



islington college

(इस्लिंग्टन कॉलेज)

Module Code & Module Title

CC6012NI Data and Web Development

40% Individual Coursework

Submission: Final Submission

AY: 2024/25

Credit: 30 credit Year long module

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Assignment Due Date: Wednesday, March 26, 2025

Assignment Submission Date: Wednesday, March 26, 2025

Submitted To: Mr. Lekhnath Katuwal

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1. Introduction

The following coursework embodies the full development process of a project management system database. The system operates to monitor different organizational entities by tracking projects together with their users as well as tasks and subtasks and milestones and resources and comments through workflow processes.

The database implementation followed a systematic approach of normalization which started by converting the data into Unnormalized Form (UNF) until reaching First Normal Form (1NF) then Second Normal Form (2NF) to achieve the final stage of Third Normal Form (3NF). The methodical details of this procedure used to normalize the database eradicate duplications and eliminate anomalies while constructing steady entity connections.

The designers created the relational schema by examining multiple entity relationships thoroughly which included many users per project and multiple project-tasks and user-tasks relationships. The system design incorporated multiple essential components for managing user data uniqueness while developing task relations correctly with defined project milestones and resource allocation features.

Database normalization yielded a refined structure which upholds data consistency and enhances storage efficiency together with performance speed during queries. The foundation allows the system to deliver diverse reporting options and reports which supports complete project management operations.

2. Contextual Analysis

- **For User and Project**

Each user is assigned to one to multiple projects.

A project can be assigned to one or multiple users.

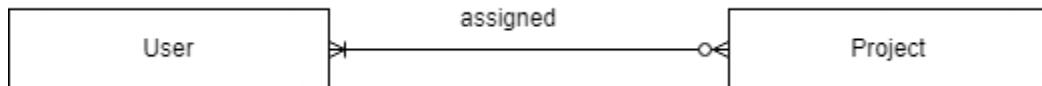


Figure 1 User and Project relationship

- **For Project and Task**

Each project contains one or multiple tasks.

A task belongs to one or multiple projects.

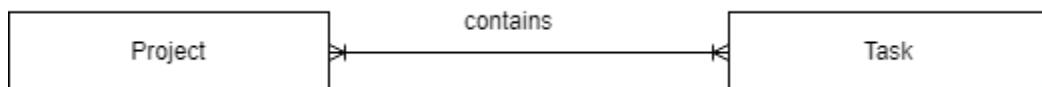


Figure 2 Project and Task Relationship

- **For User and Task**

Each user is assigned to one or multiple tasks.

A task can be assigned to one or multiple users.

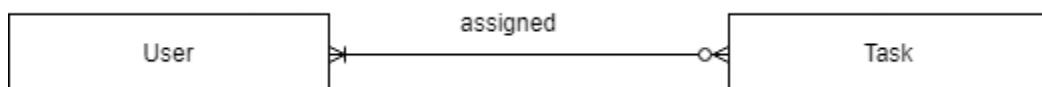


Figure 3 User and Task relationship

- **For Task and Subtask**

Each Task consists of one or multiple subtasks.

A Subtask belongs to only one Task.

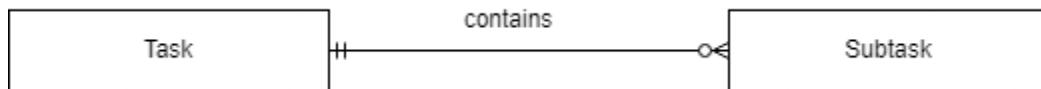


Figure 4 Task and Subtask relationship

- **For Task Comment**

A task receives one or multiple comments.

A comment belongs specifically to one task

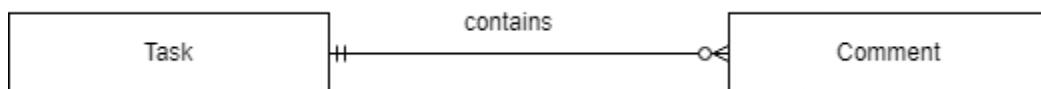


Figure 5 Task and Subtask relationship

- **For Task and Resources**

A task requires one or multiple resources.

A resource belongs to only one task

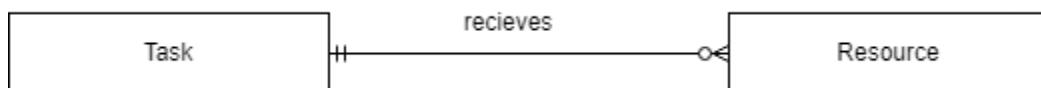


Figure 6 Task and Resources relationship

- **For Task and Milestone**

A task includes one or multiple milestones.

A milestone is related to only one task

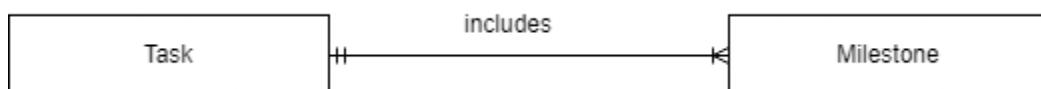


Figure 7 Task and Milestone relationship

- **For Project and Milestone**

A project consists of one or multiple milestones.

A milestone belongs to a specific project.

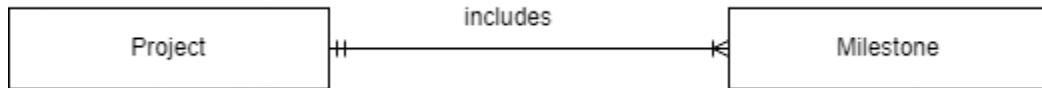


Figure 8 Project and Milestone relationship

- **For User and Subtask**

A user is assigned to one or multiple subtasks.

A subtask belongs to a specific user.

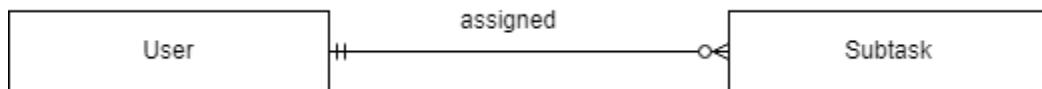


Figure 9 User and Subtask Relationship

- **For User and Comment**

A user may give one or multiple comments.

A comment belongs to one user.



Figure 10 User and Comment relationship

3. Entity relationship Diagram

The entity relationship diagram according to the scenario is provided below.

