



**University Institute of Information Technology,
PMAS-Arid Agriculture University,
Rawalpindi, Pakistan**

Project Name

Intelligent Project Alliance

By

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Supervisor

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Bachelor of Science in Software Engineering (2018-2022)

The candidate confirms that the work submitted is their own and appropriate credit has been given where reference has been made to the work of others.

DECLARATION

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CERTIFICATE OF APPROVAL

()

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Irtaza Zulfiqar(18-arid-3018)"

,

Mr. Zeeshan Javed

Supervisor

External Examiner (If any)

Administrator UIIT

Executive Summary

Schedule Management, Change Management, Requirements Management, Design Management, Task Management and Members Management

view

Task Management
organize tasks,

, automate reports, keep track of comments, create user accounts,

Acknowledgement

Almighty Allah

His

“Mr. Zeeshan Javed”

&

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Future Work

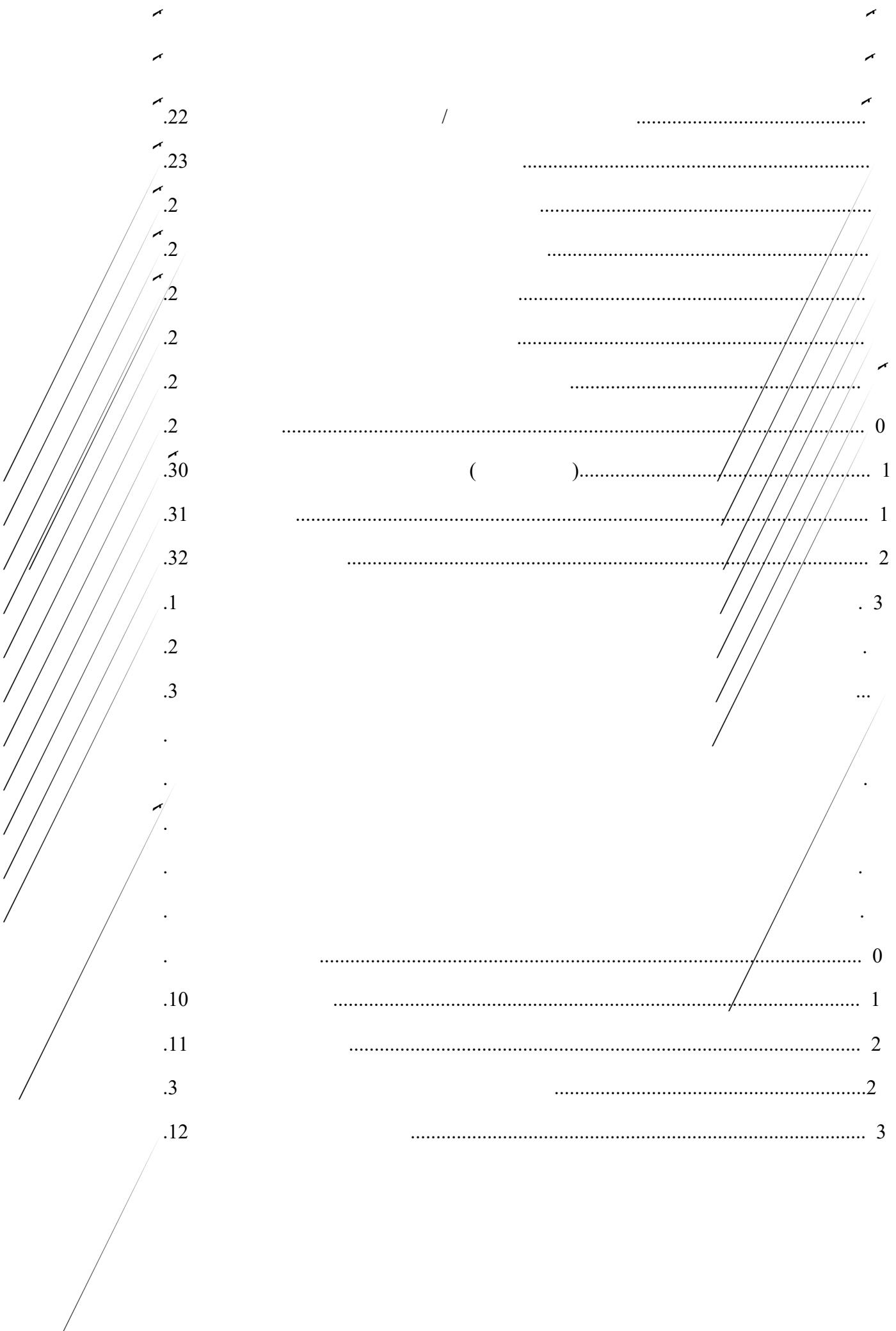
References

[1]: <https://openProject.com/>

[2]: <https://www.atlassian.com/software/jira>

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Chapter 1: Introduction

1.1. Brief

"Intelligent Project Alliance"

1.2. Relevance to Course Modules

- **Desktop Application Development:**
- **Modern Programming Languages:**
- **Software Engineering – I, II:**
- **Software Requirement Engineering:**
- **Human Computer Interaction:**
- **Software Project Management:**

1.3. Project Background

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1.4. Literature Review

OpenProject

1

Core services:

- **Project Planning:**

- **Task Management:**

- Agile, Kanban and Scrum methodology:

,
,

- Time Tracking:

,

- Team Collaboration:

,

Shortcomings:

,

IBM Engineering Lifecycle Management (ELM)

, , ,
,

3

Core services:

- Requirement management:

, ,

- Test management:

, ,

- Work-flow management:

Shortcomings:

1.5. Analysis from Literature Review

1.6. Methodology and Software Lifecycle for This Project

Intelligent Project Alliance

can help us to manage work more
efficiently and do the work more effectively

Modules of the project:

()

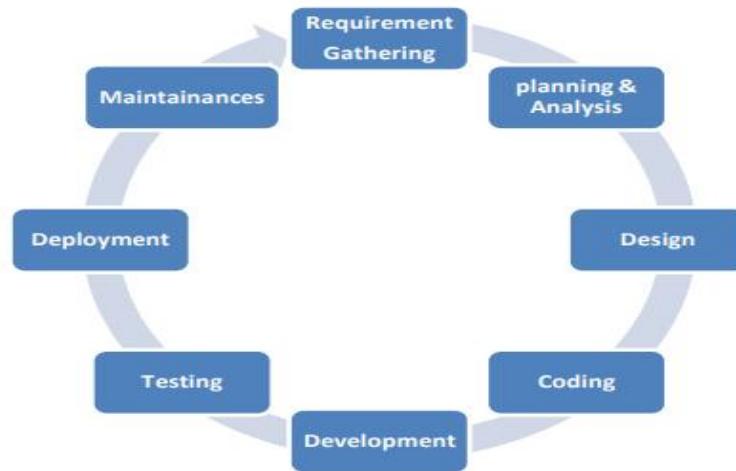


Figure 1.1: Agile Lifecycle

1.6.1 Rationale behind Selected Methodology

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Chapter 2: Problem Definition

2.1. Purpose:

201

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2.2. Product Functions:

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2.3. Proposed Architecture:

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- ()
- ()

Client Application Tier:

Data Tier:

&

2.4. Project Deliverables:

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- / /
- ,

2.5. Development Requirements:

- **Integrated Development Environment (IDE):** 2021 & 2021
- **Database**
- **Framework used For Development:** , &
- **Documentation Software**
- **Diagramming Software**
- **Source Code and Version Control Software**

2.6. Operating Environment:

- **Operating System:** (, ,)

2.7. Assumptions and Dependencies:

Assumptions:

Dependencies:

```
"      "
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" / - " " 2.0.0",
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" - - " " 0. .0",
" - - " " .1 . ",
" - " " .3.1",
" - - - " " 3. .1",
" - " " .12.1",
" - " " -2" " 2.1 .0",
" - " " .2. ",
" - - " " .3.0",
" - " " .2.2",
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" - - - " " 1.0.2",
" " " .1.2",
" - " " 2. .0",
" - - " " 0.13. ",
" " " 0.0.2",
" " " 3 .3.1"

Chapter 3: Requirement Analysis

3.1. Functional Requirements

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3.2. Non-Functional Requirements

3.2.1 Usability:

-1

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3.2.2 Performance:

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-2

-3

3.2.3 Portability:

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-2

3.3. Use Case Model

(),

()

3.3.1 Use Case Diagram:

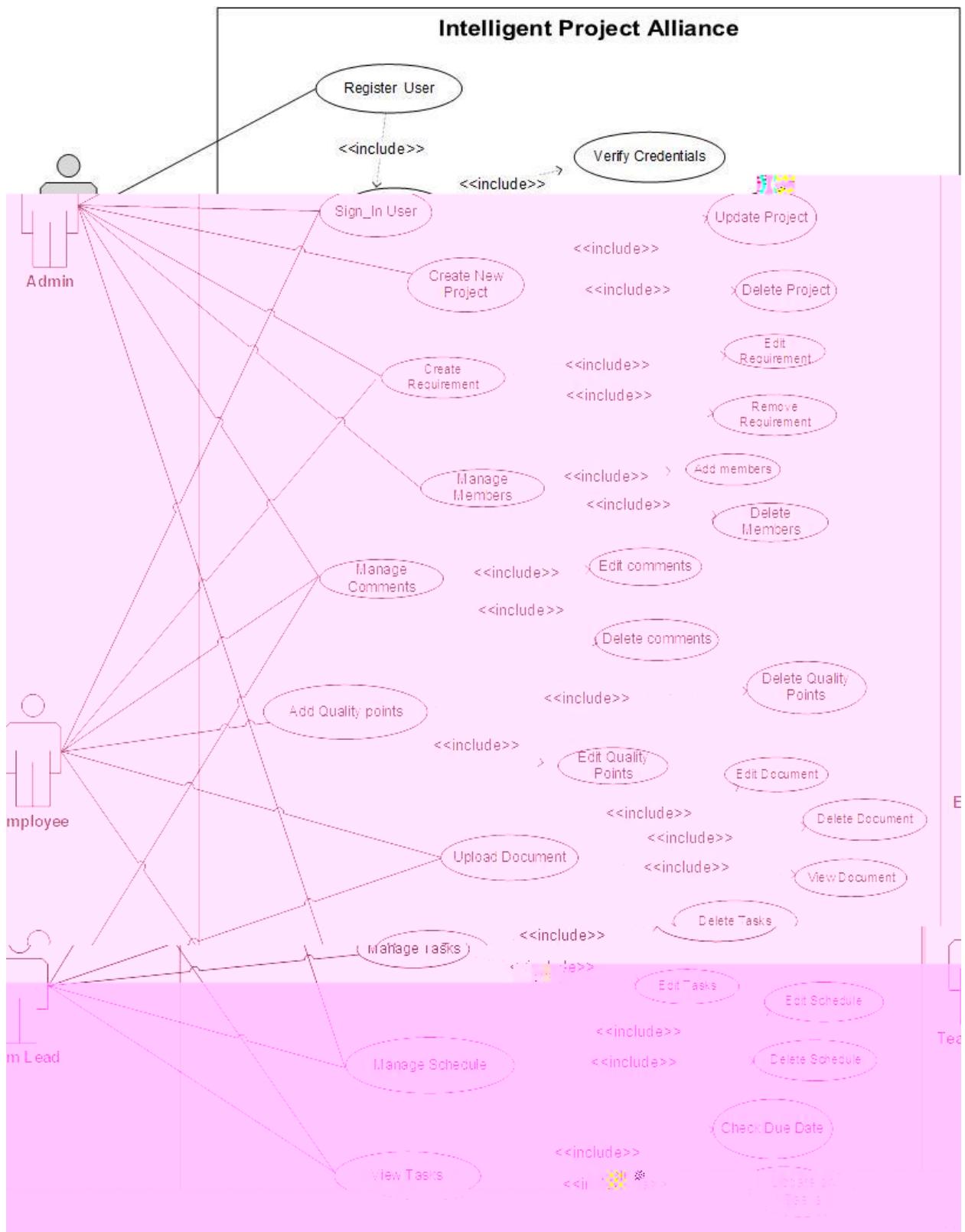


Figure 3.1: Use Case Diagram

1.3.2 Actors Description:

We have these actors in my use case.

- **Admin:**

, - , , , , , , ,

, , , , , , , ,

- **Employee:**

, , , , , , , ,

- **Team Lead:**

, , , , , , , ,

1.3.3 Use Case Description:

Table 3.1: Register User

Use Case ID:	-01
UseCase Name:	
Actors:	
Description:	
Trigger:	
Pre-conditions:	,
Post-conditions:	.
Normal Flow:	<ul style="list-style-type: none">•••
Alternative Flows:	<ul style="list-style-type: none">•••
Notes and Issues:	

Table 3.2: Sign In User

Use Case ID:	-02
Use Case Name:	
Actors:	,
Description:	
Trigger:	
Pre-conditions:	
Post-conditions:	
Normal Flow:	• •
Alternative Flows:	,
	, /

Notes and Issues:	/
--------------------------	---

Table 3.3: Create New Project

Use Case ID:	-03
Use Case Name:	
Actors:	
Description:	
Trigger:	
Preconditions:	,
Post-conditions:	,
Normal Flow:	<ul style="list-style-type: none"> • • , •
Alternative Flow:	
Assumptions:	/

Table 3.4: Manage Tasks

Use Case ID:	-0
Use Case Name:	
Actors:	
Description:	
Trigger:	
Preconditions:	
Post-conditions:	
Normal Flow:	<ul style="list-style-type: none">●●●●
Alternative Flows:	/

Assumptions:	,
---------------------	---

Table 3.5: Manage Comments

Use Case ID:	-0
Use Case Name:	
Actors:	,
Description:	,
Trigger:	.
Preconditions:	.
Post-conditions:	.
Normal Flow:	<ul style="list-style-type: none"> • •
