OBJECT ORIENTED ANALYSIS AND DESIGN PROJECT PHASE-I
Time Table Generation System

Group #2

Group Members:

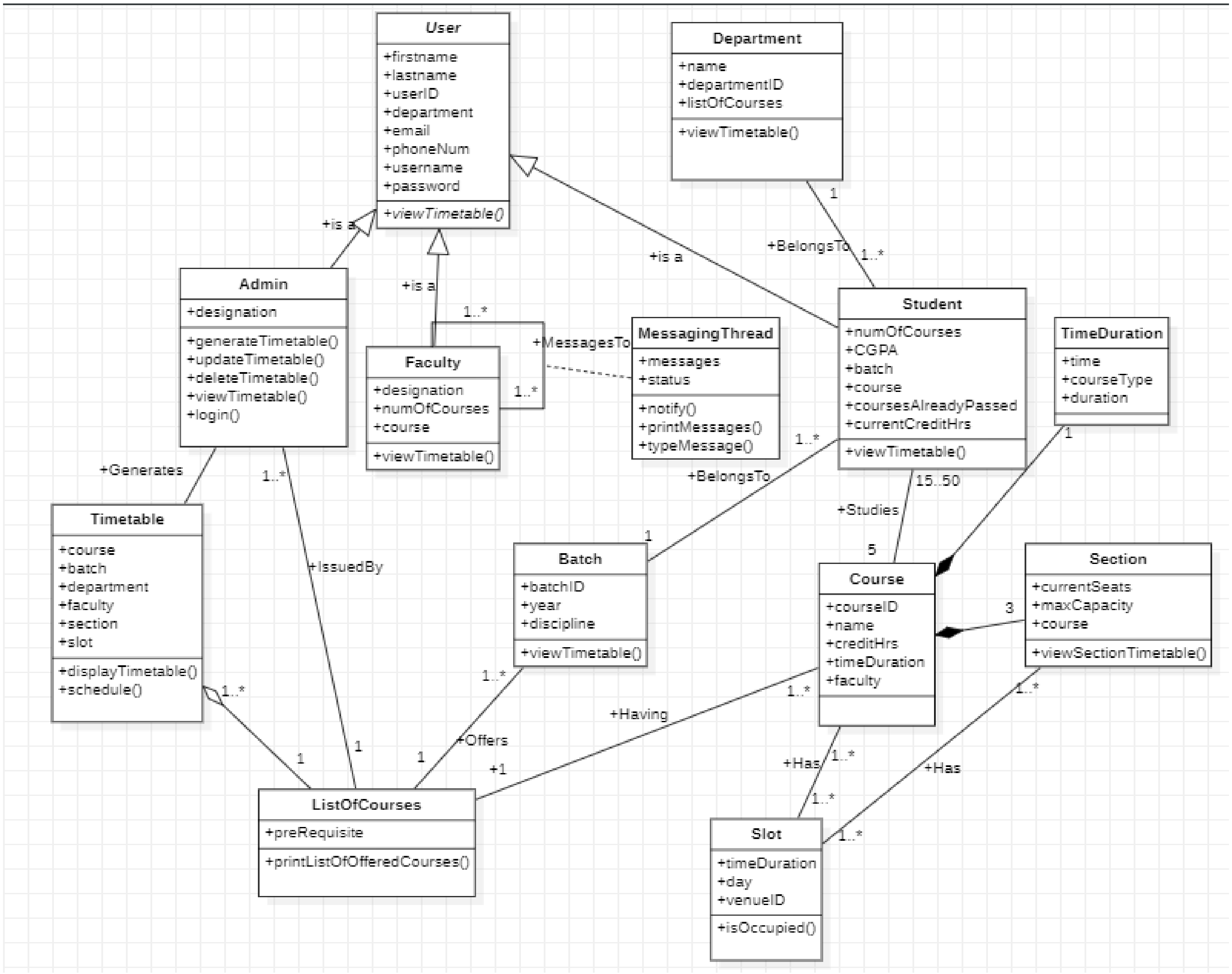
1. Ramin Rafi (17L-4284) – Group Leader
2. Tehreem Mushtaq (17L-4325)
3. Laraib Amjad (17L-4156)
4. Akash Bajwa (17L-6341)
5. Umair Ahmad (17L-4023)
6. Umer Aziz (16L-4326)
7. Michelle Akaishi (17L-4104)

