophisticated text editor for code, markup and prose. It has great user interface, extraordinary features and amazing performance.</li> </ul>	<p><b>No charge/Free</b></p>
<ul style="list-style-type: none"> <li>• <b>Operating System</b></li> </ul>  <p><i>Figure 8: Windows 10 logo</i></p>	<p><b>Windows 10 Professional</b></p> <ul style="list-style-type: none"> <li>○ Windows 10 Professional is an operating system that installed in PC and laptop to develop the system.</li> </ul>	<p><b>RM399.00</b></p>

- **Wamp Server**



Figure 9: Wamp server logo

- **MySQL Server**



Figure 10: Mysql server logo

- **Apache**



Figure 11: Apache logo

**Wamp Server 64bit**

- Wamp Server 64bit is used for the web development and to test the PHP coding until the success of creating the system.

**MySQL Server 5.5.29**

- The MySQL functions allow the developer to access MySQL database servers. For the MySQL functions to be available, the user must compile PHP with MySQL support.

**Apache License 2.0**

- The Apache HTTP Server, colloquially called Apache is a free and open-source cross-platform web server, released under the terms of Apache License 2.0.

**No charge/Free**

9.0 SYSTEM FLOWCHART AND ENTITY RELATIONSHIP DIAGRAM

9.1 Entity Relationship Diagram (ERD)

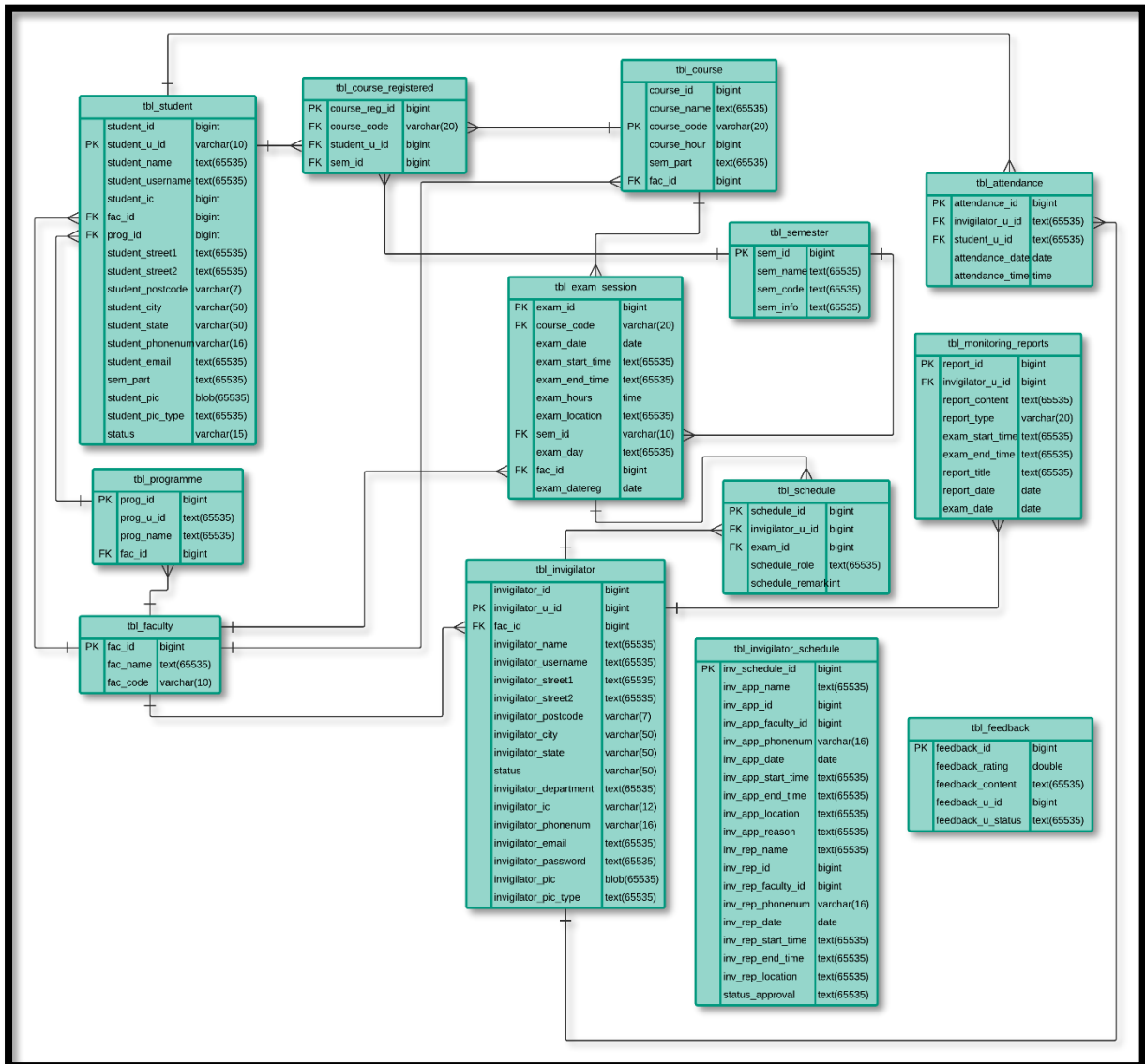


Figure 12: Entity Relationship Diagram

**9.2 Flowchart Process**

**9.2.1 All User Flowchart Process**

**9.2.1.1 All User Login Process**

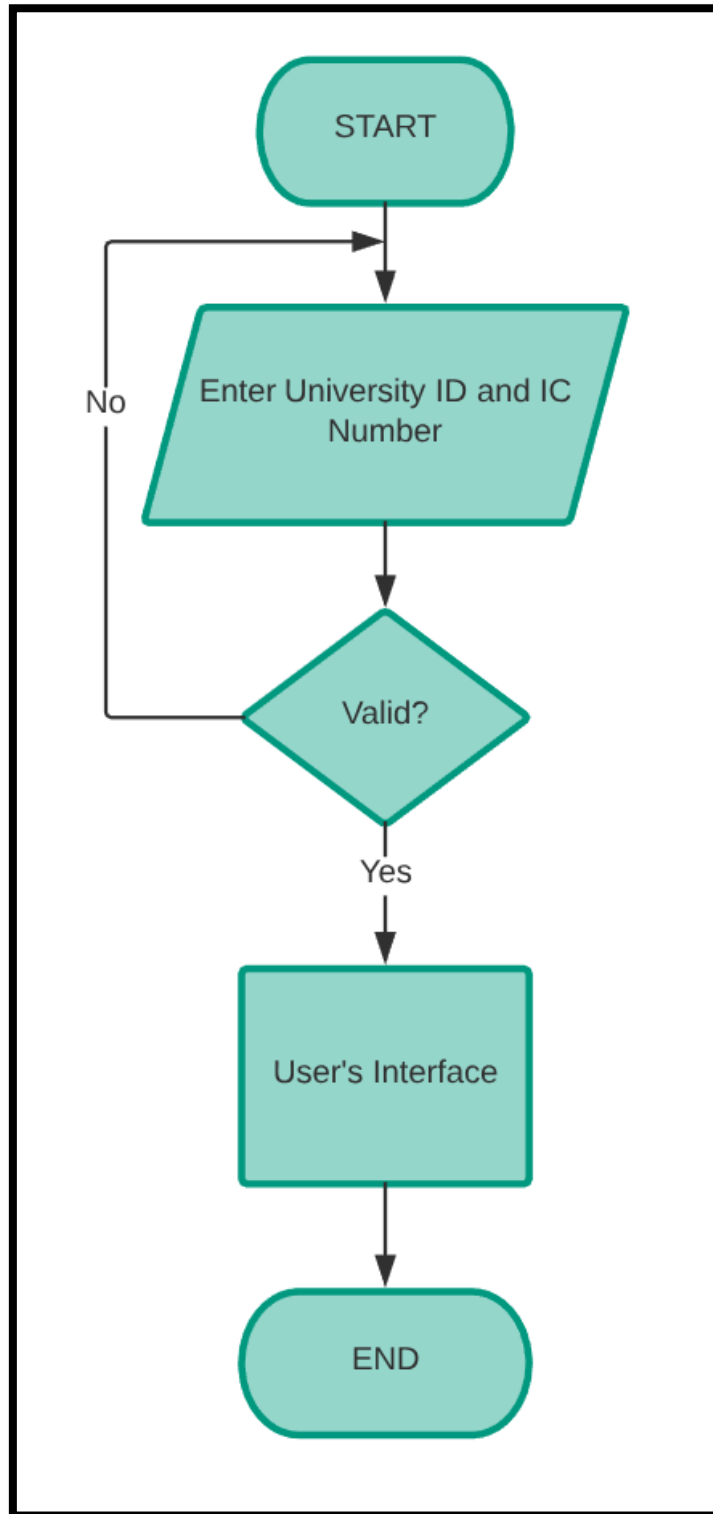
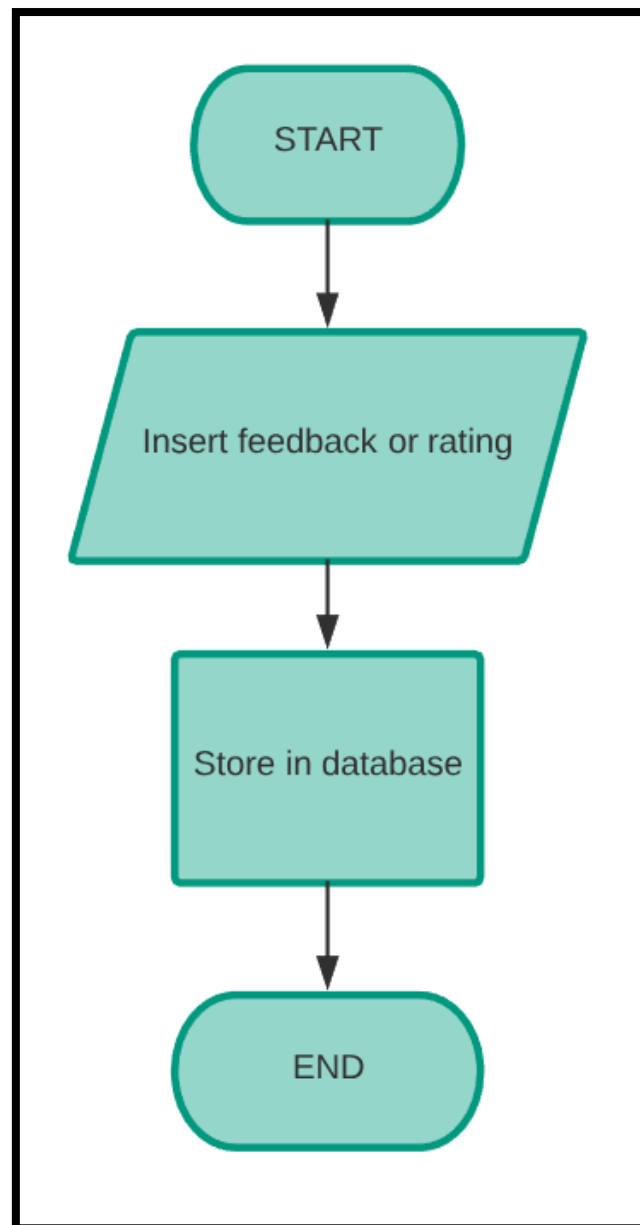