Alternative Flows:	<ul style="list-style-type: none"> • ,
Notes and Issues:	/

Table 3.6: Update Project

Use Case ID:	-0
Use Case Name:	
Actors:	
Description:	
Trigger:	
Preconditions:	
Post-conditions:	
Normal Flow:	• • •
Alternative Flows:	•
Notes and Issues:	

Table 3.7: Manage Schedule

Use Case ID:	-
Use Case Name:	
Actors:	
Description:	
Trigger:	
Preconditions:	
Post-conditions:	
Normal Flow:	•
Alternative Flows:	• ,
Notes and Issues:	

Table 3.8: Manage Members

Use Case ID:	-0
Use Case Name:	
Actors:	

Description:	,
Trigger:	
Preconditions:	
Post-conditions:	
Normal Flow:	<ul style="list-style-type: none"> • • •
Alternative Flows:	<ul style="list-style-type: none"> • •
Notes and Issues:	/

Table 3.11: Update on Tasks

Use Case ID:	-11
---------------------	-----

Use Case Name:	
Actors:	
Description:	
Trigger:	
Preconditions:	
Post-conditions:	
Normal Flow:	•
Alternative Flows:	•
Notes and Issues:	

Table 3.12: Upload Document

Use Case ID:	-12
Use Case Name:	
Actors:	
Description:	

Trigger:	
Preconditions:	
Post-conditions:	
Normal Flow:	<ul style="list-style-type: none"> ●
Alternative Flows:	<ul style="list-style-type: none"> ● , ●
Notes and Issues:	/

Chapter 4: Design and Architecture

4.1. System Architecture

4.2. System Design

4.2.1 UML Structural Diagrams

4.2.1.1 Deployment Diagram

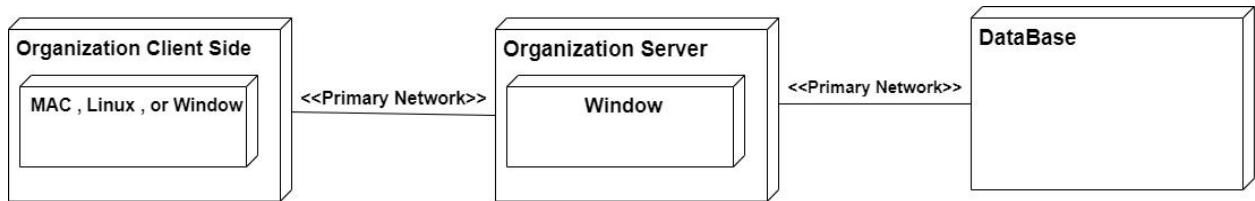


Figure 4.1: Deployment Diagram

4.2.2 UML Behavioral Diagrams

4.2.2.1 Activity Diagram

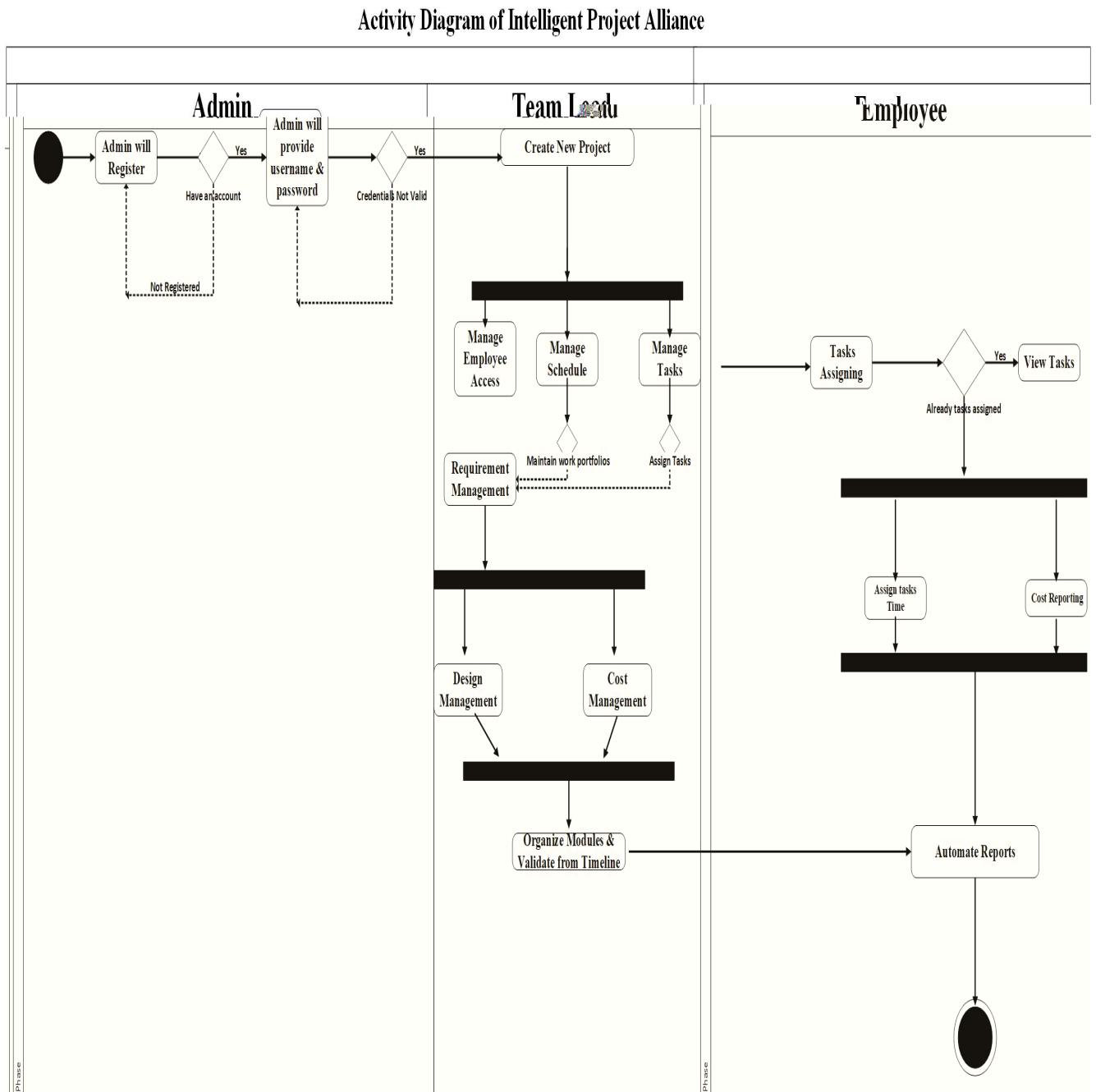


Figure 4.2: Activity Diagram of Intelligent Project Alliance

Activity Diagram For Schedule Management

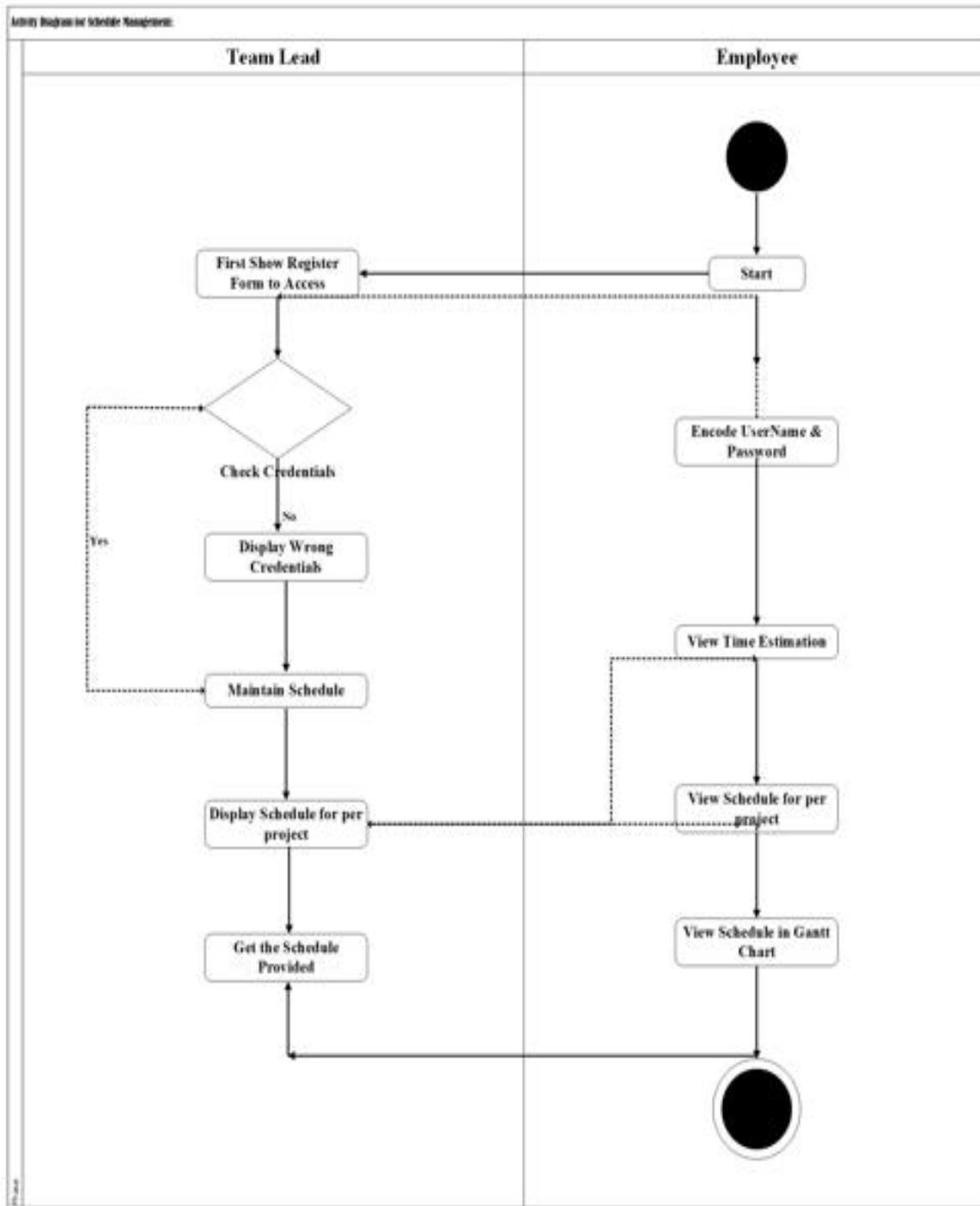


Figure 4.3: Activity Diagram for Schedule Management

Activity Diagram for Intelligent Project Alliance

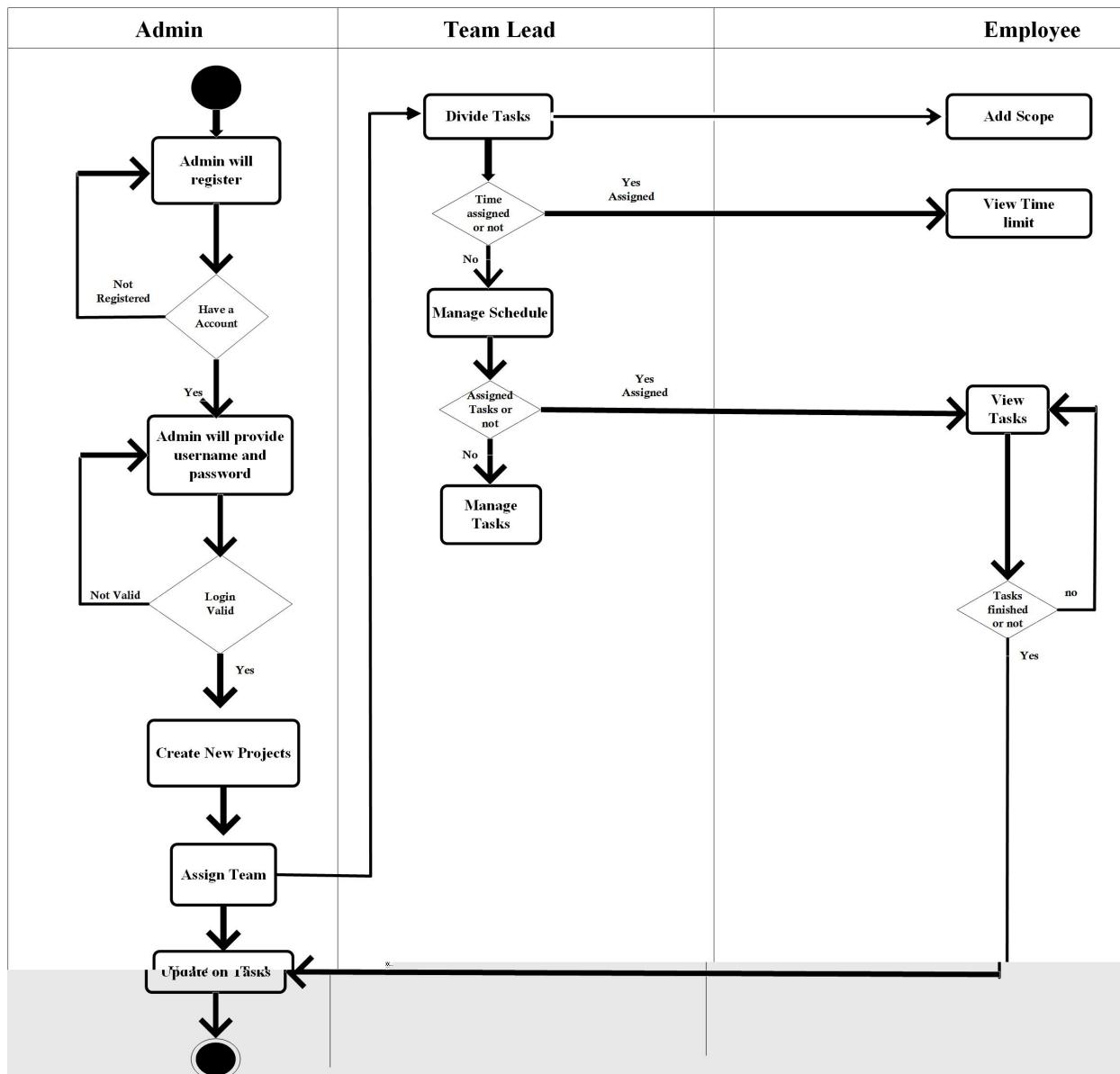


Figure 4.4: Activity Diagram for Project Management

Activity Diagram for Registration

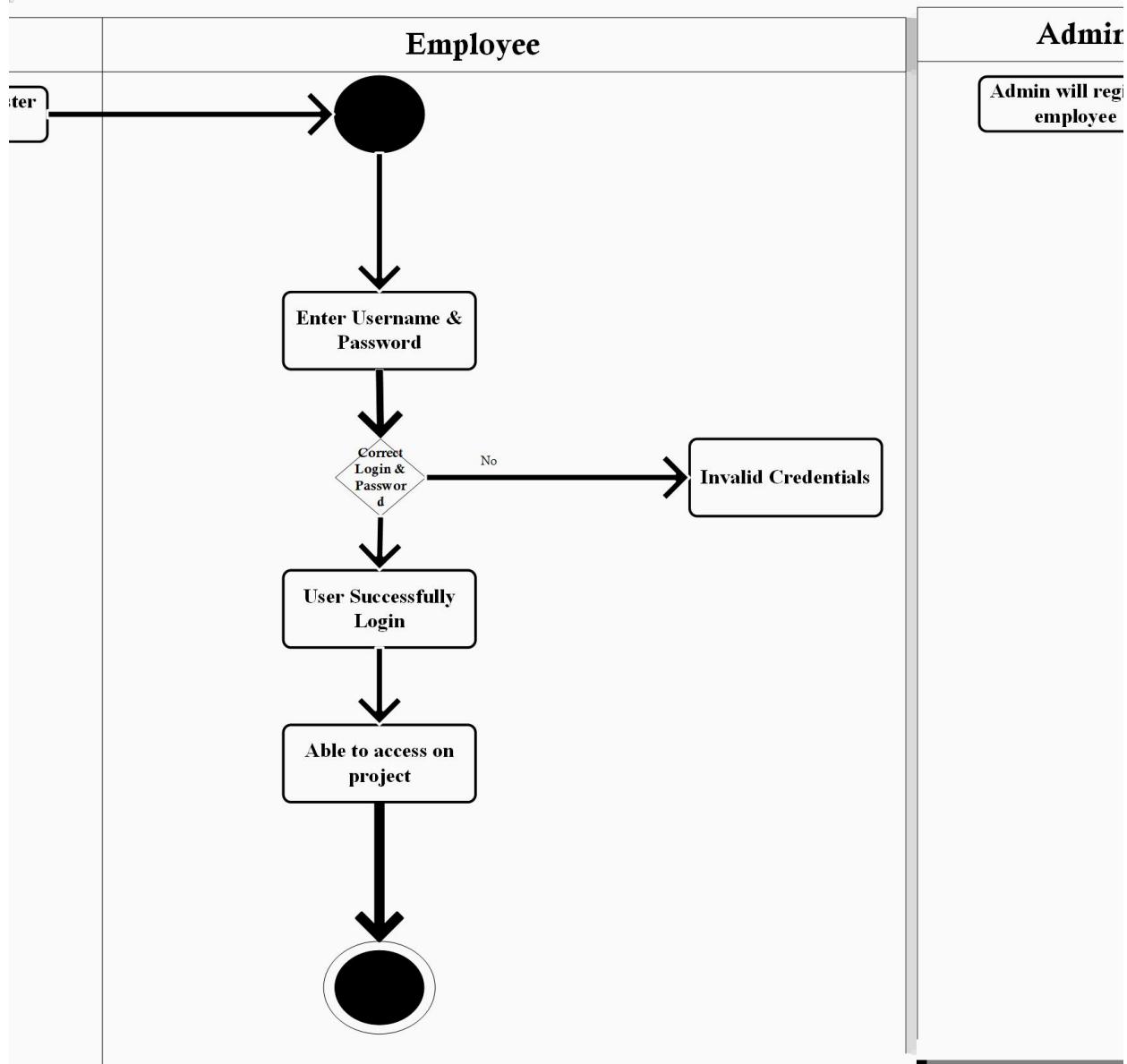


Figure 4.5: Activity Diagram for Registration

Activity Diagram for Forget Password

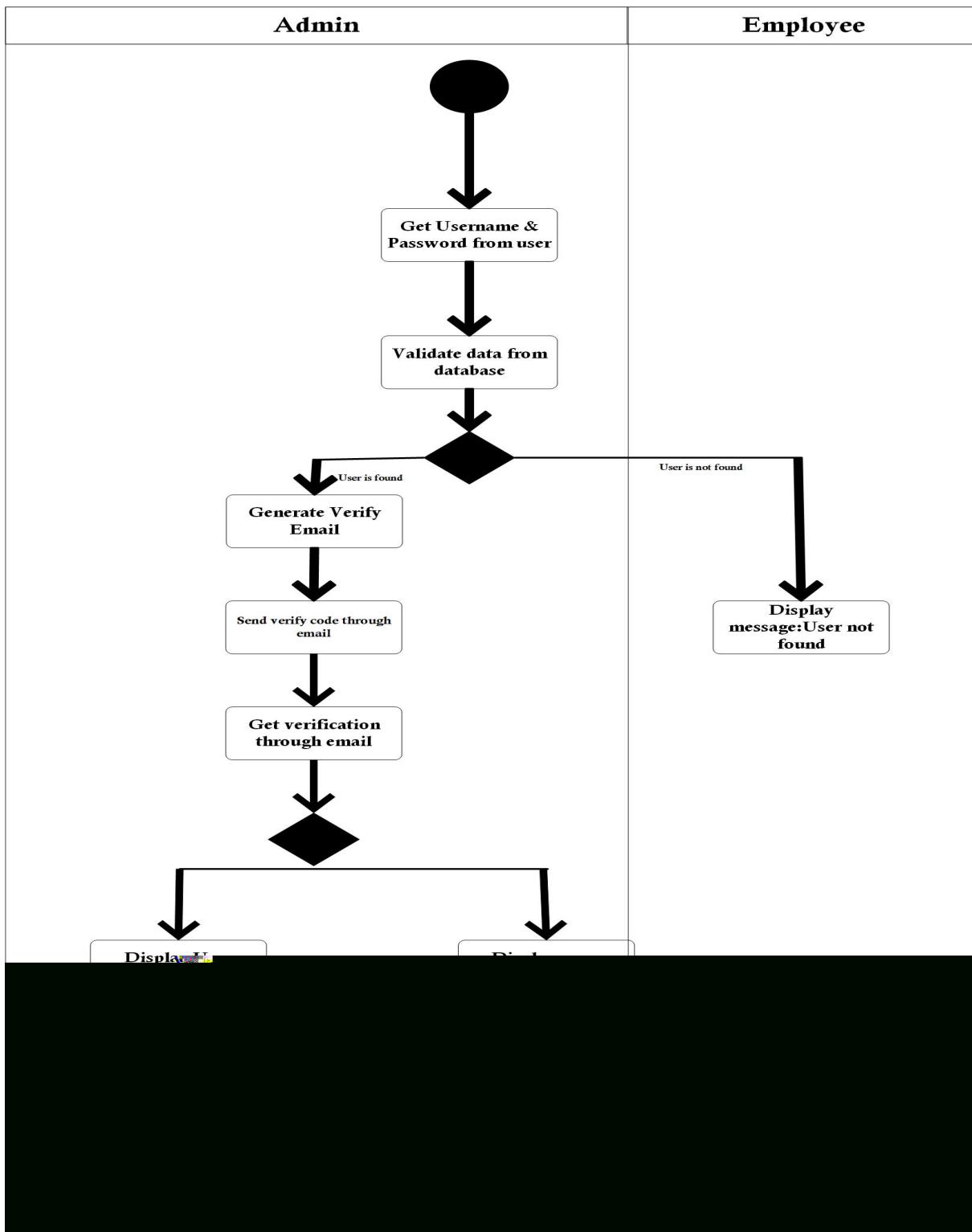


Figure 4.6: Activity Diagram for Forget Password

Activity Diagram for Create New Project

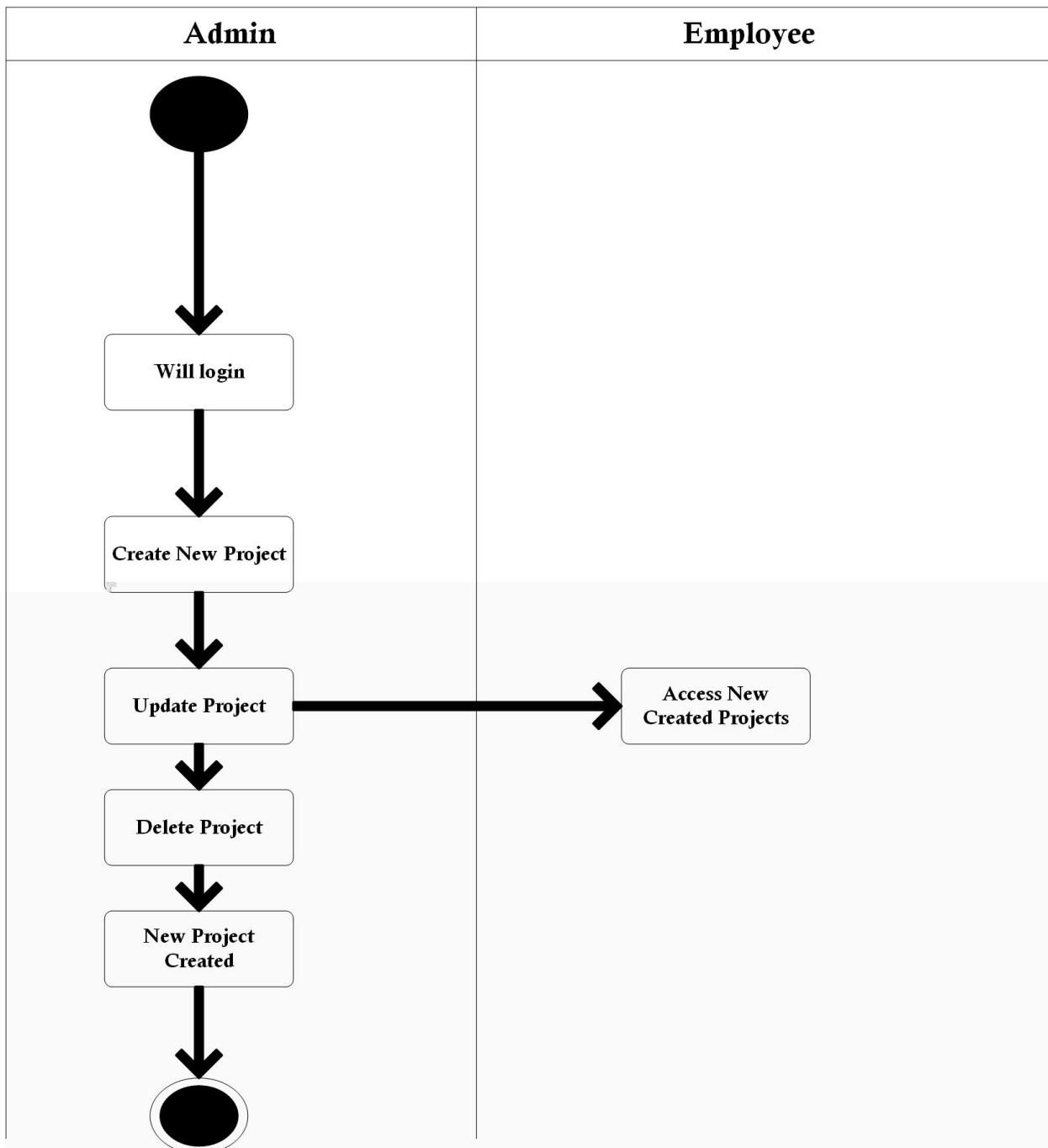


Figure 4.7 : Activity Diagram for Create New Project

Activity Diagram for Task Management

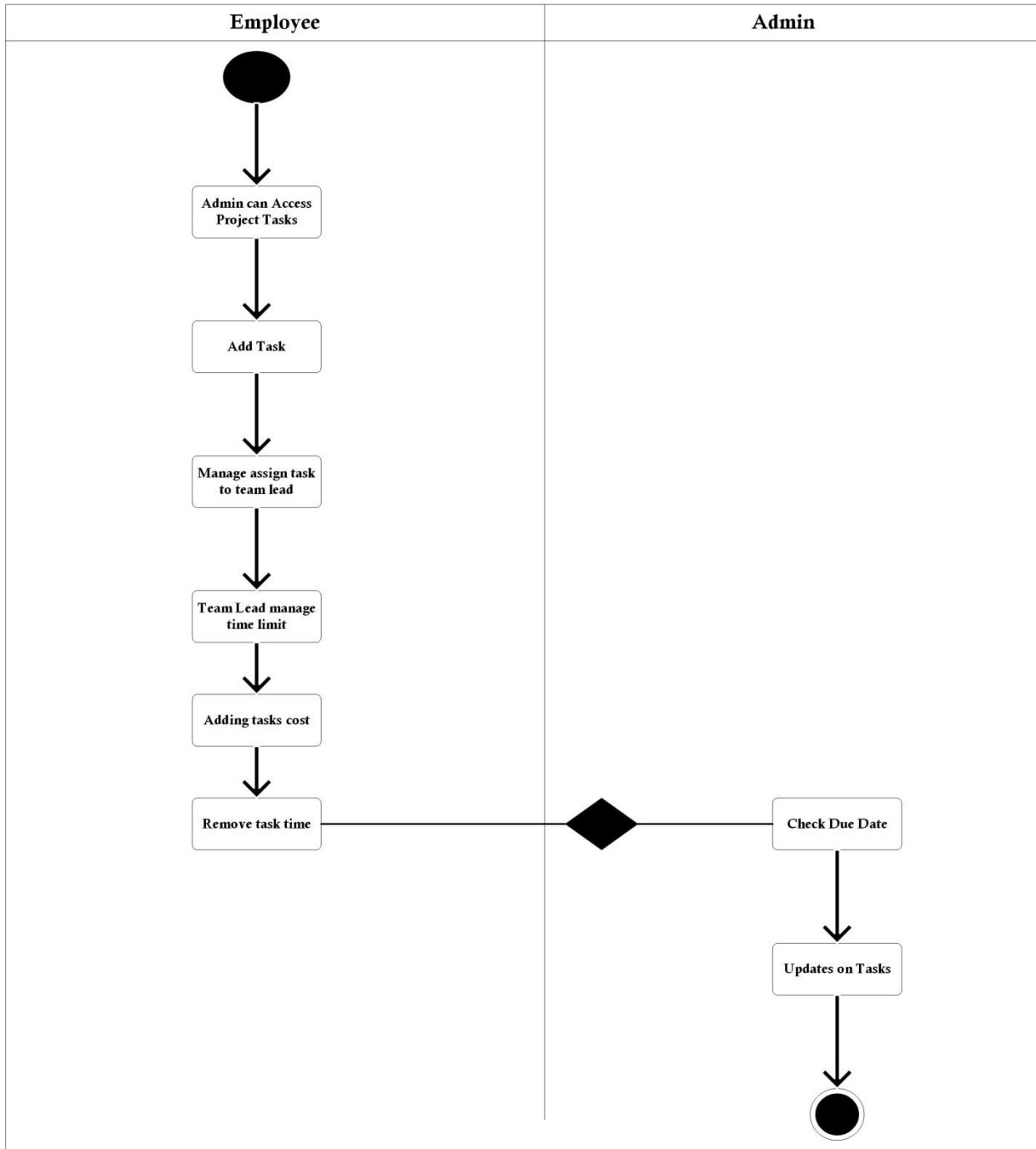


