



UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF ENGINEERING, SCHOOL OF COMPUTING

SKUDAI, 81310 JOHOR BAHRU, JOHOR DARUL TAKZIM

FINAL PROJECT APPLICATION DEVELOPMENT

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1.0 Introduction

One of the most significant and useful items in the education sector is the timetable. The timetable can be used by students and lecturers to manage their day to day schedule. With the ubiquity of mobile devices usage among students and lecturers in university and the advent of mobile application, the old timetable can be re-engineered and optimized by leveraging available technology. By re-design the old timetable into a mobile application, many improvements can be made to make the schedule more interesting, motivating and fun to be used. For example, by using technology in mobile applications, the user interface can be enhanced. Schedulers are very helpful for students and lecturers to manage their own time wisely. For students, they can check their class time and location on the fly. Lecturers can manage their subject timetable according to time, date and class location. By using mobile, it will be more convenient for students and lecturers to check their timetable.

1.1 Problem statement

Time management is the most important aspect needed to take seriously no matter what role you have. In our aspect of application we have highlighted the user that needs to use this application which is the student. Students sometimes have forgotten the classes and time of the class. For a few students they find that the manual timetable is not really helpful because it could not notice them. It is also hard for them to find out where the manual timetable that they have placed it.

If the student does not notice the classes it can deduce their grade which the attendant is one of the most important aspects that can be used for their carry mark. Our team has decided to make an application that can help the student to always notify with the classes that they have. We also have made the application to be a user friendly application which can make the student to use the application to be as easy as possible.

Application features

- Timetable
- Calendar
- Reminder

Description

This application will allow the user to create the timetable and it will notify the user for the class that they have.

List of Stakeholders

1. Students of UTM
2. Public Students
3. Lecturers of UTM
4. Public Lecturers
5. Public User

Objective

1. To develop an online timetable system for students.
2. To ease the students with their own study session.
3. To ease the students with the task to do list.
4. To ease the students with their own time management.

Members Role

NAME	ROLE
Mohd Anas Bin Adnan	UI Developer
Muhammad Amirul Fahmi Bin Noor Anim	Full Stack Developer
Nur Hasanah Binti Sariddon	Project Manager

1.2 Requirement Specification

UTM Facility Reservations System

User: Lecturer, Student

Addition:

(1) Lecturer

- **Login Into System**
- **View Application Documentation**
 - i. Download application documentation
- **View Announcement**
- **View Lecturer List**
 - i. Subject
 - ii. Section

- **Manage Subject Schedule**

- i. Date
- ii. Class Location
- iii. Time

3) Student

- **Login Into System**
- **View Current Semester Timetable**

- i. Monitor the timetable

- **View Application Documentation**

- i. Download application documentation

- **View Final Exam Timetable**
- **View Announcement**
- **View Lecturer List**

- i. Subject

- ii. Section

- **View Class Location**

2.0 System Design

2.1 Use Case Design

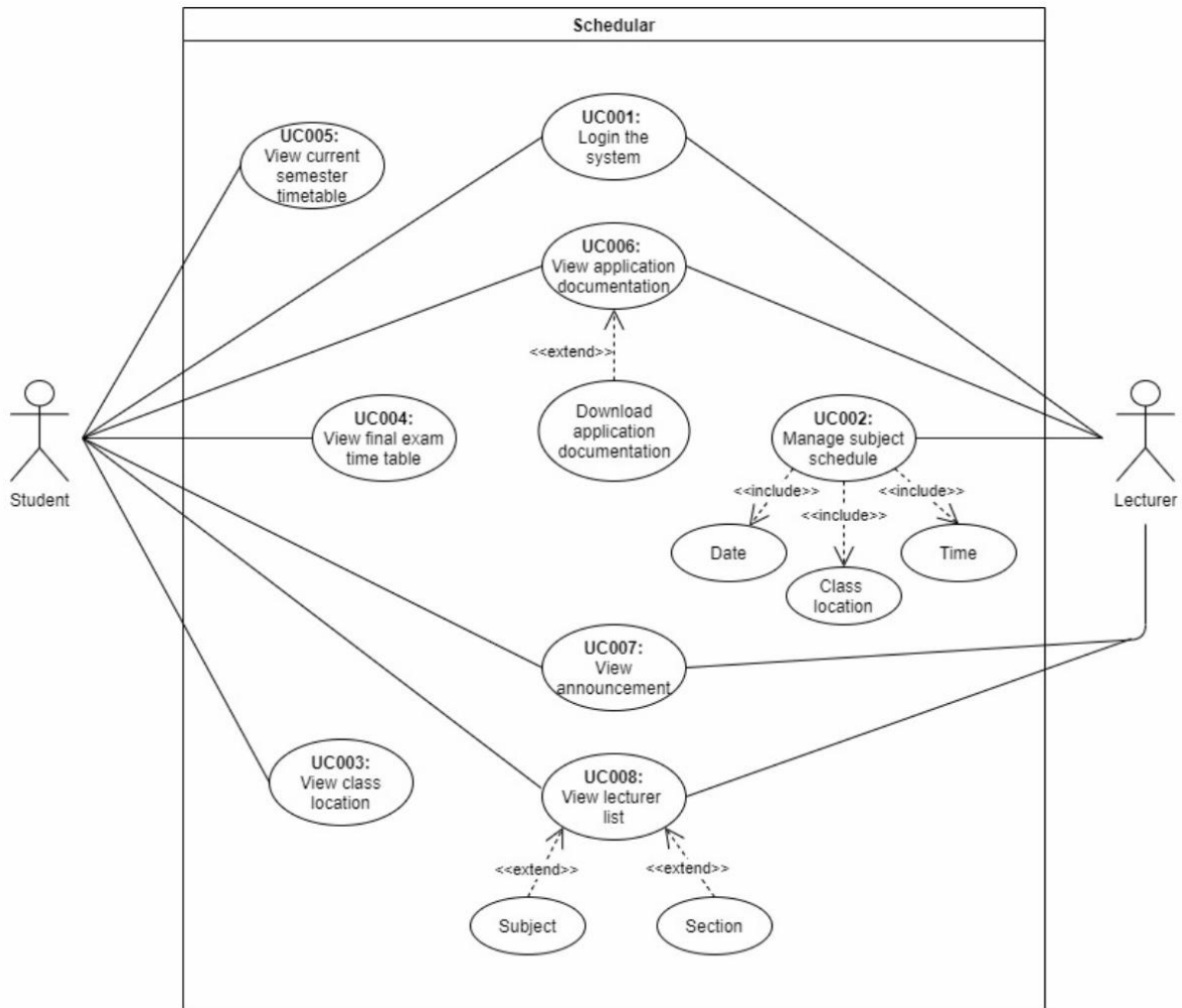
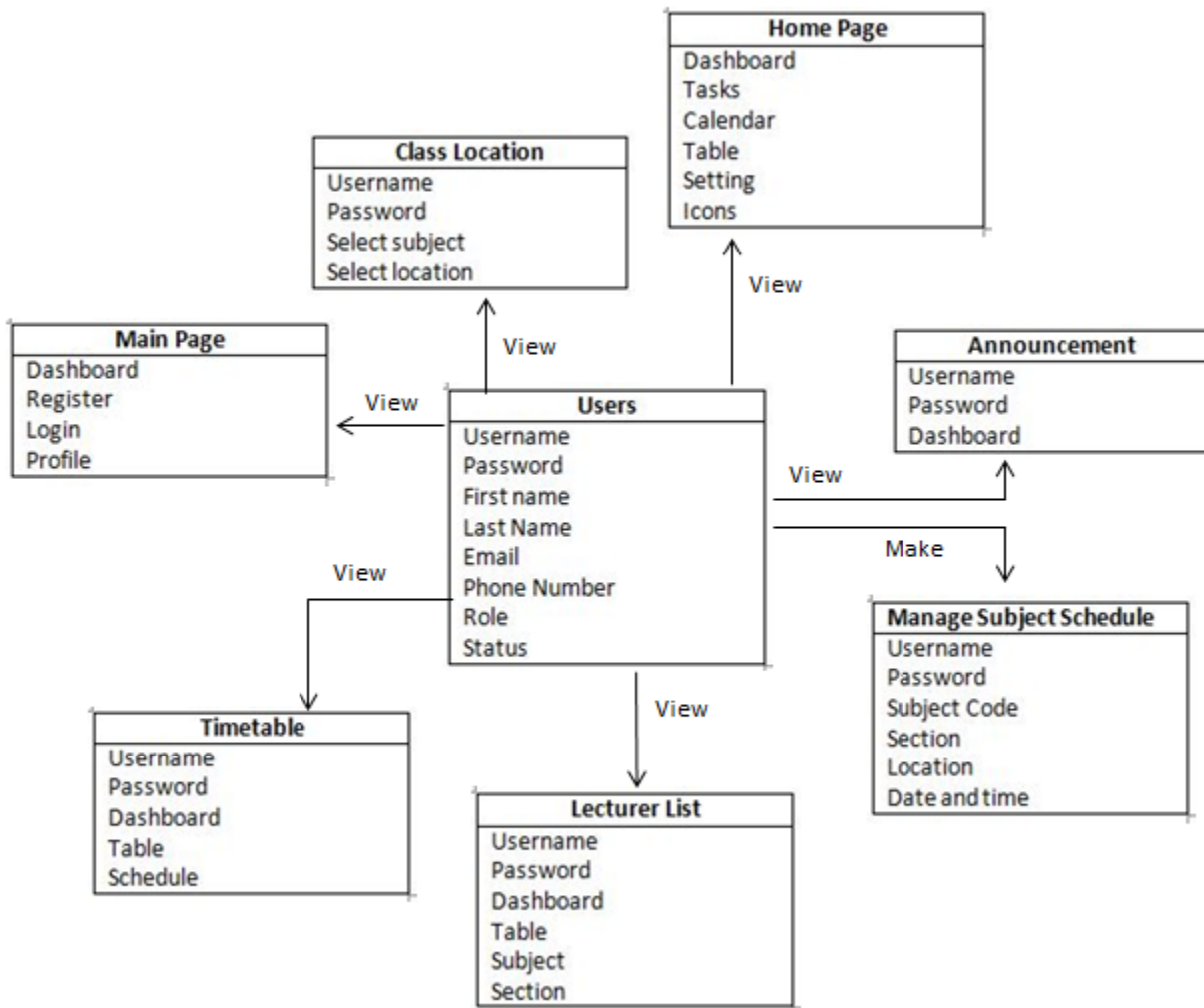


Figure 1: Scheduler Use Case Diagram

2.2 Entity Relationship



UC001: Use Case Login into System

Table 1.1: Use Case Description for Login into System

Use Case ID	UC001
Use Case Name	Login Into The System
Created by:	Mohd Anas Bin Adnan
Checked by:	Nur Hasanah Binti Sariddon
Description	Lecturer and Student login into the system by using their username and password.
Actor (s)	Lecturer and Student
Pre-condition (s)	1. Lecturer and Student accounts must exist. 2. Using the correct username and password
Normal Flow (s)	1.Lecturers and Students click on the 'Login' button on their application interface. 2.The system will ask the user to enter the username and password. 3.Users will be able to login directly into the system after they submit the right username and password.
Alternative Flow (s)	-
Exception (s)	For the users who did not register yet, they must click on the 'Register' button and register by submit all of the information needed before login into the system
Post-condition (s)	- User will directly login into the system
Related Requirement (s)	- User has register their account