Figure 13: All User Login Process

**9.2.1.2 All User Generate Feedback Process**



*Figure 14: All User Generate Feedback Process*

9.2.2 Student Flowchart Process

9.2.2.1 Student Generate and Print Examination Schedule

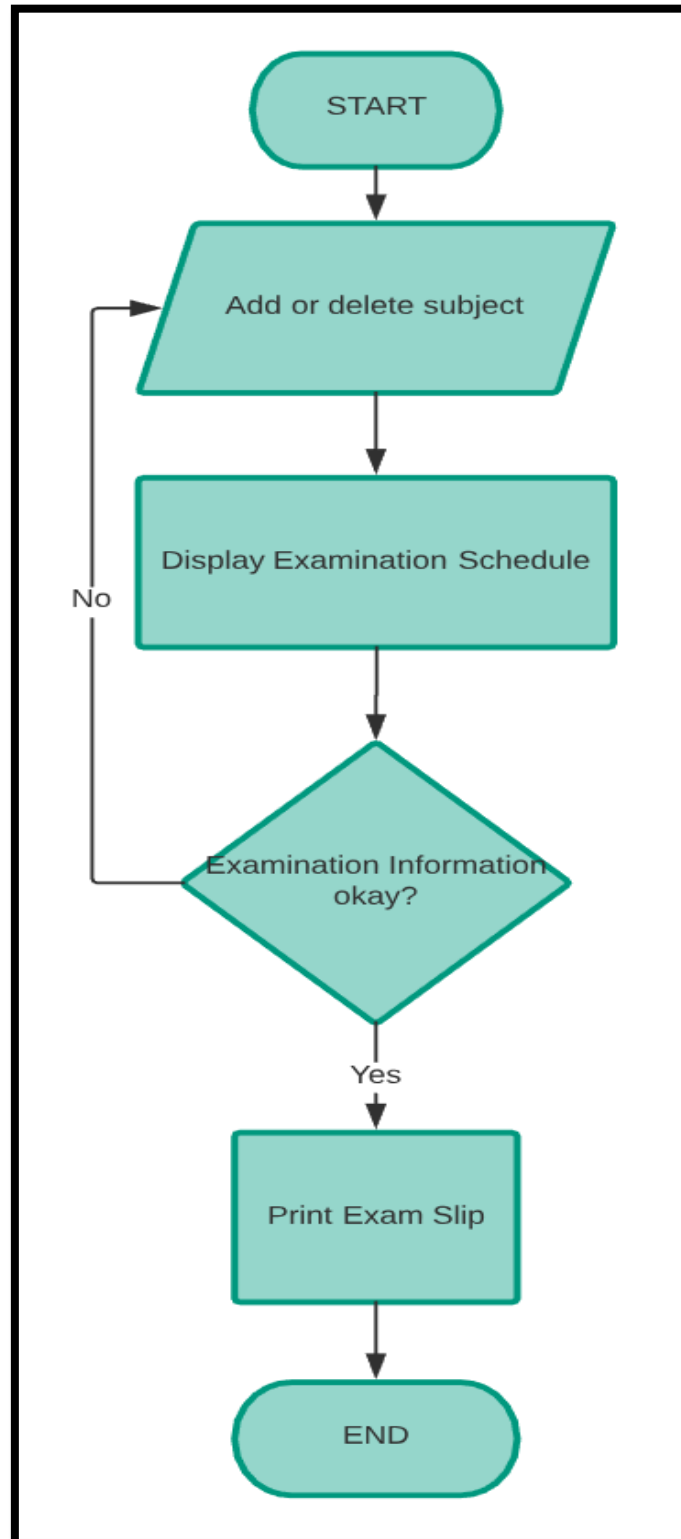


Figure 15: Student Generate and Print Examination Schedule

### 9.2.3 Invigilator Flowchart Process

#### 9.2.3.1 Invigilator Changing Schedule Process

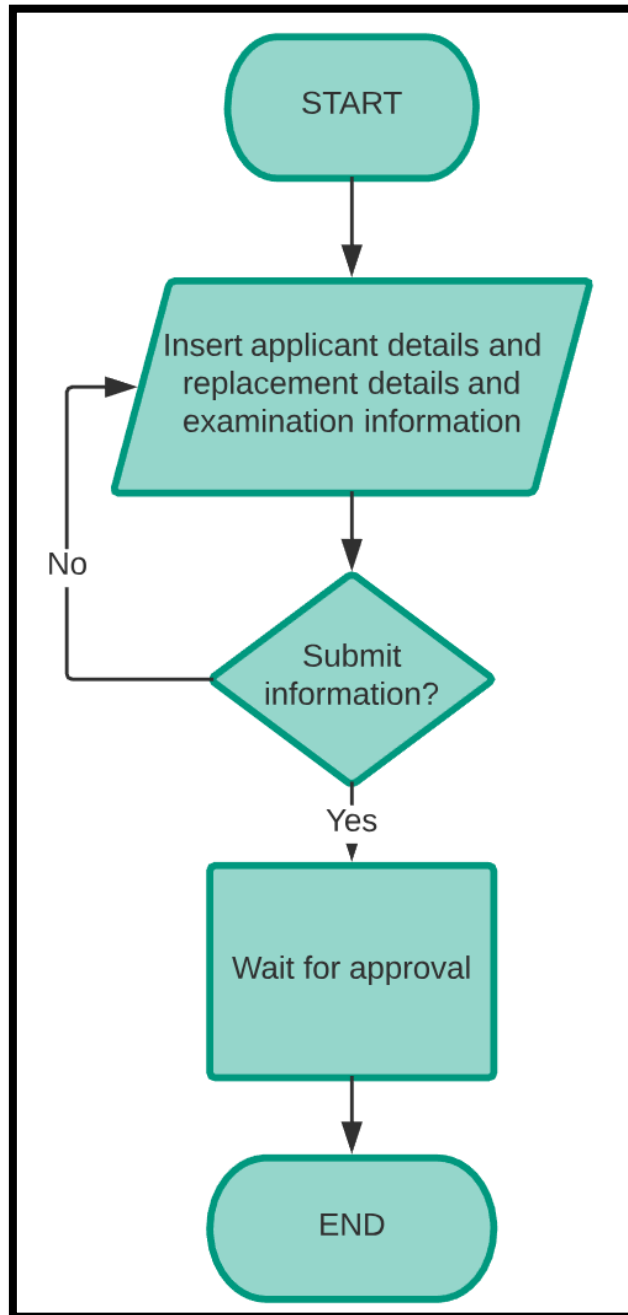


Figure 16: Invigilator Changing Schedule Process

### 9.2.3.2 Invigilator Scanning Process

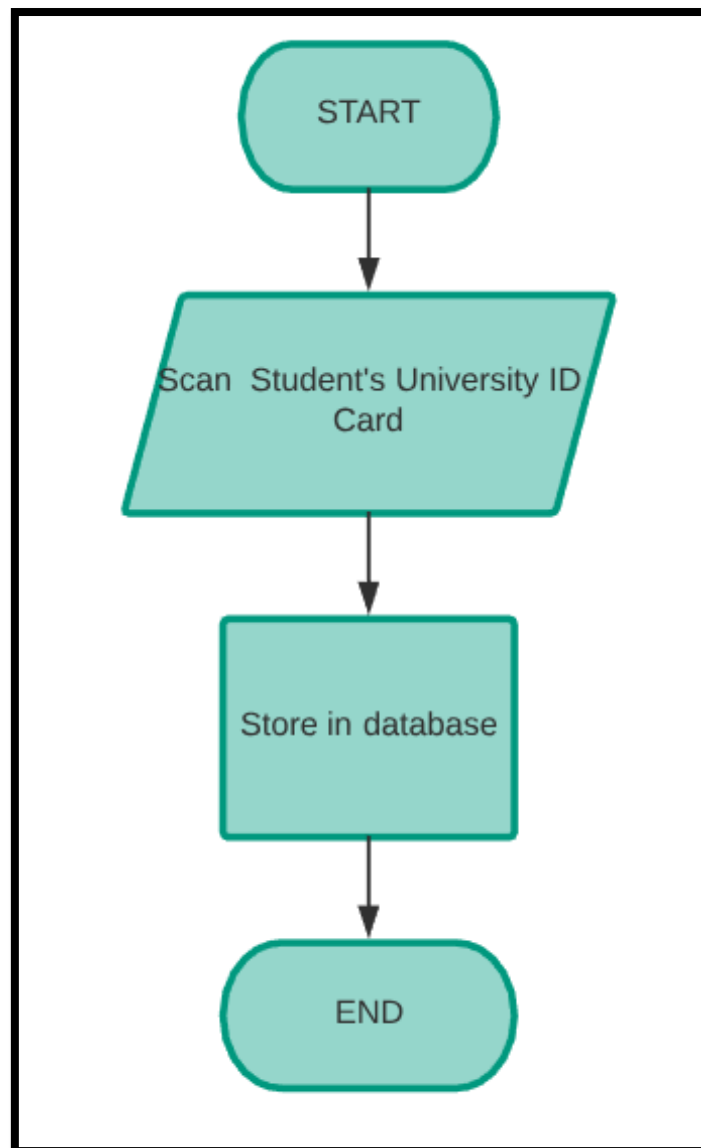