Figure 4.8: Activity Diagram for Task Management

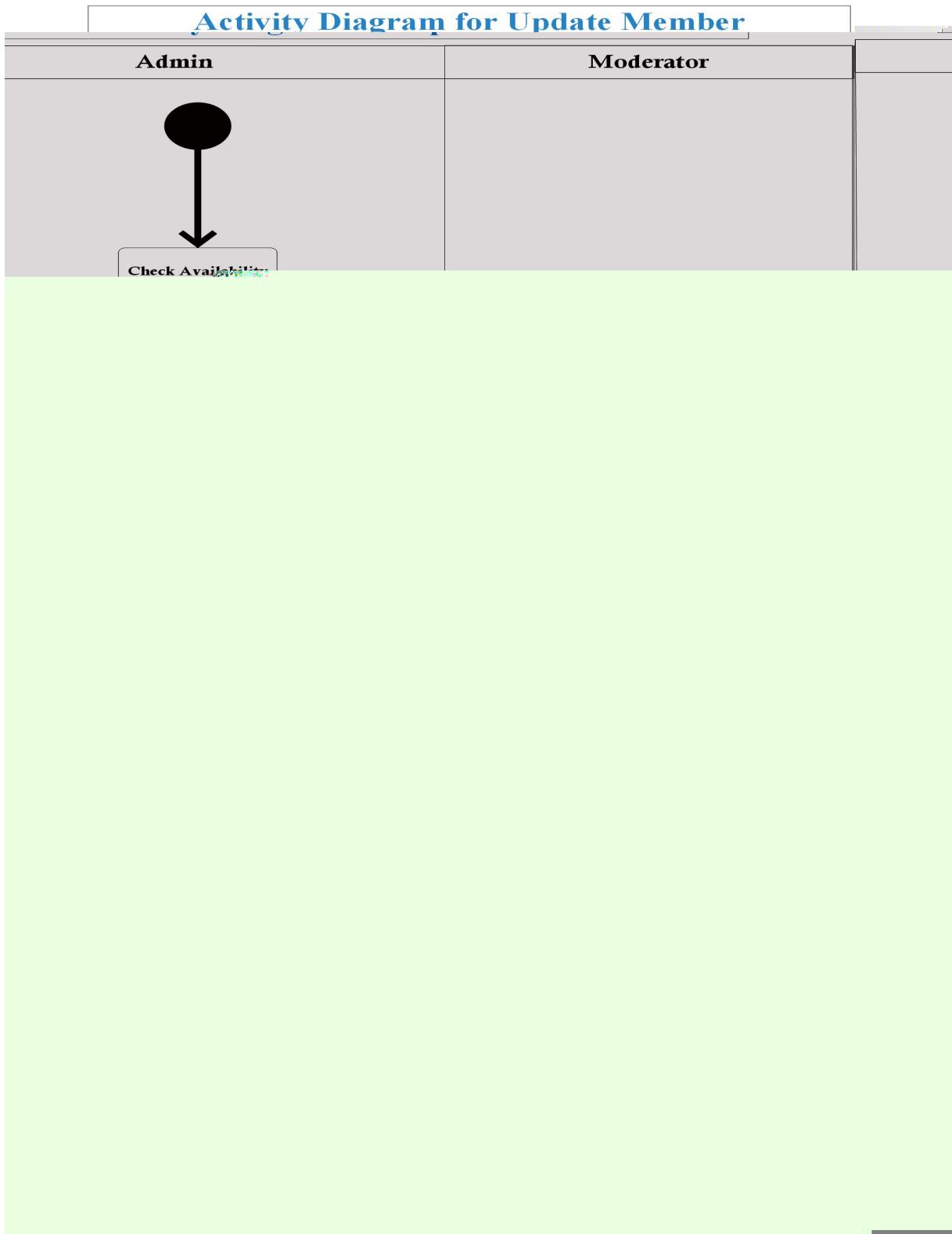


Figure 4.9: Activity Diagram for Update Member

Activity Diagram for Quality Management

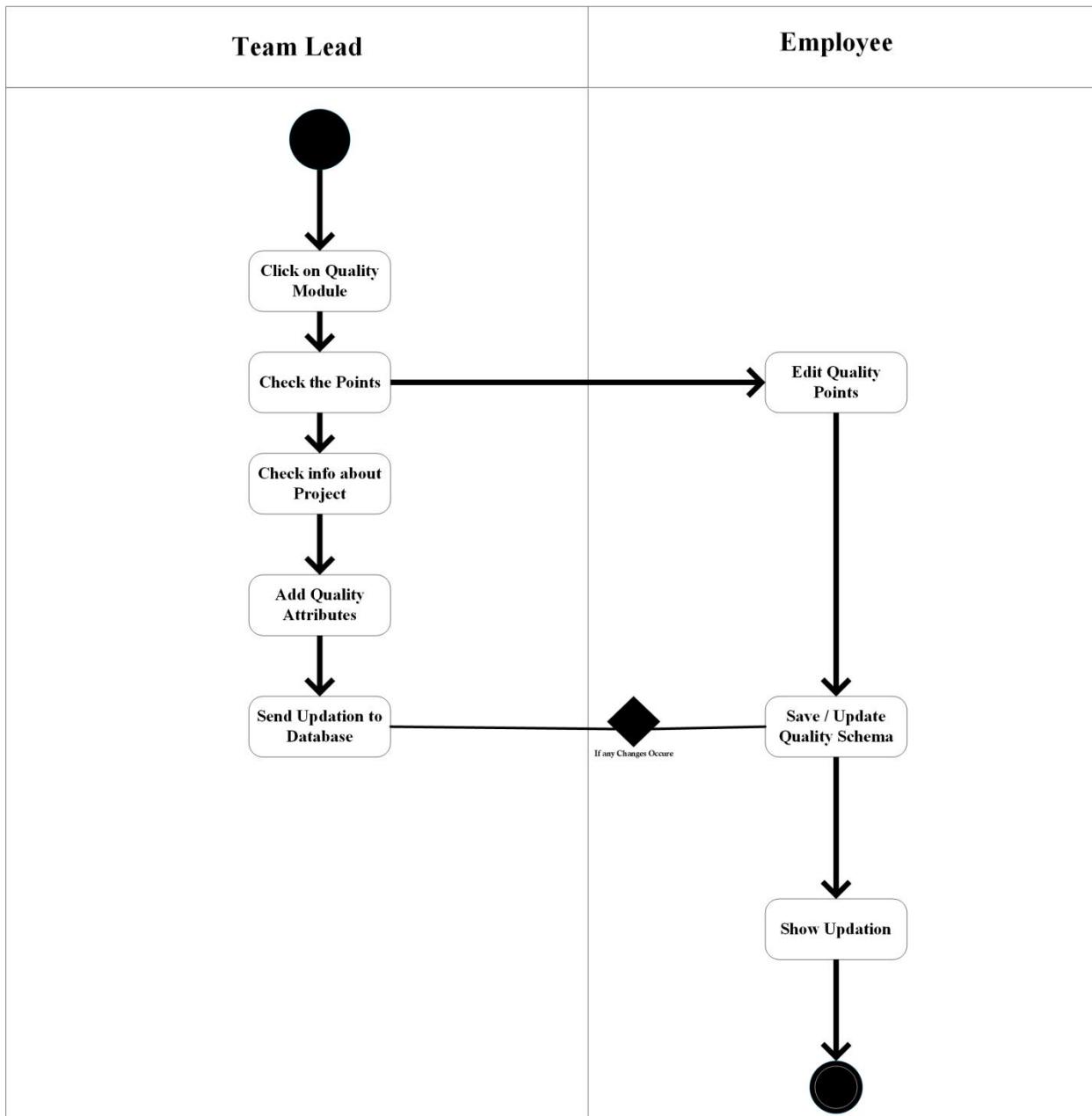


Figure 4.10: Activity Diagram for Quality Management

Activity Diagram for Change Management

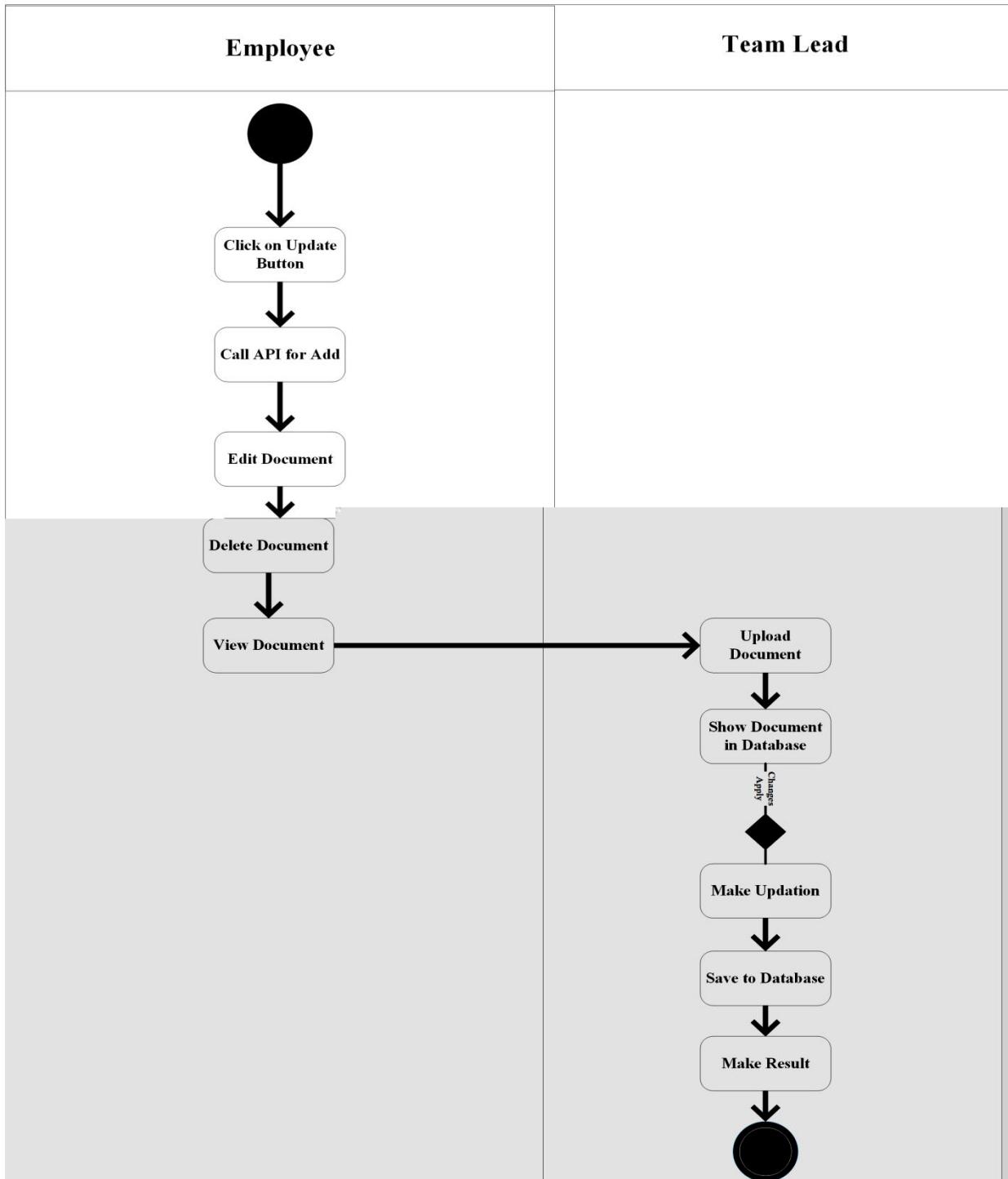


Figure 4.11: Activity Diagram for Change Management

Activity Diagram for Requirement Management

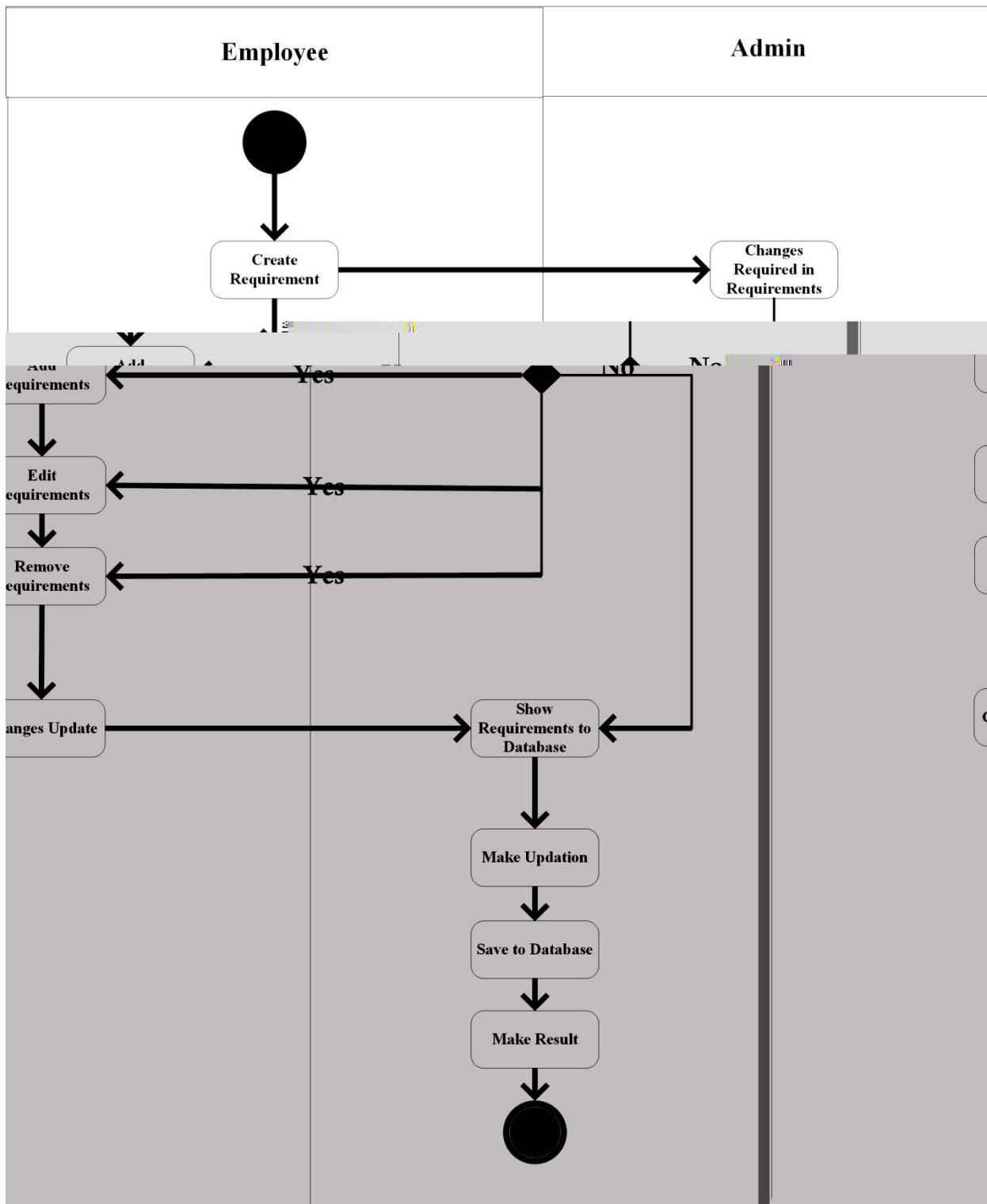


Figure 4.12 : Activity Diagram for Requirement Management

4.2.2.2 ER Diagram

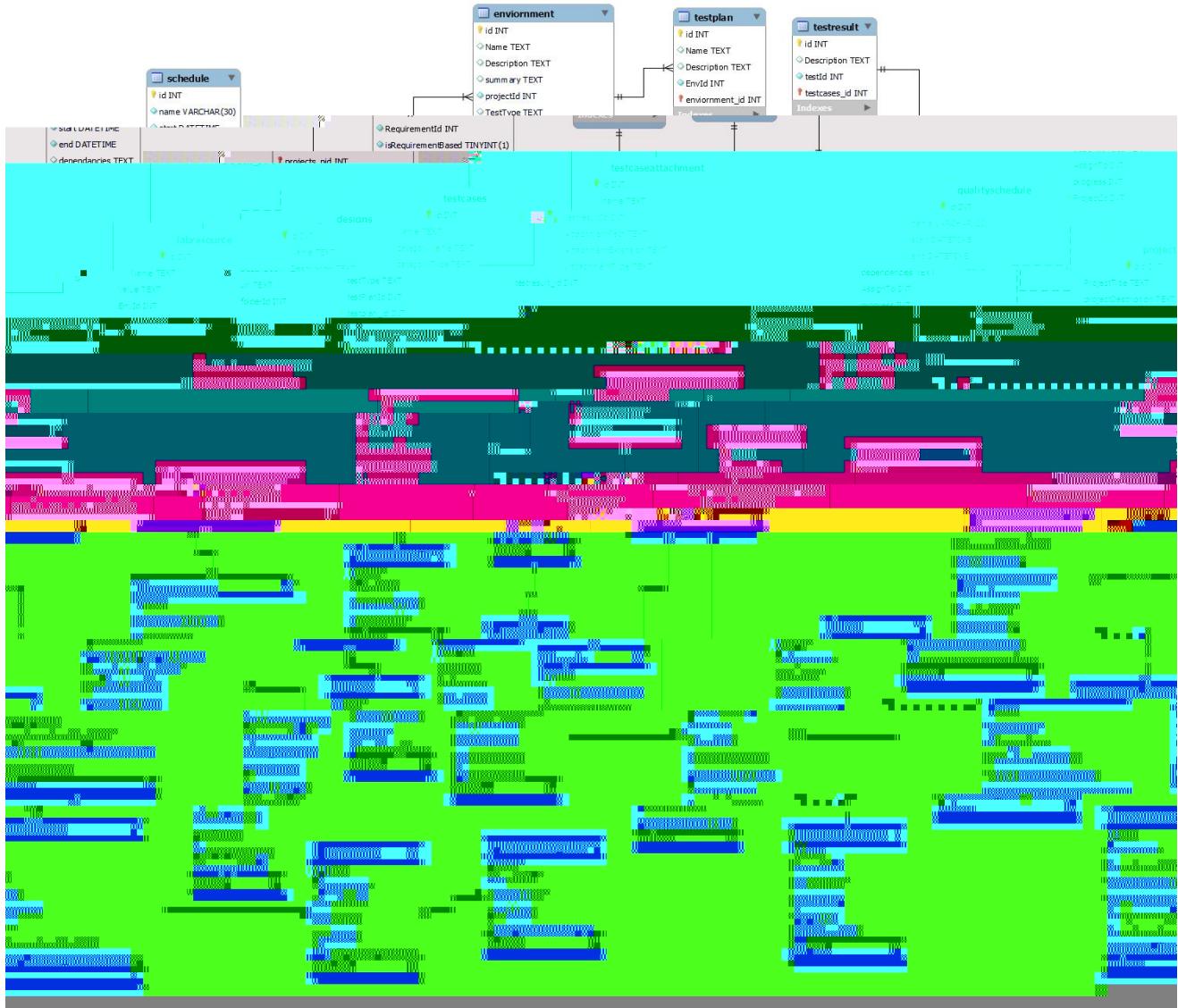


Figure 4.13 : ER Diagram of Intelligent Project Alliance

4.2.3 UML Interaction Diagrams

4.2.2 Sequence Diagrams

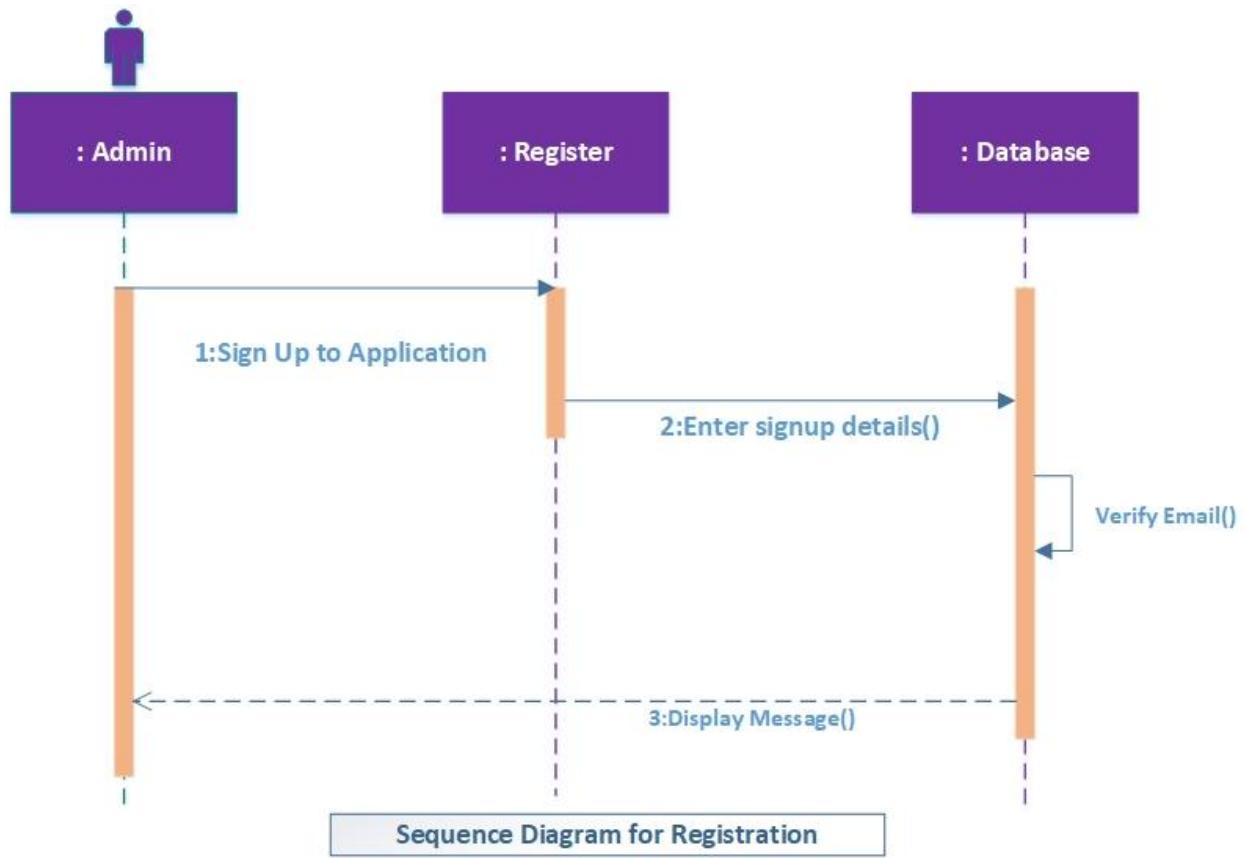


Figure 4.14: Sequence Diagram for Registration

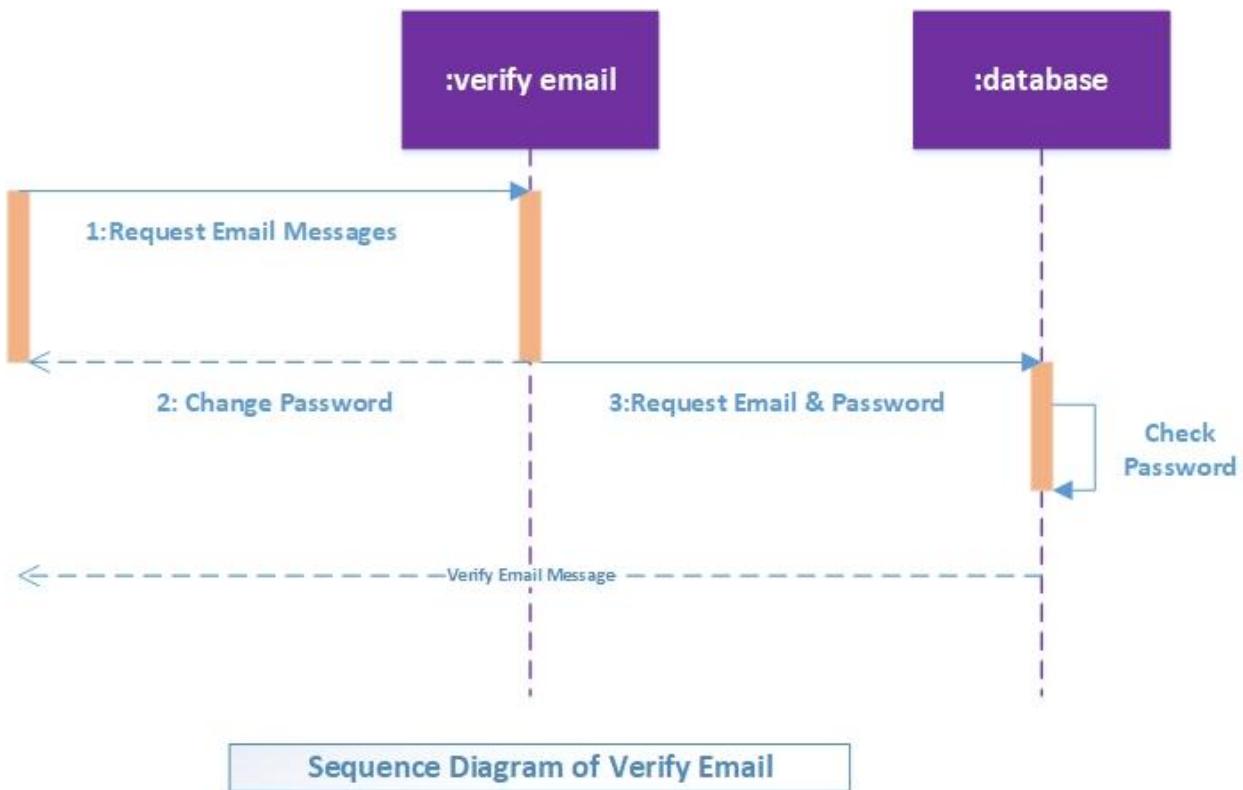


Figure 4.15 : Sequence Diagram for Verify Email

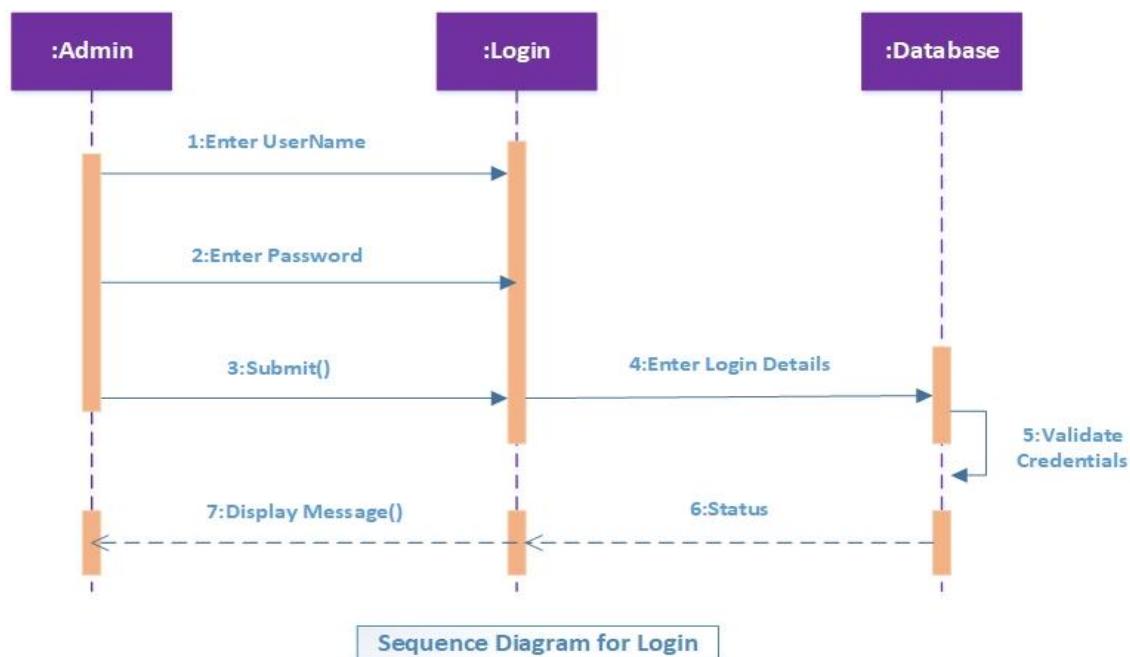


Figure 4.16: Sequence Diagram for Login

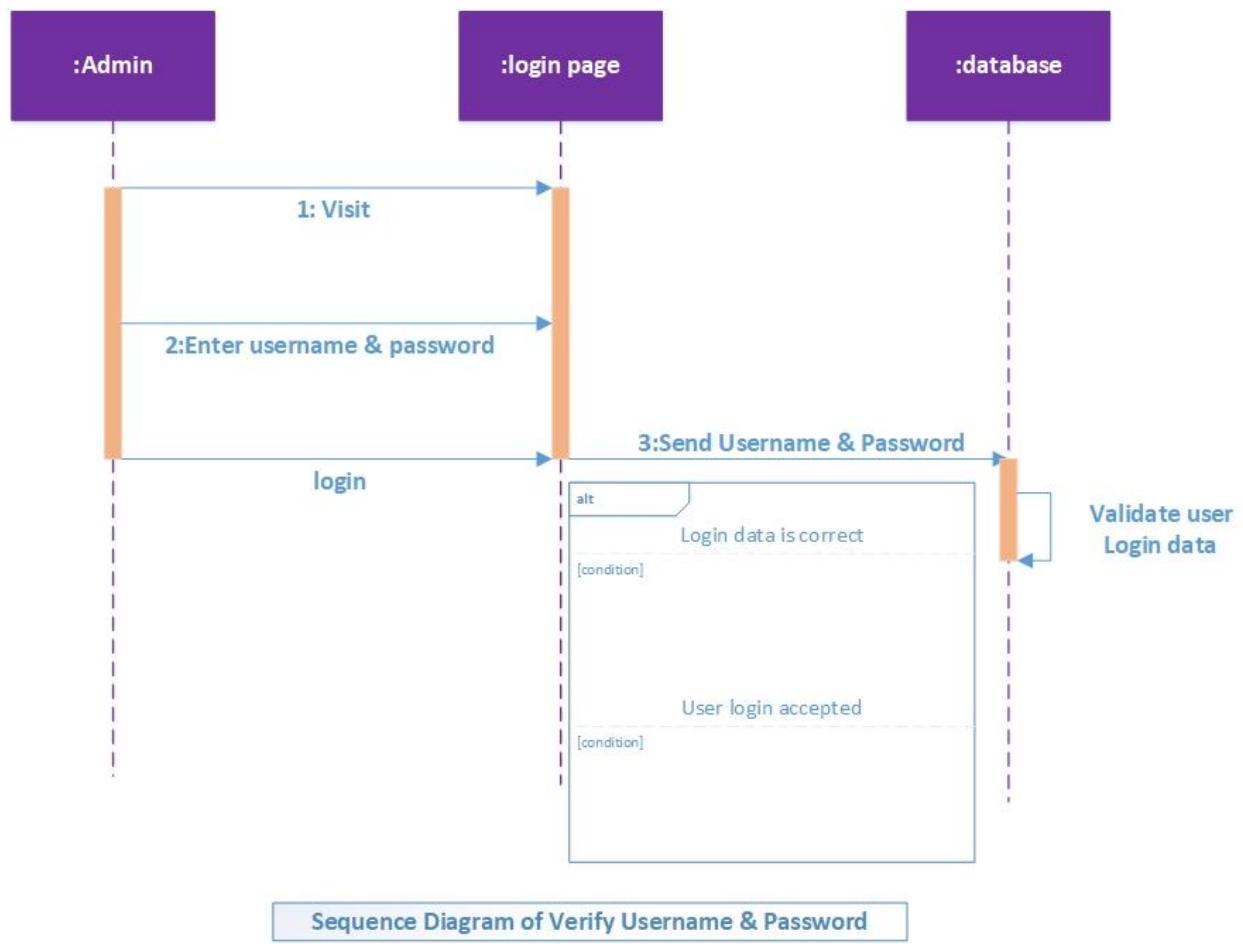


Figure 4.17: Sequence Diagram for Verify Username & Password

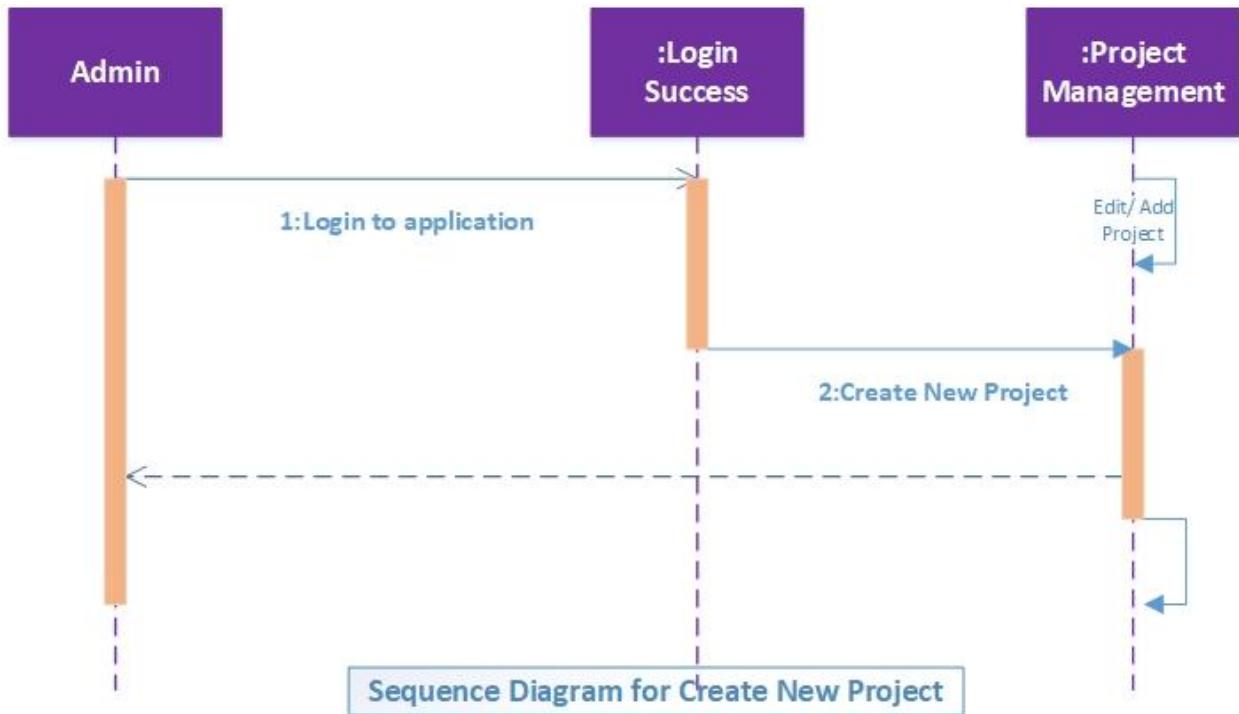


Figure 4.18: Sequence Diagram for Create New Project

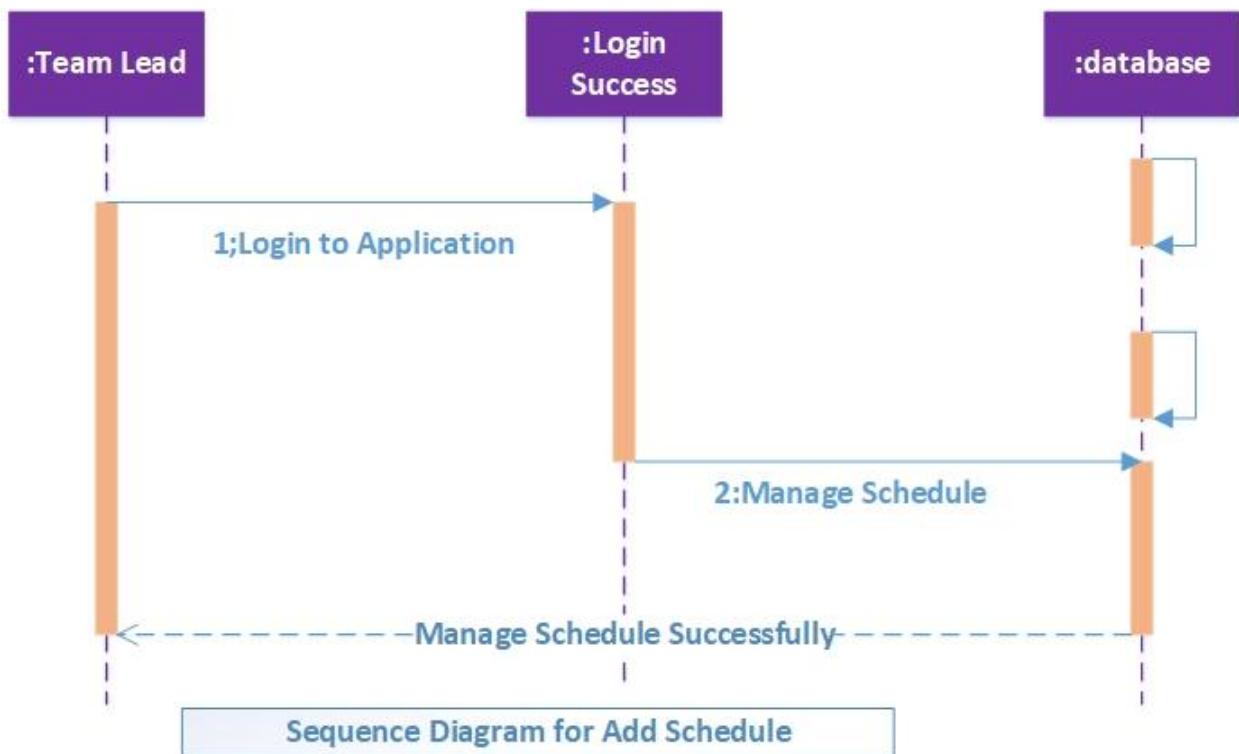


Figure 4.19: Sequence Diagram for Add Schedule

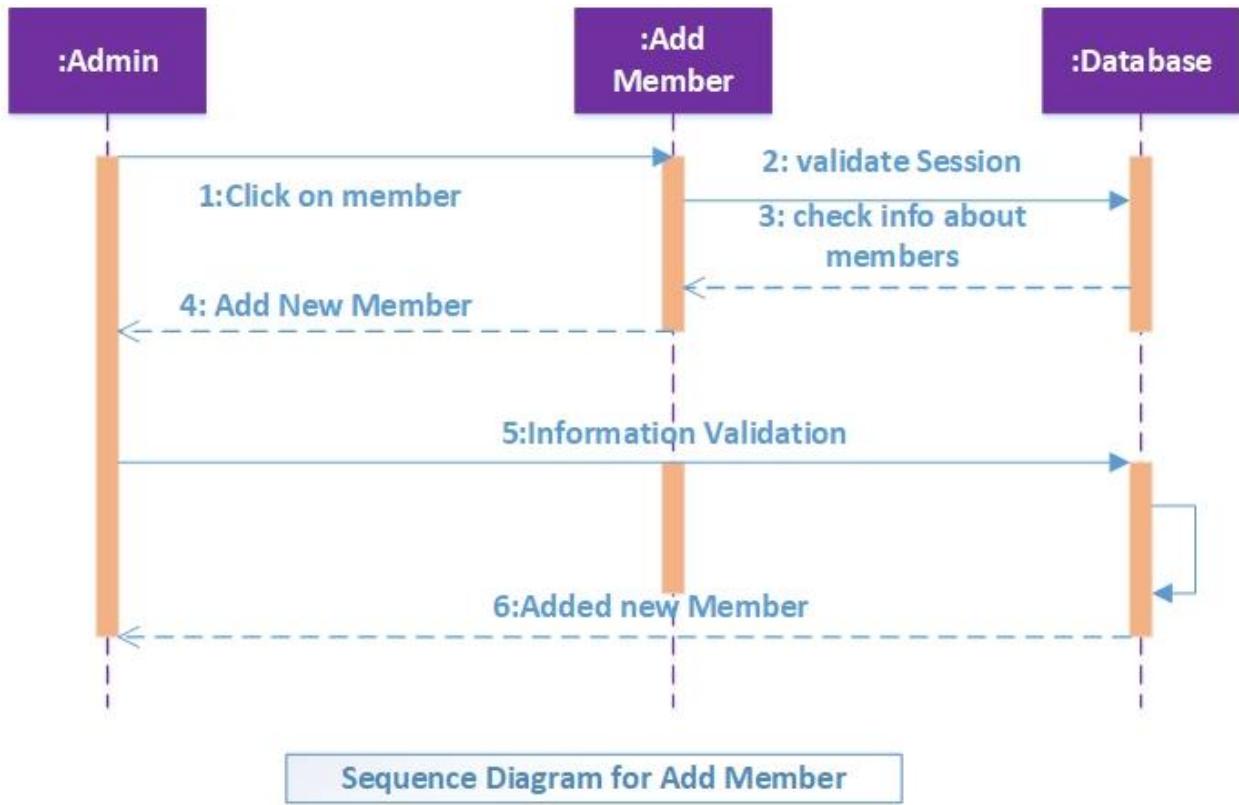


Figure 4.20: Sequence Diagram for Add Member

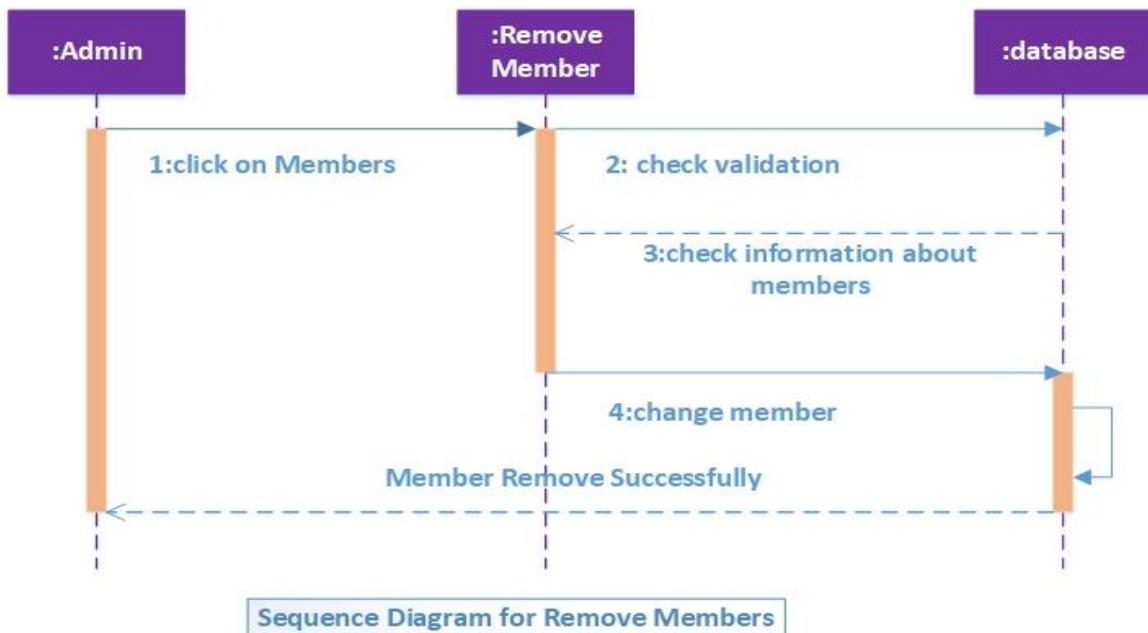


Figure 4.21: Sequence Diagram for Remove Member

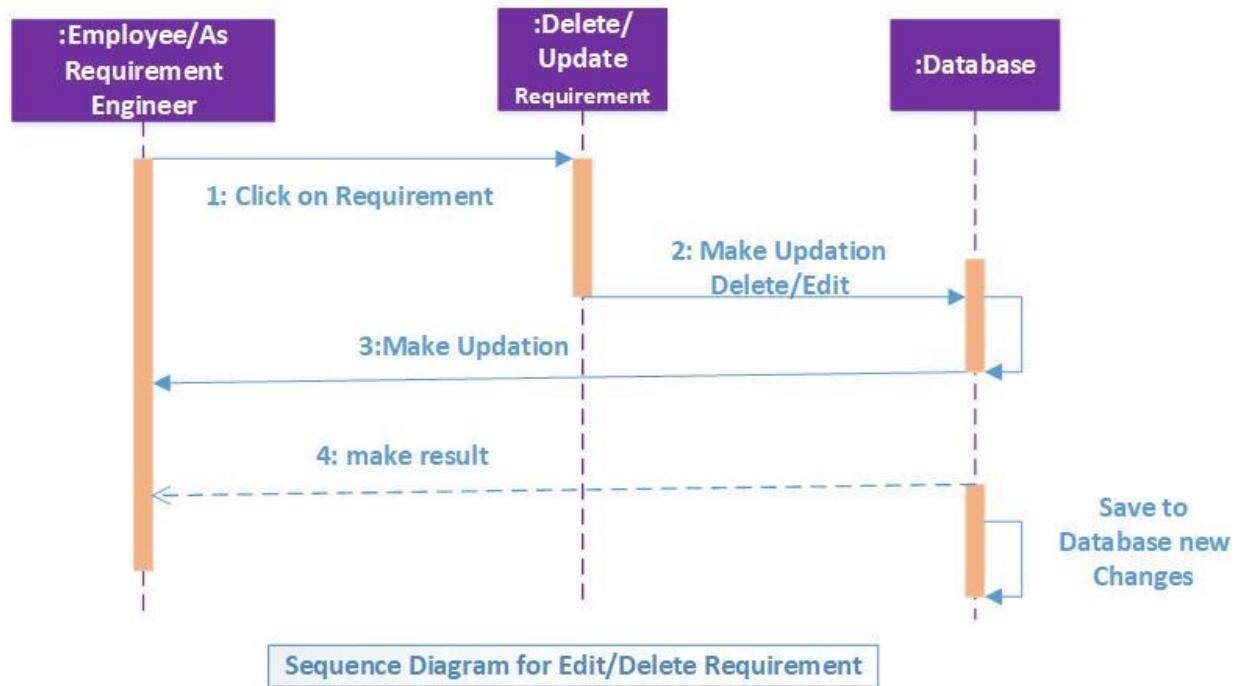


Figure 4.22: Sequence Diagram for Delete/Update Requirement

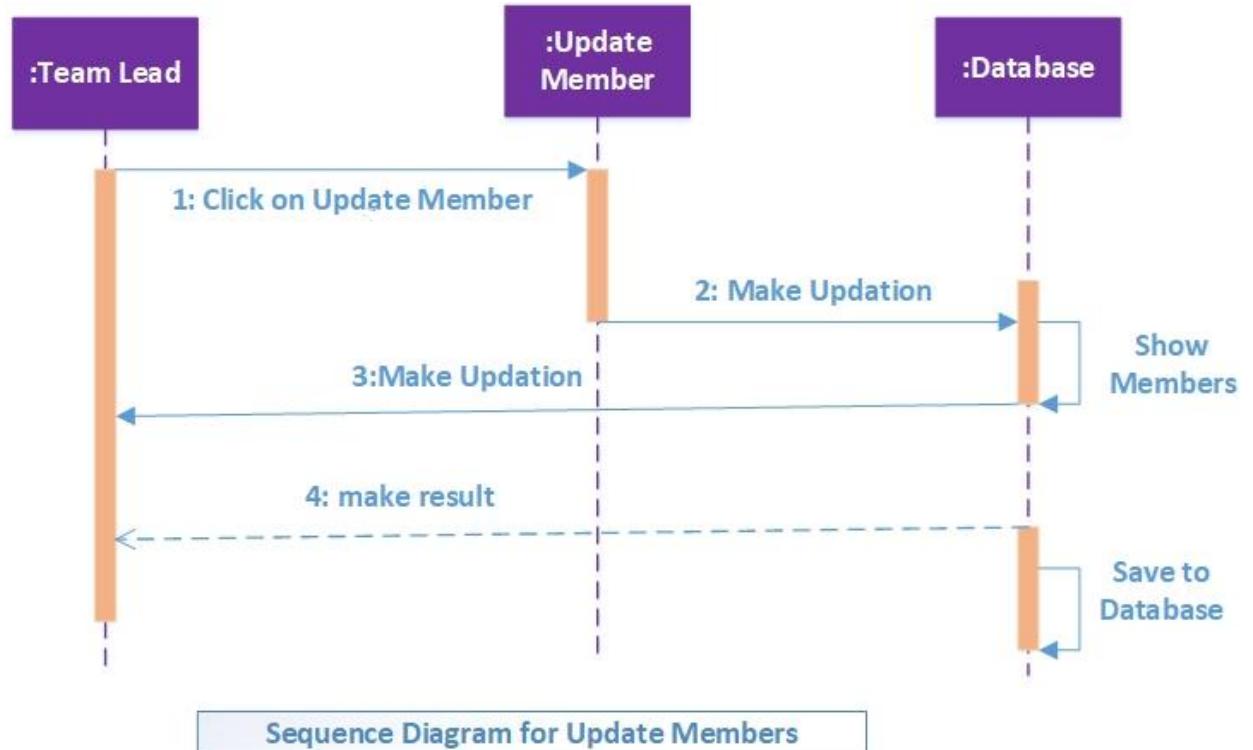


Figure 4.23: Sequence Diagram for Update Member

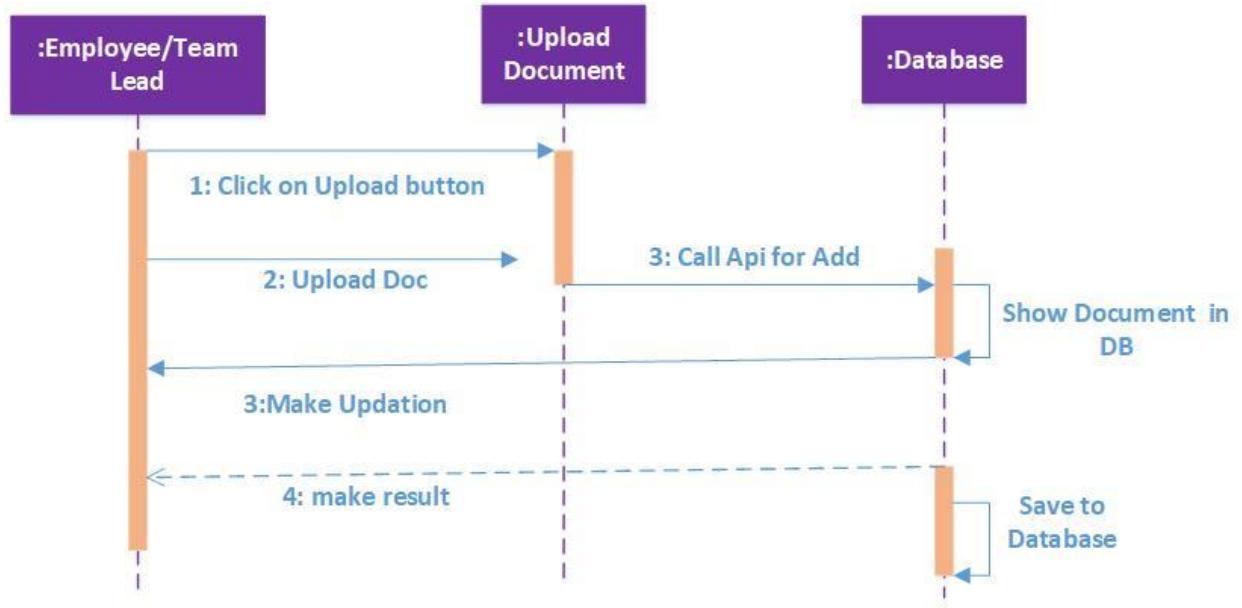
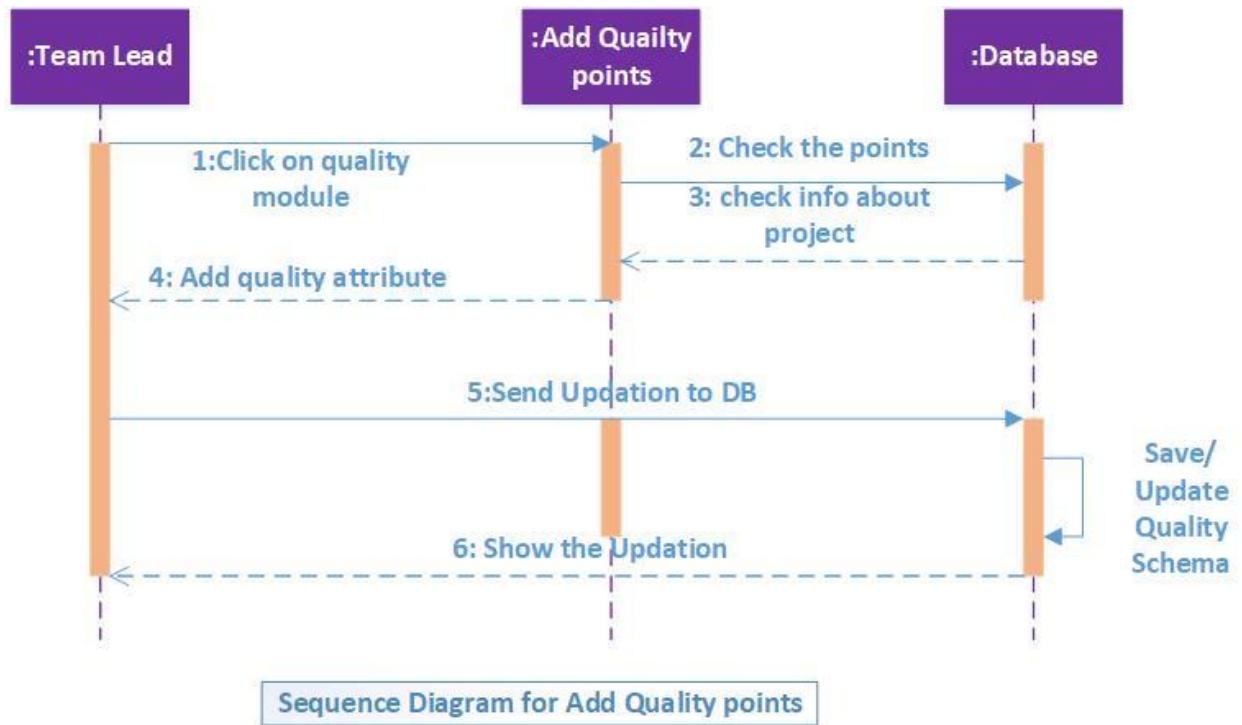


Figure 4.24: Sequence Diagram for Upload Document



Sequence Diagram for Add Quality points

Figure 4.25: Sequence Diagram for Add Quality points

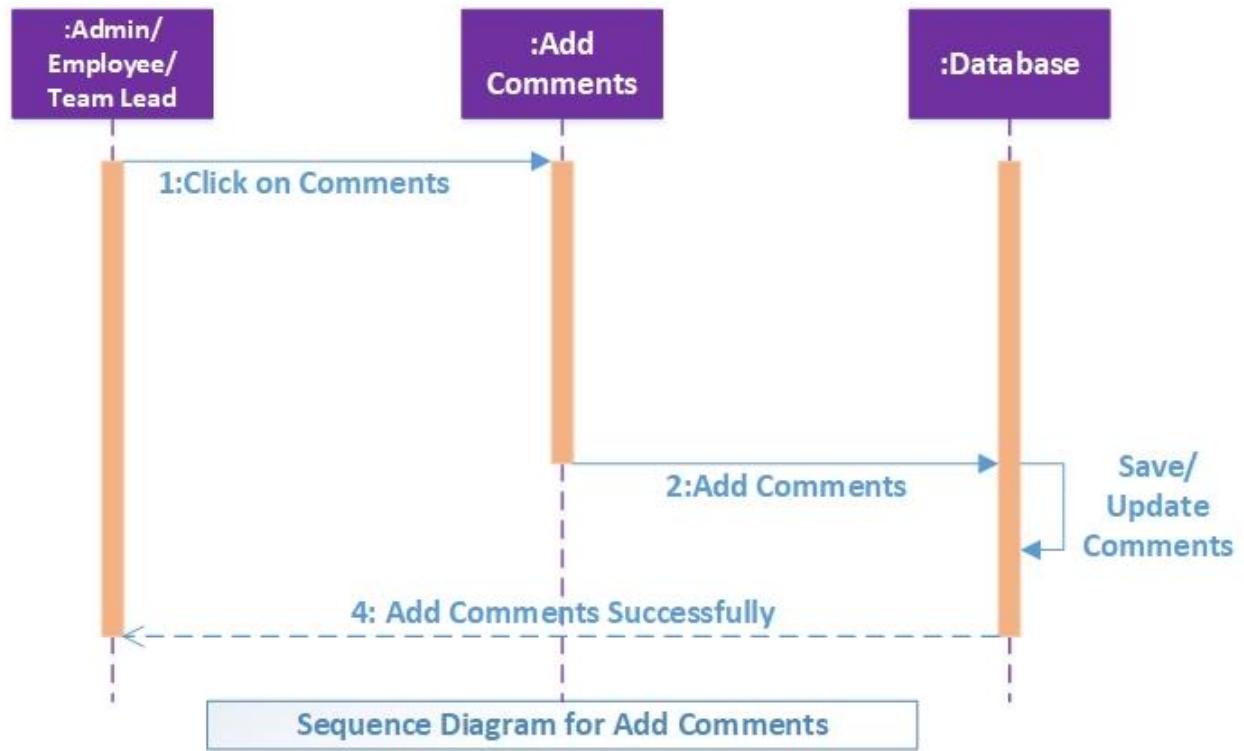


Figure 4.26: Sequence Diagram for Add Comments

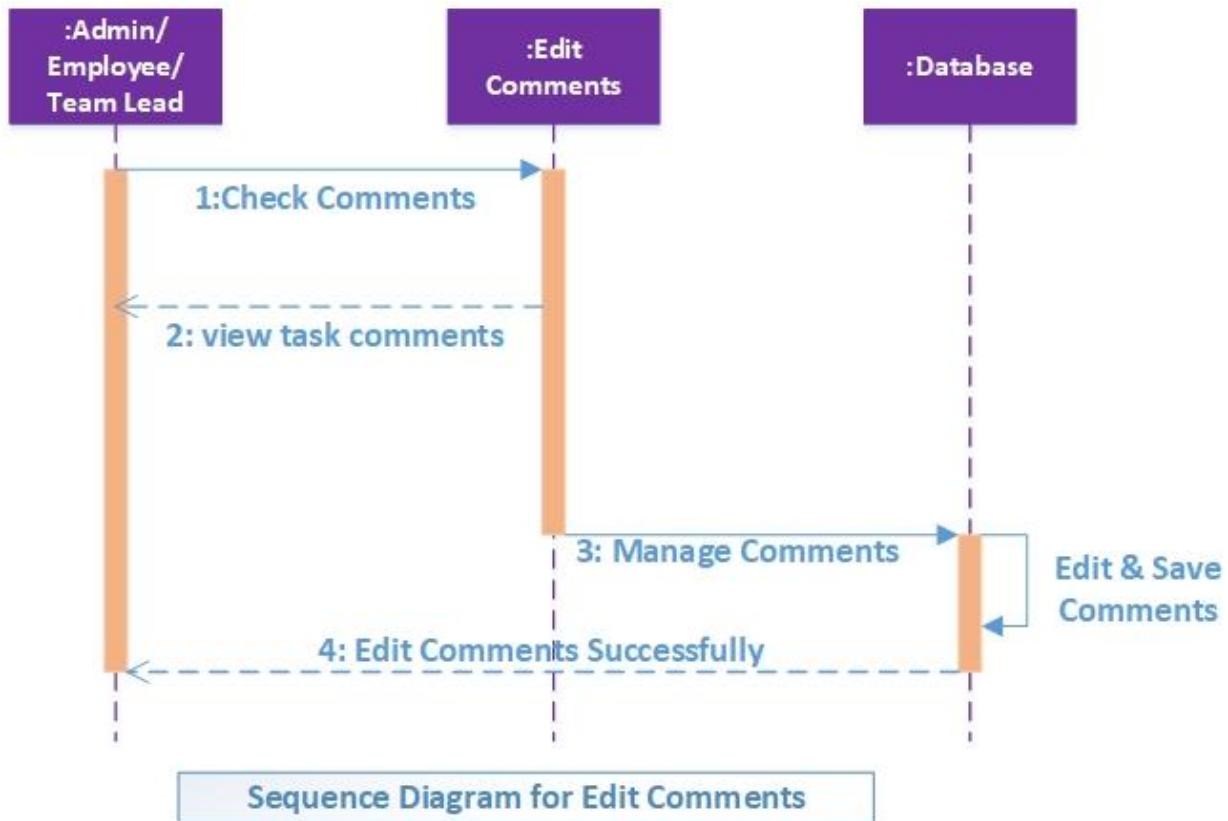


Figure 4.27: Sequence Diagram for Edit Comments

4.3 Class Diagram



Figure 4.28: Class Diagram of Intelligent Project Alliance

4.4: Milestones:

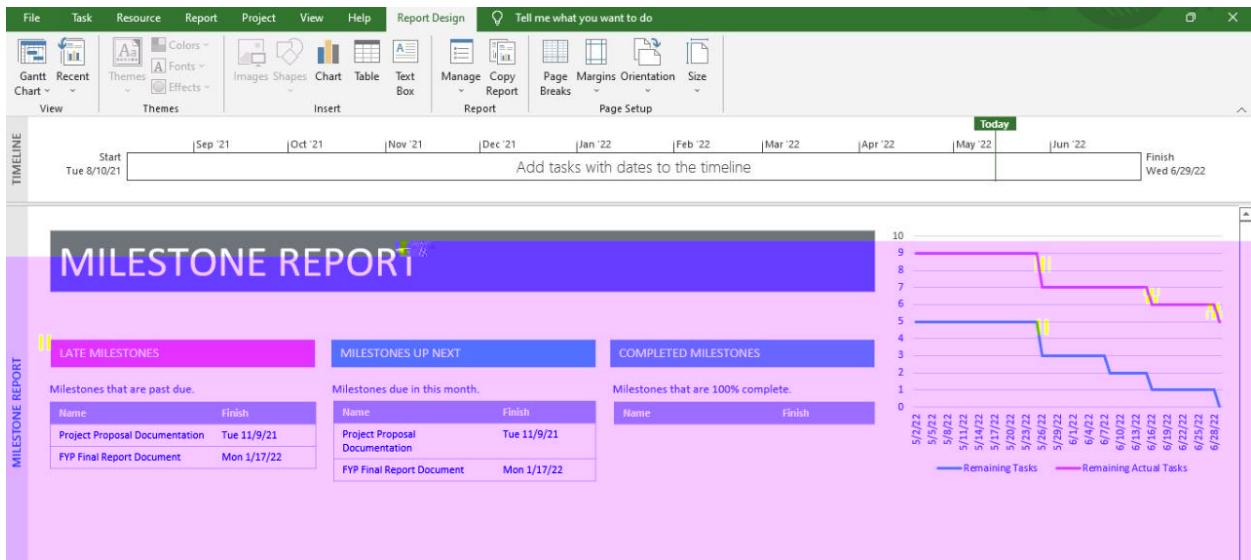
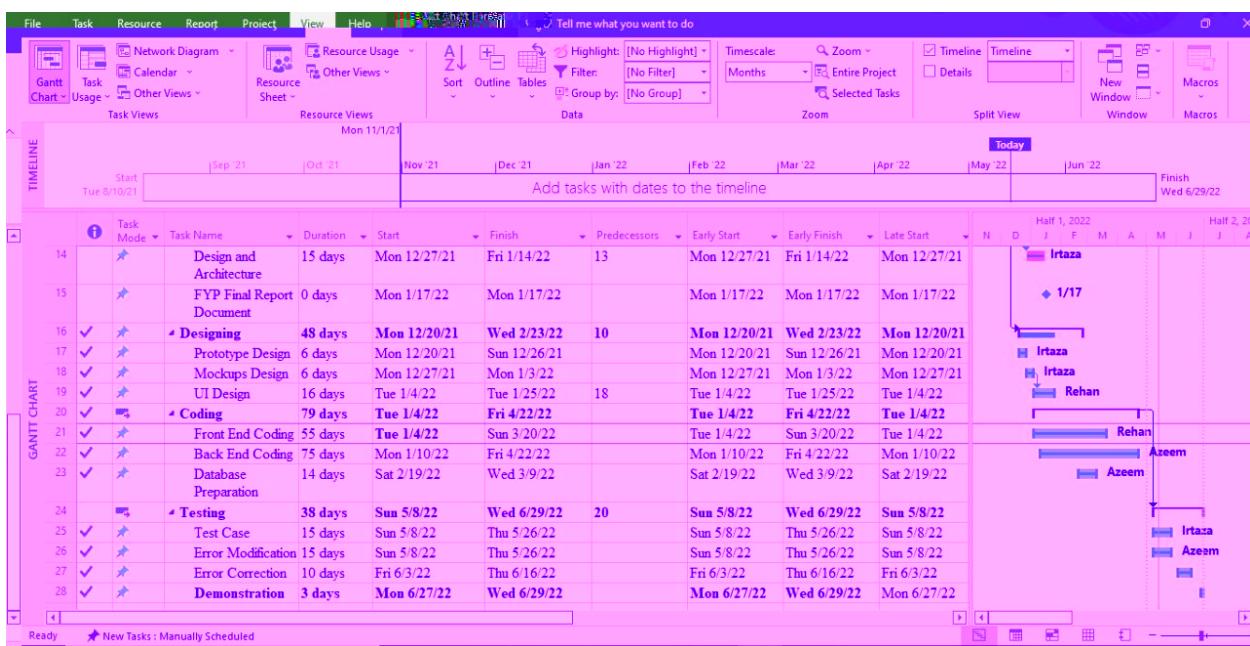
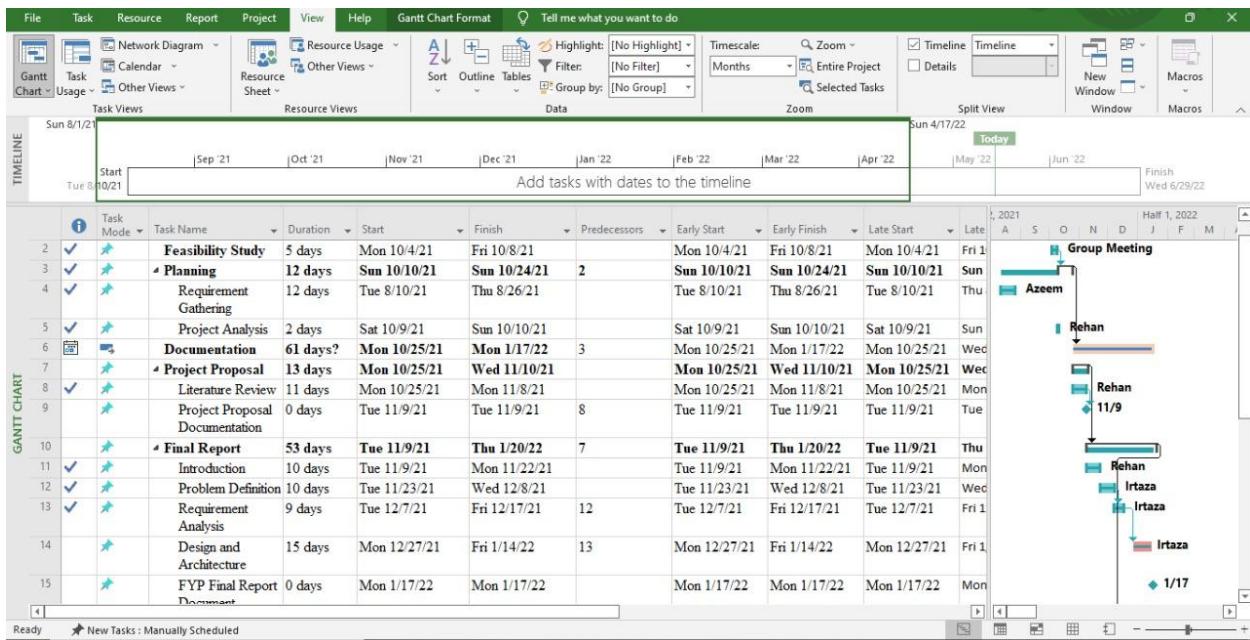