SPRING 2020

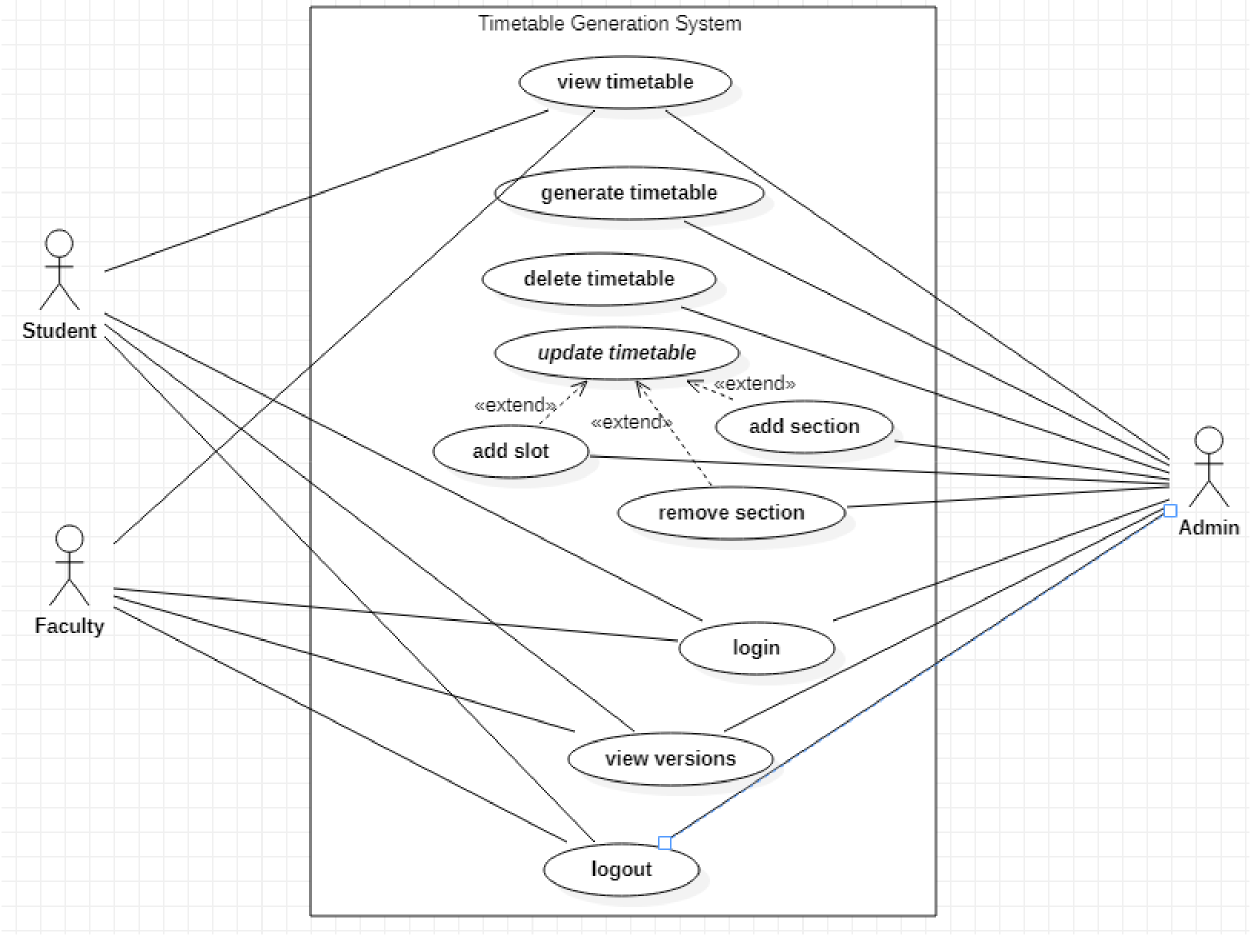
Submission Date: **13-03-2020**

Submitted to**: Dr. Ali Afzal Malik**

Analysis Class Diagram



Used Case Diagram



Used Case Templates

Identifier	UC-1	
Name	view timetable	
Summary	Displays the timetable to the users.	
Priority	High	
Actors	Admin, Faculty, Student	
Pre-condition(s)	Actor is logged in.	
Post-condition(s)	System displays the timetable successfully.	
Typical Course of Action		
S#	**Actor Action**	**System Response**
1.	Clicks on the "view timetable" button.	
2.		Displays message to the user.
3.	Selects from the provided options.	
4.		Displays the timetable on screen in the desired form
Alternate Course of Action#01 (Timetable is not yet available)		
S#	**Actor Action**	**System Response**
2.		Displays the error message.
Alternate Course of Action#02 (Student is not registered in any course)		
S#	**Actor Action**	**System Response**
4.		Displays the error message.

Identifier	UC-2	
Name	generate timetable	
Summary	The system generates timetable with all the details.	
Priority	High	
Actors	Admin	
Pre-condition(s)	Actor is logged in.	
Post-condition(s)	Timetable is generated successfully.	
Typical Course of Action		
S#	**Actor Action**	**System Response**
1.	Clicks on generate timetable button.	
2.		Displays timetable.

Identifier	UC-3	
Name	delete timetable	
Summary	This allows the actor to delete a timetable.	
Priority	Medium	
Actors	Admin	
Pre-condition(s)	Actor must is logged in and exists a timetable which the actor wants to delete.	
Post-condition(s)	System successfully deletes the timetable.	
Typical Course of Action		
S#	**Actor Action**	**System Response**
1.	Clicks on the delete option.	
2.		Opens the list of timetables.
3.	Clicks on the timetable which needs to be deleted.	
4.		Opens the timetable and asks for confirmation to delete.
5.	Clicks on “yes” button.	
6.		Deletes the timetable.
7.		Displays message.

8.		Goes back to home page.
Alternate Course of Action (Clicks on “No” button)		
S#	**Actor Action**	**System Response**
6.		Goes back to home page.

Identifier	UC-4	
Name	add slot	
Summary	Adds a time slot to the timetable.	
Priority	High	
Actors	Admin	
Pre-condition(s)	Admin is logged in.	
Post-condition(s)	Time slot is added successfully to the timetable.	
Typical Course of Action		
S#	**Actor Action**	**System Response**
1.	Enters time slot.	
2.		Checks for time slot.
3.		Adds the given time slot.
Alternate Course of Action (Time slot already exists)		
S#	**Actor Action**	**System Response**
3.		Prints error message.

2.