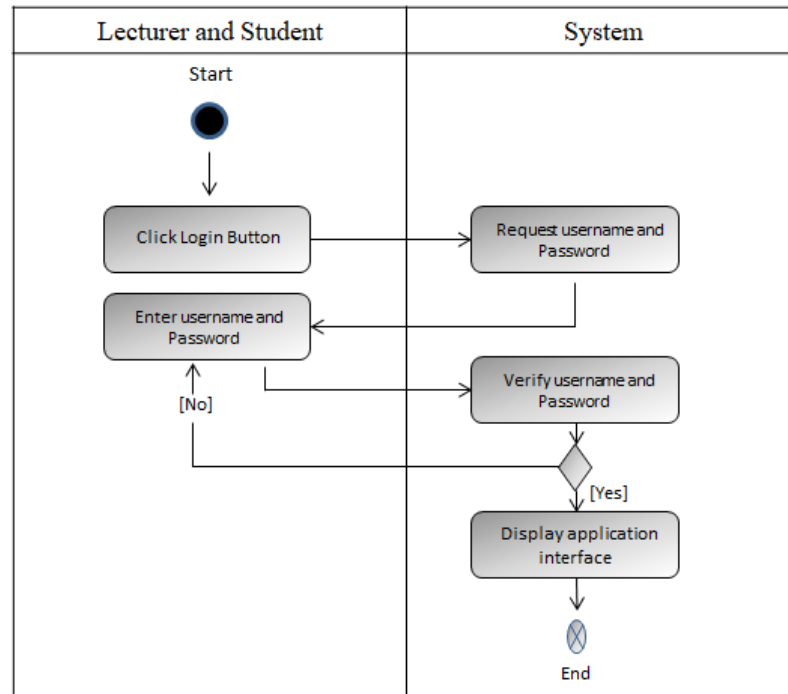


Figure 1.3: Activity Diagram of Login into system

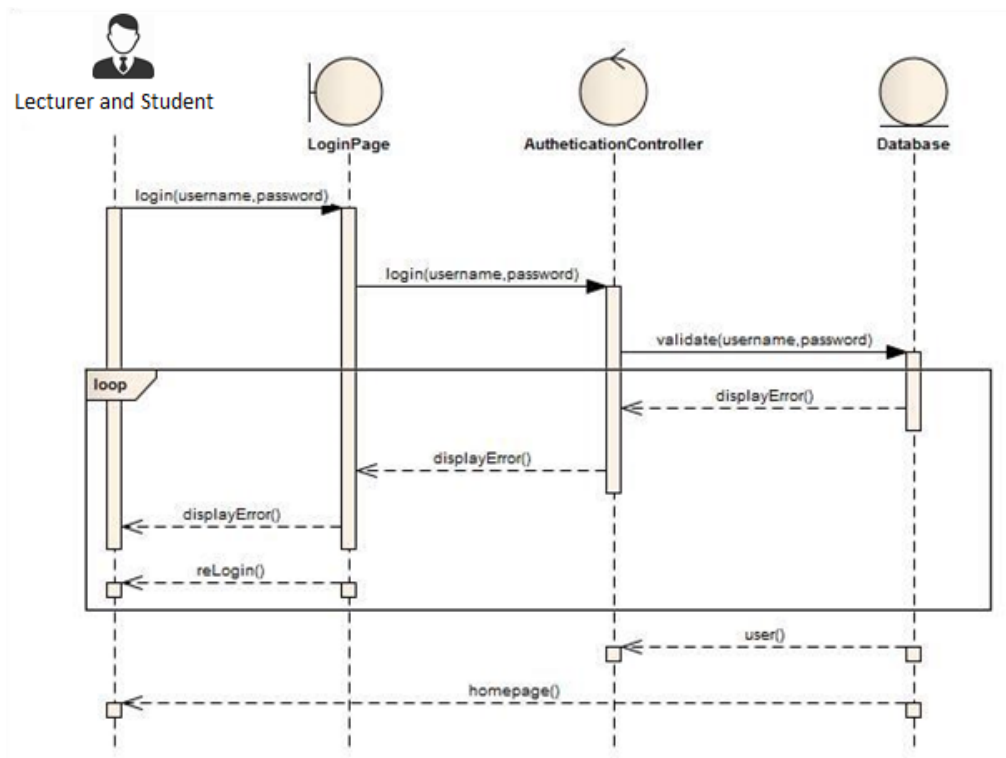


Figure 1.4: Sequence Diagram of Login into system

UC002: Use Case Manage Subject Schedule

Table 1.2: Use Case Manage Subject Schedule

Use Case ID	UC002
Use Case Name	Manage Subject Schedule
Created by:	Mohd Anas Bin Adnan
Checked by:	Nur Hasanah Binti Sariddon
Description	Lecturer can manage the class schedule for the students
Actor (s)	Lecturer
Pre-condition (s)	1. Lecturer accounts must exist. 2. Lecturers must login and already be in the system.
Normal Flow (s)	1.Lecturer can manage the schedule on need 2. Manage the date of the class 3.Manage the class location 4.Set the time of the class
Alternative Flow (s)	-
Exception (s)	-
Post-condition (s)	1. Student able to see the current schedule
Related Requirement (s)	-

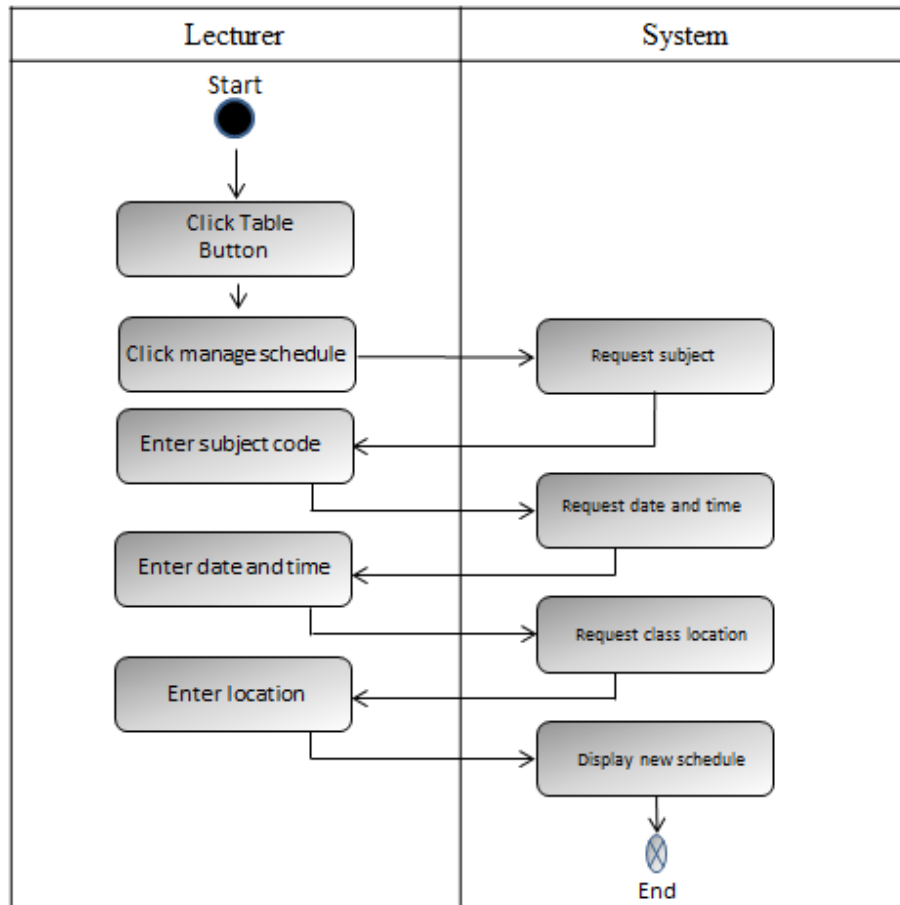


Figure 1.5: Activity Diagram of Manage Subject Schedule

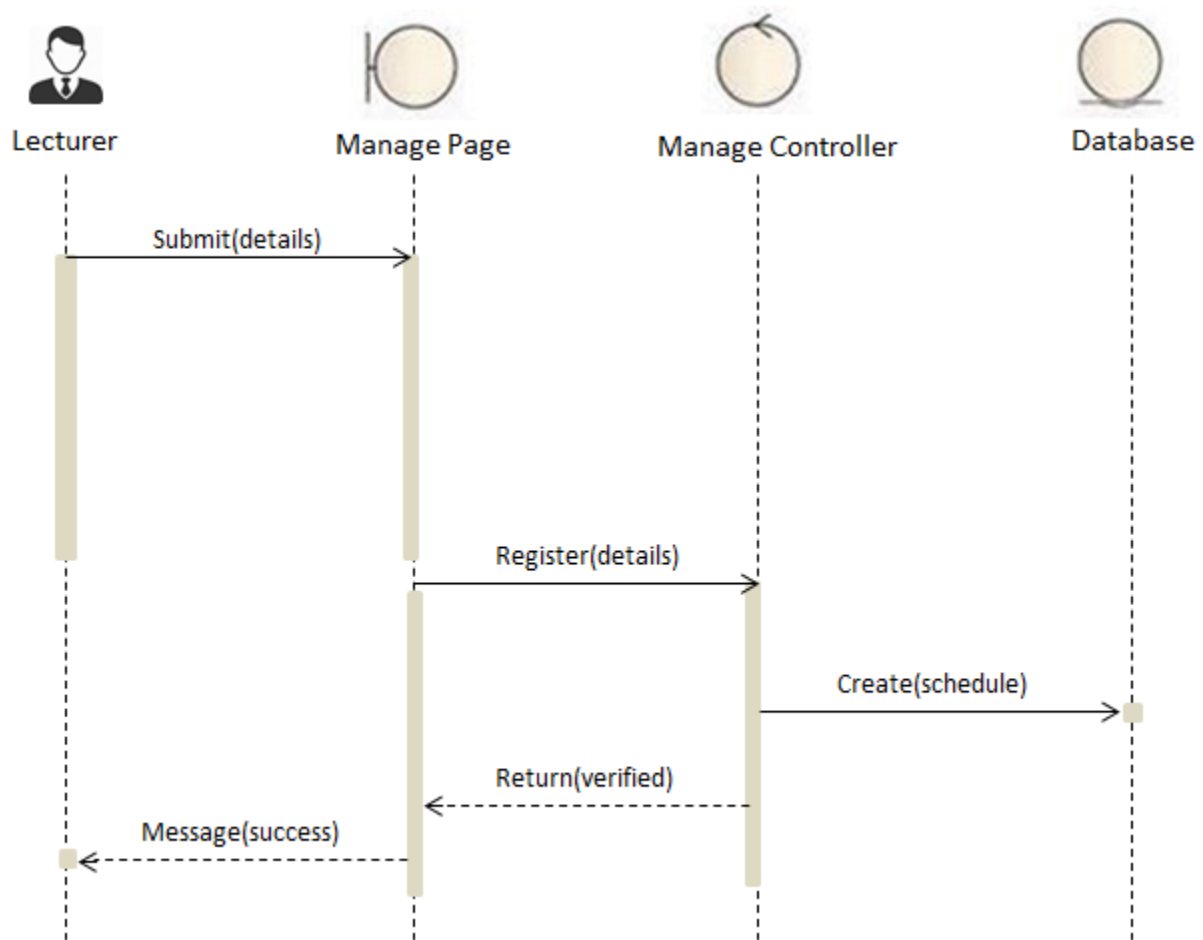


Figure 1.6: Sequence Diagram of Manage Subject Schedule

UC003: Use Case View Class Location

Table 1.3: Use Case Description for View Class Location

Use Case ID	UC003
Use Case Name	View Class Location
Created by:	Muhammad Amirul Fahmi Bin Noor Anim
Checked by:	Nur Hasanah Binti Sariddon
Description	Students able to see their class locations depends on the lecturer.
Actor (s)	Students
Pre-condition (s)	1. User account must exist and valid 2. Students must already be in the system.
Normal Flow (s)	1.Student login to their account 2.Select the subject that they want to see the location of the class .
Alternative Flow (s)	-
Exception (s)	-
Post-condition (s)	1. They will see the location of the class depends on the lecturer set up
Related Requirement (s)	-