Figure 17: Invigilator Scanning Process

9.2.3.3 Invigilator Generate Reports Process

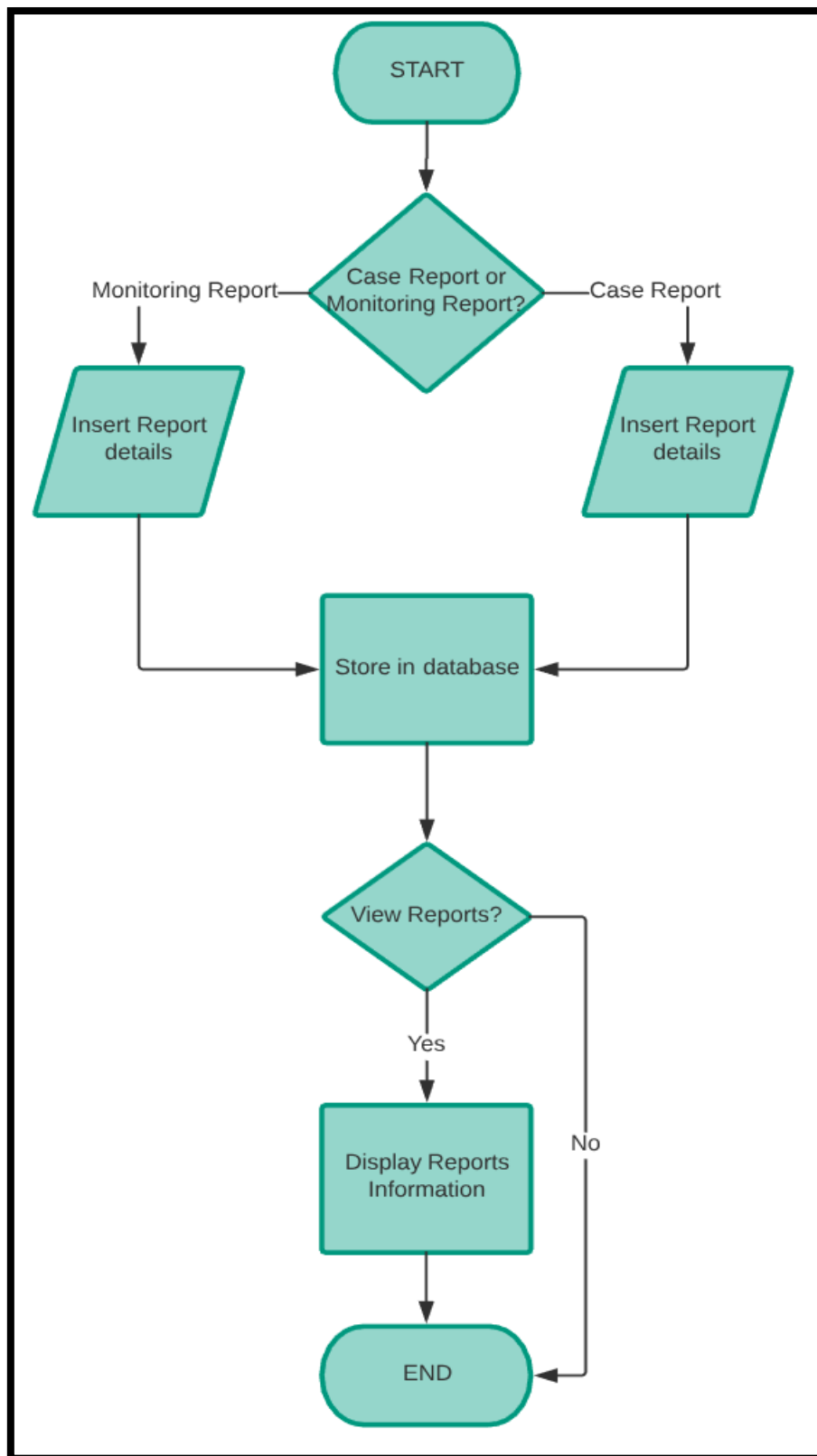


Figure 18: Invigilator Generate Reports Process

9.2.4 Admin Flowchart Process

9.2.4.1 Admin Insert Students and Invigilator Information

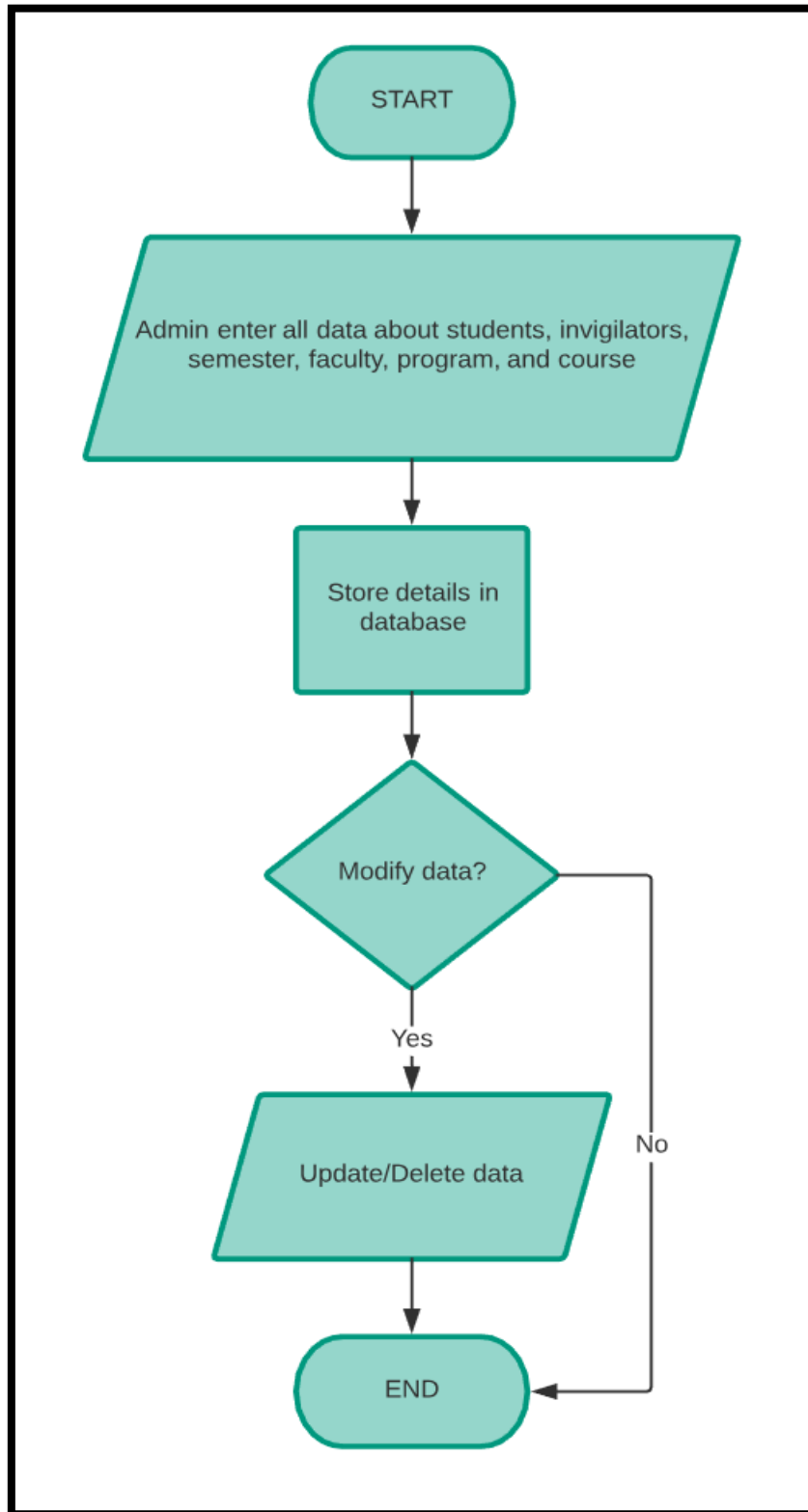


Figure 19: Admin Insert Students and Invigilator Information

### 9.2.4.2 Admin Insert and Assign Examination Schedule

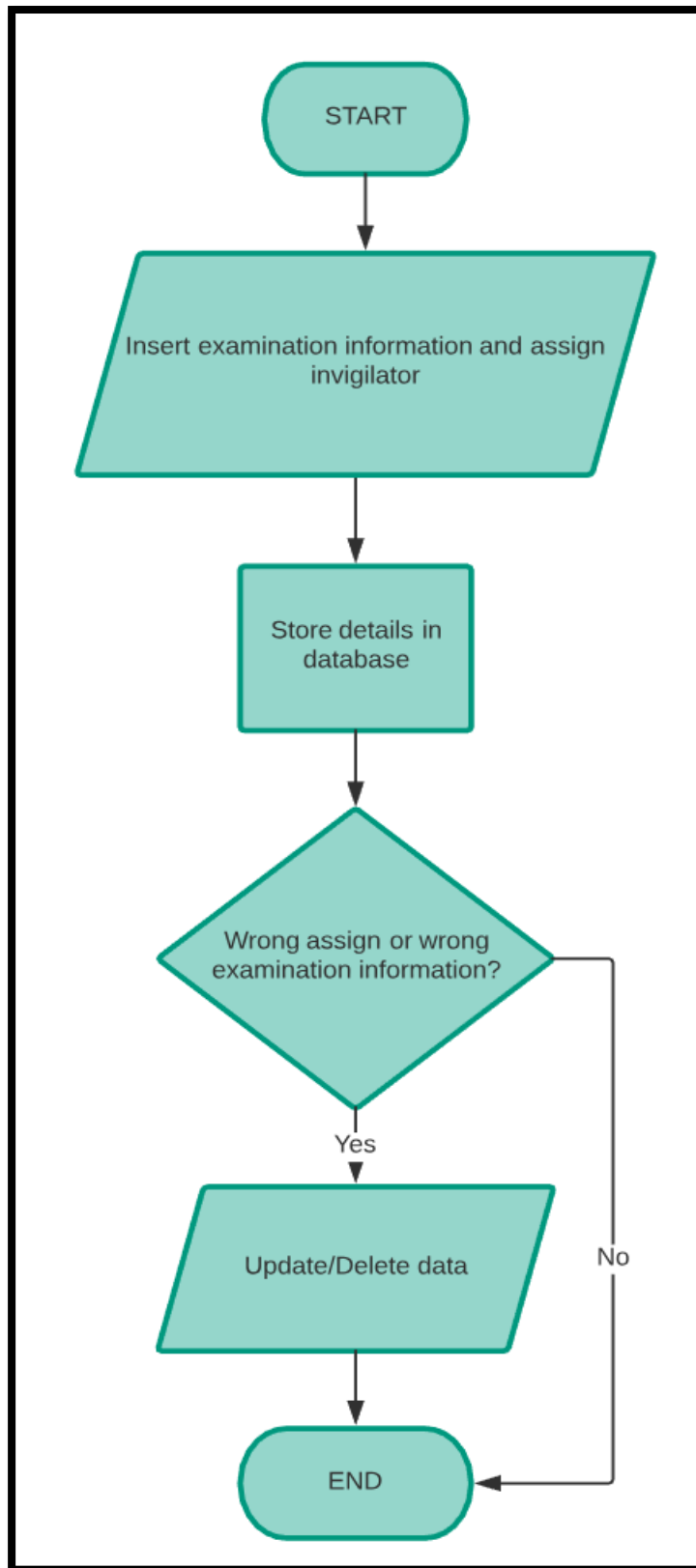


Figure 20: Admin Insert and Assign Examination Schedule