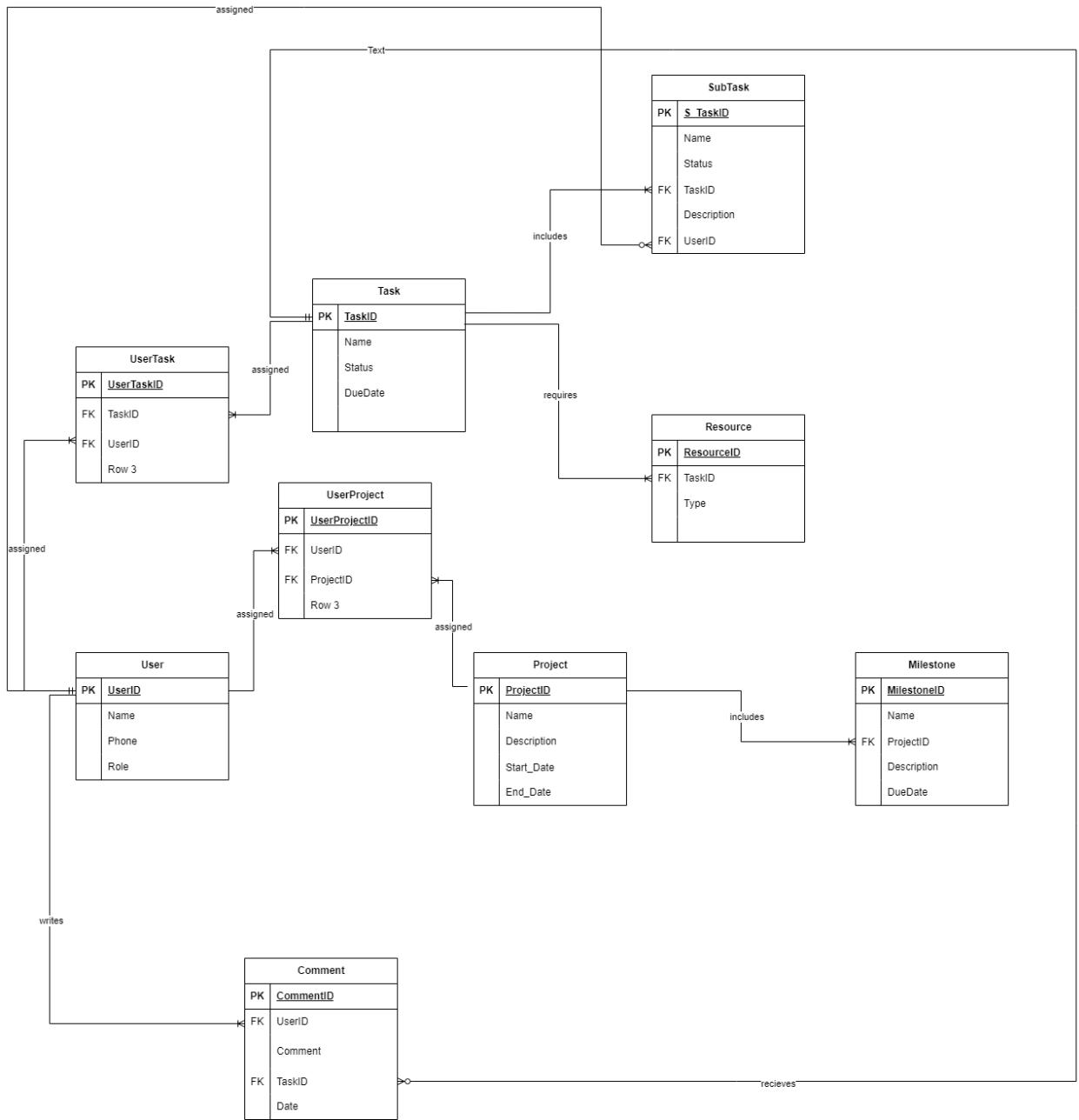


Figure 11 ERD based of scenario

4. Normalization

UNF

User-Details – (UserID, Username, UserEmail, UserContact,
{ProjectID, ProjectName, ProjectStartDate, ProectDueDate, ProjectStatus, UserRole
{TaskID, TaskName, StartDate, DueDate, Status}
})

Assumptions: One User can be assigned to one or more project.

One Project can be assigned to one or more User.

One Project has one or more task.

One task is related to only on project.

1NF

While moving from **UNF** to **1NF** we remove the **repeating groups** and relate each table using **foreign keys**.

User-Details1 – (UserID, Username, UserEmail, UserContact)

User-Project-Details-1 – (UserProjectID, ProjectID, UserID*, ProjectName,
ProjectStartDate, ProjectDueDate, ProjectStatus, UserRole)

Project-Task-Details-1 – (TaskID, UserProjectID*, TaskName, StartDate, DueDate,
Status)

Here we made a surrogate key **UserProjectID** in the table **User-Project-Details** and hence **ProjectID** is now a non-key attribute.

2NF

For a table to be at **2NF** it should contain any **partial functional dependency**. We check this in tables that have **composite key** and a **non-key**.

Since **User-Details1** and **User-Project-Details** table does not contain a composite key and a non-key attribute it is already in **2NF**.

User-Details2 – (UserID, Username, UserEmail, UserContact)

User-Project-Details-1 – (UserProjectID, ProjectID, UserID*, ProjectName, ProjectStartDate, ProjectDueDate, ProjectStatus, UserRole)

Now, we check for partial dependency in **Project-Task-Details**.

TaskID, UserProjectId – X

TaskID – TaskName, StartDate, DueDate, Status

UserProjectId - X

After checking for partial dependency, we have the following tables:

User-Project-TaskDetails-2 – (TaskID*, UserProjectId*)

Task-Details-2 – (TaskID, TaskName, StartDate, DueDate, Status)

3NF

While going from **2NF** to **3NF** we check for **transitive dependency**. This means a non-key value should only be dependent on primary key and not with other non-keys.

We check for transitive dependency in **UserDetails1**.

UserID → **Username** → X

UserID → **UserEmail** → X

UserID → **UserContact** → X

While checking for **transitive dependency** we found that it is not present in **UserDetails1**.

Hence it automatically moves to **3NF**.

Similarly, we check for transitive dependency in **User-Project-Details**.

User-Project-Details-1 – (**UserProjectID**, ProjectID, UserID*, ProjectName, ProjectStartDate, ProjectDueDate, ProjectStatus, UserRole)

UserProjectID → UserID → X

UserProjectID → UserRole → X

UserProjectID → ProjectID → ProjectName, ProjectStartDate, ProjectDueDate, ProjectStatus,

Hence, it gives the following table:

ProjectDetails 3 – ProjectID, ProjectName, ProjectStartDate, ProjectDueDate, ProjectStatus,

UserProjectDetails 3 – **UserProjectId**, ProjectId*, UserId*, UserRole

Similarly, we check for transitive dependency in **User-Project-TaskDetails**.

TaskID ProjectID UserID → 

While checking for **transitive dependency** we found that it is not present in **User-Project-TaskDetails**. Hence it automatically moves to **3NF**.

Similarly, we check for transitive dependency in **Task-Details**.

TaskID → **TaskName** → 

TaskID → **StartDate** → 

TaskID → **DueDate** → 

TaskID → **Status** → 

While checking for **transitive dependency** we found that it is not present in **Task-Details**. Hence it automatically moves to **3NF**.

Therefore, after **3NF** the final table are as follows:

User-Details1 – (UserID, Username, UserEmail, UserContact)

ProjectDetails 3 – (ProjectID, ProjectName, ProjectStartDate, ProjectDueDate, ProjectStatus)

UserProjectDetails 3 – (UserProjectId, ProjectId*, UserId*, UserRole)

User-Project-TaskDetails – (TaskID*, UserProjectId*,)

Task-Details – (TaskID, TaskName, StartDate, DueDate, Status)

5. Integration and Assumptions

Integration Aspects

- Seven main database entities which make up the schema include User along with Project and Task and Subtask together with Comment and Resource and Milestone.
- The UserProjectDetails table maintains additional project role settings among the User-Project relationship through its many-to-many connectivity.
- The User-Project-Task relationship provides unique user-project assignments to the three-way mapping tracked in User-Project-TaskDetails.
- The schema utilizes surrogate keys known as UserProjectID that enhance both relation management and improve query execution speeds.
- Referential integrity is established between all entity relations through foreign key relationships that maintain proper connectivity.
- Duplicate data has been eliminated through normalization while every required link between database objects has been maintained.

Key Assumptions

- Each user can be assigned to multiple projects with different roles in each project.
- Each user's email and contact information must be unique within the system.
- A task belongs to exactly one project but can be assigned to multiple users.
- Projects can contain multiple tasks, and task status tracking is independent of project status.
- Each subtask belongs to exactly one task and is assigned to exactly one user.

- Comments are tied to specific tasks and are created by specific users, providing clear accountability.
- Resources are allocated at the task level, and a single resource can only be assigned to one task at a time.
- Milestones are associated with specific projects rather than individual tasks, allowing for project-wide progress tracking.
- User roles are stored at the project level rather than the system level, allowing users to have different roles in different projects.
- Tasks cannot exist independently of projects, maintaining data integrity throughout the system.
- The system doesn't restrict the number of subtasks per task or comments per task, allowing for flexible project structures.
- User-project assignments must exist before tasks can be assigned, enforcing proper project management hierarchy.
- Task dates may overlap with project dates but should logically fall within the project timeline.
- Status fields across entities use consistent value sets to ensure meaningful reporting across the system.

6. Final ERD

Below is the screenshot of the Final ERD which was made using sql developer.