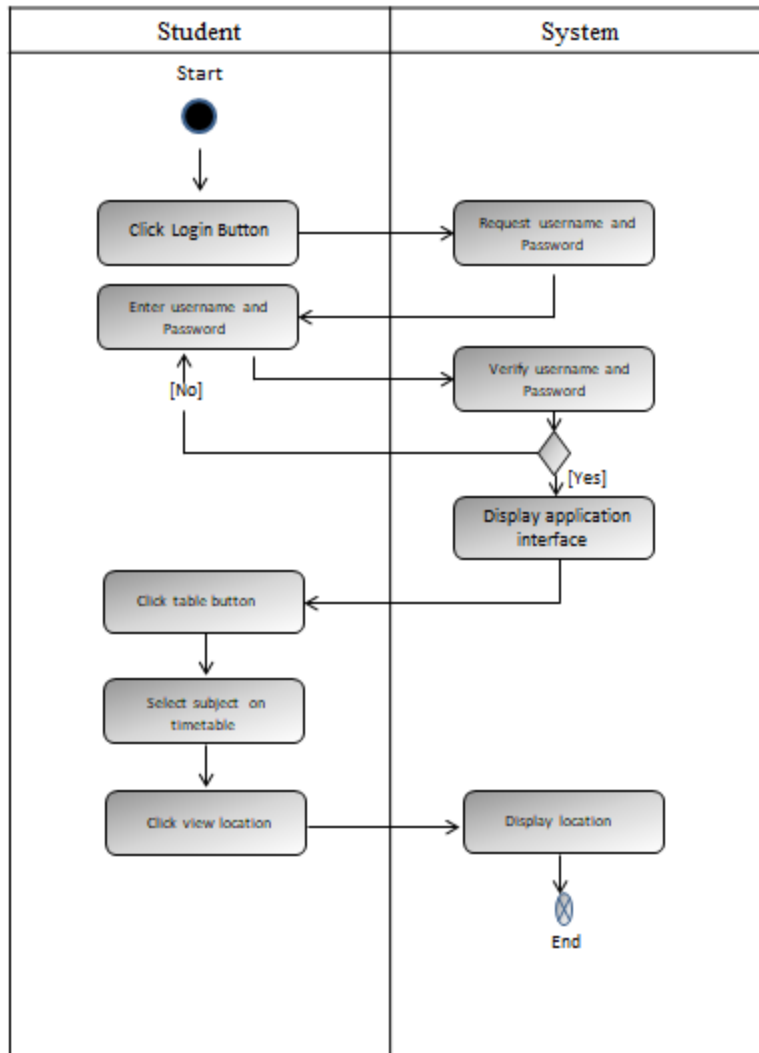


Figure 1.7: Activity Diagram of View Class Location

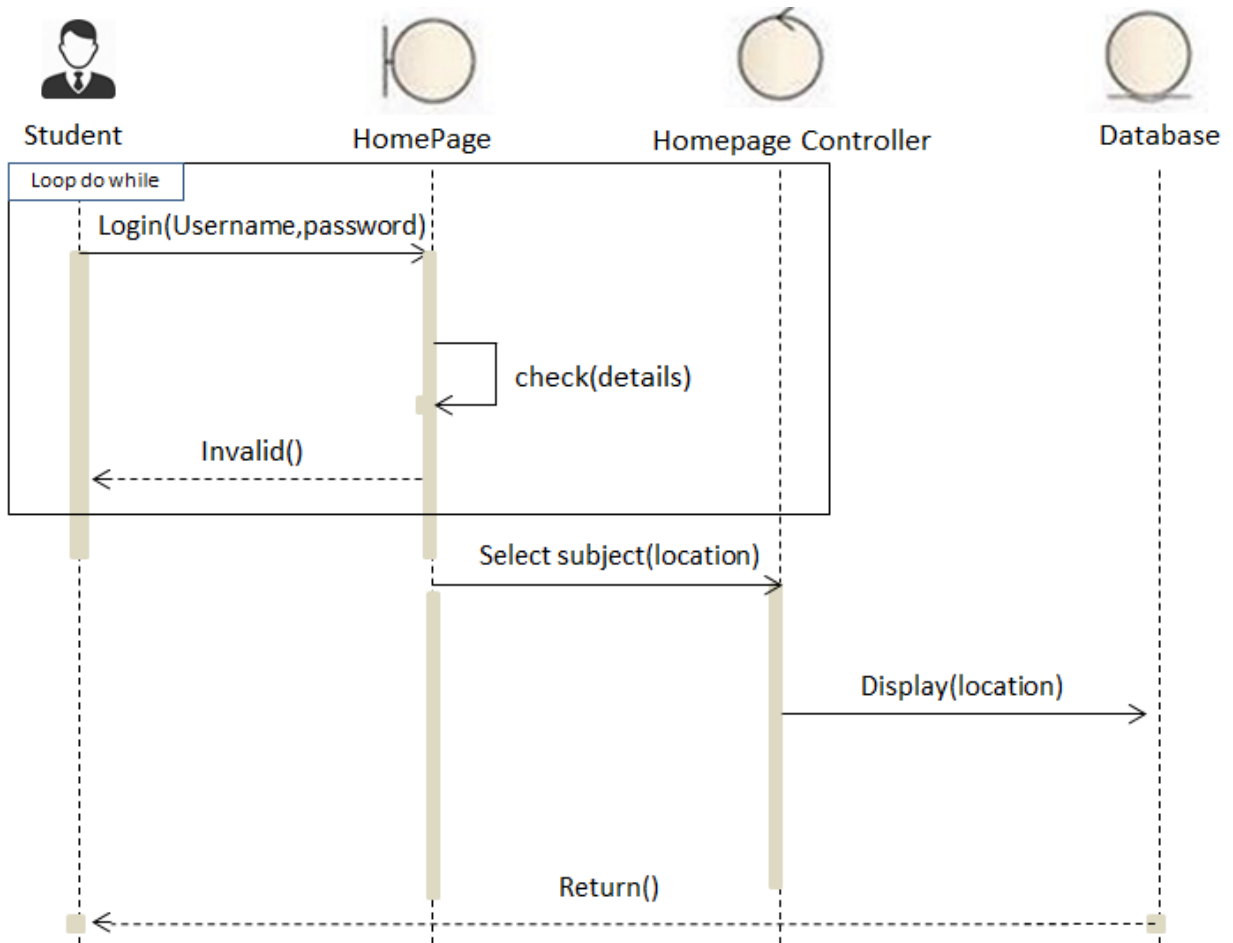


Figure 1.8: Sequence Diagram of View Class Location

UC004: Use Case View Final Exam Timetable

Table 1.4: Use Case Description for View Final Exam Timetable

Use Case ID	UC004
Use Case Name	View Final Exam Timetable
Created by:	Muhammad Amirul Fahmi Bin Noor Anim
Checked by:	Nur Hasanah Binti Sariddon
Description	For student to monitor their final exam schedule based on their subject taken on current semester
Actor(s)	Student
Pre-condition	1. Student account must exist and valid 2. Students must already be in the system.
Normal flow	1. Student click 'Final Exam Schedule' on their dashboard 2. System will display the Final Exam schedule based on the user profile and subject that student has take on current semester
Alternative flow	-
Exception flow	
Post-condition	Final Exam Schedule viewed

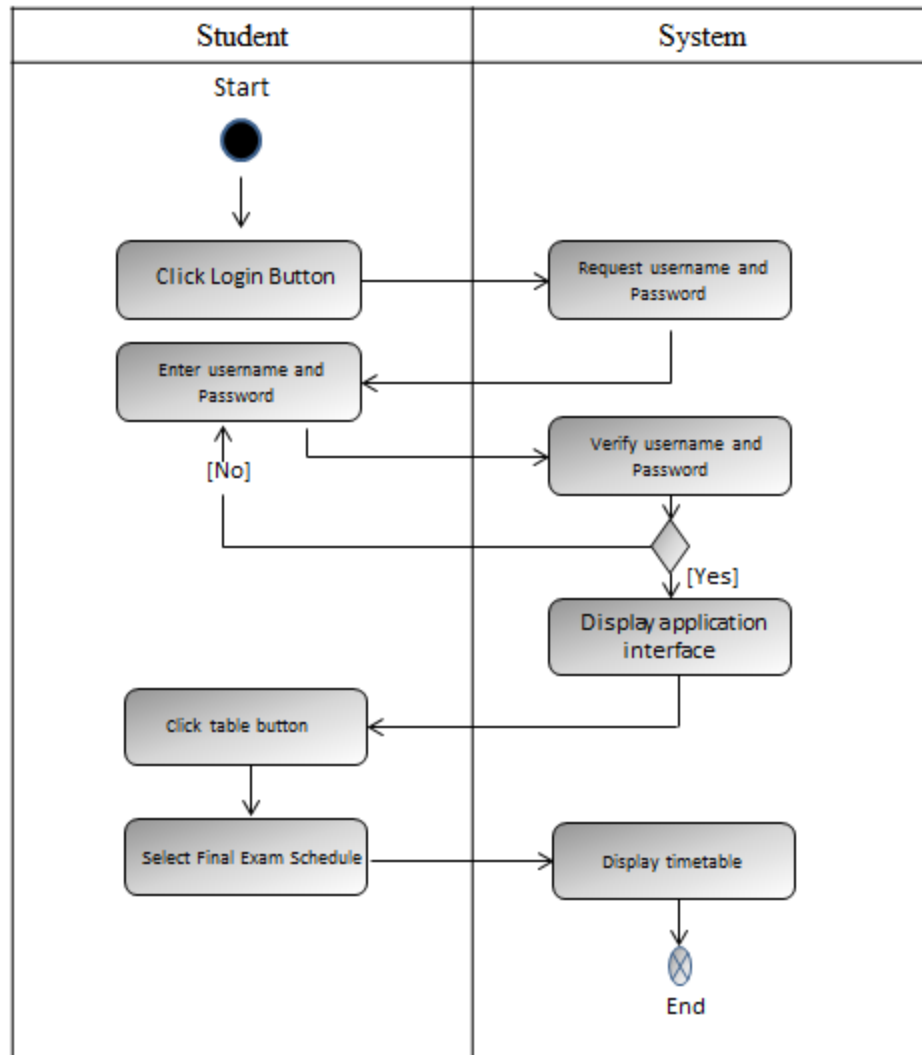


Figure 1.9: Activity Diagram of View Final Exam Timetable

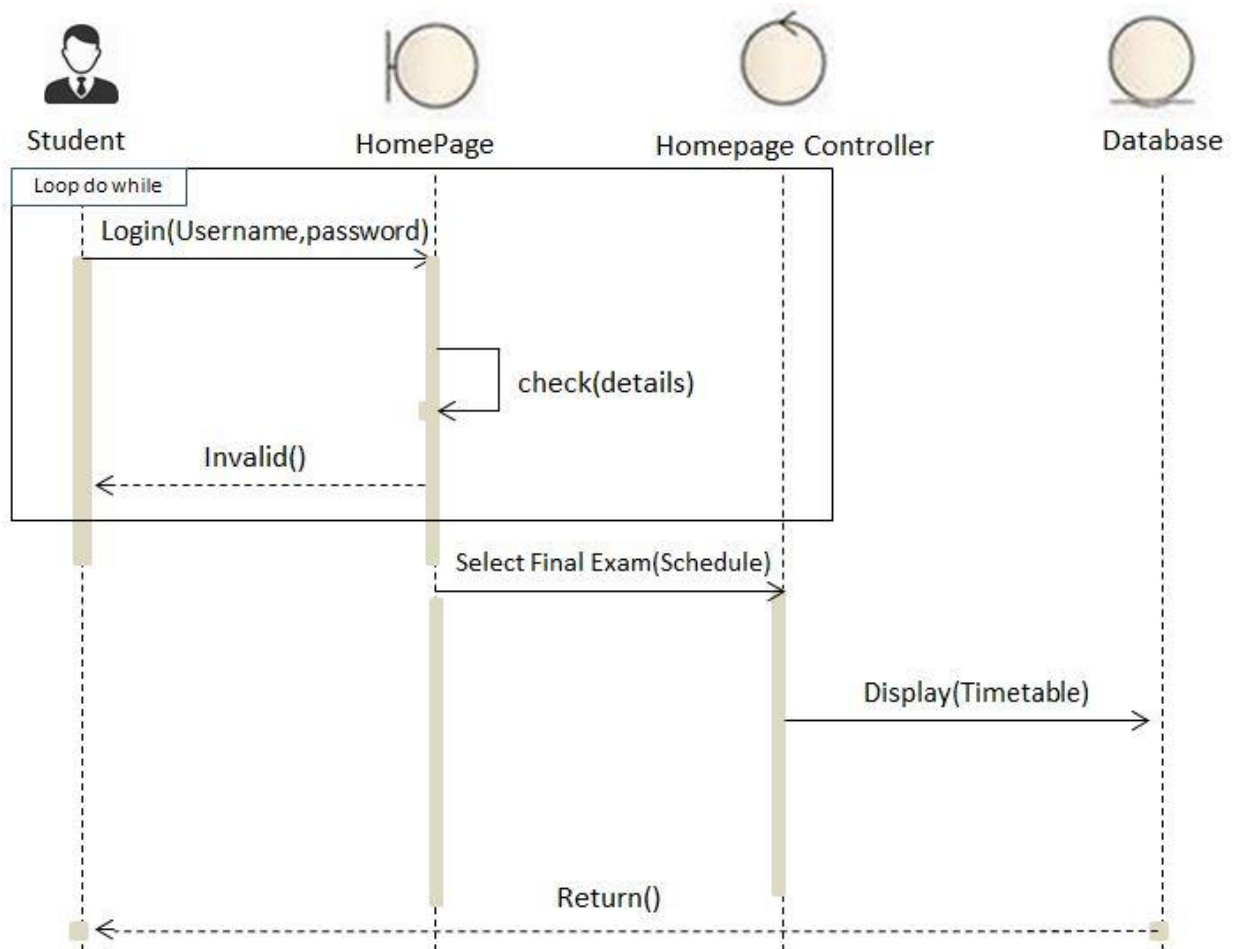


Figure 1.10: Sequence Diagram of View Final Exam Timetable

UC005: Use Case View Current Semester Timetable

Table 1.5: Use Case Description for View Current Semester Timetable

Use Case ID	UC005
Use Case Name	View Current Semester Timetable
Created by:	Mohd Anas Bin Adnan
Checked by:	Muhammad Amirul Fahmi Bin Noor Anim
Description	Student can monitor their current semester timetable
Actor (s)	Student
Pre-condition (s)	1. Student account must exist and valid 2. Students must already be in the system.
Normal Flow (s)	1. Student click 'Timetable' on their iScheduler options list 2. System will display the current timetable based on the user profile and subject that student has take on current semester
Alternative Flow (s)	
Exception (s)	-
Post-condition (s)	-Timetable Viewed
Related Requirement (s)	