<table>
<tr><td colspan="2"><b>Identifier</b></td><td colspan="2">UC-5</td></tr>
<tr><td colspan="2"><b>Name</b></td><td colspan="2">add section</td></tr>
<tr><td colspan="2"><b>Summary</b></td><td colspan="2">Adds a new section for a course.</td></tr>
<tr><td colspan="2"><b>Priority</b></td><td colspan="2">Medium</td></tr>
<tr><td colspan="2"><b>Actors</b></td><td colspan="2">Admin</td></tr>
<tr><td colspan="2"><b>Pre-condition(s)</b></td><td colspan="2">Admin is logged in.</td></tr>
<tr><td colspan="2"><b>Post-condition(s)</b></td><td colspan="2">New section is added for a course.</td></tr>
<tr><td colspan="4"><b>Typical Course of Action</b></td></tr>
<tr><td><b>S#</b></td><td colspan="2"><b>Actor Action</b></td><td><b>System Response</b></td></tr>
<tr><td><b>1.</b></td><td colspan="2">Enters section name.</td><td></td></tr>
<tr><td><b>2.</b></td><td colspan="2"></td><td>Checks whether the section already exists or not.</td></tr>
<tr><td><b>3.</b></td><td colspan="2"></td><td>Adds section.</td></tr>
<tr><td colspan="4"><b>Alternate Course of Action (Section already exists)</b></td></tr>
<tr><td><b>S#</b></td><td colspan="2"><b>Actor Action</b></td><td><b>System Response</b></td></tr>
<tr><td><b>3.</b></td><td colspan="2"></td><td>Print error message.</td></tr>
</table>

<table>
<tr><td colspan="2"><b>Identifier</b></td><td colspan="2">UC-6</td></tr>
<tr><td colspan="2"><b>Name</b></td><td colspan="2">remove section</td></tr>
<tr><td colspan="2"><b>Summary</b></td><td colspan="2">Removes a section of a registered course.</td></tr>
<tr><td colspan="2"><b>Priority</b></td><td colspan="2">Medium</td></tr>
<tr><td colspan="2"><b>Actors</b></td><td colspan="2">Admin</td></tr>
<tr><td colspan="2"><b>Pre-condition(s)</b></td><td colspan="2">The section exists for that course.</td></tr>
<tr><td colspan="2"><b>Post-condition(s)</b></td><td colspan="2">Section is removed for that registered course.</td></tr>
<tr><td colspan="4"><b>Typical Course of Action</b></td></tr>
<tr><td><b>S#</b></td><td colspan="2"><b>Actor Action</b></td><td><b>System Response</b></td></tr>
<tr><td><b>1.</b></td><td colspan="2">Enters section name.</td><td></td></tr>
<tr><td><b>2.</b></td><td colspan="2"></td><td>Checks whether the section already exists or not.</td></tr>
</table>

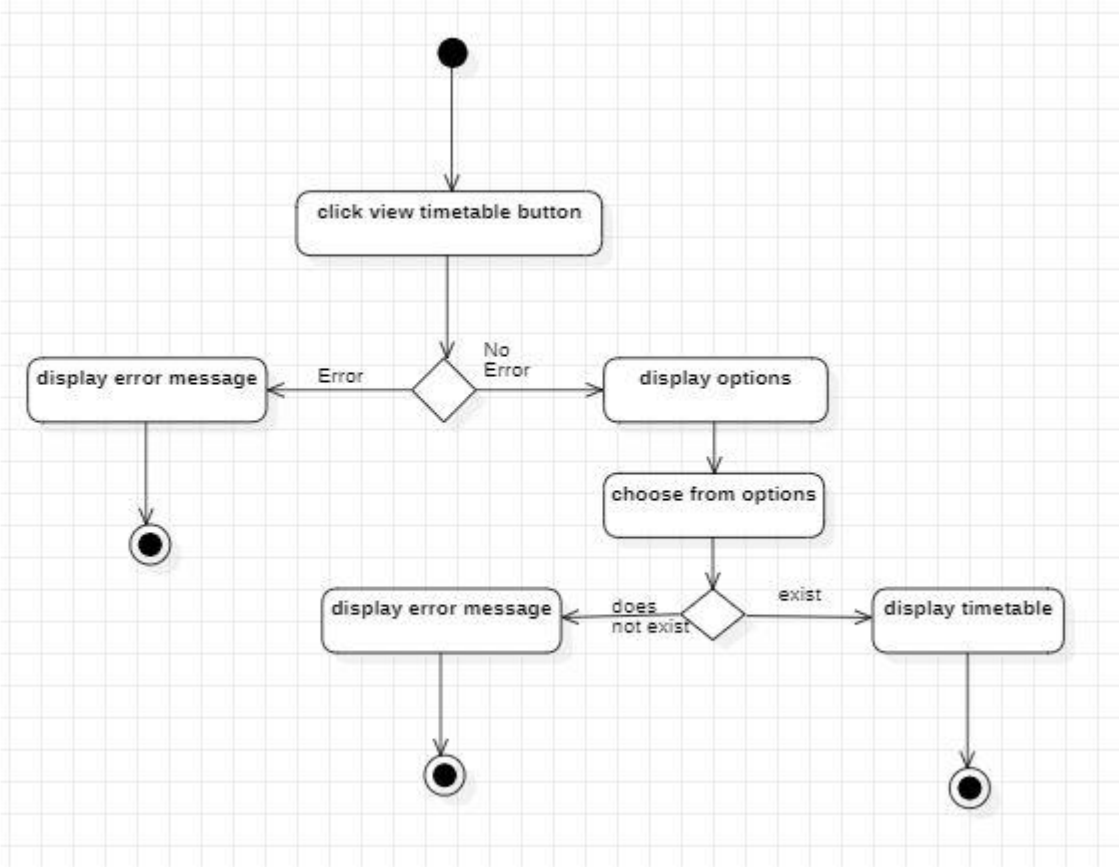
3.		Removes section.
Alternate Course of Action (Section does not exist)		
S#	**Actor Action**	**System Response**
3.		Prints error message.