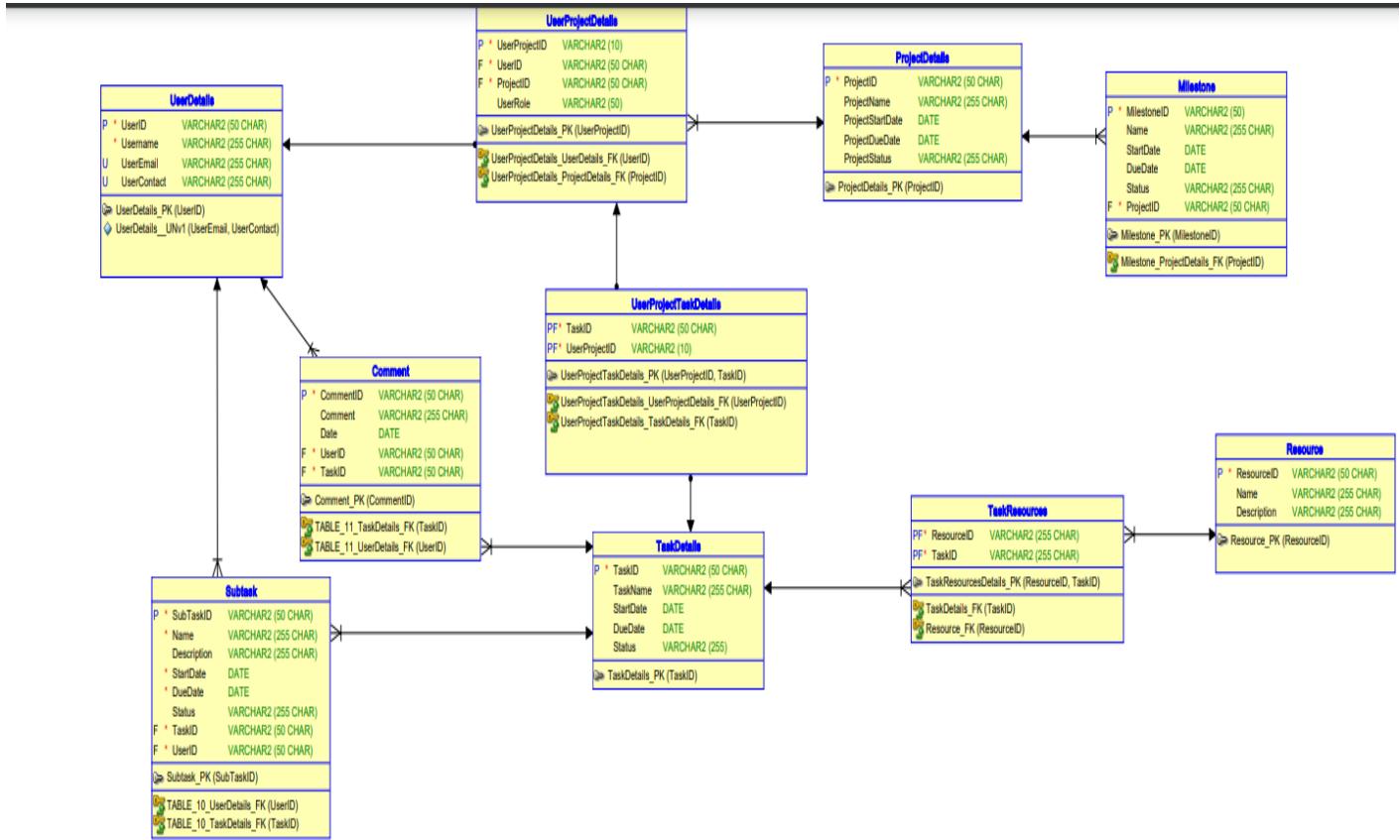


Figure 12 Final ERD

7. Data Dictionary

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
ResourceID	Varchar2	255	Composite Key			Uniquely identifies each resources in the database.	R-01
TaskID	Varchar2	255	Composite Key			Uniquely identifies each Task in the database	T-01

Figure 13 Data dictionary for TaskResources

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
TaskID	Varchar2	50	Composite Key			Gives the Task ID value which uniquely identifies a task	T-01
UserProjectID	Varchar2	10	Composite Key			Gives the UserProjectID which gives the value for User and the Project they are associated with	UP-01

Figure 14 Data dictionary for UserProject Task

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
ResourceID	Varchar2	50	Primary Key			Uniquely identifies each resources in the database.	R-01
Name	Varchar2	255	Not Null			The name of the resource, which cannot be null	Fan
Description	Date	255	Not Null			Gives the information about the resource	Keeps the devices cool

Figure 15 Data dictionary for Resource

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
SubtaskID	Varchar2	50	Primary Key			Uniquely identifies each project in the database.	st-01
Name	Varchar2	255	Not Null			Project name, which cannot be null	Form Validation
Description	Varchar2	255	Not Null			Gives the description of the task	Create dashboard UI
StartDate	Date		Not Null			Gives the start date of the project	Dec 1, 2025
DueDate	Date		Not Null			Gives the project deadline date	Dec 9, 2025
Status	Varchar2	255	Not Null			Gives information about the task progress.	Delayed
TaskID	Varchar2	50	Foreign Key	Task Details	TaskID	The subtask belongs to which Task	T-01
UserID	Varchar2	50	Foreign Key	UserDetails	UserID	Which user is associated with the subtask	U1

Figure 16 Data dictionary for Subtask

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
TaskID	Varchar2	10	Primary Key			Uniquely identifies each tasks in the database.	T-01
TaskName	Varchar2	255	Not Null			Task name, which cannot be null	Login Page Design
StartDate	Date		Not Null			When the task started	March 1, 2025
DueDate	Date		Not Null			Deadline of the Task	May 1, 2025
Status	Varchar2	255	Not Null			Whether it is completed, delayed or in progress	In progress

Figure 17 Data dictionary for Task

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
CommentID	Varchar2	50	Primary Key			Uniquely identifies each comment in the database.	C-01
Comment	Varchar2	255	Not Null			Comment made by the user, which cannot be null	Task completed
Date	Date		Not Null			When the comment was made	Jan 1, 2025
UserID	Varchar2		Foreign Key	UserDetails	UserID	Which user made the comment	U1
TaskID	Varchar2	50	Foreign Key	TaskDetails	TaskID	The comment was made on which task	T-01

Figure 18 Data dictionary for Comment

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
UserID	Varchar2	50	Foreign Key	UserDetails	UserID	Uniquely identifies each project in the database.	U1
ProjectID	Varchar2	50	Foreign Key	ProjectDetails	ProjectID	Project name, which cannot be null	P-01
UserProjectDetails	Varchar2	50	Primary Key			Gives the information of the project: Completed, Delayed or Inprogress	UP-01
UserRole	Varchar2	40	Not Null				Project Manager

Figure 19 Data dictionary for UserProjectDetails

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
MilestoneID	Varchar2	50	Primary Key			Uniquely identifies each project in the database.	U1
Name	Varchar2	255	Not Null			Project name, which cannot be null	Attendance System
StartDate	Date		Not Null			Gives the information of the project: Completed, Delayed or Inprogress	Completed
DueDate	Date		Not Null			Gives the start date of the project	Dec 1, 2025
Status	Varchar2	255	Not Null			Gives the project deadline date	Dec 9, 2025
ProjectID	Varchar2	255	Foreign Key	ProjectDetails	ProjectID	Gives us the information about which milestone is associated with which project	P-01-Attendance System

Figure 20 Data dictionary for Milestone

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
ProjectID	Varchar2	50	Primary Key			Uniquely identifies each project in the database.	P-01
ProjectName	Varchar2	255	Not Null			Project name, which cannot be null	Attendance System
ProjectStartDate	Date		Not Null			Gives the project Start Date	Nov 1, 2025
ProjectDueDate	Date		Not Null			Gives the project deadline date	Dec 1, 2025
ProjectStatus	Varchar2	255	Not Null			Gives the status of the project if it is completed, delayed or inprogress.	In progress

Figure 21 Data dictionary for Project

Column Name	Data Type	Size	Constraint	Reference Table	Reference Column	Description	Example Data
ID	Varchar2	50	Primary Key			Uniquely identifies the user in the database.	U1
Username	Varchar2	255	Not Null			Name of the user which cannot be null	Nishan Thapa
UserEMail	Varchar2	255	Unique			Email of the user , must be unique for each user.	trishan110@gmail.com
UserContact	Varchar2	255	Unique			Contact number of the userwhich will be unique as well	9861858040