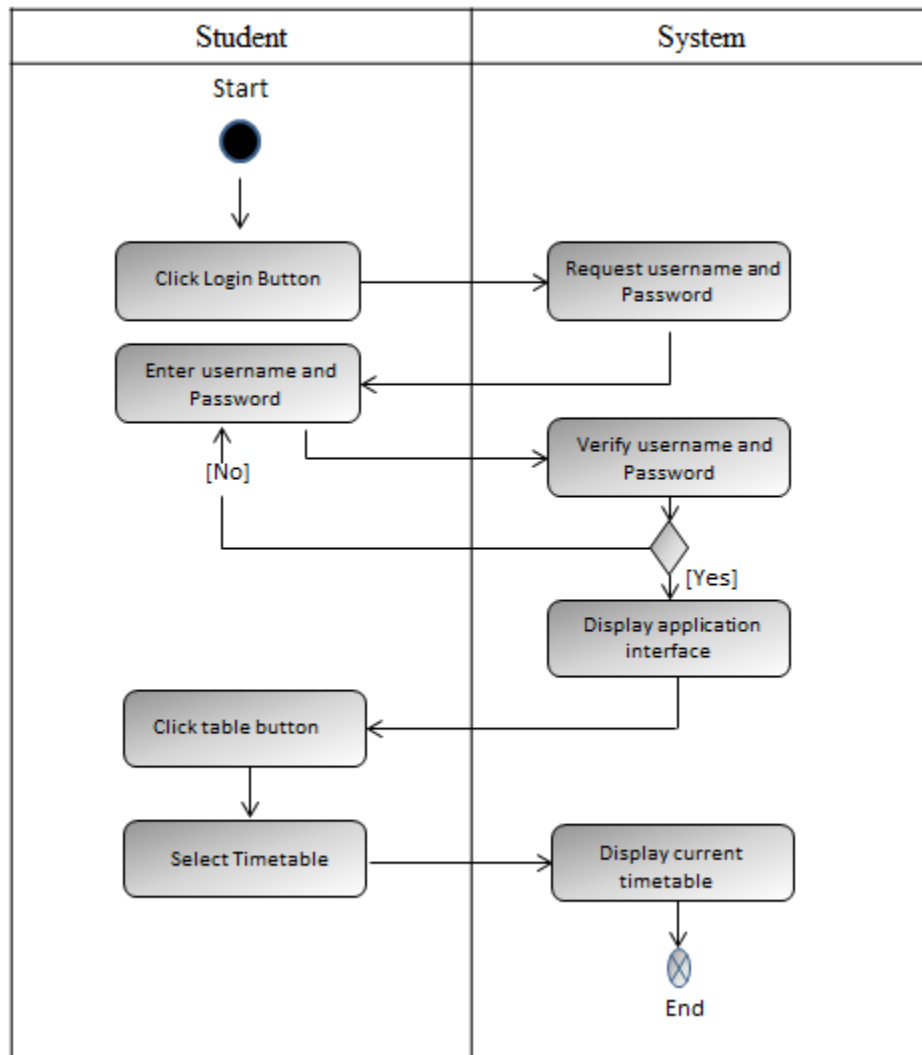


Figure 1.11: Activity Diagram of View Current Semester Timetable

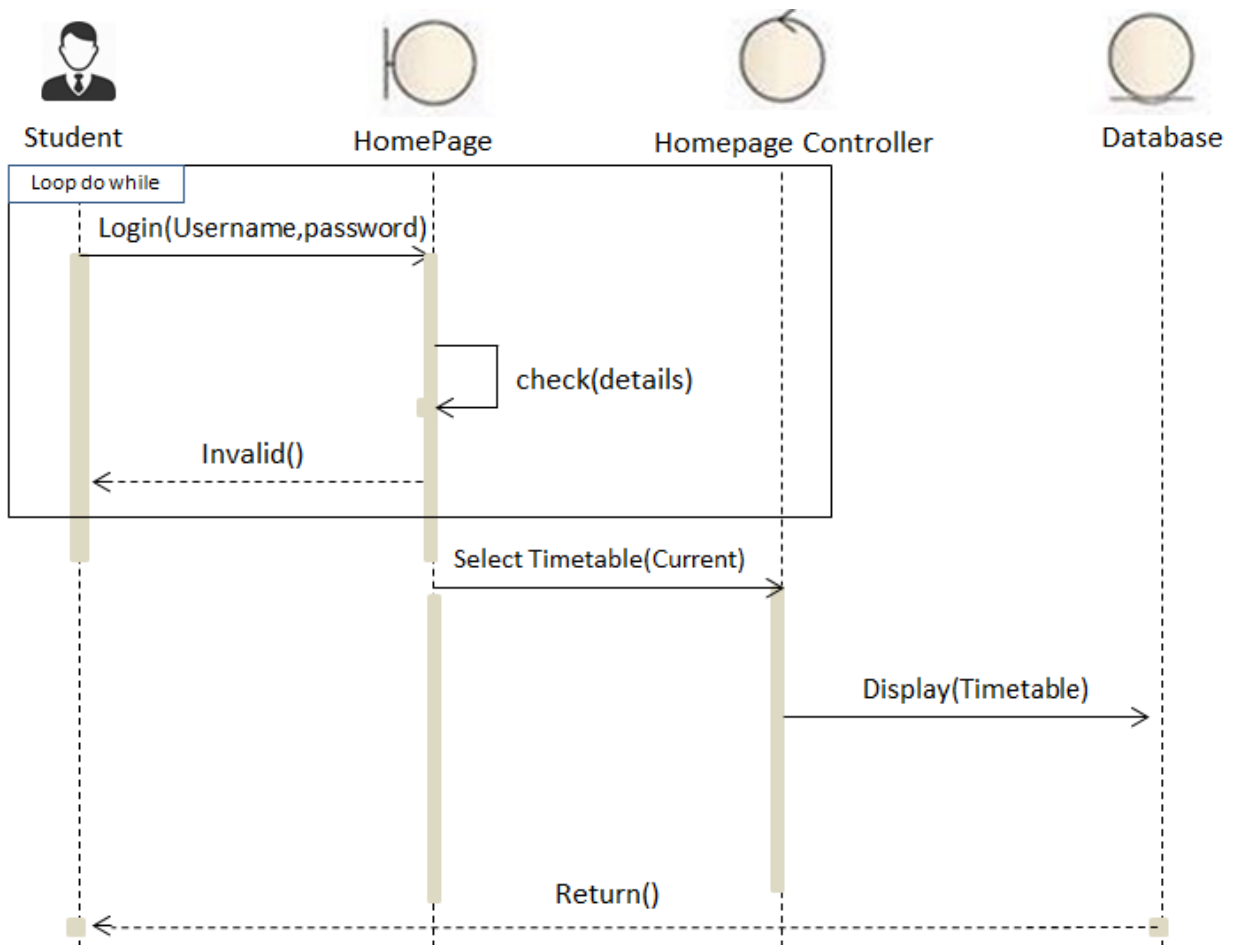


Figure 1.12: Sequence Diagram of View Current Semester Timetable

UC006: Use Case View Application Documentation

Table 1.6: Use Case Description for View Application Documentation

Use Case ID	UC006
Use Case Name	View Application Documentation
Created by: Checked by:	Mohd Anas Bin Adnan Muhammad Amirul Fahmi Bin Noor Anim
Actor	Lecturer and Student
Description	Lecturer and student will able to view and download the application documentation
Pre-condition	1. Lecturer and student account must exist and valid 2. Lecturers and students must already be in the system.
Normal Flow	1. Lecturer and student must login into the system with the right username and password 2. They must click on the “Application Documentation” button 3. Select ‘View’ or ‘Download’ button
Alternative Flow	
Exception	
Post-condition	-Users able to view or to download the application documentation

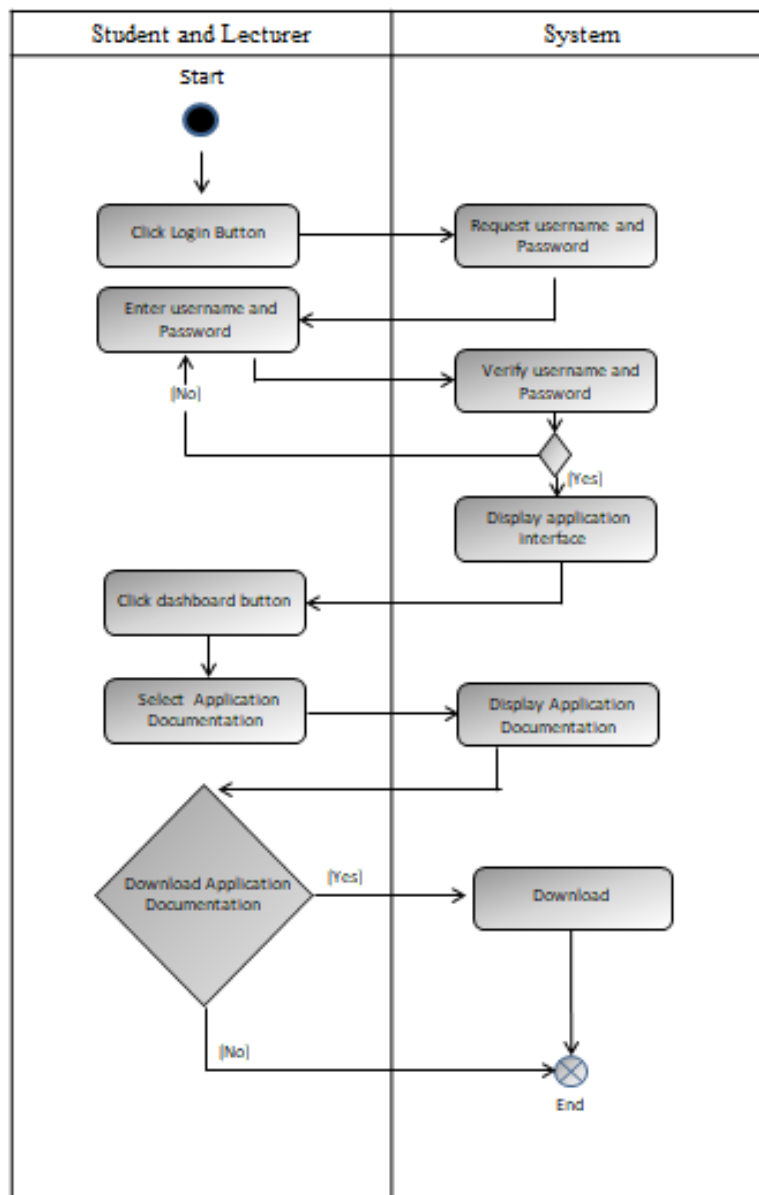


Figure 1.14: Activity Diagram of View Application Documentation

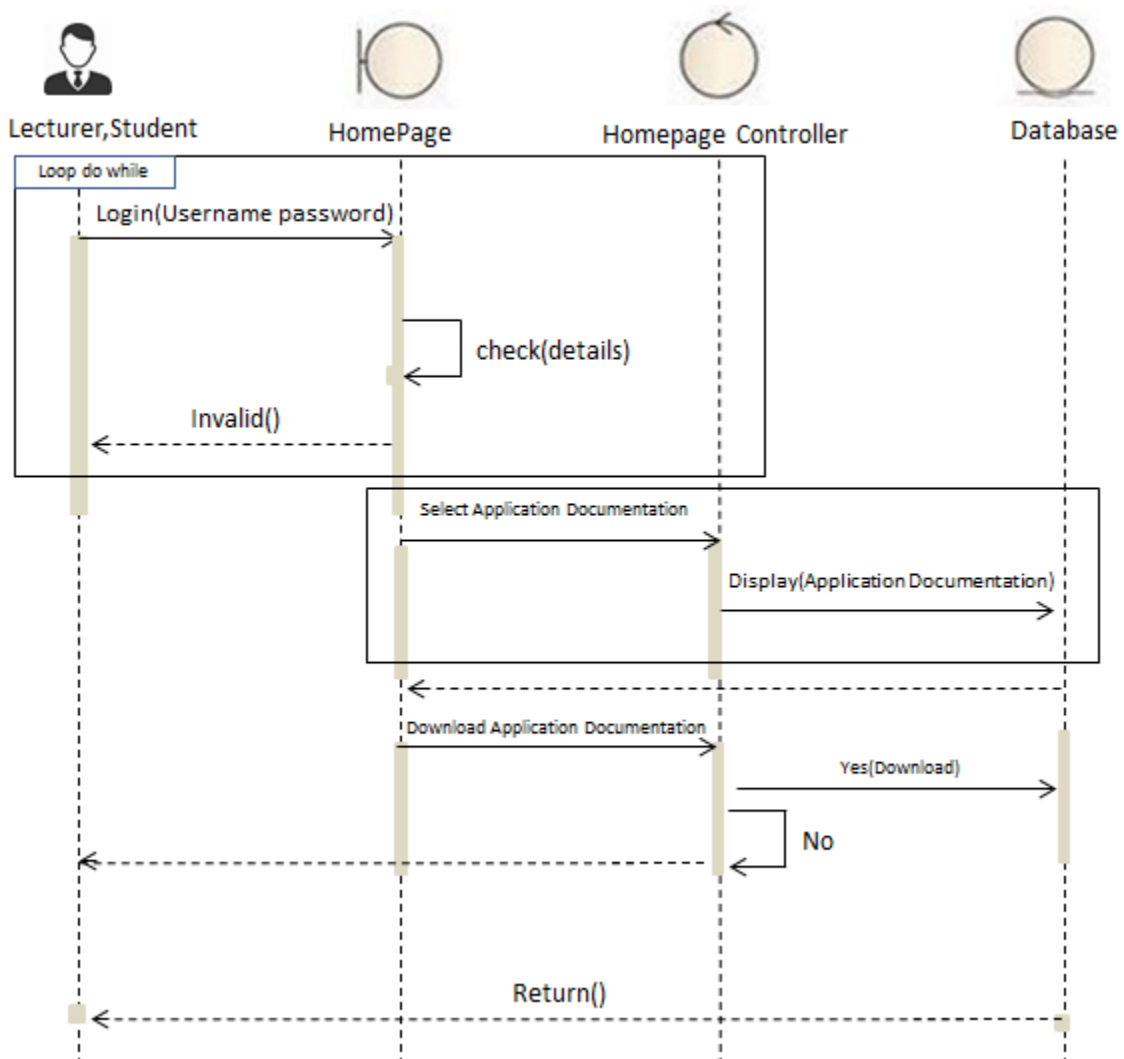


Figure 1.13: Sequence Diagram of View Application Documentation

UC007: Use Case View Announcement

Table 1.7: Use Case Description for View Announcement

Use Case ID	UC007
Use Case Name	View Announcement
Created by: Checked by:	Muhammad Amirul Fahmi Bin Noor Anim Mohd Anas Bin Adnan
Actor	Lecturer and Student
Description	Users will be able to see all of the announcements based on the current information.
Pre-condition	1. Lecturer and student account must exist and valid 2. Lecturers and students must already be in the system.
Normal Flow	1. Users login into the system 2. They will be able to see the announcements on the main page.
Alternative Flow	
Exception	
Post-condition	Users can take action if the announcement is related with their schedule.