## 10.0 STORYBOARD, WEB SYSTEM STRUCTURE & NAVIGATION

### 10.1 STORYBOARD

#### 10.1.1 All Users Interface

##### 10.1.1.1 All User Login Form Interface

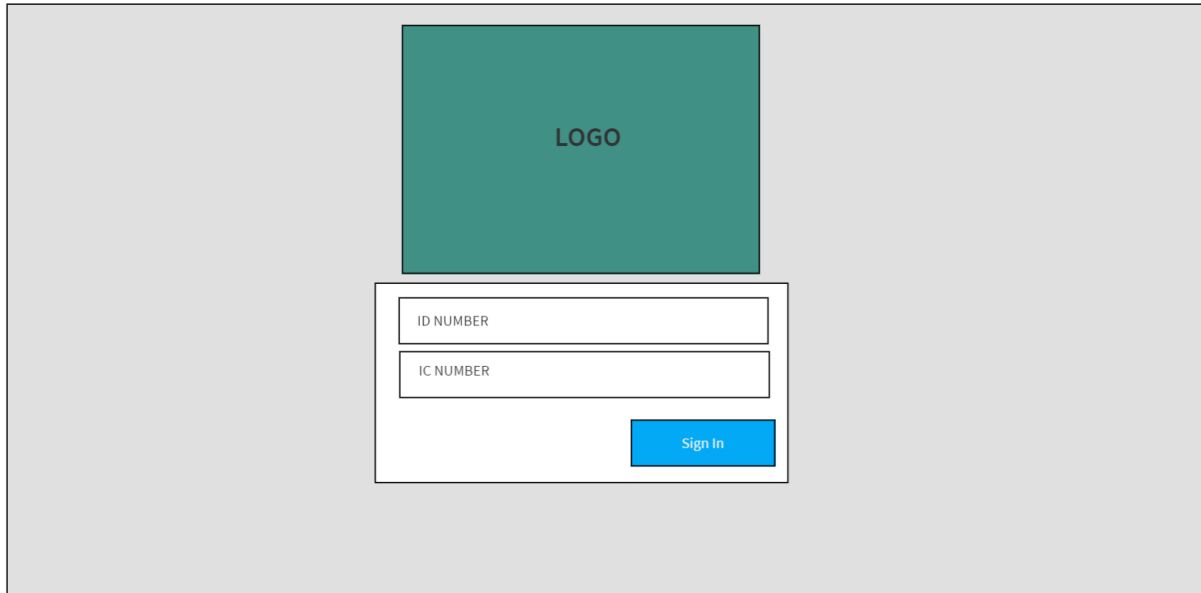


Figure 21: All User Login Form Interface

##### 10.1.1.2 All User Profile Interface

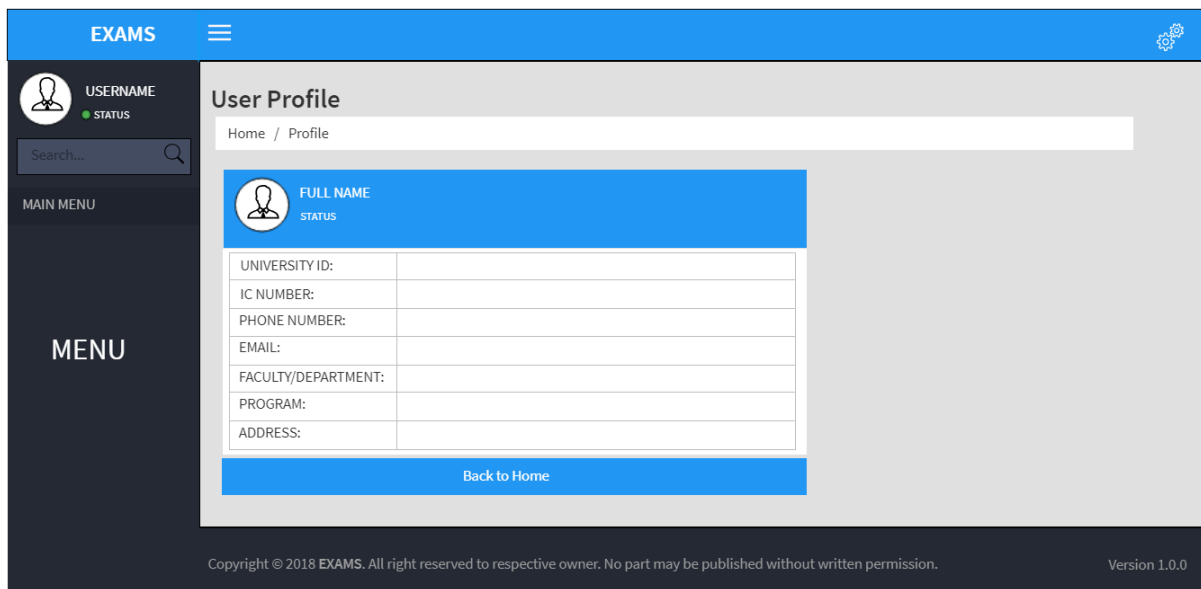


Figure 22: All User Profile Interface

### 10.1.1.3 All User Feedback Interface

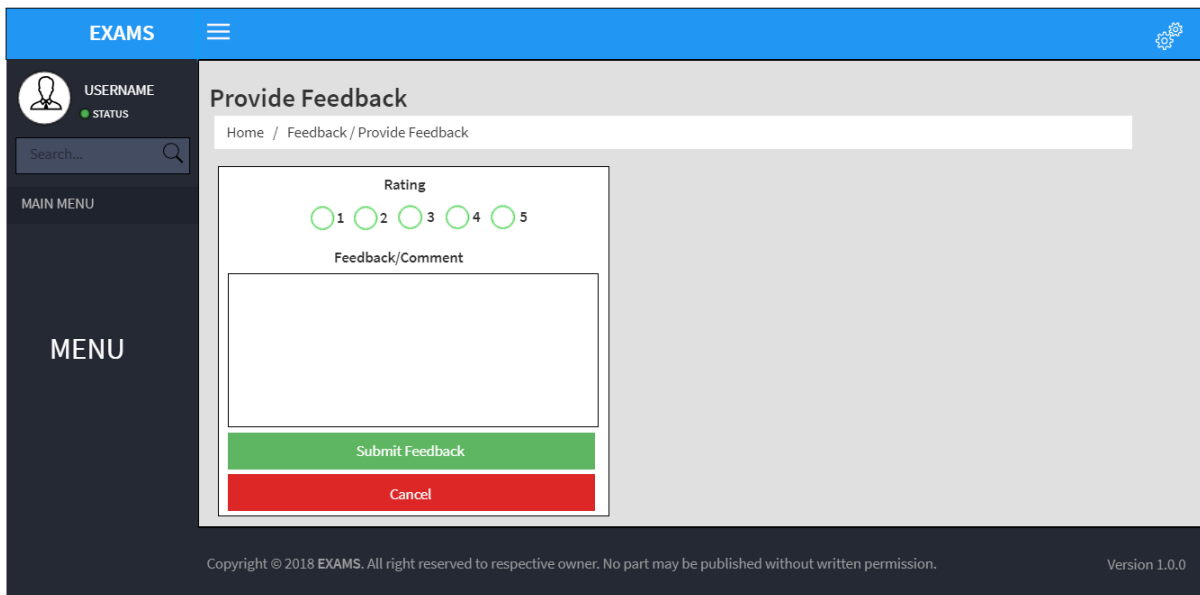


Figure 23: All User Feedback Interface

### 10.1.2 Admin Interface

#### 10.1.2.1 Admin Main Menu Interface

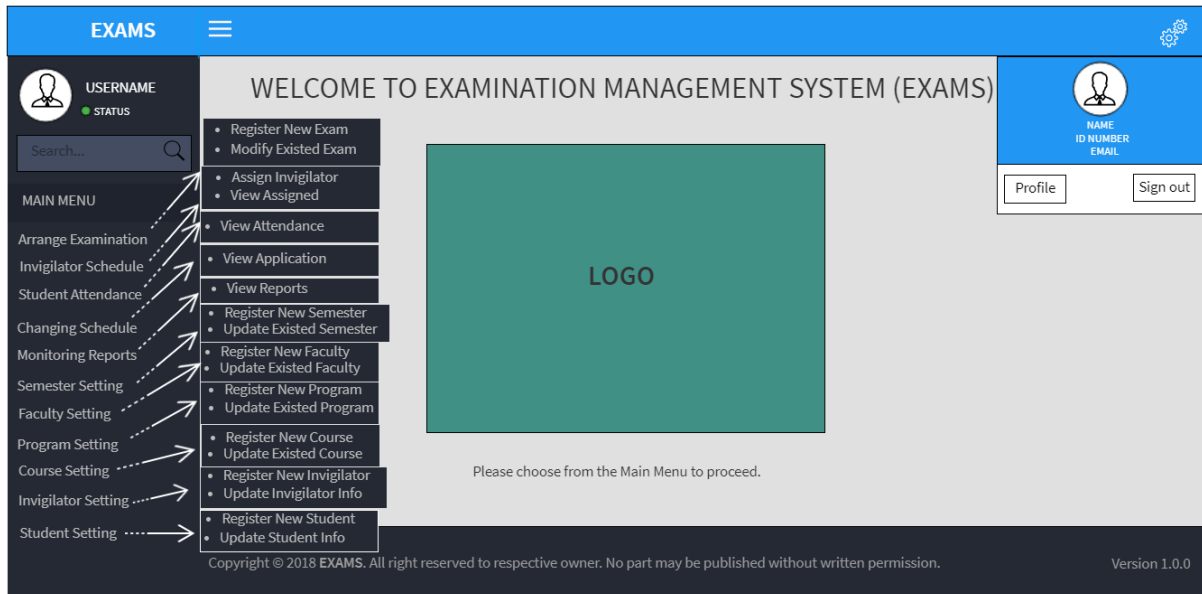