Figure 22 Data dictionary for User

8. Script

```
CREATE TABLE "Comment"
```

```
(
```

```
CommentID VARCHAR2 (50 CHAR) NOT NULL ,
```

```
"Comment" VARCHAR2 (255 CHAR) ,
```

```
"Date" DATE ,
```

```
UserID VARCHAR2 (50 CHAR) NOT NULL ,
```

```
TaskID VARCHAR2 (50 CHAR) NOT NULL
```

```
)
```

```
;
```

```
ALTER TABLE "Comment"
```

```
ADD CONSTRAINT Comment_PK PRIMARY KEY ( CommentID ) ;
```

```
CREATE TABLE Milestone
```

```
(
```

```
MilestoneID VARCHAR2 (50) NOT NULL ,
```

```
Name VARCHAR2 (255 CHAR) ,
```

```
StartDate DATE ,
```

```
    DueDate      DATE ,  
  
    Status       VARCHAR2 (255 CHAR) ,  
  
    ProjectID   VARCHAR2 (50 CHAR) NOT NULL  
  
)  
  
;
```

```
ALTER TABLE Milestone  
  
ADD CONSTRAINT Milestone_PK PRIMARY KEY ( MilestoneID ) ;
```

```
CREATE TABLE ProjectDetails  
  
(  
  
    ProjectID   VARCHAR2 (50 CHAR) NOT NULL ,  
  
    ProjectName  VARCHAR2 (255 CHAR) ,  
  
    ProjectStartDate DATE ,  
  
    ProjectDueDate DATE ,  
  
    ProjectStatus VARCHAR2 (255 CHAR)  
  
)
```

```
;
```

```
ALTER TABLE ProjectDetails
```

```
ADD CONSTRAINT ProjectDetails_PK PRIMARY KEY ( ProjectID ) ;
```

```
CREATE TABLE "Resource"
```

```
(
```

```
    ResourceID  VARCHAR2 (50 CHAR) NOT NULL ,
```

```
    Name        VARCHAR2 (255 CHAR) ,
```

```
    Description VARCHAR2 (255 CHAR)
```

```
)
```

```
;
```

```
ALTER TABLE "Resource"
```

```
ADD CONSTRAINT Resource_PK PRIMARY KEY ( ResourceID ) ;
```

```
CREATE TABLE Subtask
```

```
(
```

```
    SubTaskID   VARCHAR2 (50 CHAR) NOT NULL ,
```

```
    Name        VARCHAR2 (255 CHAR) NOT NULL ,
```

```
    Description VARCHAR2 (255 CHAR) ,
```

```
    StartDate   DATE NOT NULL ,
```

```
    DueDate     DATE NOT NULL ,
```

```
    Status      VARCHAR2 (255 CHAR) ,  
  
    TaskID     VARCHAR2 (50 CHAR) NOT NULL ,  
  
    UserID      VARCHAR2 (50 CHAR) NOT NULL  
  
)  
  
;
```

```
ALTER TABLE Subtask  
  
ADD CONSTRAINT Subtask_PK PRIMARY KEY ( SubTaskID ) ;
```

```
CREATE TABLE TaskDetails  
  
(  
  
    TaskID     VARCHAR2 (50 CHAR) NOT NULL ,  
  
    TaskName   VARCHAR2 (255 CHAR) ,  
  
    StartDate  DATE ,  
  
    DueDate    DATE ,  
  
    Status     VARCHAR2 (255)  
  
)
```

```
;
```

```
ALTER TABLE TaskDetails
```

```
ADD CONSTRAINT TaskDetails_PK PRIMARY KEY ( TaskID ) ;
```

```
CREATE TABLE TaskResources
```

```
(  
    ResourceID VARCHAR2 (255 CHAR) NOT NULL ,  
    TaskID      VARCHAR2 (255 CHAR) NOT NULL  
)
```

```
;
```

```
ALTER TABLE TaskResources
```

```
ADD CONSTRAINT TaskResourcesDetails_PK PRIMARY KEY ( ResourceID, TaskID ) ;
```

```
CREATE TABLE UserDetails
```

```
(  
    UserID      VARCHAR2 (50 CHAR) NOT NULL ,  
    Username   VARCHAR2 (255 CHAR) NOT NULL ,  
    UserEmail  VARCHAR2 (255 CHAR) ,  
    UserContact VARCHAR2 (255 CHAR)  
)
```

```
;
```

```
ALTER TABLE UserDetails
```

```
ADD CONSTRAINT UserDetails_PK PRIMARY KEY ( UserID ) ;
```

```
ALTER TABLE UserDetails
```

```
ADD CONSTRAINT UserDetails__UNv1 UNIQUE ( UserEmail , UserContact ) ;
```

```
CREATE TABLE UserProjectDetails
```

```
(
```

```
UserProjectID VARCHAR2 (10) NOT NULL ,
```

```
UserID      VARCHAR2 (50 CHAR) NOT NULL ,
```

```
ProjectID   VARCHAR2 (50 CHAR) NOT NULL ,
```

```
UserRole    VARCHAR2 (50)
```

```
)
```

```
;
```

```
ALTER TABLE UserProjectDetails
```

```
ADD CONSTRAINT UserProjectDetails_PK PRIMARY KEY ( UserProjectID ) ;
```

```
CREATE TABLE UserProjectTaskDetails
```

```
(  
    TaskID      VARCHAR2 (50 CHAR) NOT NULL ,  
  
    UserProjectID VARCHAR2 (10) NOT NULL  
)  
;  
  
ALTER TABLE UserProjectTaskDetails  
ADD CONSTRAINT UserProjectTaskDetails_PK PRIMARY KEY ( UserProjectID, TaskID )  
;
```

```
ALTER TABLE Milestone  
ADD CONSTRAINT Milestone_ProjectDetails_FK FOREIGN KEY  
(  
    ProjectID  
)  
REFERENCES ProjectDetails  
(  
    ProjectID  
)  
;
```

```
ALTER TABLE TaskResources  
ADD CONSTRAINT Resource_FK FOREIGN KEY  
(  
    ResourceID  
)  
REFERENCES "Resource"  
(  
    ResourceID  
)  
;
```

```
ALTER TABLE Subtask  
ADD CONSTRAINT TABLE_10_TaskDetails_FK FOREIGN KEY  
(  
    TaskID  
)  
REFERENCES TaskDetails  
(  
    TaskID
```

```
)  
;
```

```
ALTER TABLE Subtask
```

```
ADD CONSTRAINT TABLE_10_UserDetails_FK FOREIGN KEY
```

```
(
```

```
UserID
```

```
)
```

```
REFERENCES UserDetails
```

```
(
```

```
UserID
```

```
)
```

```
;
```

```
ALTER TABLE "Comment"
```

```
ADD CONSTRAINT TABLE_11_TaskDetails_FK FOREIGN KEY
```

```
(
```

```
TaskID
```

```
)
```

```
REFERENCES TaskDetails
```

```
(  
TaskID  
)
```

```
;
```

```
ALTER TABLE "Comment"
```

```
ADD CONSTRAINT TABLE_11_UserDetails_FK FOREIGN KEY
```

```
(  
UserID  
)
```

```
REFERENCES UserDetails
```

```
(  
UserID  
)
```

```
;
```

```
ALTER TABLE TaskResources
```

```
ADD CONSTRAINT TaskDetails_FK FOREIGN KEY
```

```
(  
TaskID  
)
```

```
)
```

```
REFERENCES TaskDetails
```

```
(
```

```
TaskID
```

```
)
```

```
;
```

```
-- ERROR: FK name length exceeds maximum allowed length(30)
```

```
ALTER TABLE UserProjectDetails
```

```
ADD CONSTRAINT UserProjectDetails_ProjectDetails_FK FOREIGN KEY
```

```
(
```

```
ProjectID
```

```
)
```

```
REFERENCES ProjectDetails
```

```
(
```

```
ProjectID
```

```
)
```

```
;
```

```
-- ERROR: FK name length exceeds maximum allowed length(30)
```

```
ALTER TABLE UserProjectDetails
  ADD CONSTRAINT UserProjectDetails_UserDetails_FK FOREIGN KEY
  (
    UserID
  )
  REFERENCES UserDetails
  (
    UserID
  );
-- ERROR: FK name length exceeds maximum allowed length(30)
```

```
ALTER TABLE UserProjectTaskDetails
  ADD CONSTRAINT UserProjectTaskDetails_TaskDetails_FK FOREIGN KEY
  (
    TaskID
  )
  REFERENCES TaskDetails
  (
    TaskID
  );
```

```
)  
;  
  
-- ERROR: FK name length exceeds maximum allowed length(30)  
  
ALTER TABLE UserProjectTaskDetails  
    ADD CONSTRAINT UserProjectTaskDetails_UserProjectDetails_FK FOREIGN KEY  
        (  
            UserProjectID  
        )  
    REFERENCES UserProjectDetails  
        (  
            UserProjectID  
        )  
;
```

9. Creating User

9.1. Creating user identified by password

```
SQL> Connect / as sysdba;
Connected.
SQL> Create user Coursework identified by Nishan;
```

Figure 13 New User

9.2. Granting resources to the user

```
SQL> GRANT CONNECT, RESOURCE to Coursework;
Grant succeeded.
```

Figure 14 Grant Resource

9.3. Connecting with the user

```
SQL> Connect Coursework/Nishan;
Connected.
SQL> |
```

Figure 15 Connect with new user

9.4. Checking for any in-built tables

```
SQL> select table_name from user_tables;
no rows selected
```

Figure 16 Select tables

10. Creating Tables

The screenshot shows the Oracle SQL Developer interface. In the top-left corner, there are tabs for 'Worksheet' and 'Query Builder'. The 'Worksheet' tab is active, displaying the following SQL code:

```
CREATE TABLE userdetails (
    userid      VARCHAR2(50 CHAR) NOT NULL,
    username    VARCHAR2(100 CHAR) NOT NULL,
    useremail   VARCHAR2(200 CHAR) NOT NULL,
    usercontact VARCHAR2(15 CHAR) NOT NULL
);

ALTER TABLE userdetails ADD CONSTRAINT userdetails_pk PRIMARY KEY ( userid );

ALTER TABLE userdetails ADD CONSTRAINT userdetails_un UNIQUE ( useremail,
                                                               usercontact );
```

In the bottom-left corner of the worksheet area, there is a 'Script Output' tab. It contains the following log output:

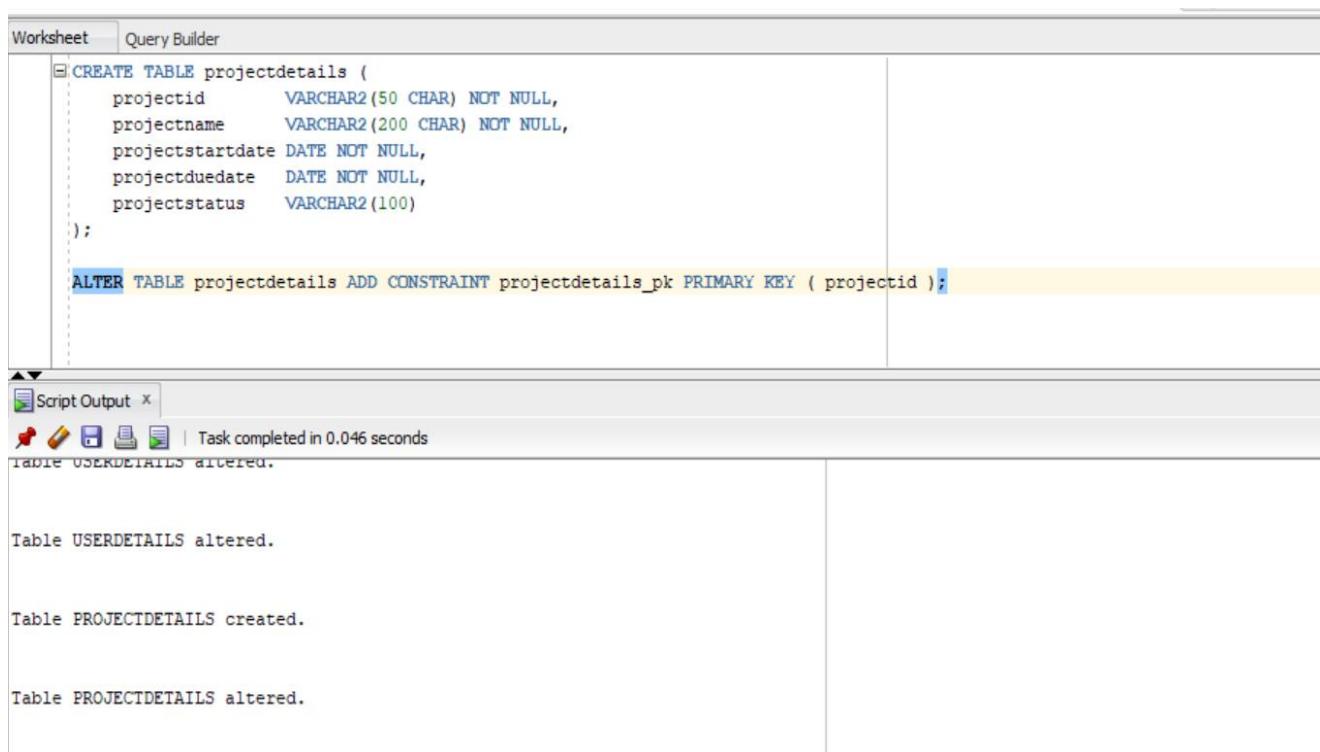
```
Table USERDETAILS created.

Table USERDETAILS altered.

Table USERDETAILS altered.
```

Below the worksheet, there is a toolbar with icons for running, saving, and canceling the script. A status bar at the bottom indicates: 'Task completed in 0.18 seconds'.

Figure 23 Creating userdetails table



The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab is active, displaying the following SQL code:

```

CREATE TABLE projectdetails (
    projectid      VARCHAR2(50 CHAR) NOT NULL,
    projectname    VARCHAR2(200 CHAR) NOT NULL,
    projectstartdate DATE NOT NULL,
    projectduedate DATE NOT NULL,
    projectstatus   VARCHAR2(100)
);

ALTER TABLE projectdetails ADD CONSTRAINT projectdetails_pk PRIMARY KEY ( projectid );

```

The 'Script Output' tab below shows the results of the execution:

```

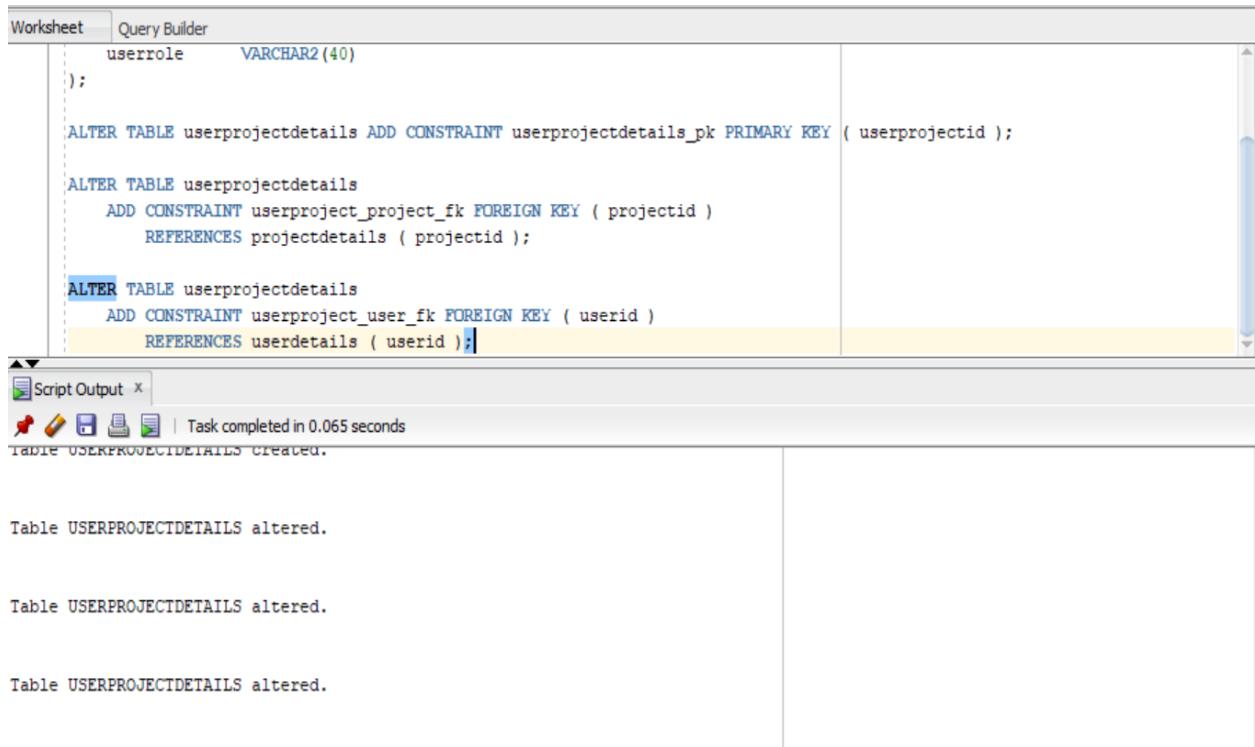
Table USERDETAILS altered.

Table PROJECTDETAILS created.

Table PROJECTDETAILS altered.

```

Figure 24 Creating project details table



The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab is active, displaying the following SQL code:

```

userrole      VARCHAR2(40)
);

ALTER TABLE userprojectdetails ADD CONSTRAINT userprojectdetails_pk PRIMARY KEY ( userprojectid );

ALTER TABLE userprojectdetails
    ADD CONSTRAINT userproject_project_fk FOREIGN KEY ( projectid )
        REFERENCES projectdetails ( projectid );

ALTER TABLE userprojectdetails
    ADD CONSTRAINT userproject_user_fk FOREIGN KEY ( userid )
        REFERENCES.userdetails ( userid );

```

The 'Script Output' tab below shows the results of the execution:

```

Table USERPROJECTDETAILS created.

Table USERPROJECTDETAILS altered.

Table USERPROJECTDETAILS altered.

Table USERPROJECTDETAILS altered.

```

Figure 25 Creating user-project-details table

The screenshot shows the Oracle SQL Developer interface. The top window is titled "Worksheet" and contains the following SQL code:

```
CREATE TABLE milestone (
    milestoneid VARCHAR2(50 CHAR) NOT NULL,
    name        VARCHAR2(100 CHAR) NOT NULL,
    startdate   DATE NOT NULL,
    due date    DATE NOT NULL,
    status      VARCHAR2(100 CHAR),
    projectid   VARCHAR2(50 CHAR) NOT NULL
);

ALTER TABLE milestone ADD CONSTRAINT milestone_pk PRIMARY KEY ( milestoneid );

ALTER TABLE milestone
```

The bottom window is titled "Script Output" and displays the results of the execution:

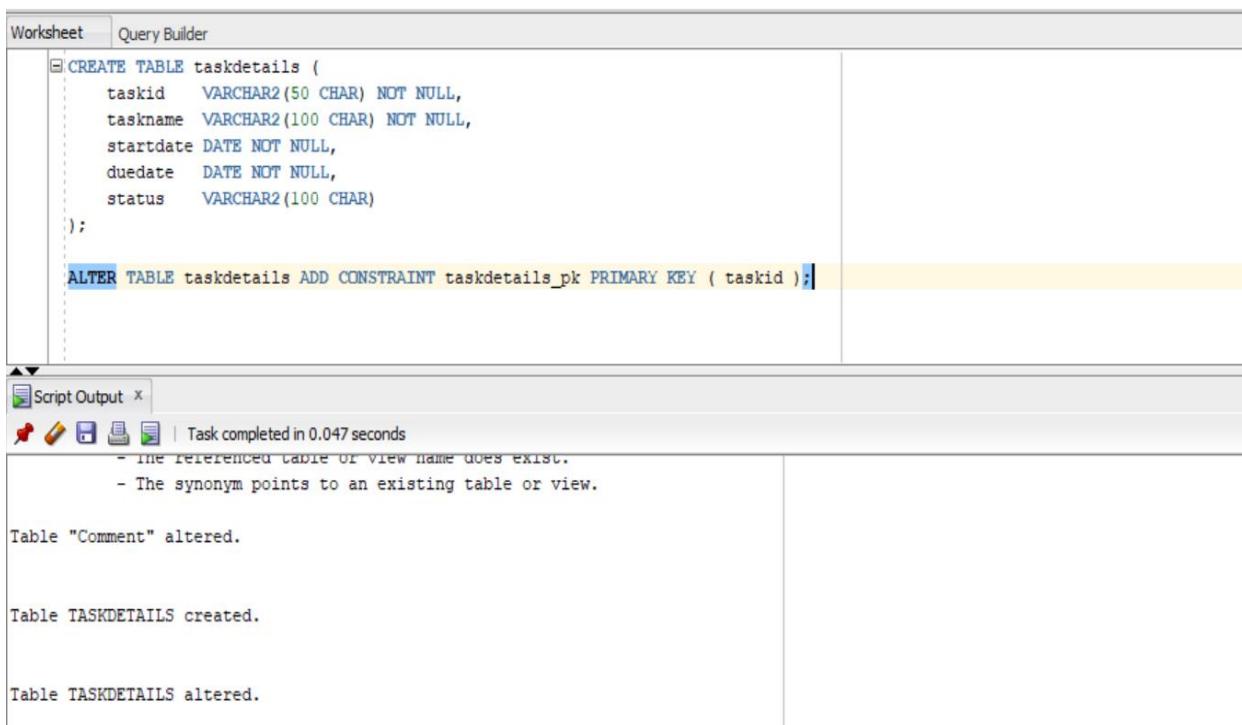
```
Table MILESTONE created.

Table MILESTONE altered.

Table MILESTONE altered.
```

A message at the top of the output window says "Task completed in 0.054 seconds".

Figure 26 Creating Milestone table



The screenshot shows the Oracle SQL Developer interface. The top section is the 'Worksheet' tab, which contains the following SQL code:

```

CREATE TABLE taskdetails (
    taskid  VARCHAR2(50 CHAR) NOT NULL,
    taskname VARCHAR2(100 CHAR) NOT NULL,
    startdate DATE NOT NULL,
    due date DATE NOT NULL,
    status   VARCHAR2(100 CHAR)
);

ALTER TABLE taskdetails ADD CONSTRAINT taskdetails_pk PRIMARY KEY ( taskid );

```

The bottom section is the 'Script Output' tab, which displays the results of the execution:

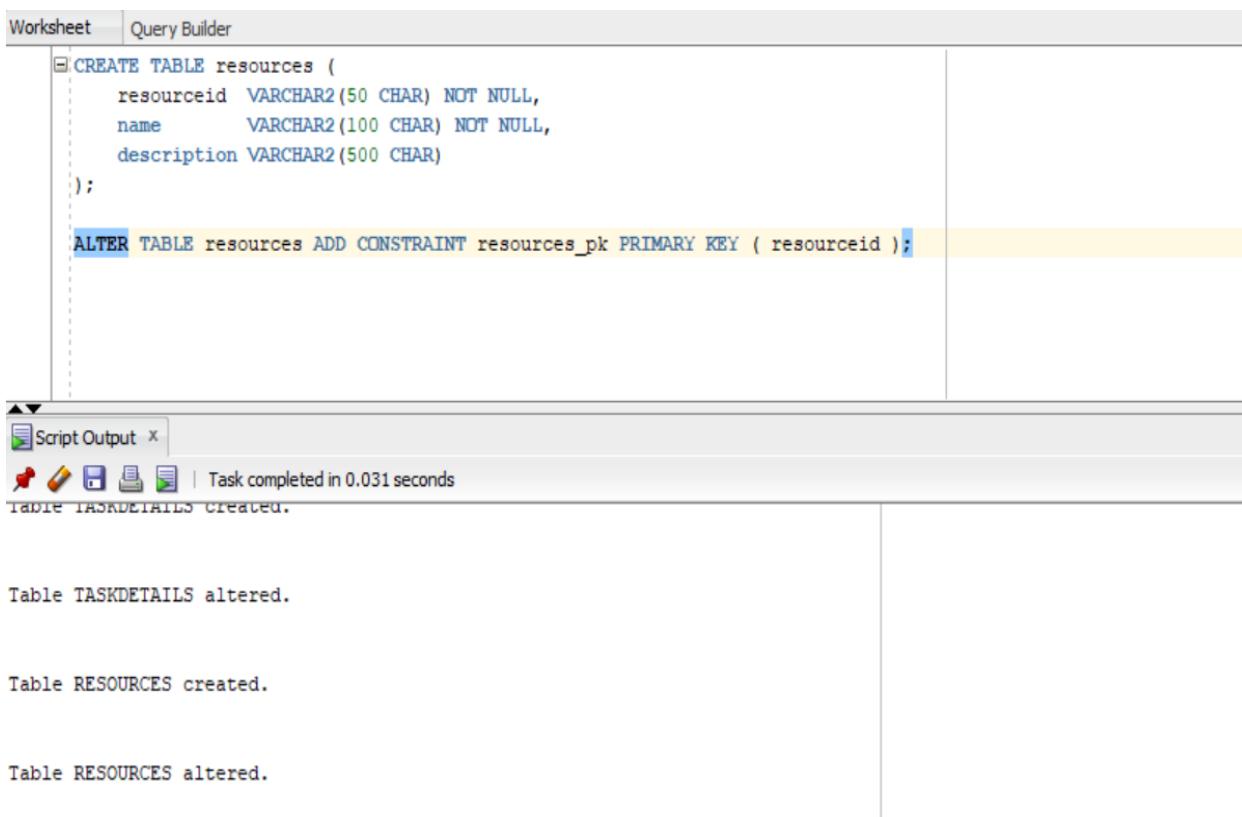
- The referenced table or view name does exist.
- The synonym points to an existing table or view.

Execution details: Task completed in 0.047 seconds.

Output messages:

- Table "Comment" altered.
- Table TASKDETAILS created.
- Table TASKDETAILS altered.

Figure 27 Creating task details table



The screenshot shows the Oracle SQL Developer interface. The top section is the 'Worksheet' tab, which contains the following SQL code:

```

CREATE TABLE resources (
    resourceid  VARCHAR2(50 CHAR) NOT NULL,
    name        VARCHAR2(100 CHAR) NOT NULL,
    description VARCHAR2(500 CHAR)
);

ALTER TABLE resources ADD CONSTRAINT resources_pk PRIMARY KEY ( resourceid );

```

The bottom section is the 'Script Output' tab, which displays the results of the execution:

- The referenced table or view name does exist.
- The synonym points to an existing table or view.

Execution details: Task completed in 0.031 seconds.

Output messages:

- Table TASKDETAILS created.
- Table TASKDETAILS altered.
- Table RESOURCES created.
- Table RESOURCES altered.

Figure 28 Creating resources table

The screenshot shows the Oracle SQL Developer interface. The top window is titled 'Worksheet' and contains three lines of SQL code:

```
);  
ALTER TABLE taskresourcedetails ADD CONSTRAINT taskresourcedetails_pk PRIMARY KEY ( taskid,  
                                resourceid );  
ALTER TABLE taskresourcedetails  
    ADD CONSTRAINT taskresource_resources_fk FOREIGN KEY ( resourceid )  
        REFERENCES resources ( resourceid );  
ALTER TABLE taskresourcedetails  
    ADD CONSTRAINT taskresource_taskdetails_fk FOREIGN KEY ( taskid )  
        REFERENCES taskdetails ( taskid );
```

The bottom window is titled 'Script Output' and shows the results of the execution:

```
Table TASKRESOURCEDETAILS altered.  
Table TASKRESOURCEDETAILS altered.  
Table TASKRESOURCEDETAILS altered.
```

Figure 29 Creating task-resource-details table

The screenshot shows the Oracle SQL Developer interface. The top tab bar has 'Worksheet' and 'Query Builder' selected. The main workspace contains the following SQL code:

```
CREATE TABLE "Comment" (
    commentid VARCHAR2(50 CHAR) NOT NULL,
    "Comment" VARCHAR2(500 CHAR),
    "Date" DATE NOT NULL,
    userid VARCHAR2(50) NOT NULL,
    taskid VARCHAR2(50 CHAR) NOT NULL
);

ALTER TABLE "Comment" ADD CONSTRAINT comment_pk PRIMARY KEY (commentid);

ALTER TABLE "Comment"
    ADD CONSTRAINT comment_taskdetails_fk FOREIGN KEY (taskid)
```

Below the workspace is a toolbar with icons for script, edit, save, and run, followed by the message 'Task completed in 0.053 seconds'. The bottom pane displays the execution results:

```
Table "Comment" altered.

Table "Comment" altered.

Table "Comment" altered.
```

Figure 30 Creating Comment table

The screenshot shows the Oracle SQL Developer interface. The top window is titled 'Worksheet' and contains SQL code for creating a table named 'subtask'. The code includes defining a primary key 'taskid' and adding two foreign keys: 'subtask_taskdetails_fk' referencing 'taskdetails' and 'subtask_userdetails_fk' referencing 'userdetails'. The bottom window is titled 'Script Output' and displays three lines of output indicating that the table was altered successfully: 'Table SUBTASK altered.', 'Table SUBTASK altered.', and 'Table SUBTASK altered.'.

```
taskid      VARCHAR2(50 CHAR) NOT NULL
);
ALTER TABLE subtask ADD CONSTRAINT subtask_pk PRIMARY KEY ( subtaskid );
ALTER TABLE subtask
ADD CONSTRAINT subtask_taskdetails_fk FOREIGN KEY ( taskid )
REFERENCES taskdetails ( taskid );
ALTER TABLE subtask
ADD CONSTRAINT subtask_userdetails_fk FOREIGN KEY ( userid )
REFERENCES userdetails ( userid );
```

Script Output | Task completed in 0.059 seconds

Table SUBTASK altered.
Table SUBTASK altered.
Table SUBTASK altered.