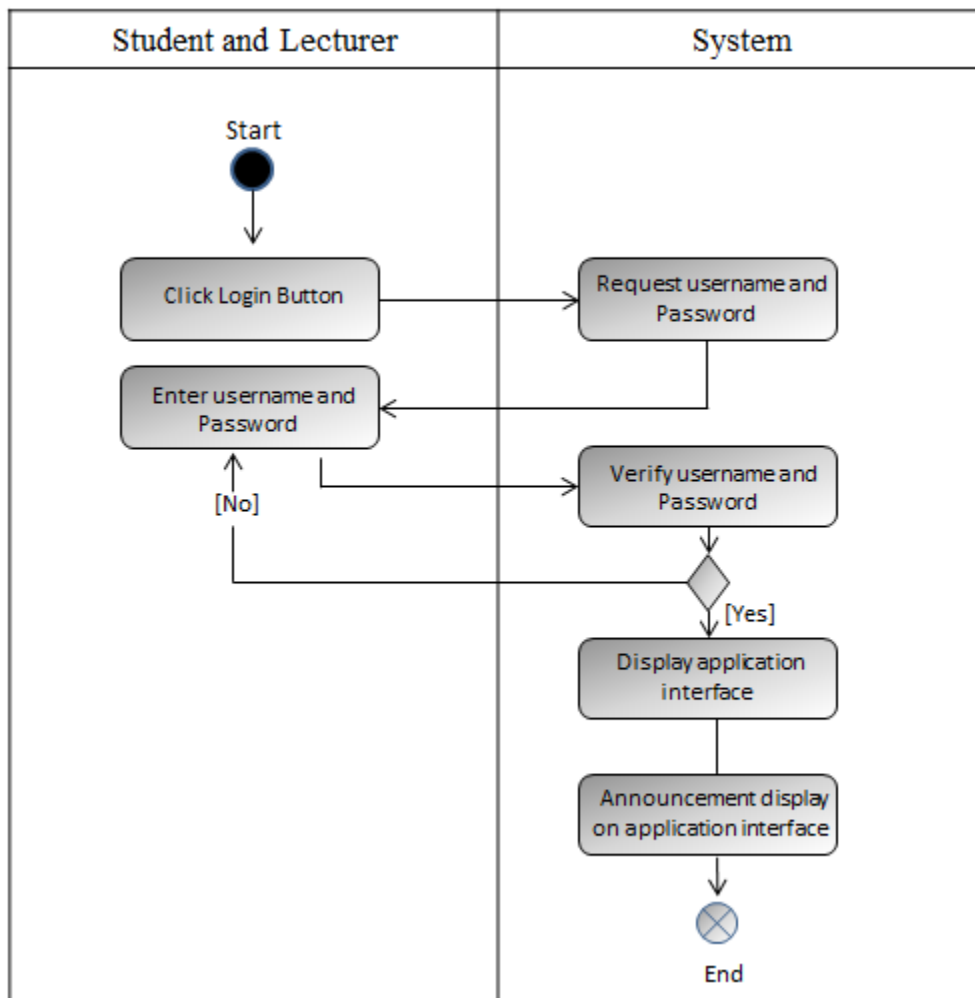


Figure 1.16: Activity Diagram of View Announcement

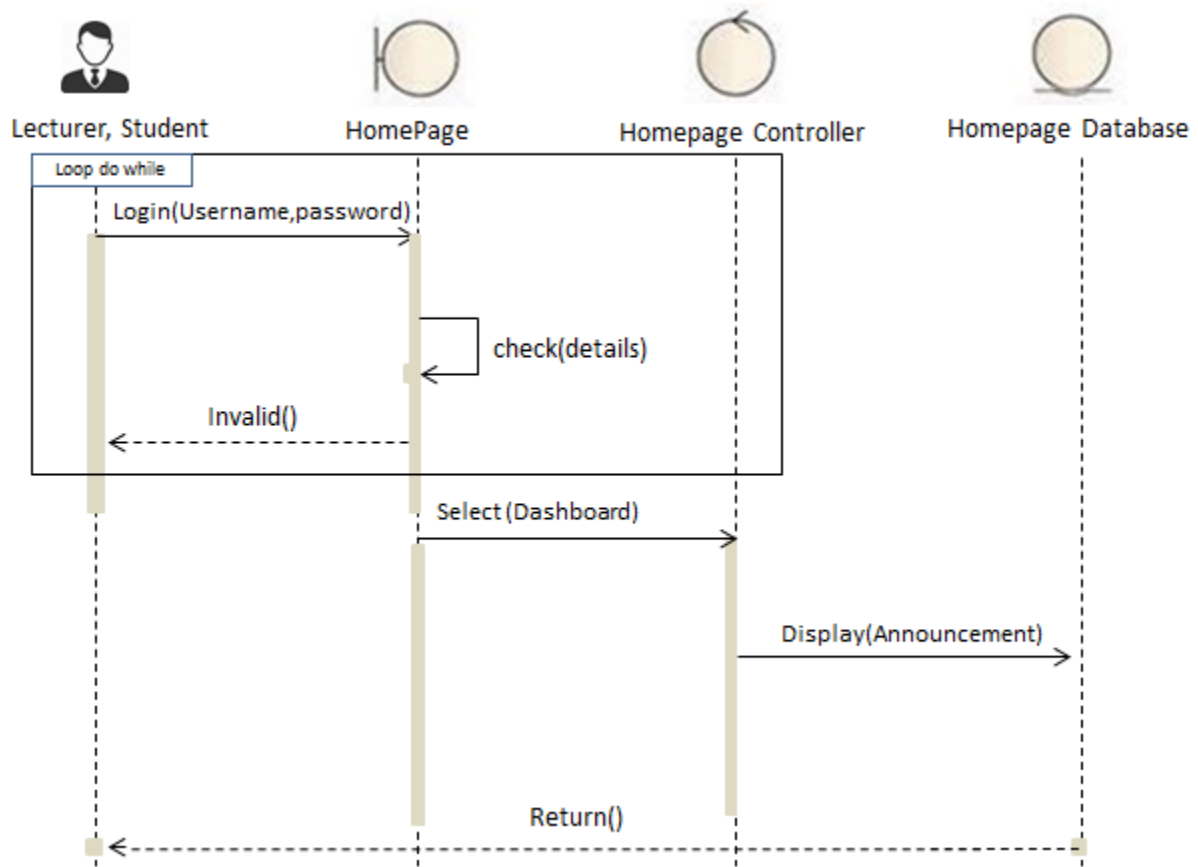


Figure 1.1.5: Sequence Diagram of View Announcement

UC008: Use Case View Lecturer List

Table 1.8: Use Case Description for View Lecturer List

Use Case ID	UC008
Use Case Name	View Lecturer List
Created by: Checked by:	Muhammad Amirul Fahmi Bin Noor Anim Nur Hasanah Binti Sariddon
Description	Lecturer and student can see the lecturer listed based on the subject and section
Actor (s)	Lecturer and student
Pre-condition (s)	1.Lecturer and student account must exist and valid 2.Lecturers and students must already be in the system.
Normal Flow (s)	1.Users login into the system 2.Users must click on the 'Table' button 3Student can select the subject list 4.They will be able to see the lecturer list based on the subject and section.
Alternative Flow (s)	
Exception (s)	-
Post-condition (s)	-Lecturers name list will be display with the subject and section