Figure 24: Admin Main Menu Interface

#### 10.1.2.2 Admin Insert Data Interface (Register Exam, Semester, Faculty, Program, Course, Invigilator and Student)

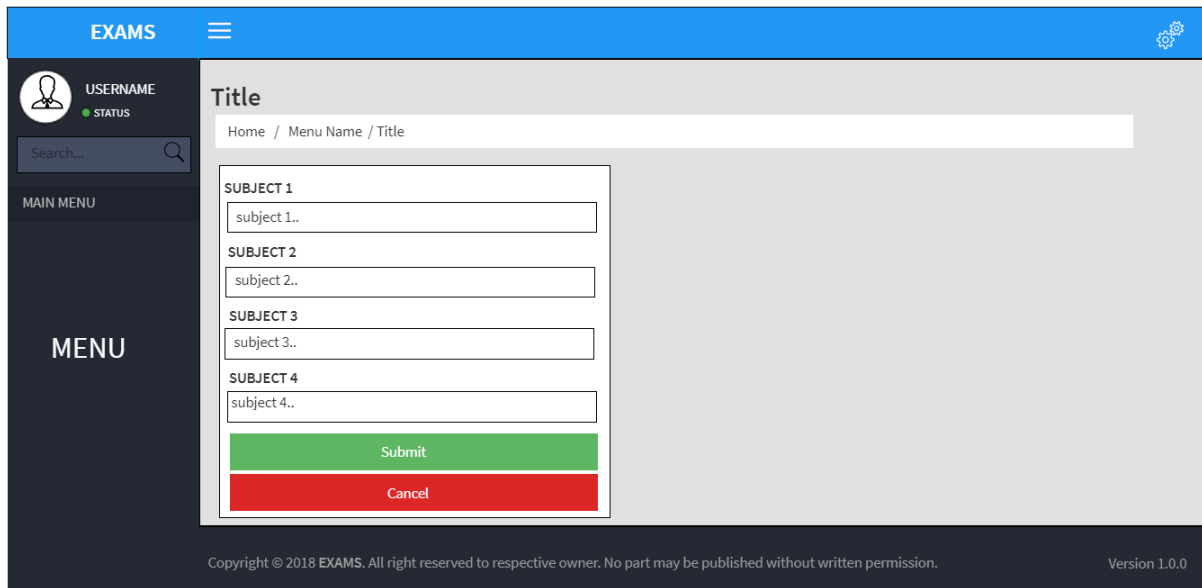


Figure 25: Admin Insert Data Interface

**10.1.2.3 Admin View Data Interface (View Assigned, Attendance, Application, Reports, Rating)**

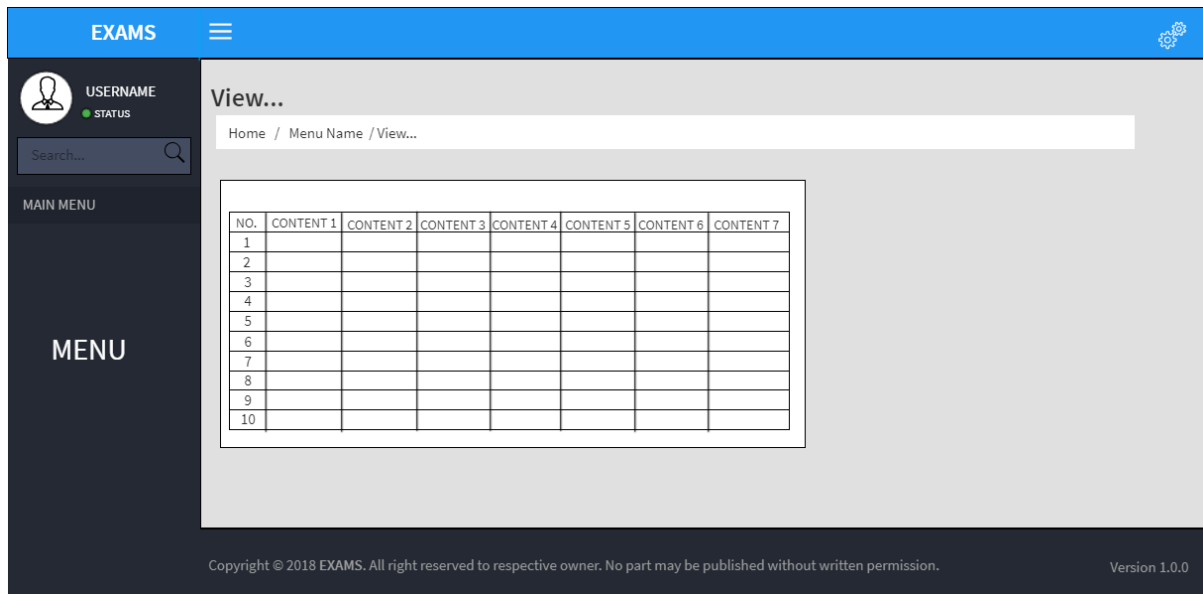


Figure 26: Admin View Data Interface

**10.1.2.4 Admin Update Data Interface (Update Exam, Semester, Faculty, Program, Course, Invigilator, Student and Assign Invigilator)**