Figure 31 Creating Sub-Task table

The screenshot shows the Oracle SQL Developer interface. The top menu bar has 'Worksheet' and 'Query Builder' tabs, with 'Worksheet' selected. The main area contains three lines of SQL code:

```
);  
ALTER TABLE userprojecttaskdetails ADD CONSTRAINT userprojecttaskdetails_pk PRIMARY KEY ( taskid,  
userprojectid );  
  
ALTER TABLE userprojecttaskdetails  
ADD CONSTRAINT userprojecttask_project_fk FOREIGN KEY ( taskid )  
REFERENCES taskdetails ( taskid );  
  
ALTER TABLE userprojecttaskdetails  
ADD CONSTRAINT userprojecttask_userproject_fk FOREIGN KEY ( userprojectid )  
REFERENCES userprojectdetails ( userprojectid );
```

The third line of code is highlighted with a yellow background. Below the code editor is a toolbar with icons for script, output, and other functions. The status bar at the bottom left shows 'Script Output X' and 'Task completed in 0.063 seconds'. The status bar at the bottom right shows 'Table USERPROJECTTASKDETAILS altered.' repeated three times.

Figure 32 Creating User-Project-Task-Details table

```
SQL> Select table_name from user_tables;

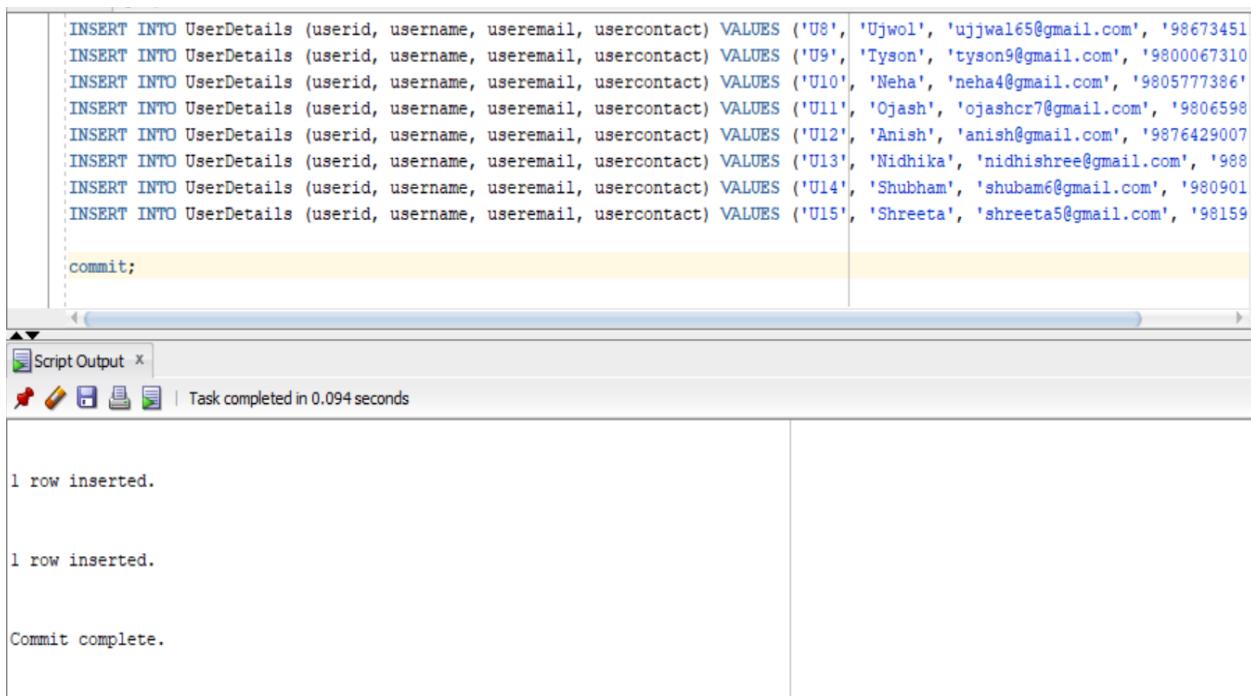
TABLE_NAME
-----
USERDETAILS
PROJECTDETAILS
USERPROJECTDETAILS
MILESTONE
TASKDETAILS
RESOURCES
TASKRESOURCEDETAILS
Comment
SUBTASK
USERPROJECTTASKDETAILS

10 rows selected.

SQL> |
```

Figure 33 Showing the tables created

11. Inserting Values inside the table



The screenshot shows an Oracle SQL Developer interface. In the top-left pane, there is an SQL script window containing the following code:

```

INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U8', 'Ujwol', 'ujjwal65@gmail.com', '98673451');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U9', 'Tyson', 'tyson9@gmail.com', '9800067310');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U10', 'Neha', 'neha4@gmail.com', '9805777386');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U11', 'Ojash', 'ojashcr7@gmail.com', '9806598');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U12', 'Anish', 'anish@gmail.com', '9876429007');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U13', 'Nidhika', 'nidhishree@gmail.com', '988');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U14', 'Shubham', 'shubam6@gmail.com', '980901');
INSERT INTO UserDetails (userid, username, useremail, usercontact) VALUES ('U15', 'Shreeta', 'shreeta5@gmail.com', '98159');

commit;

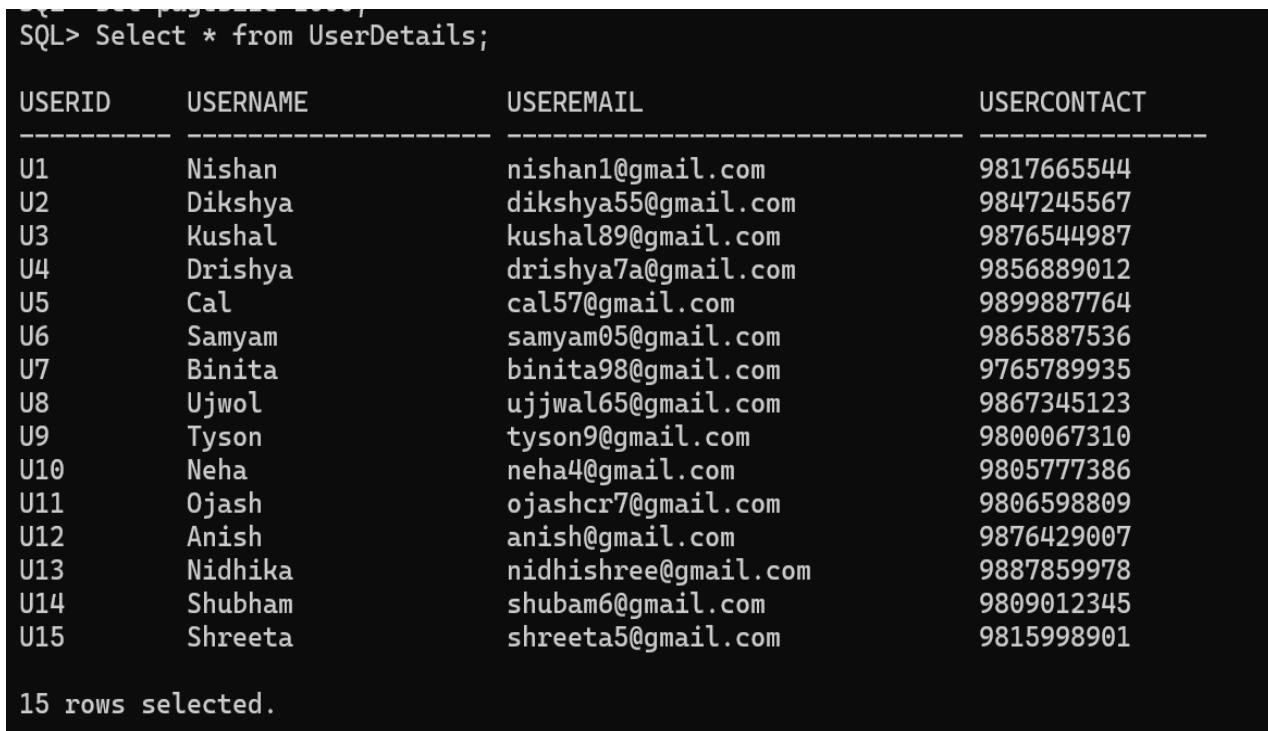
```

In the bottom-left pane, the "Script Output" tab is selected, showing the results of the execution:

- 1 row inserted.
- 1 row inserted.
- Commit complete.