Figure 4.29: Milestone

4.4.1: Operation and management plan (Gantt Chart):



4.4.3: Project Resources

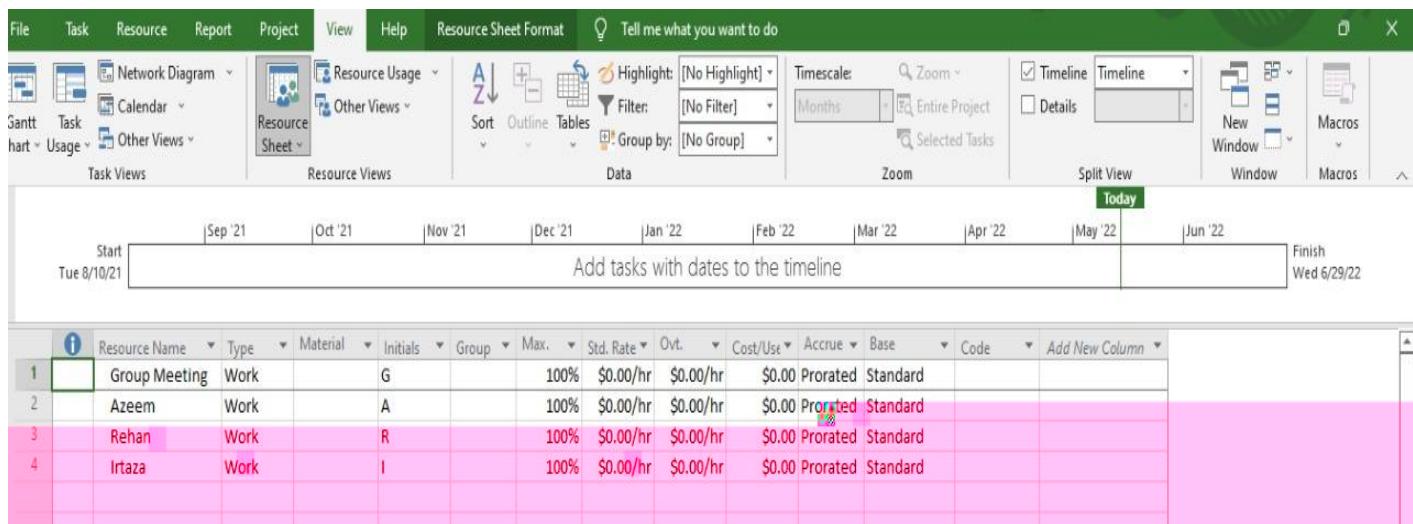


Figure 4.32: Project Resources

Chapter 5: Implementation

5.1. Component Diagram

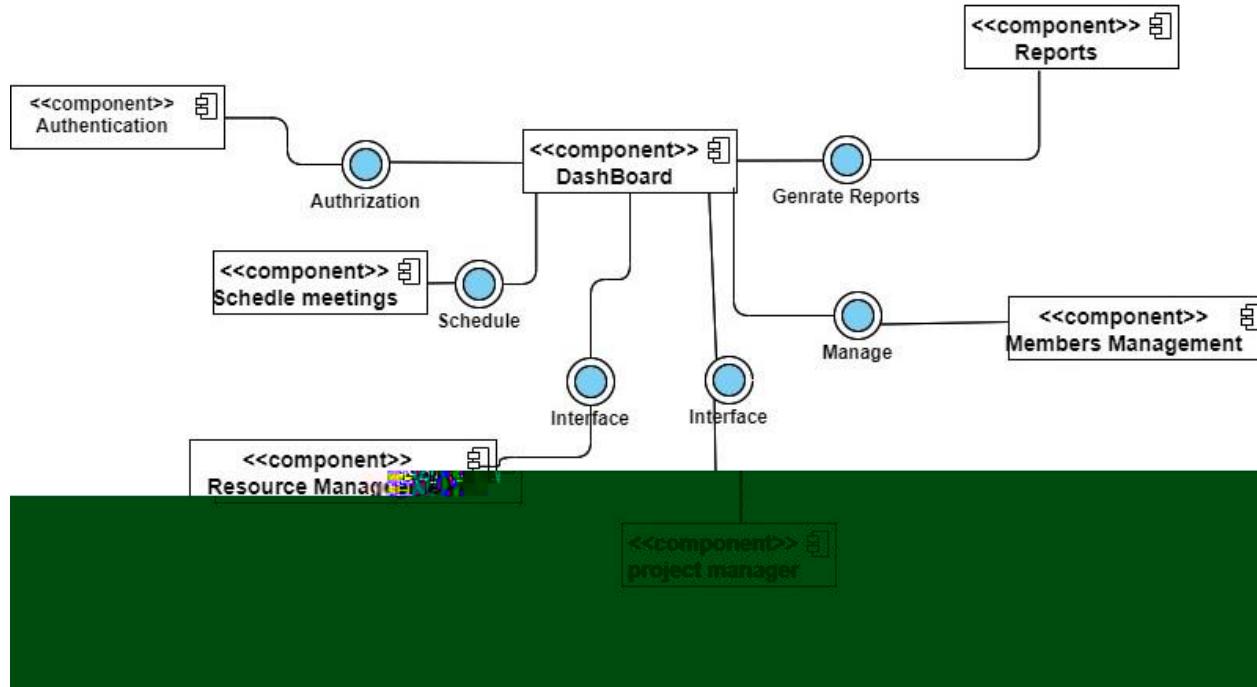


Figure 5.1: Component Diagram

Explanation:

5.2. User Interface

Splash Screen



Figure 5.2: Splash Screen

Signup

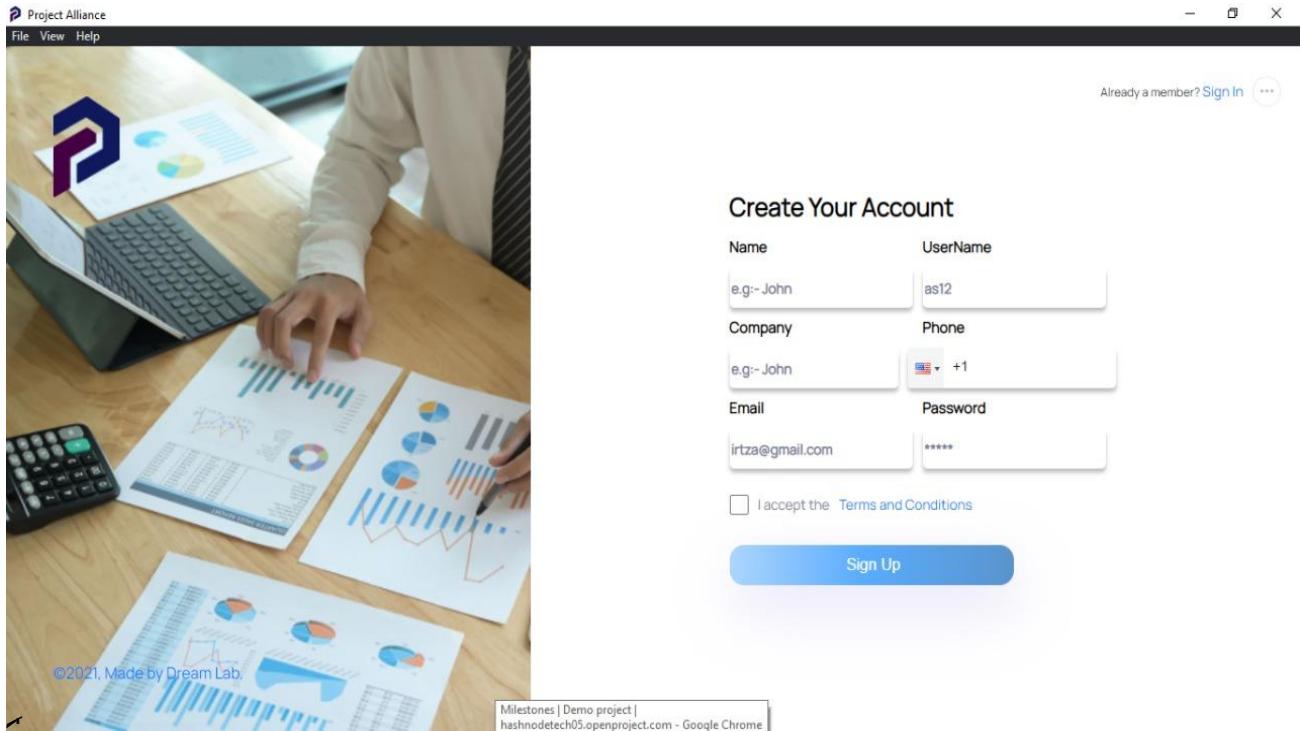


Figure 5.3: Sign Up

- 1.
- 2.
- 3.

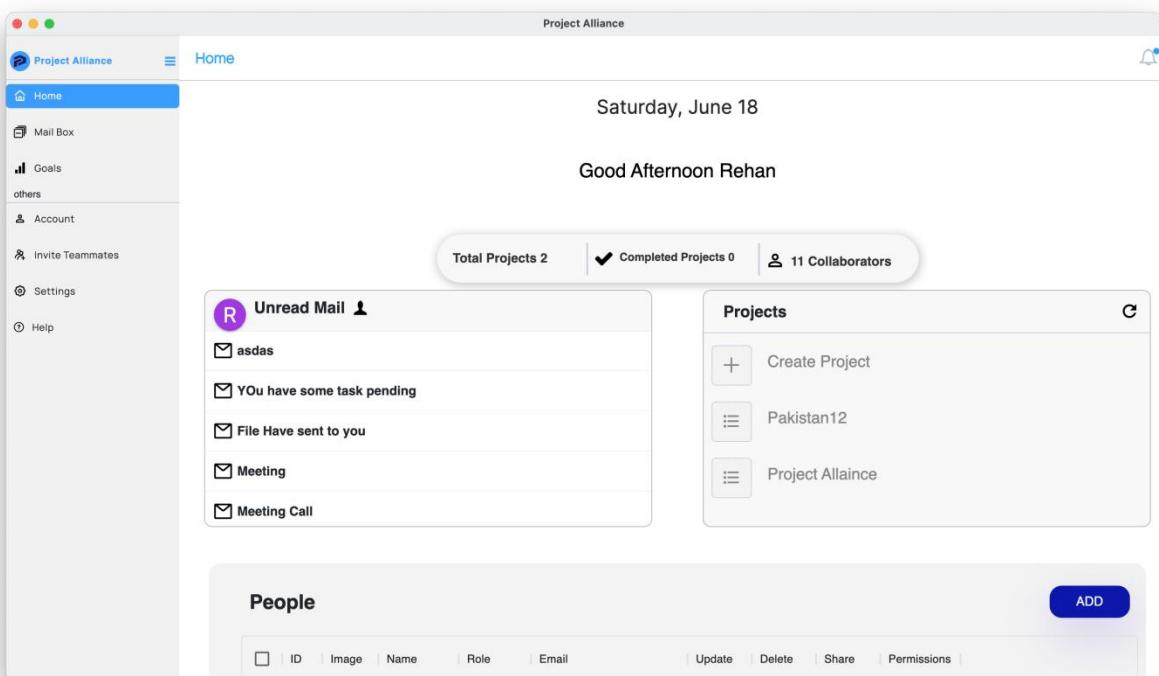


Figure 5.4: Dashboard

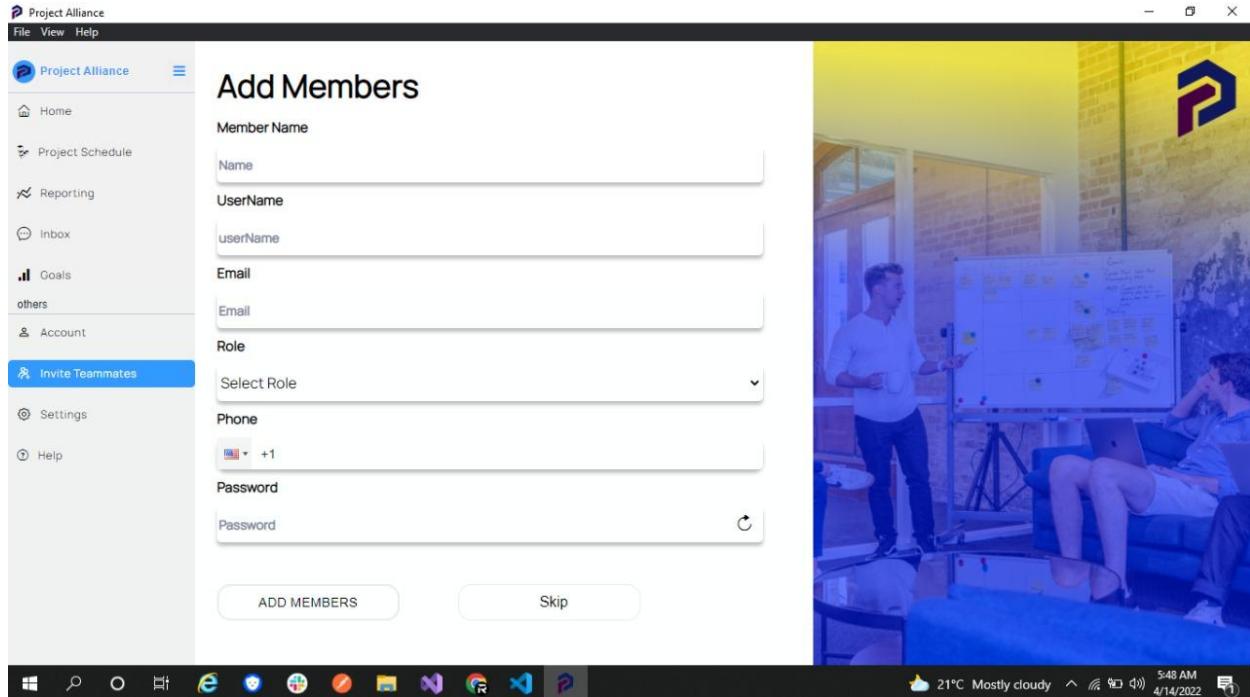


Figure 5.5: Add Member

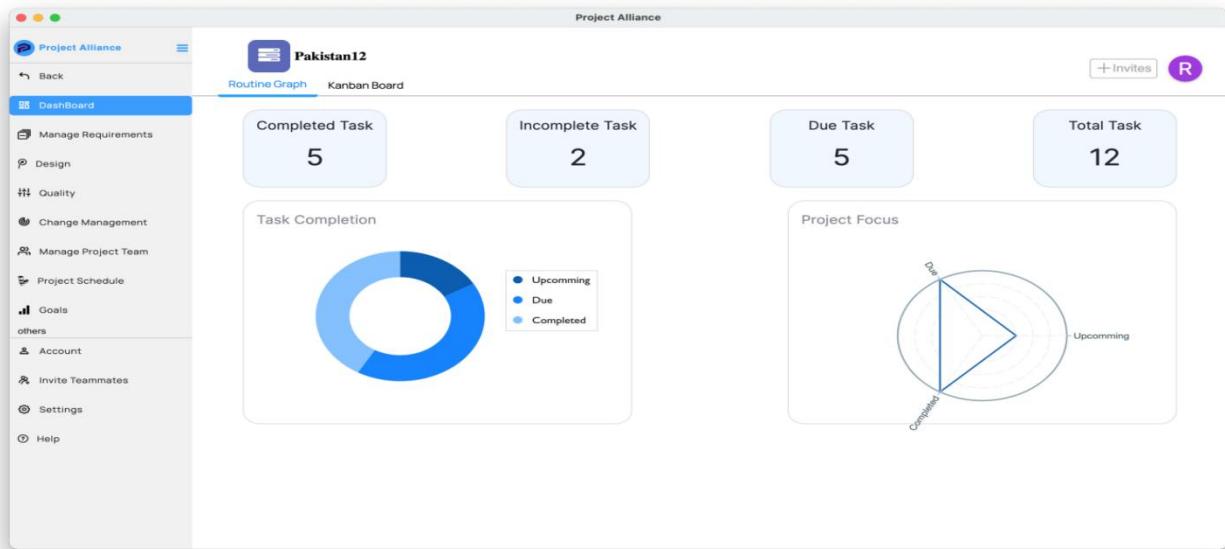


Figure 5.6:Reporting Screen

The screenshot shows the Project Alliance software interface. The top navigation bar includes 'Project Alliance' (with a logo), 'File', 'View', and 'Help'. Below the bar, there's a header with 'Project Alliance' (with a logo), 'Goals' (with a yellow flame icon), and a user profile for 'Rehan'. A search bar and a user photo are also present. On the left, a sidebar menu lists 'Home', 'Project Schedule', 'Reporting', 'Inbox', and a 'Goals' section which is currently selected (highlighted in blue). Under 'Goals', there are links for 'others', 'Account', 'Invite Teammates', 'Settings', and 'Help'. The main content area is titled 'Project Allaince' and contains a placeholder message: 'Add your company mission to align your work and stay inspired. Only members with full access can edit.' Below this, a 'Goals +' button is shown. The main list displays five items, each in a blue-bordered box:

Goal Description	Due Date
Complete your Project	2022-04-05T00:00:00
Fyp Completeion	2022-04-05T00:00:00
Complete your Project	2022-04-05T00:00:00
Fyp Completeion	2022-04-05T00:00:00
sss	0001-01-01T00:00:00
cas	0001-01-01T00:00:00

Figure 5.7: Goal Management

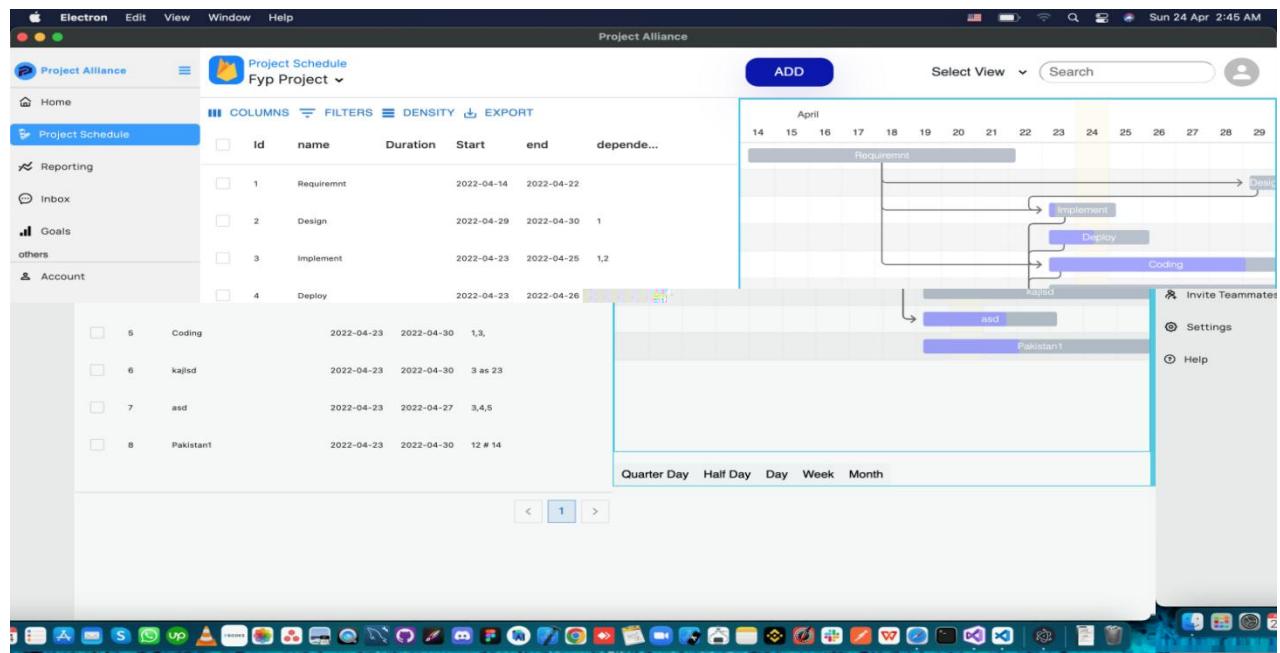


Figure 5.8: Project Schedule

start and end dates

The screenshot shows the 'Project Alliance' application interface. The title bar says 'Project Alliance'. The left sidebar has a blue header 'Project Alliance' and a list of options: Home (selected), Mail Box, Goals, others, Account, Invite Teammates, Settings, Help, and a separator line. The main area is titled 'Meeting Call' and contains a 'People' section. The 'People' section has a header with columns: ID, Image, Name, Role, Email, and buttons for Update, Delete, Share, and Permissions. Below is a table of 11 members:

ID	Image	Name	Role	Email	Update	Delete	Share	Permissions
1	Azeem	admin		as1265513@gmail.com				
2	Rehan	Moderator		rehangoraya05@gmail.c...				
3	IR	irtza	Moderator	irtza11@gmail.com				
4	HA	hassan	Member	hassan@gmail.com				
5	NA	Nadeem	Member	Nadeem@gmail.com				
6	UM	umar	Member	umar@gmail.com				
7	JD	john the don	Member	john@gmail.com				
8	MO	motu	Member	motu@gmail.com				
9	IC	Inspector ...	Member	inspector@gmail.com				
10								

At the bottom right of the table, it says '1-11 of 11' with navigation arrows.

Figure 5.9: Member Screen

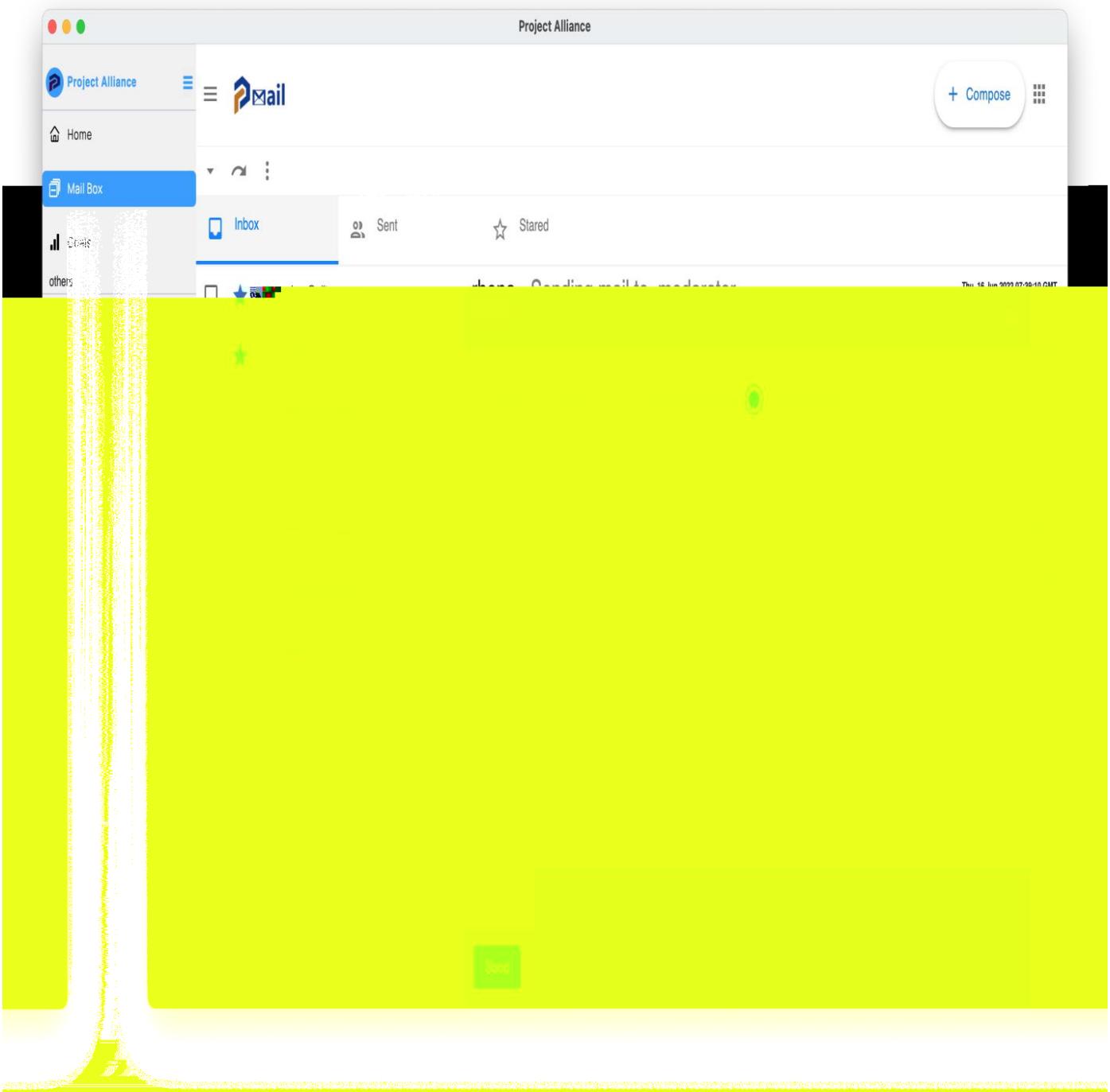


Figure 5.10: MailBox Screen

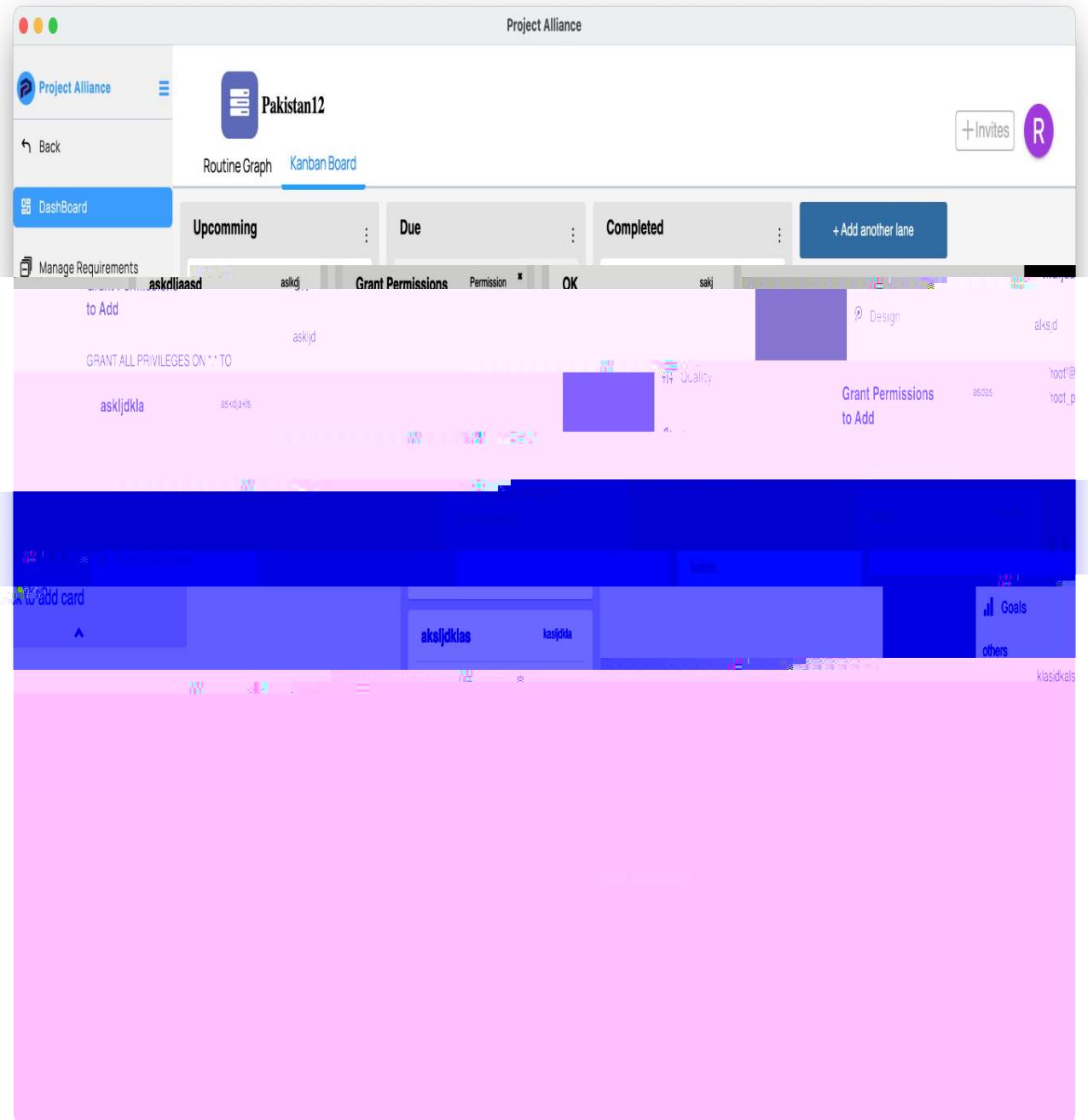


Figure 5.11: DashBoard Screen

The screenshot shows the 'Project Alliance' application interface. At the top, there is a header bar with the title 'Project Alliance' and a sub-header 'Project Team Pakistan12'. On the right side of the header is a search bar and a user profile icon. Below the header is a navigation sidebar on the left containing various project management links: 'Dashboard', 'Manage Requirements', 'Design', 'Quality', 'Change Management', 'Manage Project Team' (which is highlighted in blue), 'Project Schedule', 'Goals', 'others', 'Account', 'Invite Teammates', 'Settings', and 'Help'. The main content area displays a table titled 'Project Team' with columns: Profile Picture, Name, Email, Role, Edit, and Delete. There are six rows of data, each representing a team member:

Profile Picture	Name	Email	Role	Edit	Delete
	Azeem	as1265513@gmail.com	Requirement Engineer		
	Rehan	rehangoraya05@gmail.com	Scrum Master		
	Nadeem	Nadeem@gmail.com	Developer		
	john the don	john@gmail.com	Designer		
	motu	motu@gmail.com	Scrum Master		
	General Bajwa	bajwa@gmail.com	Business Analyst		

Figure 5.12: Add Project Team Screen

Chapter 6: Testing and Evaluation

6.1. Verification:

6.1.1. Functional Testing:

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Project Name: Intelligent Project Alliance (Desktop Application)						
Test Case 1						
Test Case ID:	01					
Test Priority (Low/Medium/High):	Test Designed Date :					
Module Name: Register User						
Test Title:	Test Execution Date :					