Identifier	UC-7	
Name	login	
Summary	Actor logs in after verification of username and password.	
Priority	High	
Actors	Admin, Faculty, Student.	
Pre-condition(s)	Actor is able to login.	
Post-condition(s)	Actor can generate timetable.	
Typical Course of Action		
S#	**Actor Action**	**System Response**
1.	Enters username and password.	
2.	Clicks on login button.	
3.		Verifies credentials.
4.		Redirects to home page.
Alternate Course of Action (Invalid Credentials)		
S#	**Actor Action**	**System Response**
4.		Displays error message.
5.		Prompts to enter valid credentials.
Go back to step 1.		

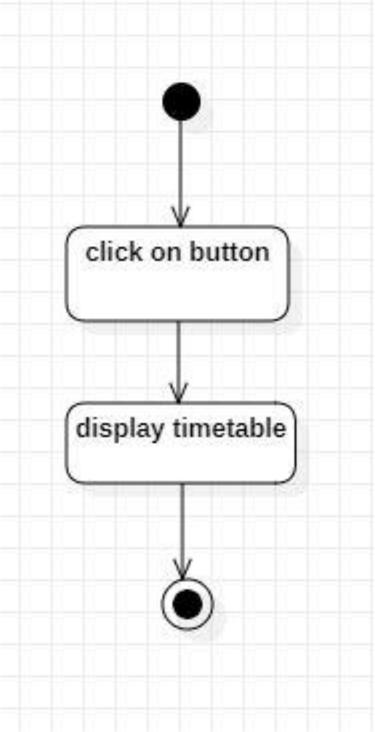
<table>
<tr><td><b>Identifier</b></td><td colspan="2">UC-8</td></tr>
<tr><td><b>Name</b></td><td colspan="2">logout</td></tr>
<tr><td><b>Summary</b></td><td colspan="2">Actor logs out from system.</td></tr>
<tr><td><b>Priority</b></td><td colspan="2">High</td></tr>
<tr><td><b>Actors</b></td><td colspan="2">Admin</td></tr>
<tr><td><b>Pre-condition(s)</b></td><td colspan="2">Actor is logged in.</td></tr>
<tr><td><b>Post-condition(s)</b></td><td colspan="2">Actor can login.</td></tr>
<tr><td colspan="3"><b>Typical Course of Action</b></td></tr>
<tr><td><b>S#</b></td><td><b>Actor Action</b></td><td><b>System Response</b></td></tr>
<tr><td><b>1.</b></td><td>Clicks on log out button.</td><td></td></tr>
<tr><td><b>2.</b></td><td></td><td>Redirects to home page.</td></tr>
<tr><td colspan="3"><b>Alternate Course of Action (Session Expired)</b></td></tr>
<tr><td><b>S#</b></td><td><b>Actor Action</b></td><td><b>System Response</b></td></tr>
<tr><td><b>2.</b></td><td></td><td>Displays “Session Already Expired” message.</td></tr>
</table>

<table>
<tr><td><b>Identifier</b></td><td colspan="2">UC-9</td></tr>
<tr><td><b>Name</b></td><td colspan="2">view version</td></tr>
<tr><td><b>Summary</b></td><td colspan="2">The system allows to view different versions of the timetable.</td></tr>
<tr><td><b>Priority</b></td><td colspan="2">Low</td></tr>
<tr><td><b>Actors</b></td><td colspan="2">Admin, Faculty, Student.</td></tr>
<tr><td><b>Pre-condition(s)</b></td><td colspan="2">System is running.</td></tr>
<tr><td><b>Post-condition(s)</b></td><td colspan="2">System is running.</td></tr>
<tr><td colspan="3"><b>Typical Course of Action</b></td></tr>
<tr><td><b>S#</b></td><td><b>Actor Action</b></td><td><b>System Response</b></td></tr>
<tr><td><b>1.</b></td><td>Click on “view versions button.</td><td></td></tr>
<tr><td><b>2.</b></td><td></td><td>Opens up the list of versions.</td></tr>
</table>