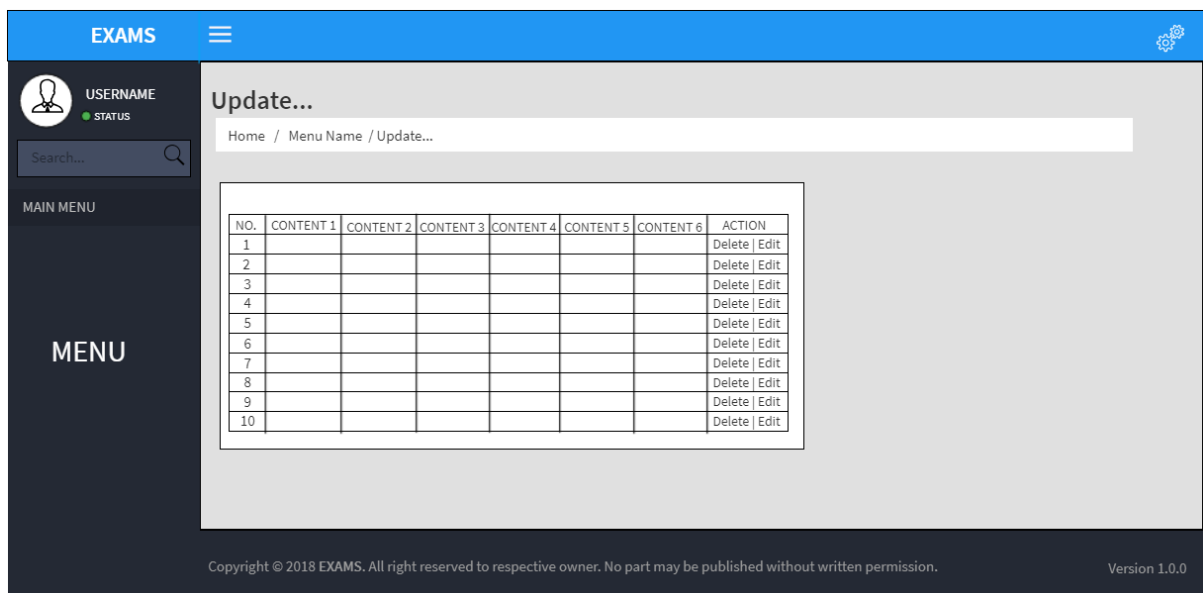


Figure 27: Admin Update Data Interface

### 10.1.3 Invigilator Interface

#### 10.1.3.1 Invigilator Main Menu Interface

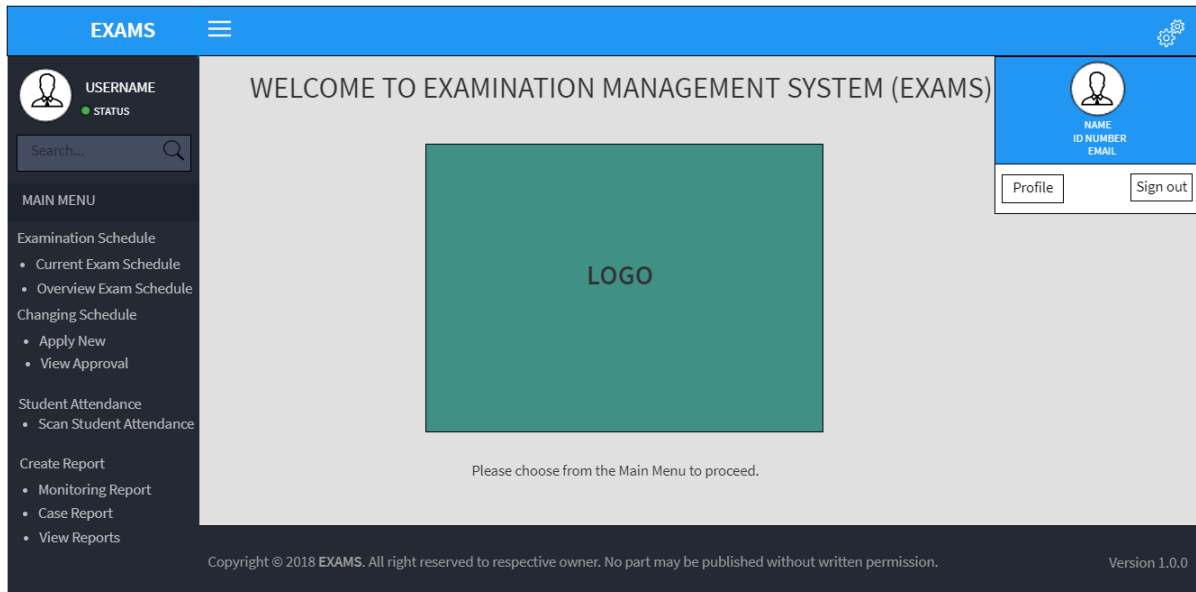


Figure 28: Invigilator Main Menu Interface

#### 10.1.3.2 Invigilator Insert Data Interface (Create Reports and Apply Changing Schedule)

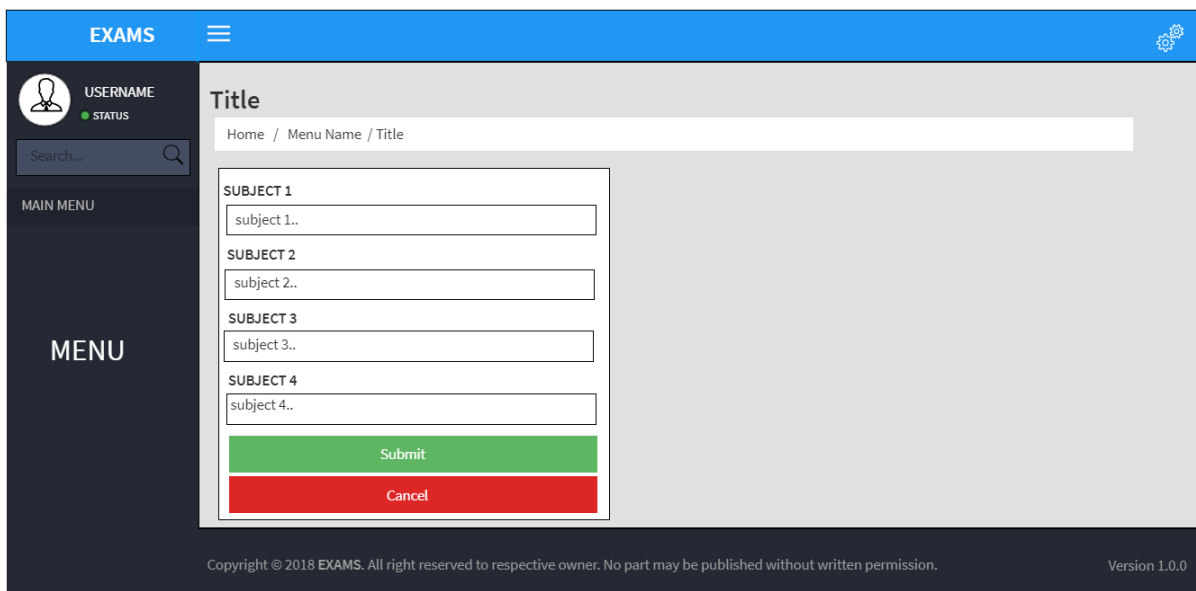


Figure 29: Invigilator Insert Data Interface

### 10.1.3.3 Invigilator View Data Interface (Current and Overview Exam Schedule, View Changing Status and View Reports)

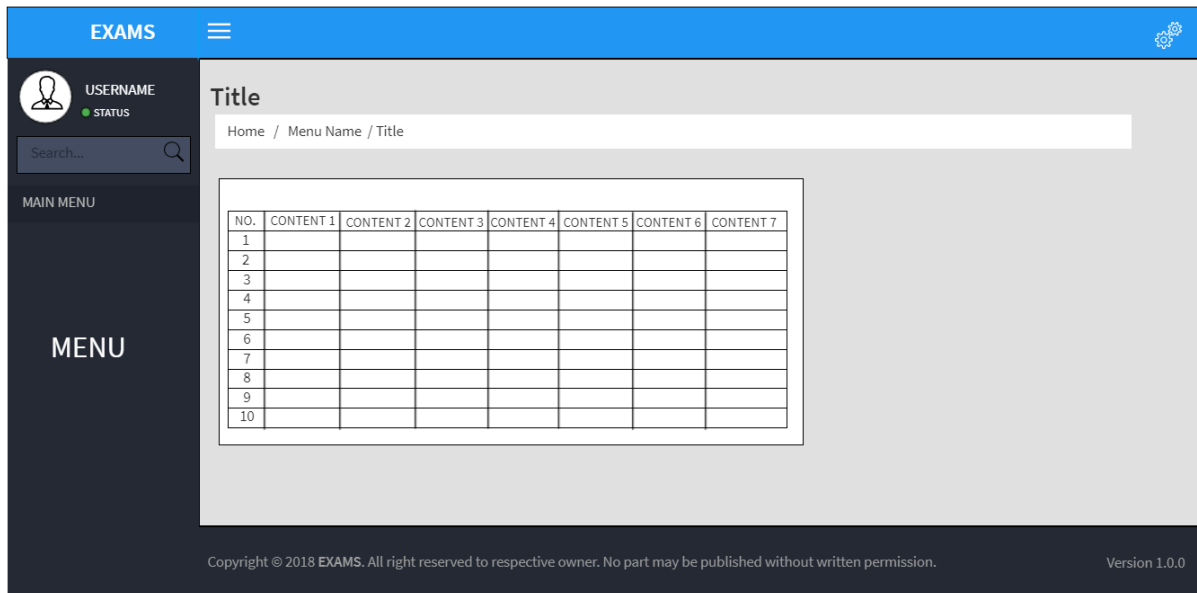


Figure 30: Invigilator View Data Interface

### 10.1.3.4 Invigilator Scan Student Attendance Interface

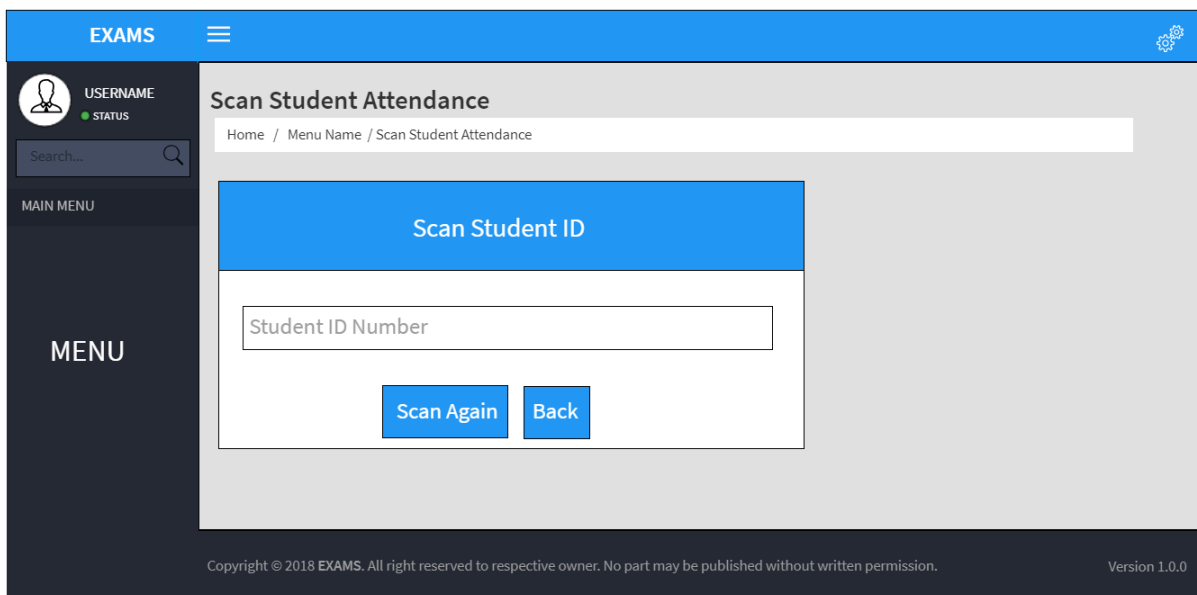


Figure 31: Invigilator Scan Student Attendance Interface

### 10.1.4 Student Interface

#### 10.1.4.1 Student Main Menu Interface

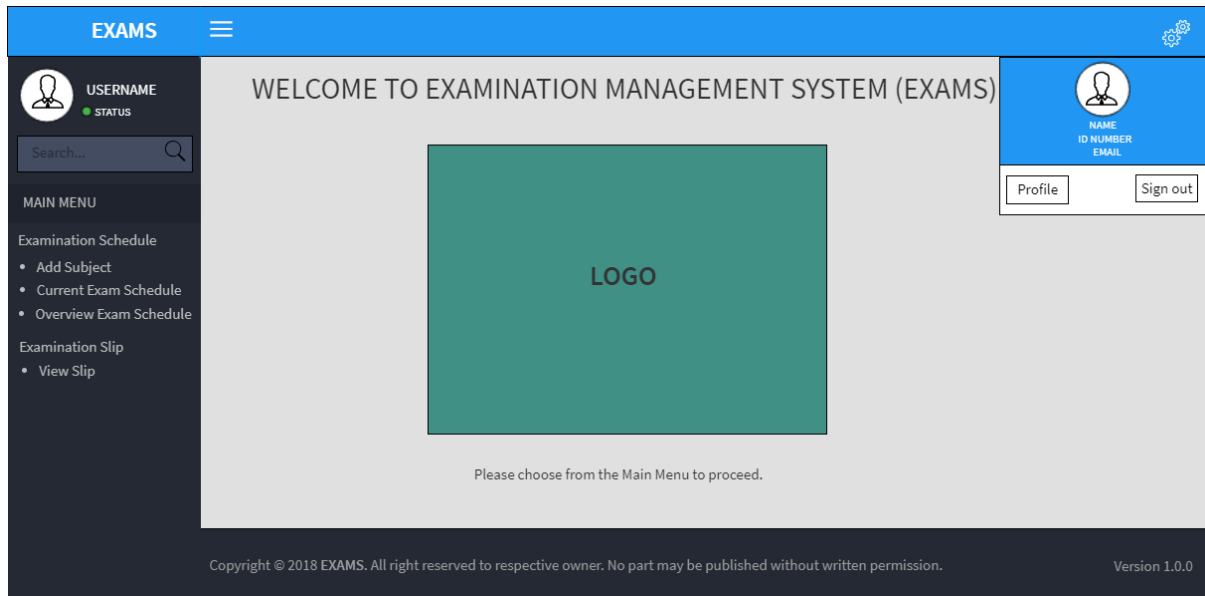


Figure 32: Student Main Menu Interface

#### 10.1.4.2 Student Add Subject/Course Interface

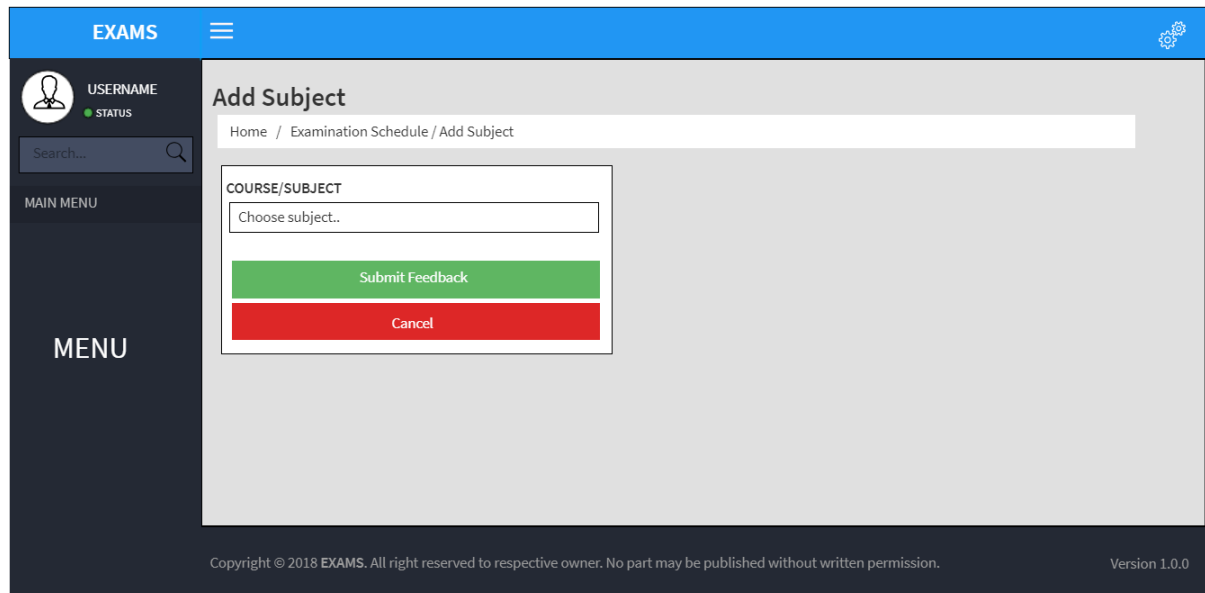