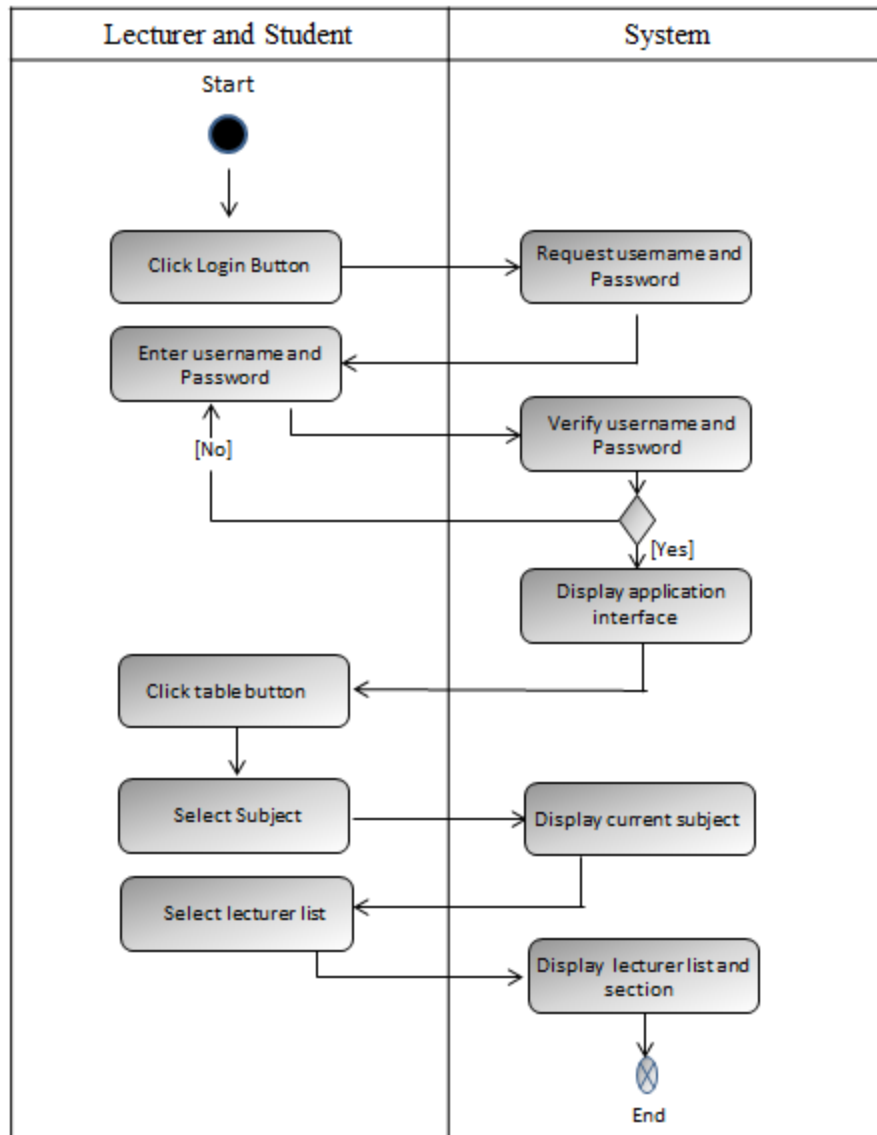


Figure 1.18 Activity Diagram of View Lecturer List

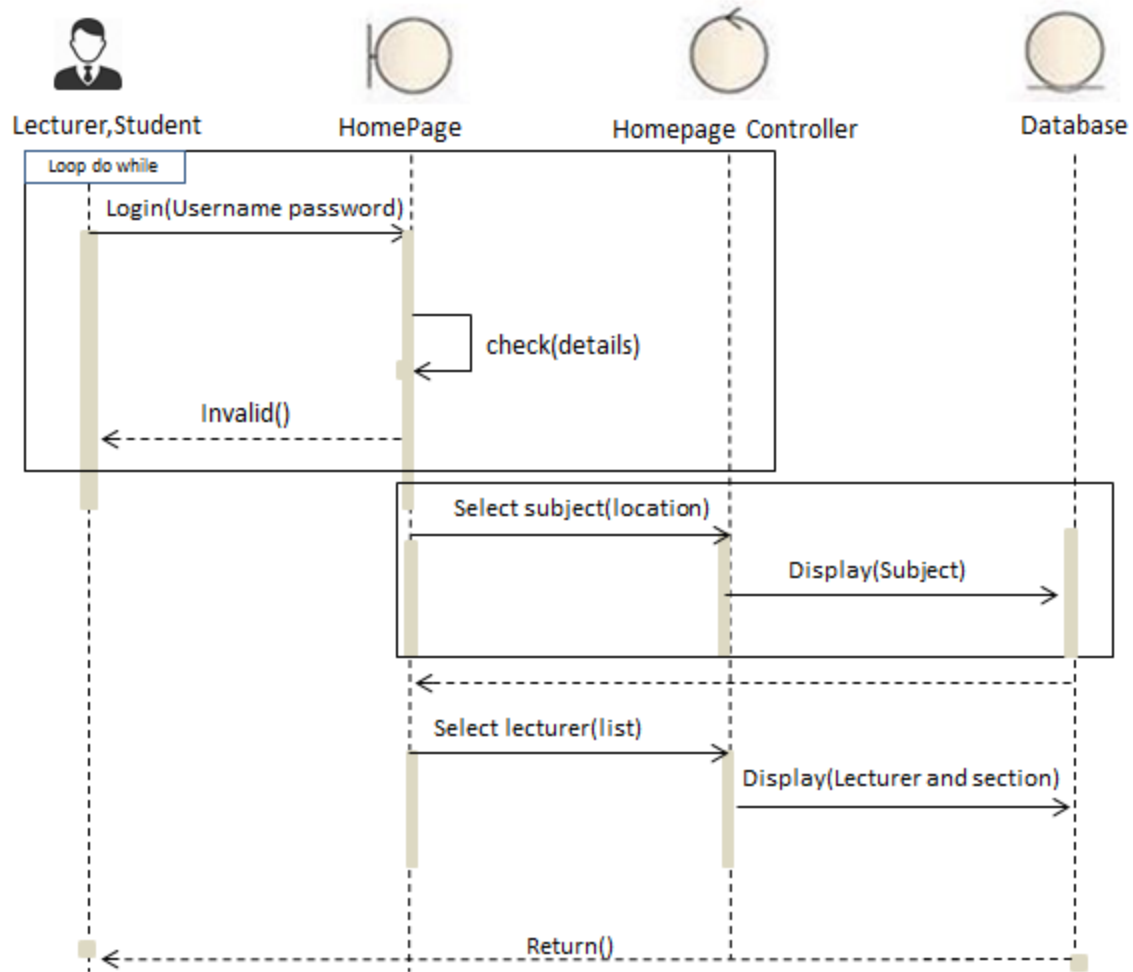


Figure 1.17: Sequence Diagram of View Lecturer List

3.0 Interface Design

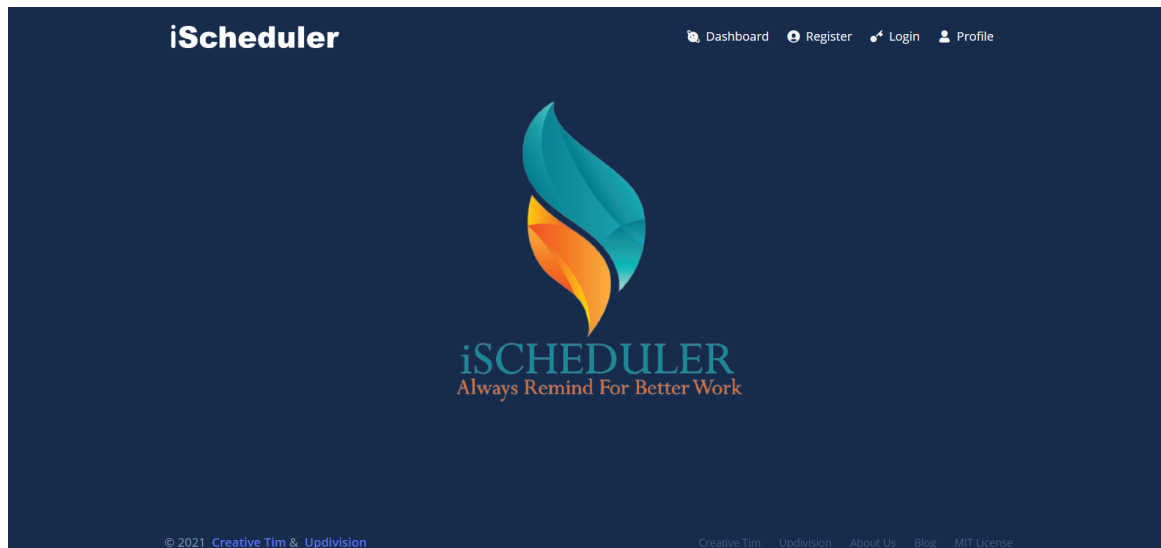


Figure 3.1 Home Page before log in

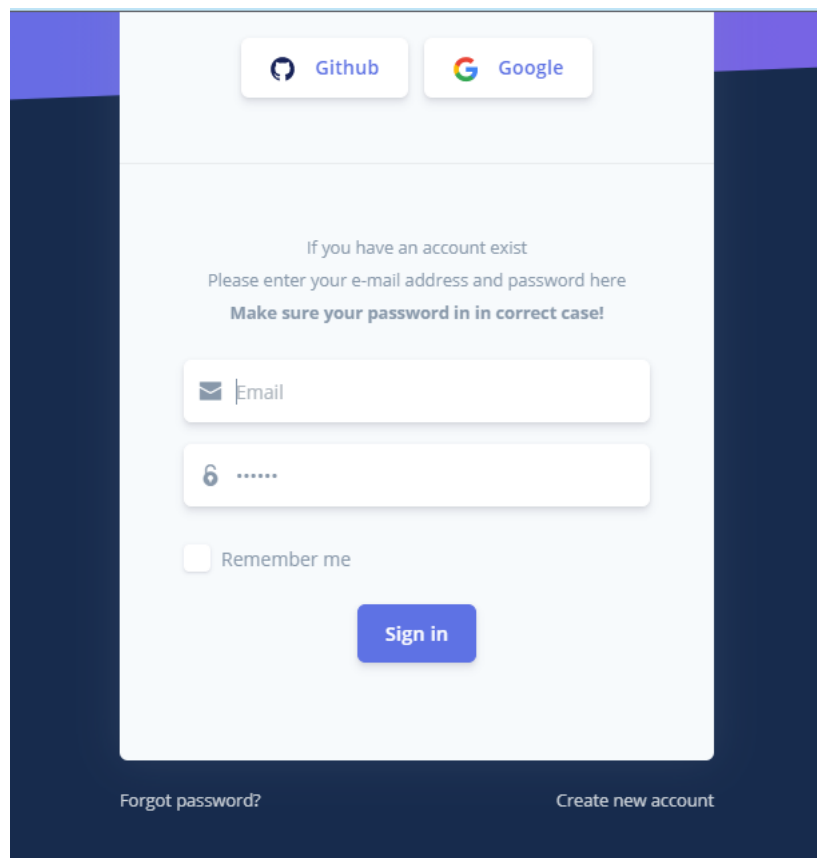
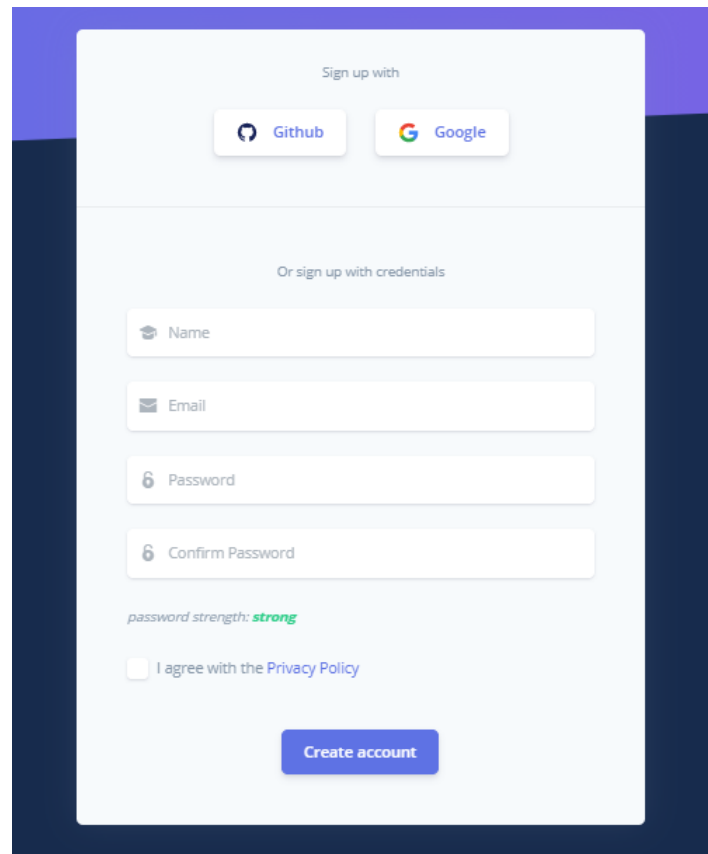


Figure 3.2 Sign In Page



The register page features a light blue background with a dark blue border. At the top, it says "Sign up with" and provides two buttons for "Github" and "Google". Below this, it says "Or sign up with credentials" and provides four input fields: "Name", "Email", "Password", and "Confirm Password". Each input field has a small icon on the left. Below the input fields, it says "password strength: **strong**". At the bottom, there is a checkbox labeled "I agree with the Privacy Policy" and a blue button labeled "Create account".