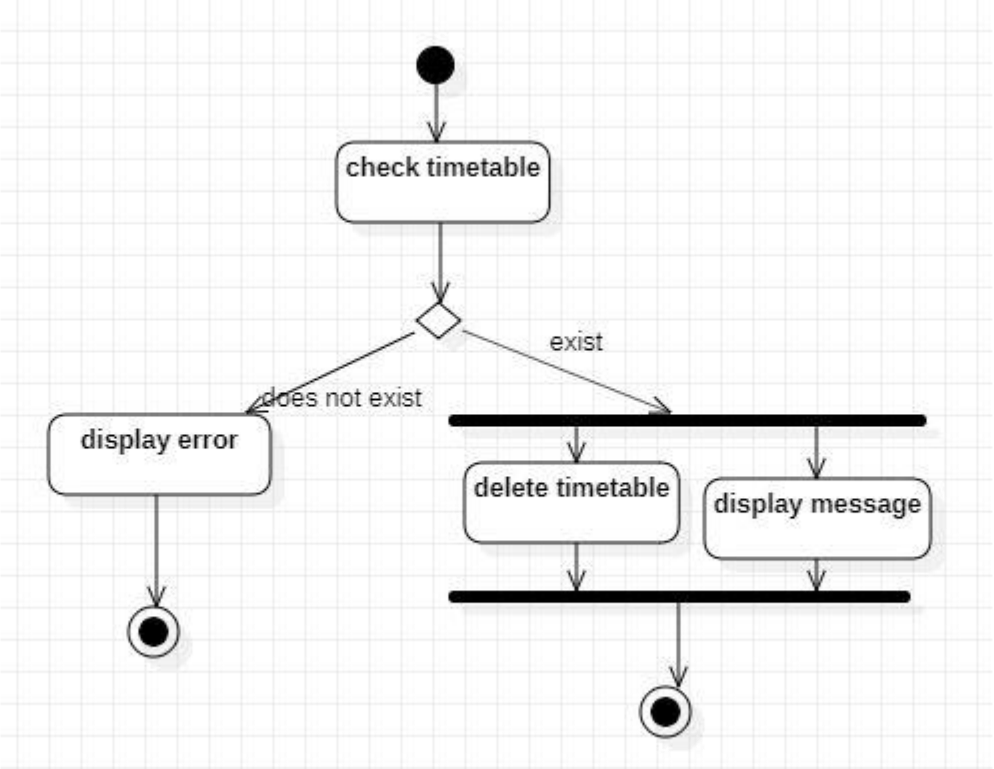
UC1


click view timetable button
No Error
Error
display error message
display options
choose from options
does not exist
exist
display error message
display timetable