Figure 33: Student Add Subject/Course Interface

### 10.1.4.3 Student View Data Interface (View Current and Overview Exam Schedule)

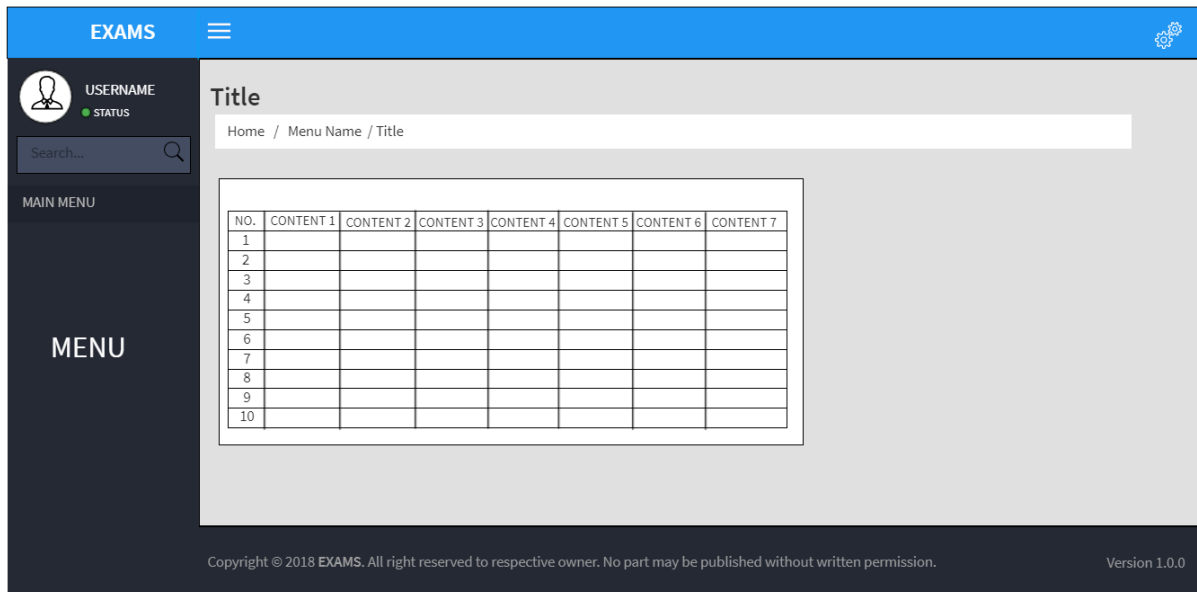


Figure 34: Student View Data Interface

### 10.1.4.4 Student View Examination Slip Interface

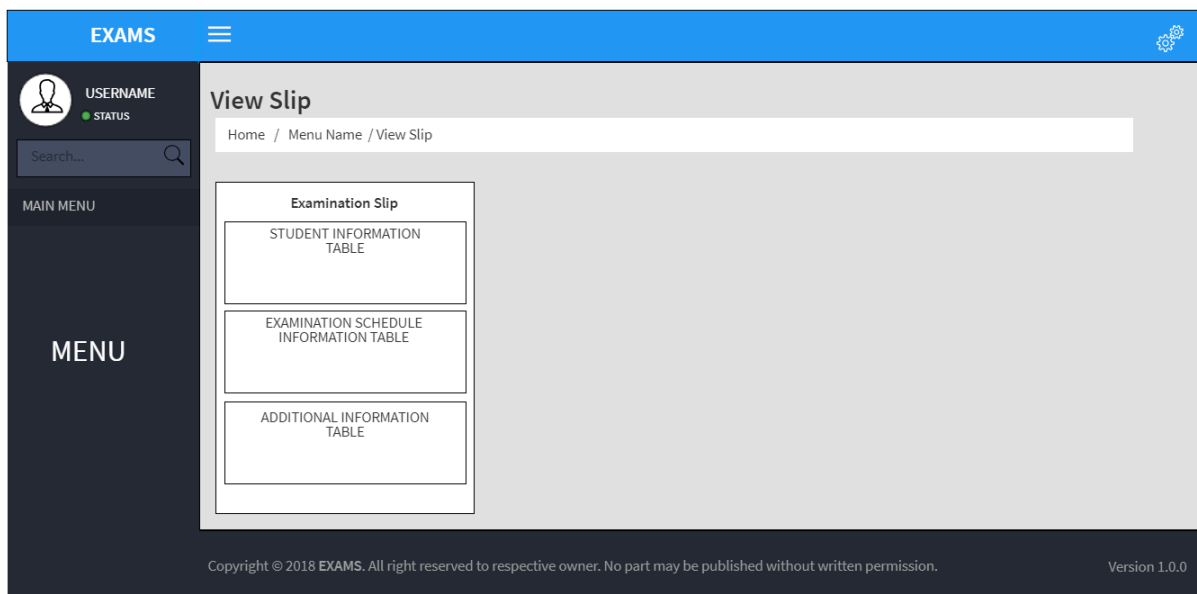


Figure 35: Student View Examination Slip Interface

## 10.2 WEB SYSTEM STRUCTURE & NAVIGATION

### 10.2.1 ADMIN PAGE

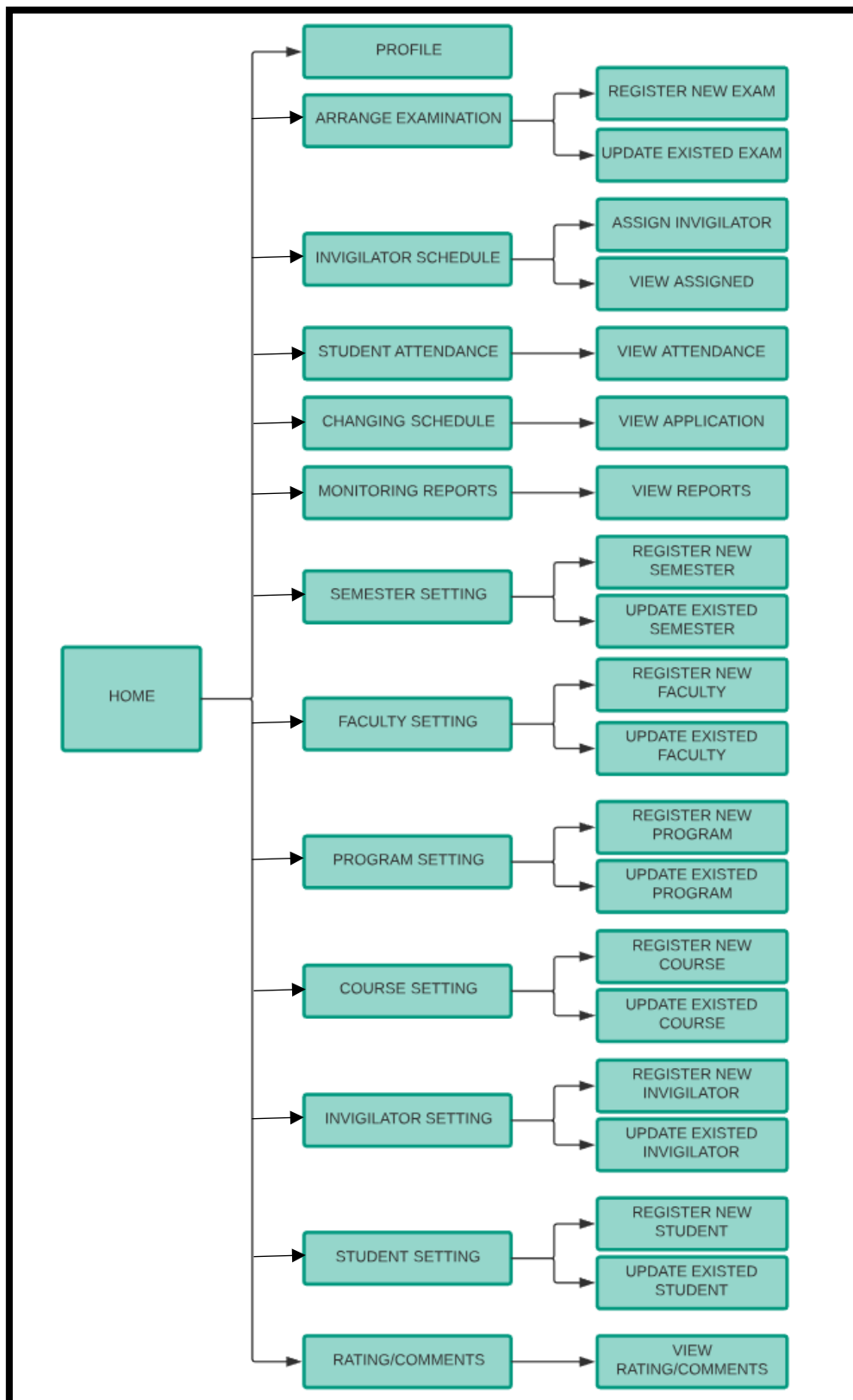


Figure 36: Admin Page

### 10.2.2 INVIGILATOR PAGE

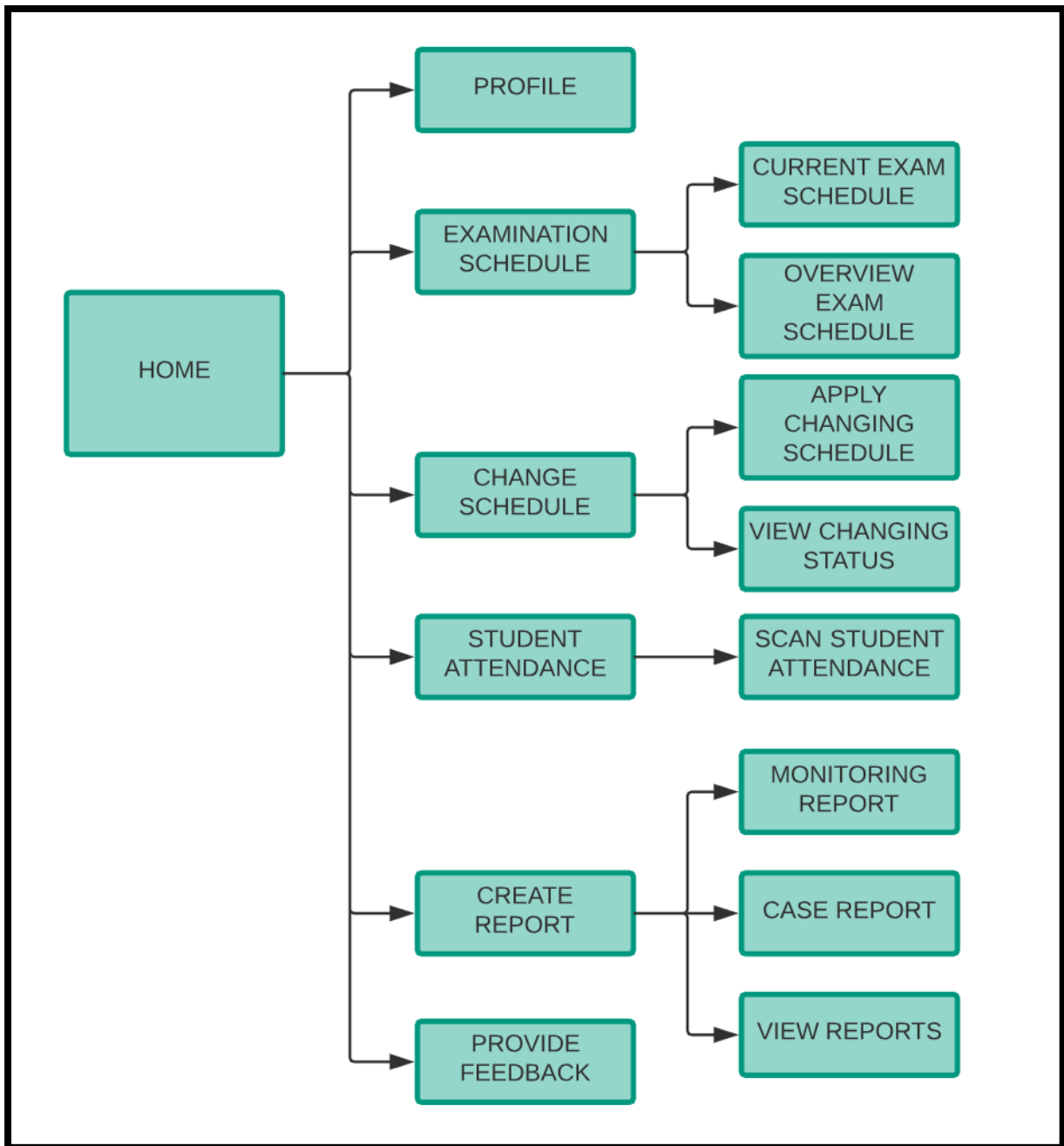


Figure 37: Invigilator Page

### 10.2.3 STUDENT PAGE

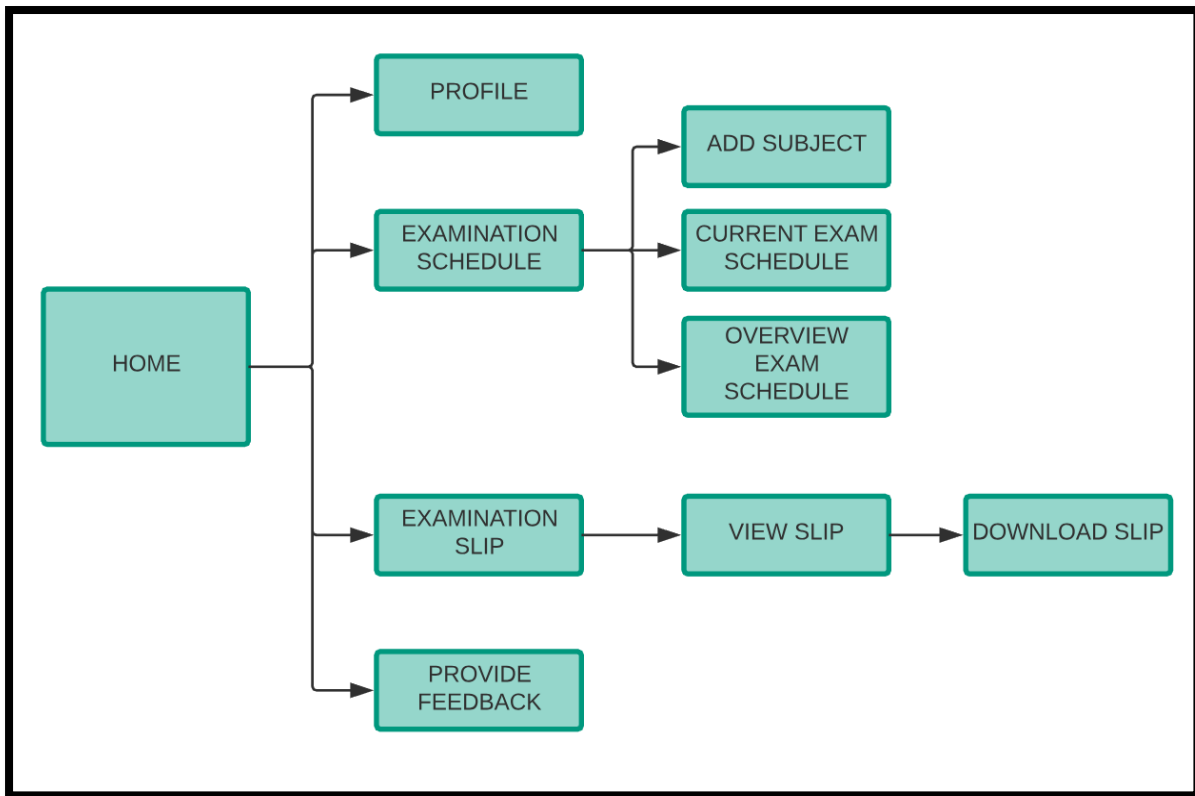


Figure 38: Student Page

### **CONCLUSION**

As the conclusion, hopefully, the Examination Management System (EXAMS) can be developed as planned and be used as proposed in this proposal. Hence, in hope that at the end, EXAMS can be completed according to the Gantt chart provided. The existence of EXAMS will benefit a lot of people in various types of users such as students, invigilators and lecturers. Every end of semester there will be an examination that will be conducted for all students to test their knowledge of what they learn for the entire semester. However, even examination is done ever the end of the semester, the system to manage all the examination information is not yet seen until now. It was reported that invigilators find difficulties in checking examination schedule as there was limited online platform, as well as attendance of invigilators and students are recorded manually by filling paper-based forms. Thus, the creation of EXAMS is relevant to any educational institutions that practice examinations as part of their teaching and learning activities to measure students' performance. Examinations activities eventually can be managed at ease and evidence of each examination session are kept digitally. This will ensure users' satisfactions by having productive works which equipped with user friendly interface.

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