Figure 3.3 Register Page

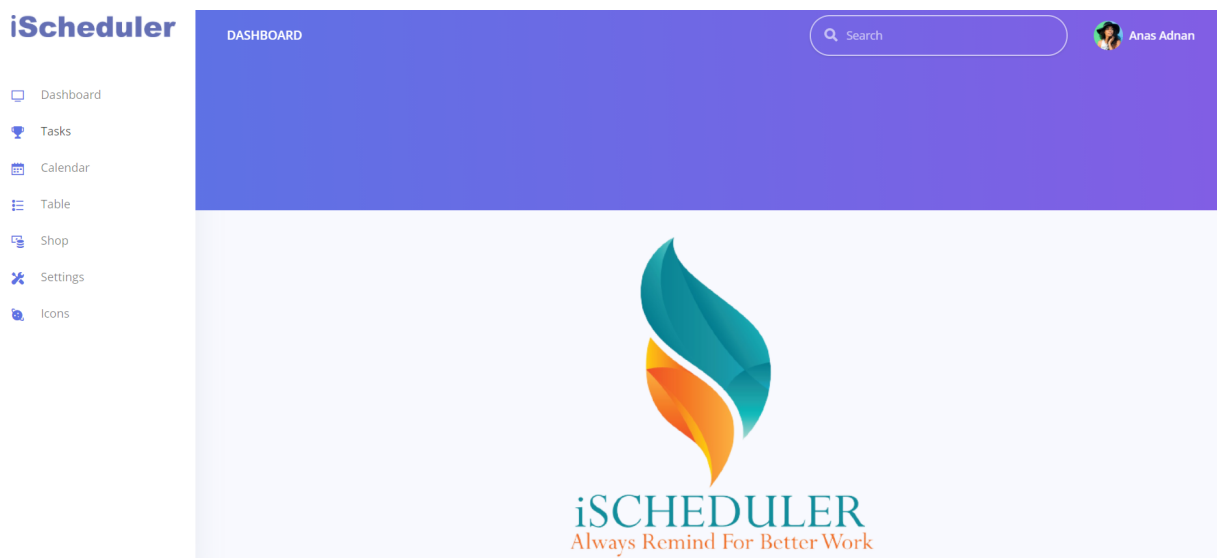


Figure 3.4 Home Page after log in

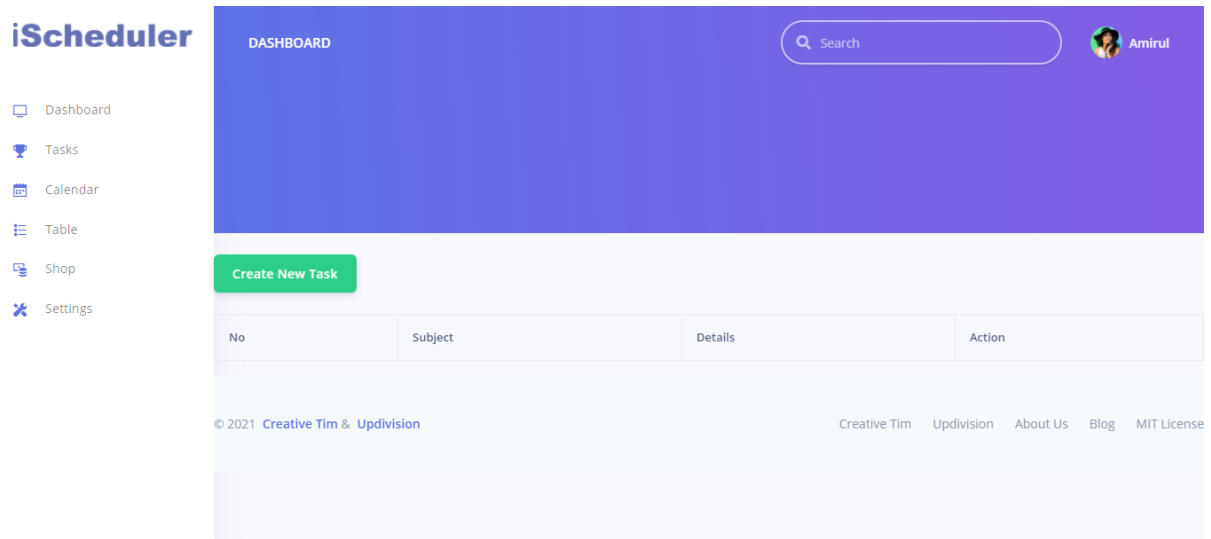


Figure 3.5 Task Page

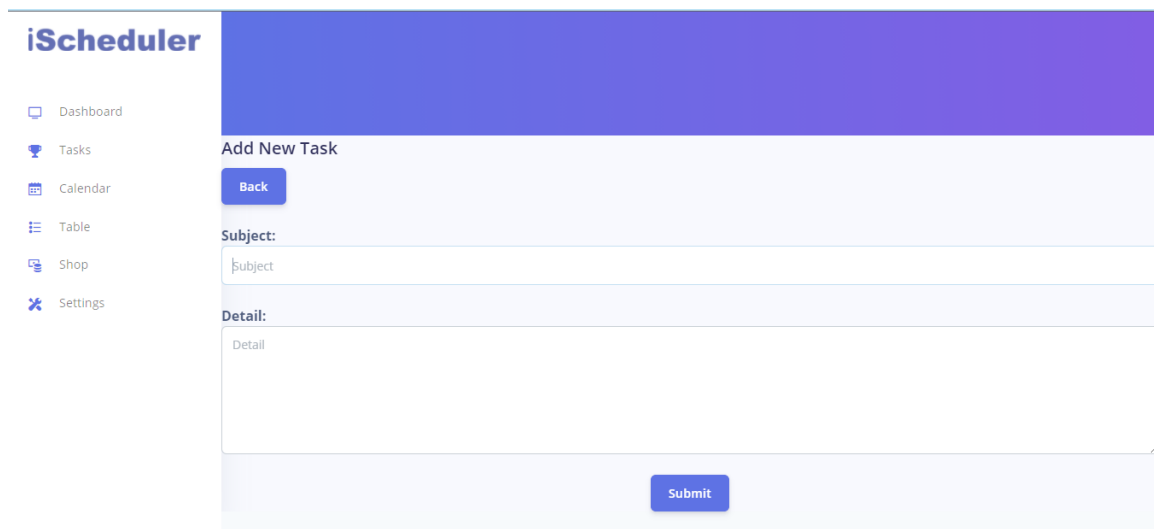


Figure 3.6 Add Task Page

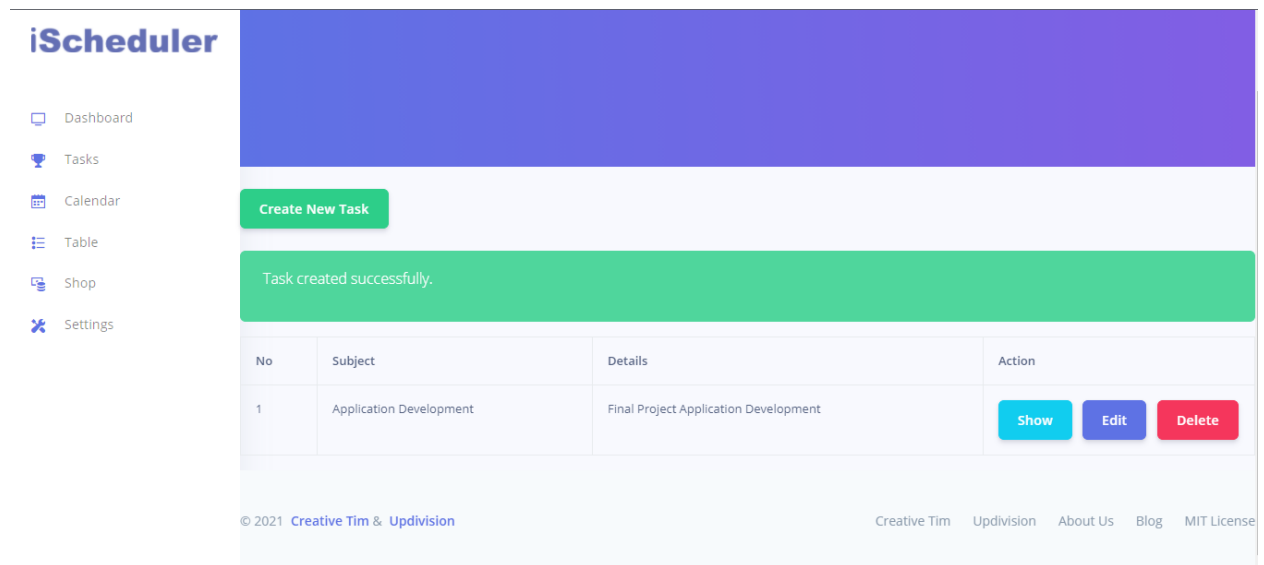


Figure 3.7 Task Page after added task

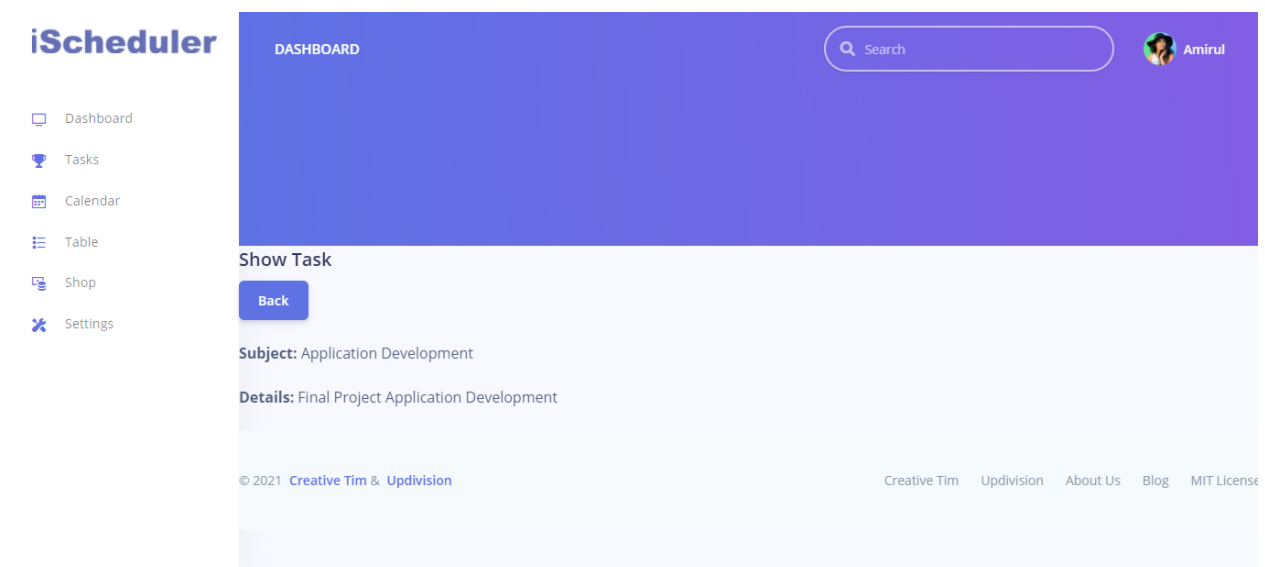


Figure 3.8 Show Task Page

iScheduler

Dashboard

Tasks

Calendar

Table

Shop

Settings

Edit Task

Back

Subject:

Application Development

Detail:

Final Project Application Development iScheduler

Submit

Figure 3.9 Edit Task Page

iScheduler

Dashboard

Tasks

Calendar

Table

Shop

Settings

DASHBOARD

Search

Amirul

Create New Task

Task deleted successfully

No	Subject	Details	Action

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Figure 4.0 Delete Task Page

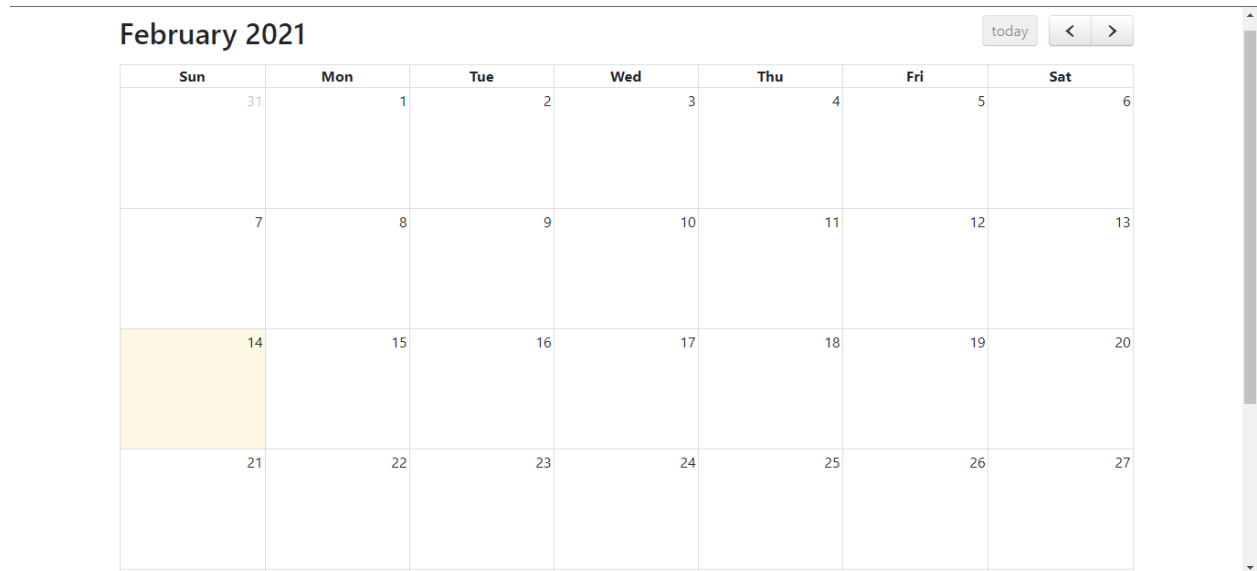


Figure 4.1 Calendar Page

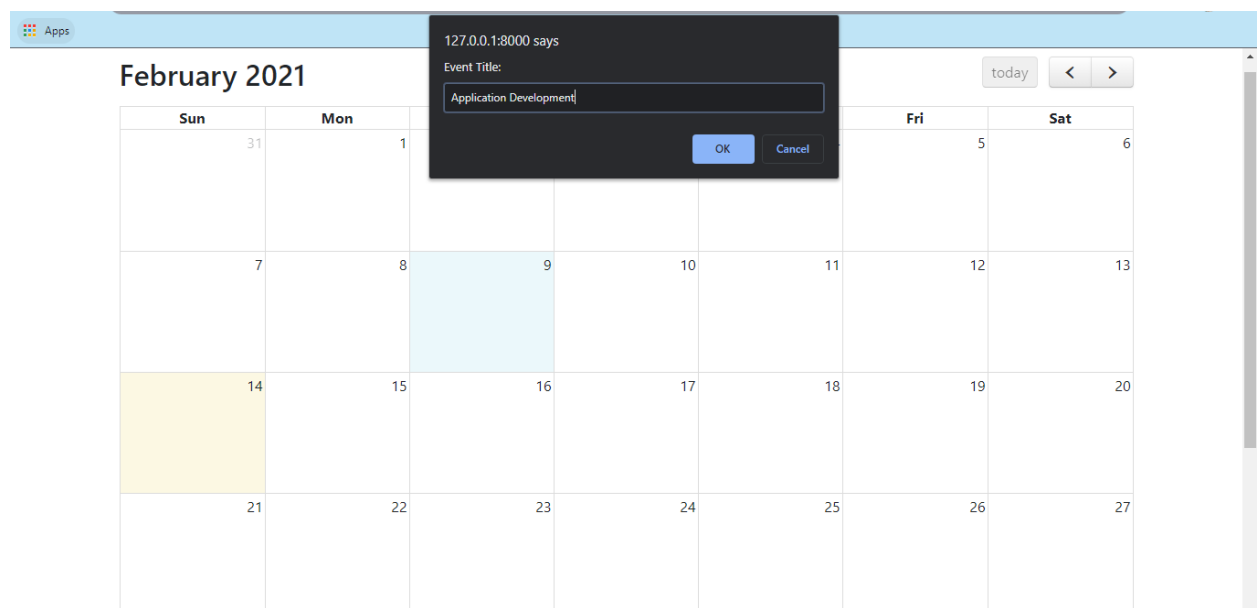


Figure 4.2 Add Calendar Event Page

February 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10	11	12	13
		Application Development				
14	15	16	17	18	19	20
21	22	23	24	25	26	27

today Event
 ✓ Event Created Successfully

Figure 4.3 Success Add Event Page

Apps

127.0.0.1:8000 says
 Event Title:
 Final Project AD duration

OK Cancel

today < >

February 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10	11	12	13
		Application Development				
14	15	16	17	18	19	20
21	22	23	24	25	26	27