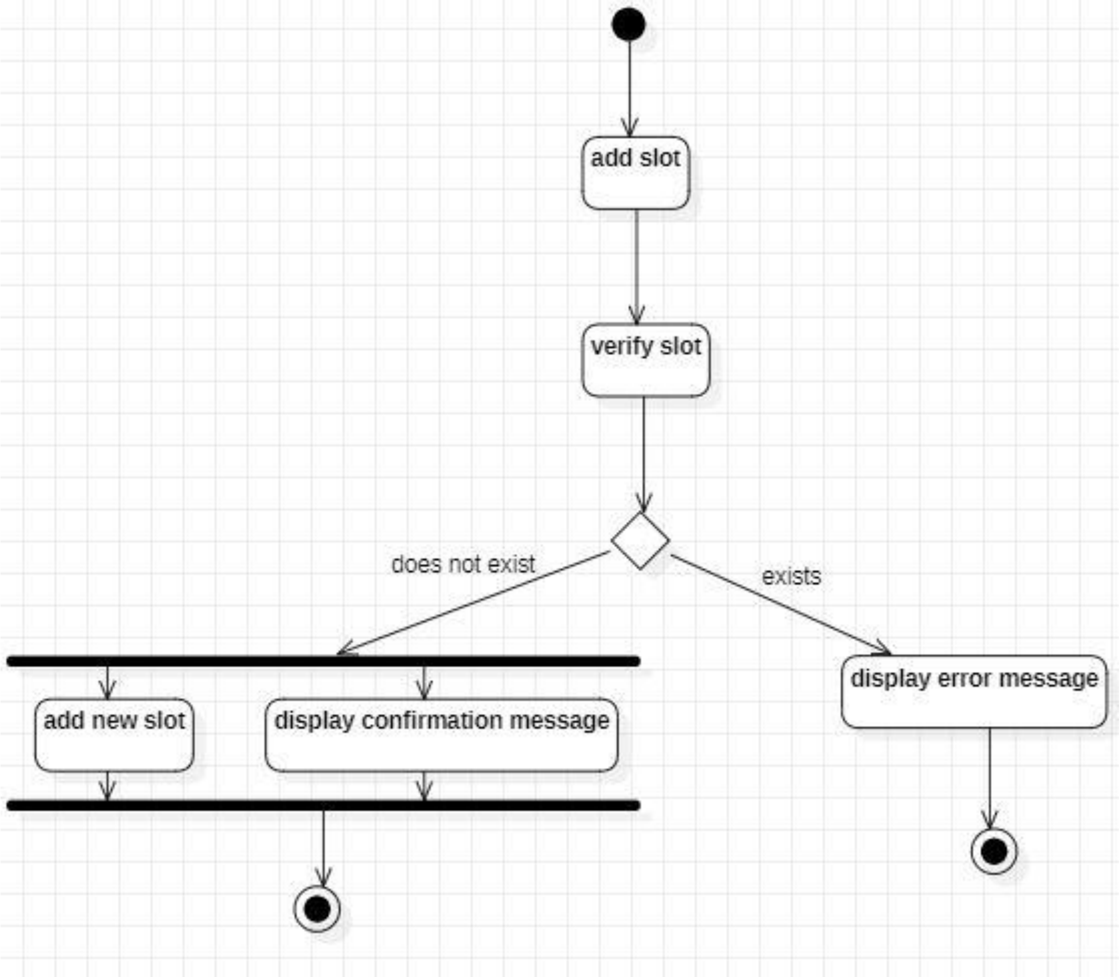
UC2



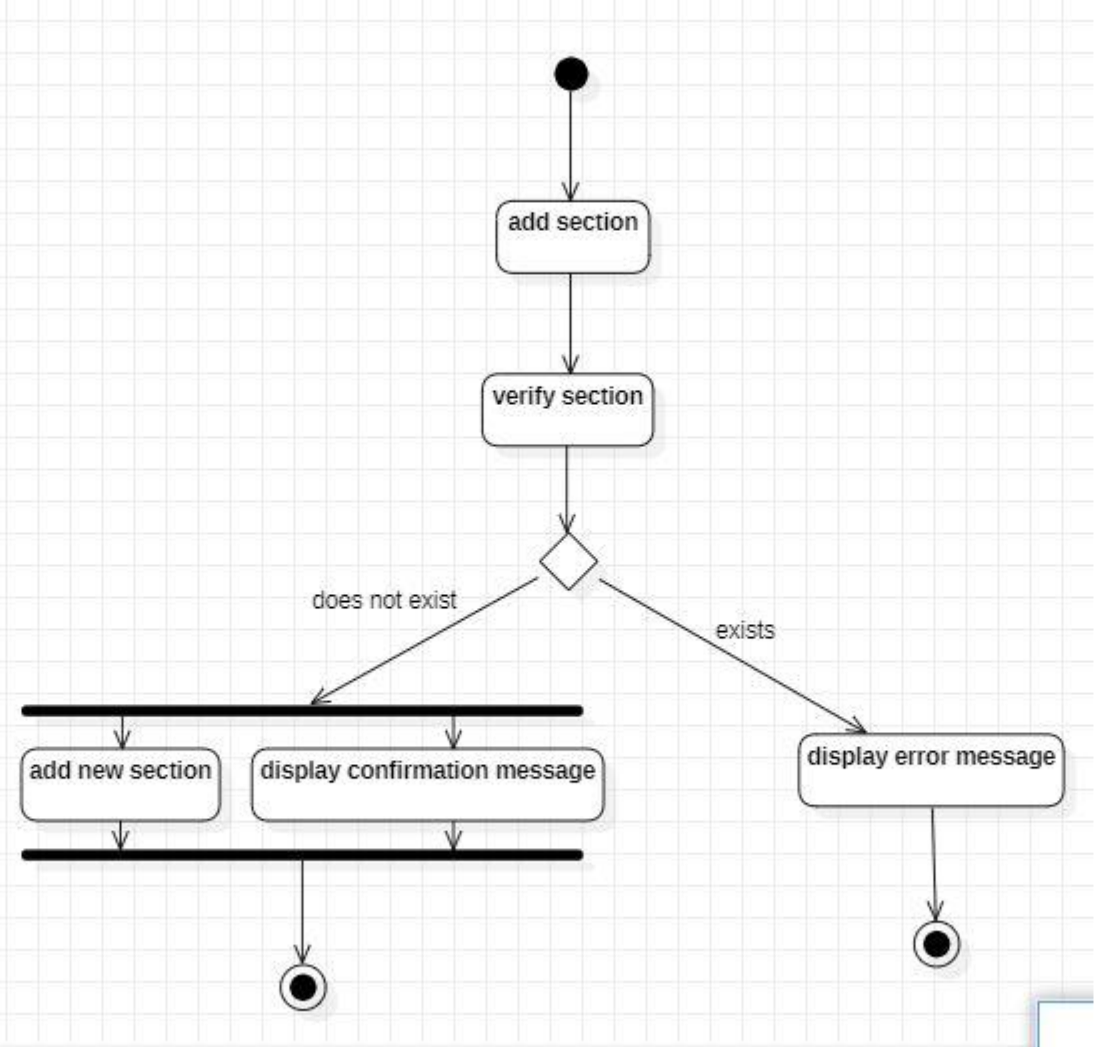
UC3


check timetable
exist
does not exist
display error
delete timetable
display message