Description:	Register User					
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes

1	Register User					
2						
3		0				
4						
5		+ 231 2 1				
6.		0				
7.		*****				
6				.		

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 2	
Test Case ID:	02
Test Priority (Low/Medium/High):	Test Designed Date :
Module Name: Sign In User	
Test Title:	Test Execution Date :
Description:	Sign In User

Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Register User					
2						
3		0				
6.		0				
7.		*****				
6						

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 3	
Test Case ID:	03
Test Priority (Low/Medium/High):	Test Designed Date :
Module Name: Create New Project	
Test Title:	Test Execution Date :

Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1						
2					Pass	

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 4	
Test Case ID:	0
Test Priority (Low/Medium/High):	Test Designed Date :

Module Name: Manage Tasks						
Test Title:		Test Execution Date :				
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1						

Project Name: Intelligent Project Alliance (Desktop Application)

Test Case 5

Test Case ID:	0					
Test Priority (Low/Medium/High):		Test Designed Date :				
Module Name: Manage Comments						
Test Title:		Test Execution Date :				
Description:	,					
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1						

Project Name: Intelligent Project Alliance (Desktop Application)						
Test Case 6						
Test Case ID:	0					
Test Priority (Low/Medium/High):	Test Designed Date :					
Module Name: Update Project						
Test Title:	Test Execution Date :					
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Update Project				Pass	

Project Name: Intelligent Project Alliance (Desktop Application)						
Test Case 7						
Test Case ID:	0					

Test Priority (Low/Medium/High):		Test Designed Date :				
Module Name: Manage Schedule						
Test Title:		Test Execution Date :				
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Manage Schedule					
2						

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 8	
Test Case ID: 0	
Test Priority (Low/Medium/High):	Test Designed Date :

Module Name: Manage Members						
Test Title:		Test Execution Date :				
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Manage Members					
2						