Figure 4.4 Add Event For Multiple Day Page

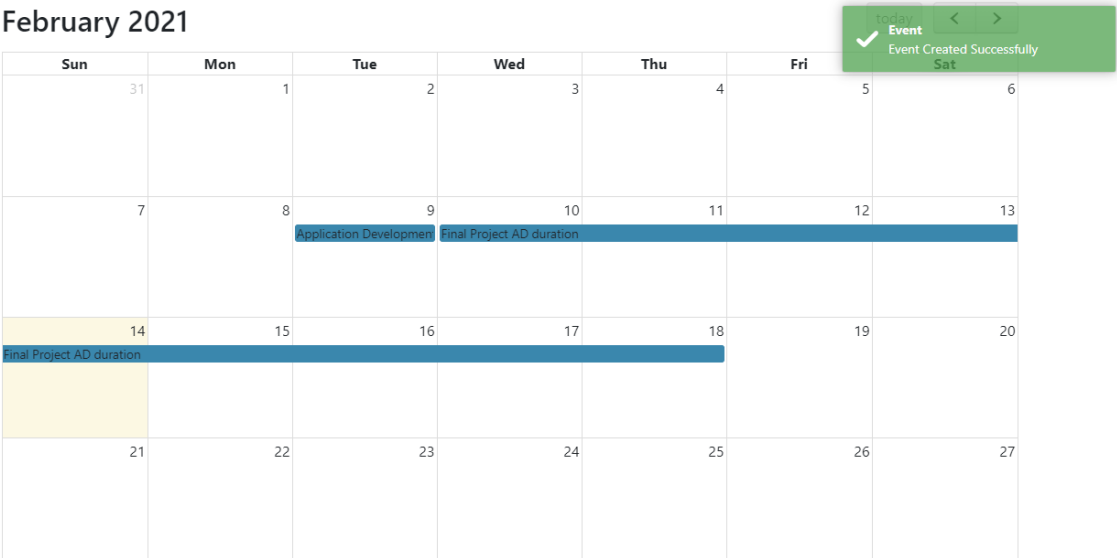


Figure 4.5 Success Add Event For Multiple Day Page

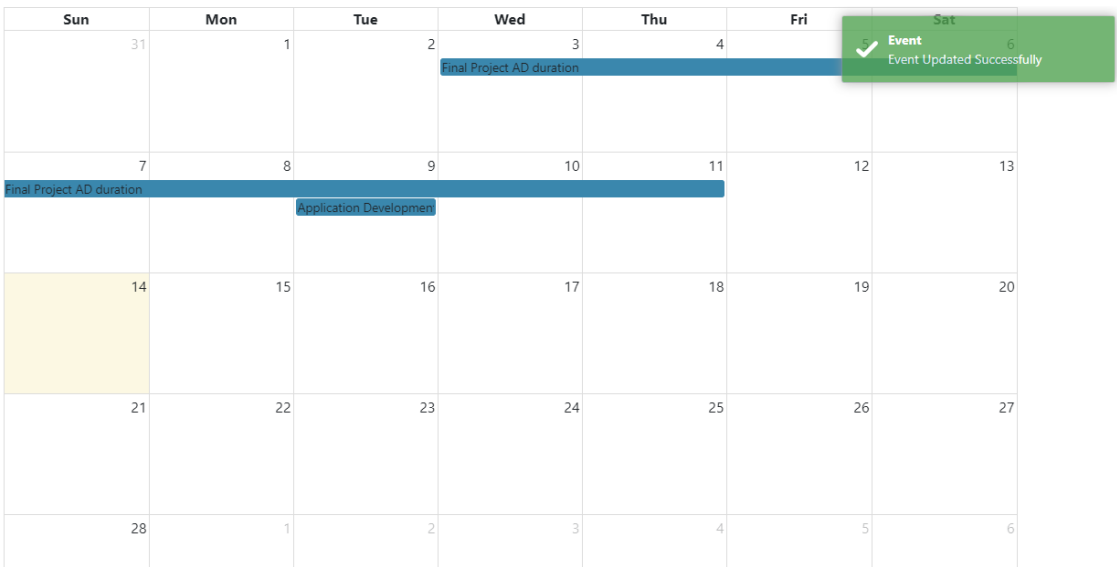


Figure 4.6 Move Day Of Event Page

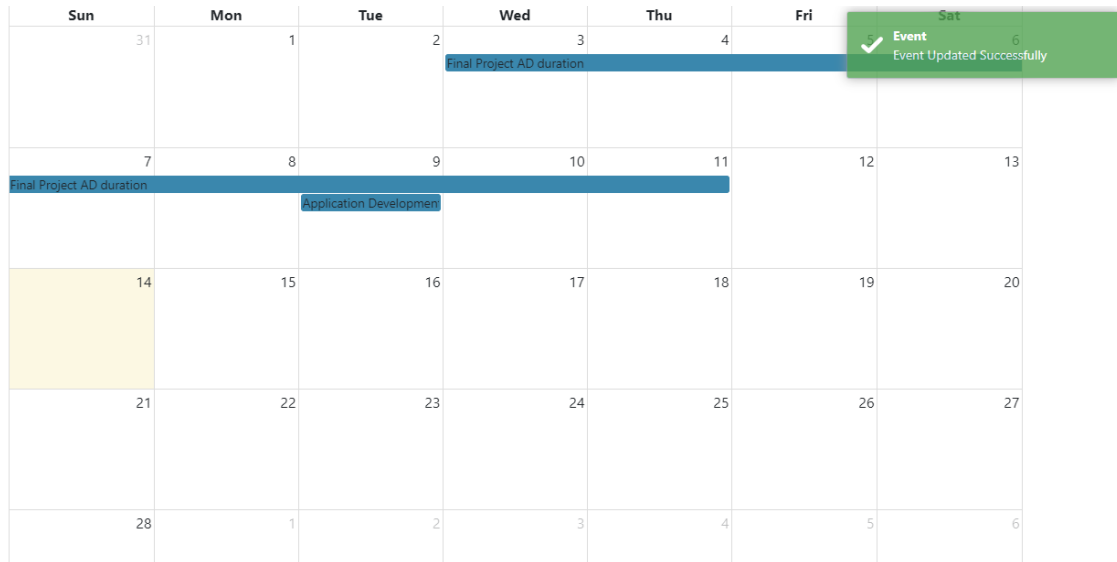


Figure 4.7 Success Move Day Of Event Page

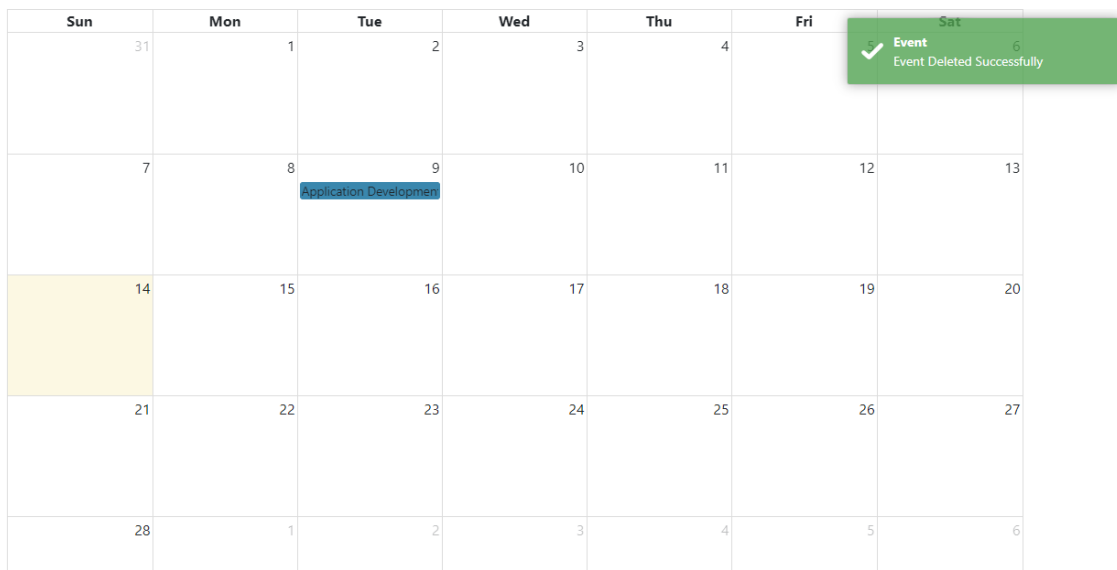


Figure 4.8 Delete Move Day Of Event Page

Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00			09:00 - 10:15 Application Development	09:30 - 10:30 Image Processing	
10:00	09:30 - 10:30 Application Development	10:00 - 11:00 Image Processing			10:00 - 11:00 Mobile Application
11:00	11:00 - 12:30 Mandarin Class		10:45 - 11:45 Artificial Intelligence		
12:00		11:30 - 13:00 Japanese Class	12:00 - 13:45 Mobile Application	12:00 - 13:45 Japanese Class	
13:00					12:30 - 14:00 Entrepreneurship

Figure 4.9 Timetable Page

DASHBOARD

Search

Amirul

SHOP

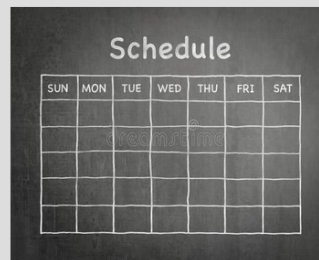


Figure 5.0 Shop Page in

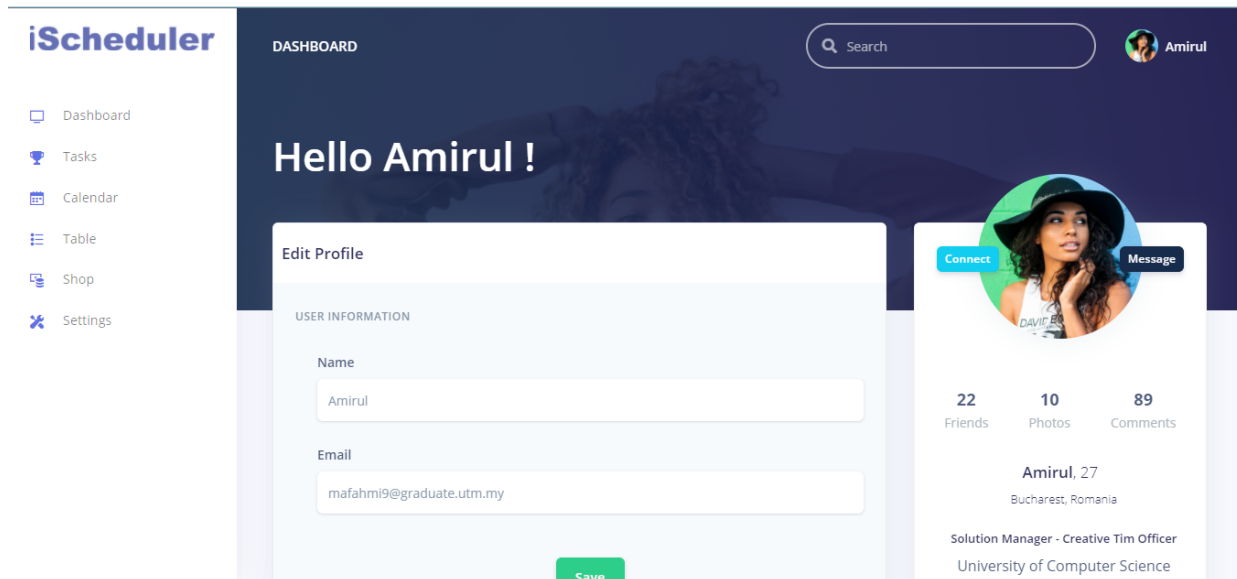


Figure 5.1 Setting Page

4.0 Discussion and Conclusion

4.1 Discussion

For discussion, before proceeding with this idea, our group had to do a brainstorming greatly and take a time to produce beneficial things that will help everyone. To produce the idea all of us have to do a small research based on the problem that lecturer and student face. The outcome from this research, all of us has listed that mostly they has a problem to manage the subject schedule, view updates current timetable, view final exam timetable based on own course, view class location, view lecturer list, view and download application document, and view announcement. Moreover, before proceeding to develop the platform, we must consider its use case. This use case is to analyze in detail what the user can access and what the user can not access, means there's a few features that a lecturer can access but not for students and vice versa. This purpose is to make sure that its has a differentiation in accessing features between lecturer and student. Lastly, after settle up the use case and all of use has clear about the flow of the platform we have proceed in developing the iScheduler platform. During developing the iScheduler platform of course we have faced a few problem and we have try to fix it to make sure that this platform is clearly function regarding to our objective and purpose.

4.2 Conclusion

In conclusion, suitable with their trademarks which is “Always Remind For Better Work”, the iScheduler platform is very beneficial to users in university especially for lecturers, public user and students. This platform will ease the burden for them to monitor the activity and lecture during the current semester. For the lecturer, they can manage the subject schedule in terms of date, location, and time, this features will help them to make sure that their schedule is clearly being manage. For student the most important things in this iScheduler is, they can monitor the timetable for current semester and final exam. In addition, any kind of information and activities that related to the study also will be announced in the iScheduler applications that be view to the user in the stakeholder list. Moreover, By having and registered with this iScheduler, all of the problems that lecturer, student, and public user having before this will be overcome perfectly because the user can develop their own online timetable, and they will not miss the task given by monitor the task list, from this features they also can get a free time timetable template if the can achieve the task given and they also can buy the others timetable template by clicking the ‘Shop’ button. Lastly, the most beneficial things for all the users that have mentioned, they can able to manage their own time very well because this iScheduler it also comes with reminder and calendar features.