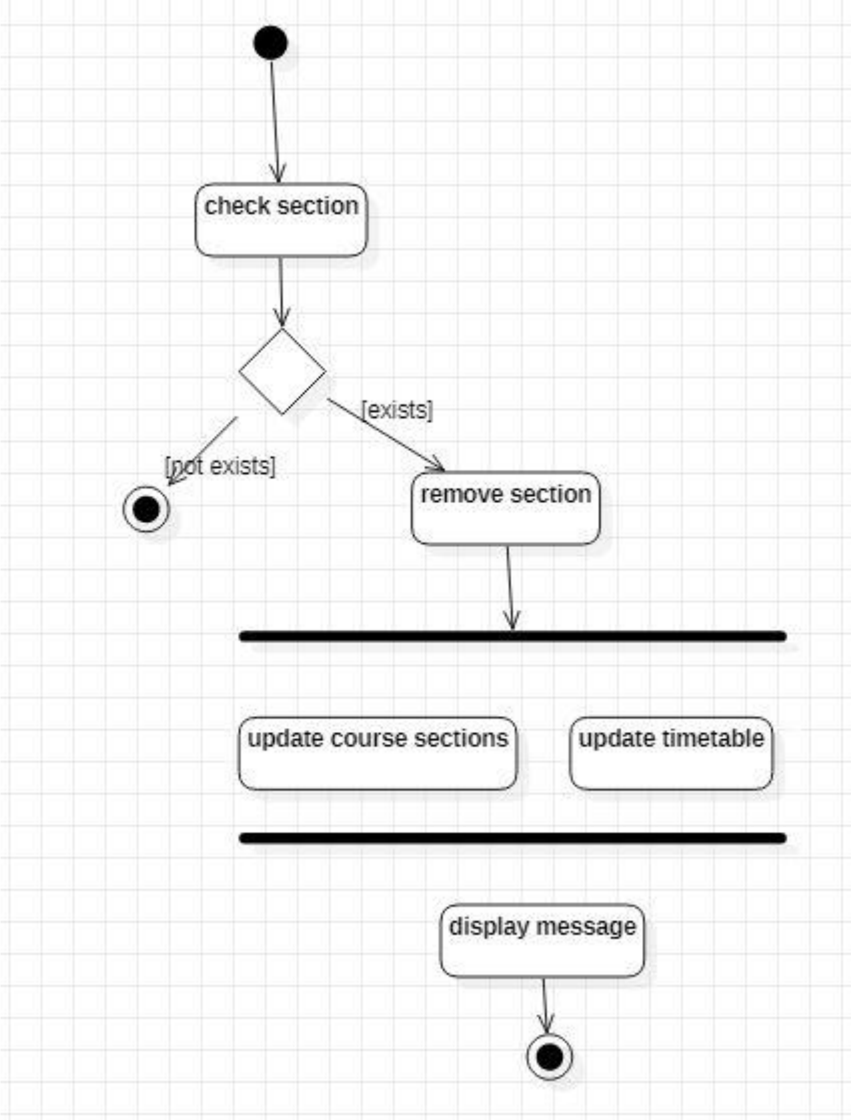
UC4


add slot
verify slot
does not exist
exists
add new slot
display confirmation message
display error message

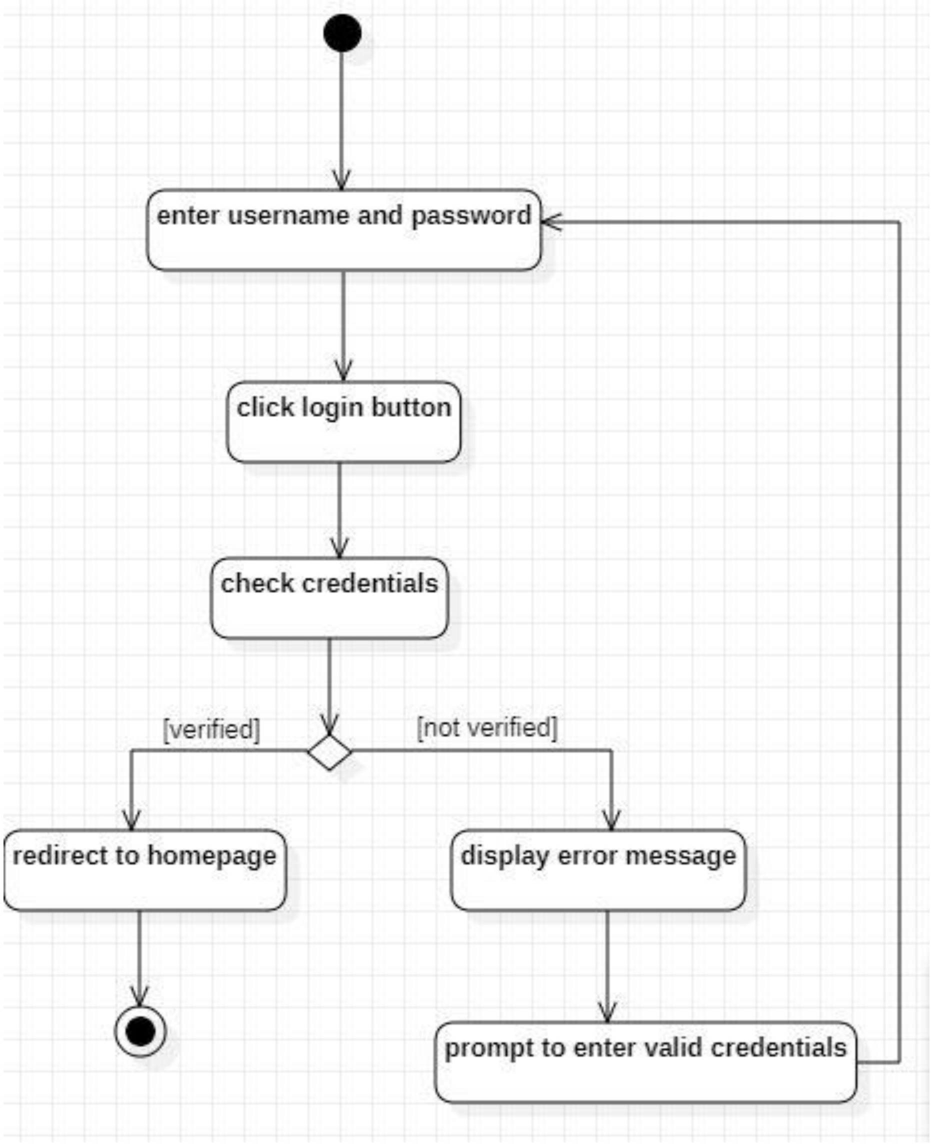
UC5


add section
verify section
does not exist
exists
add new section
display confirmation message
display error message