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 9	
Test Case ID:	0
Test Priority (Low/Medium/High):	Test Designed Date :

Module Name: Upload Requirement						
Test Title:		Test Execution Date :				
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Add requirement					
2						

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 10	
Test Case ID:	10
Test Priority (Low/Medium/High):	Test Designed Date :
Module Name: Edit/Update Requirement	

Test Title:			Test Execution Date :			
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1					Pass	

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 11	
Test Case ID:	11
Test Priority (Low/Medium/High):	Test Designed Date :
Module Name: Update on Tasks	
Test Title:	Test Execution Date :

Description: /						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Update Tasks					
2						

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 12	
Test Case ID:	12
Test Priority (Low/Medium/High):	Test Designed Date :
Module Name: Add Document	

Test Title:		Test Execution Date :				
Description:						
Pre-Condition:						
Dependencies:						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Upload Document					
2						

Project Name: Intelligent Project Alliance (Desktop Application)	
Test Case 13	
Test Case ID:	13

Test Priority (Low/Medium/High):		Test Designed Date :				
Module Name: Add Quality points						
Test Title:		Test Execution Date :				
Description:						
Pre-Condition: “Add quality module”						
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Quality Attribute				Pass	

6.1.2. Static testing:

6.2. Validation:

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6.3. Usability Testing:

Usability Testing

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6.4. Module/Unit Testing:

6.5. Integration Testing:

Integration Testing

6.6. System Testing:

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6.7. Acceptance testing:

6.8. Stress Testing:

Stress Testing &

6.9. Evaluation:

6.10. Deployment:

6.11. Maintenance:

Chapter 7: Conclusion and Future Work

7.1. Conclusion

7.2. Future Work

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1.7. References:

1. _____ // _____ . _____ /
2. _____ // _____ . _____ . _____ / _____ / _____
3. _____ // _____ . _____ . _____ / _____ / _____ - _____ - _____