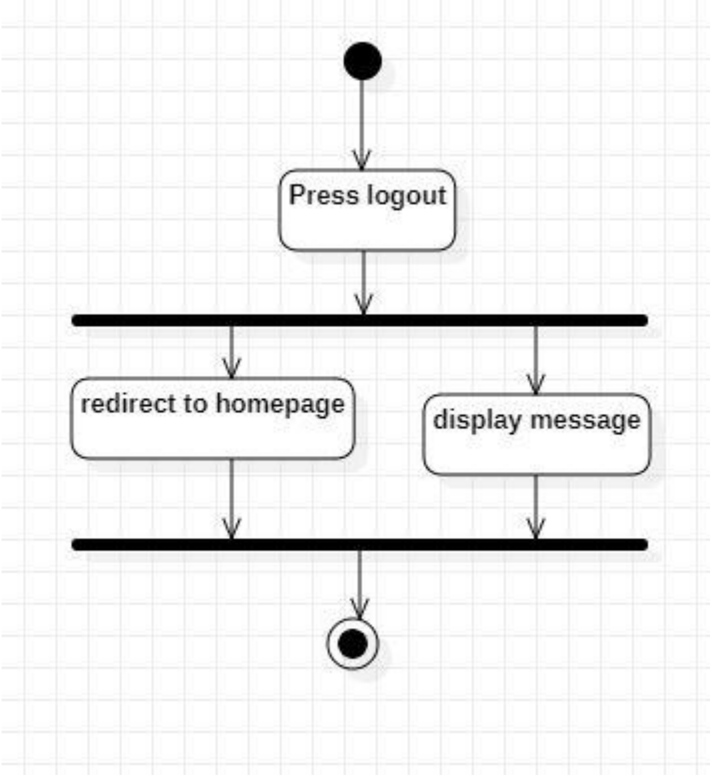
UC6


check section
[exists]
[not exists]
remove section
update course sections
update timetable
display message

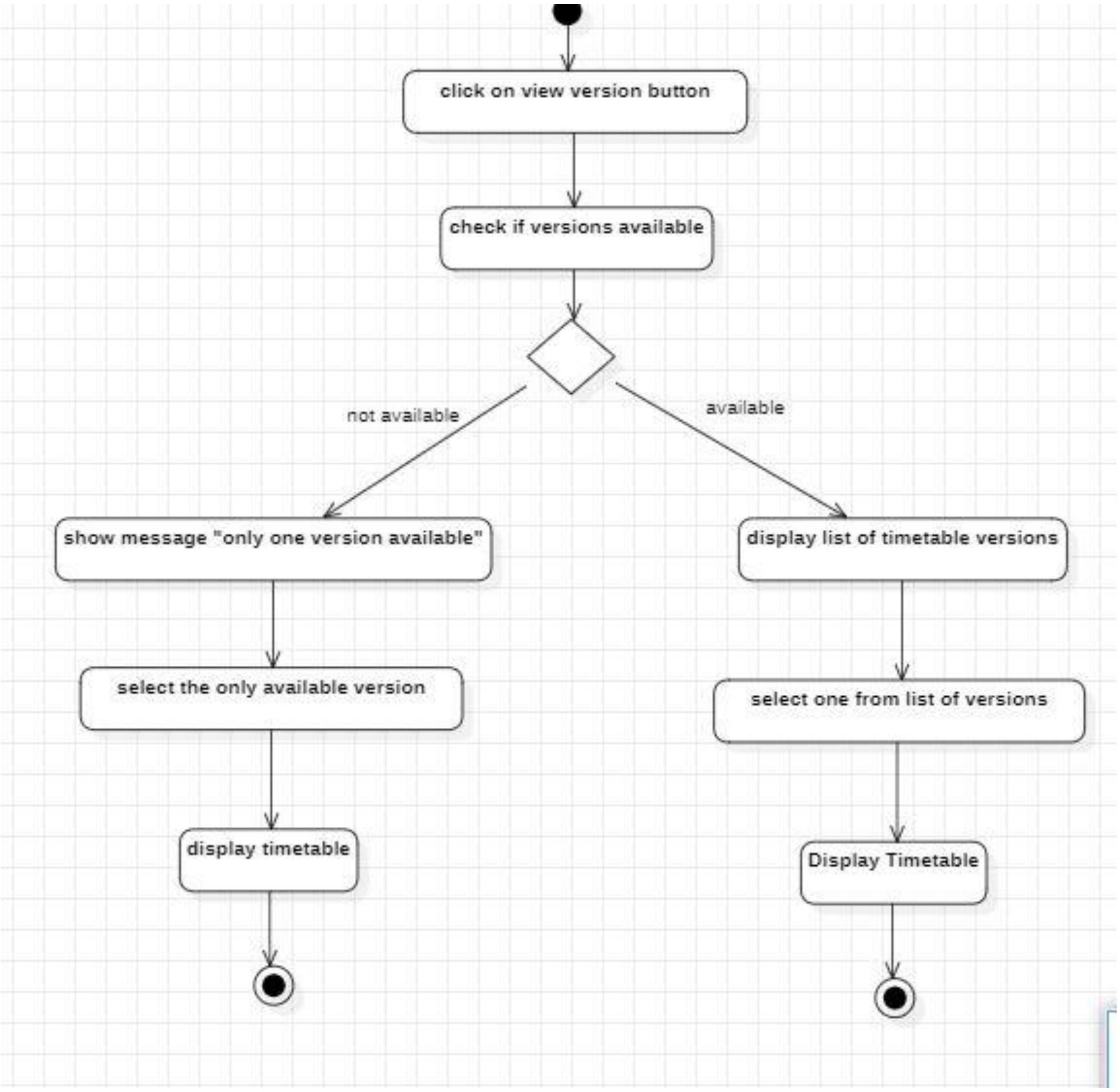
UC7


enter username and password
click login button
check credentials
[verified]
[not verified]
redirect to homepage
display error message
prompt to enter valid credentials

UC8



UC9


click on view version button
check if versions available
not available
available
show message "only one version available"
display list of timetable versions
select the only available version
select one from list of versions
display timetable
Display Timetable