A status bar at the bottom indicates "Task completed in 0.094 seconds".

Figure 34 Inserting values to UserDetails table



The screenshot shows an Oracle SQL Developer interface with a SQL query window containing the following command:

```
SQL> Select * from UserDetails;
```

The results of the query are displayed in a table:

USERID	USERNAME	USEREMAIL	USERCONTACT
U1	Nishan	nishan1@gmail.com	9817665544
U2	Dikshya	dikshya55@gmail.com	9847245567
U3	Kushal	kushal89@gmail.com	9876544987
U4	Drishya	drishya7a@gmail.com	9856889012
U5	Cal	cal57@gmail.com	9899887764
U6	Samyam	samyam05@gmail.com	9865887536
U7	Binita	binita98@gmail.com	9765789935
U8	Ujwol	ujjwal65@gmail.com	9867345123
U9	Tyson	tyson9@gmail.com	9800067310
U10	Neha	neha4@gmail.com	9805777386
U11	Ojash	ojashcr7@gmail.com	9806598809
U12	Anish	anish@gmail.com	9876429007
U13	Nidhika	nidhishree@gmail.com	9887859978
U14	Shubham	shubam6@gmail.com	9809012345
U15	Shreeta	shreeta5@gmail.com	9815998901

At the bottom of the query window, it says "15 rows selected."

Figure 35 Showing the insert details of User-Details

The screenshot shows an Oracle SQL Developer interface. In the top-left pane, there is a code editor containing an SQL script to insert 15 rows into the 'ProjectDetails' table. The script includes various project names, start dates, due dates, and statuses. In the bottom-right pane, the 'Script Output' tab displays the results of the execution, showing three separate messages: '1 row inserted.', each corresponding to one of the three groups of five rows in the script.

```

INSERT INTO ProjectDetails VALUES ('P-07', 'Logistic Management System', TO_DATE('2024-08-15', 'YYYY-MM-DD'), TO_DATE('2025-08-15', 'YYYY-MM-DD'), 'Ongoing');
INSERT INTO ProjectDetails VALUES ('P-08', 'Car Rental System', TO_DATE('2024-10-01', 'YYYY-MM-DD'), TO_DATE('2025-07-15', 'YYYY-MM-DD'), 'Ongoing');
INSERT INTO ProjectDetails VALUES ('P-09', 'Phone Tracking System', TO_DATE('2024-12-15', 'YYYY-MM-DD'), TO_DATE('2025-08-15', 'YYYY-MM-DD'), 'Ongoing');
INSERT INTO ProjectDetails VALUES ('P-10', 'Daily Tracking System', TO_DATE('2024-07-16', 'YYYY-MM-DD'), TO_DATE('2025-05-15', 'YYYY-MM-DD'), 'Ongoing');
INSERT INTO ProjectDetails VALUES ('P-11', 'Route Management System', TO_DATE('2024-12-20', 'YYYY-MM-DD'), TO_DATE('2025-09-15', 'YYYY-MM-DD'), 'Ongoing');
INSERT INTO ProjectDetails VALUES ('P-12', 'Payment System', TO_DATE('2024-06-01', 'YYYY-MM-DD'), TO_DATE('2024-12-11', 'YYYY-MM-DD'), 'Completed');
INSERT INTO ProjectDetails VALUES ('P-13', 'Fake News Detection System', TO_DATE('2024-12-11', 'YYYY-MM-DD'), TO_DATE('2025-09-15', 'YYYY-MM-DD'), 'Ongoing');
INSERT INTO ProjectDetails VALUES ('P-14', 'Fake Comment Detection System', TO_DATE('2024-09-05', 'YYYY-MM-DD'), TO_DATE('2025-06-15', 'YYYY-MM-DD'), 'Completed');
INSERT INTO ProjectDetails VALUES ('P-15', 'Movie Recommendation System', TO_DATE('2024-10-01', 'YYYY-MM-DD'), TO_DATE('2025-07-15', 'YYYY-MM-DD'), 'Ongoing);
commit;

```

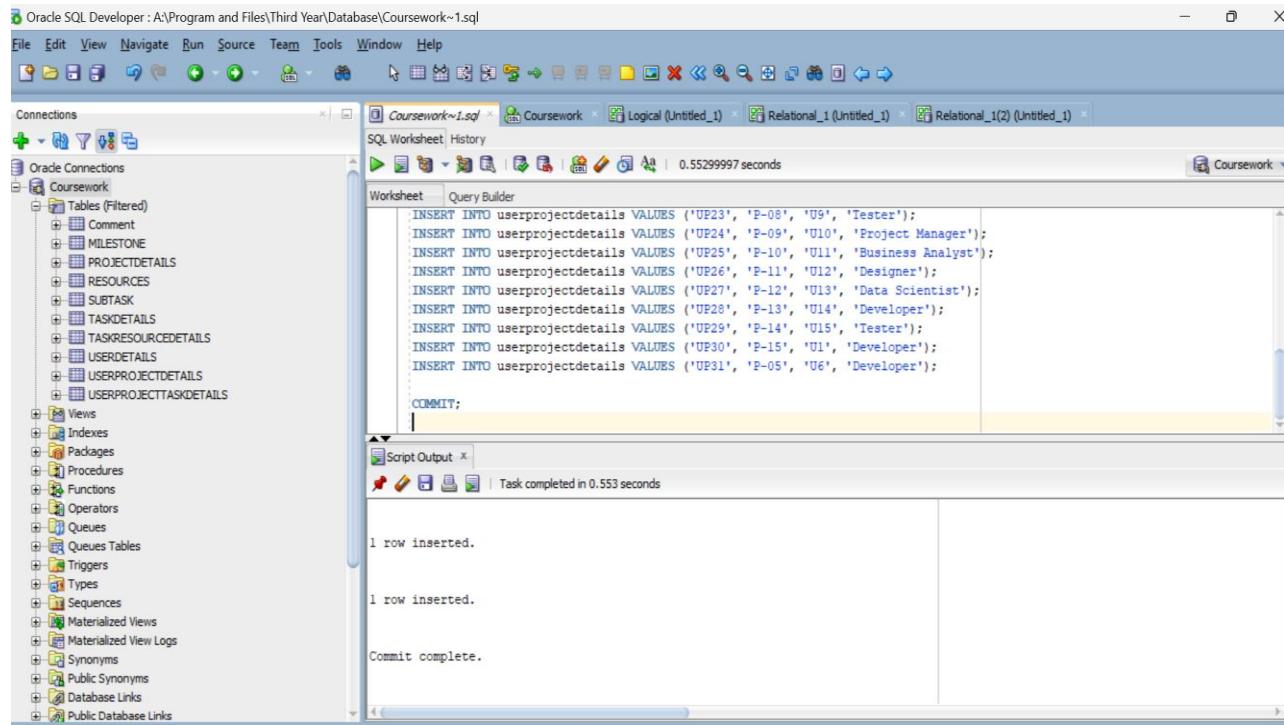
Figure 36 Inserting values inside the Project Details table

The screenshot shows the results of a SQL query executed in Oracle SQL Developer. The query selects all columns from the 'ProjectDetails' table. The results are displayed in a grid format with 15 rows, matching the number of rows inserted in Figure 36. The columns are labeled: PROJECTID, PROJECTNAME, PROJECTSTARTDAT, PROJECTDUEDATE, and PROJECTSTA. The data includes various project names like 'Enrolment System', 'Attendance System', etc., along with their respective start and due dates, and status indicators like 'Ongoing' or 'Completed'.

PROJECTID	PROJECTNAME	PROJECTSTARTDAT	PROJECTDUEDATE	PROJECTSTA
P-01	Enrolment System	18-SEP-24	09-DEC-24	Ongoing
P-02	Attendance System	10-JAN-24	21-SEP-24	Ongoing
P-03	Registration System	10-MAR-24	05-SEP-24	Ongoing
P-04	Rental System	10-OCT-24	25-DEC-24	Completed
P-05	Diet Tracking System	19-JAN-24	25-NOV-24	Ongoing
P-06	Expense Tracking System	01-MAY-24	01-FEB-25	Ongoing
P-07	Logistic Management System	15-AUG-24	30-JUL-25	Ongoing
P-08	Car Rental System	01-OCT-24	15-JUL-25	Completed
P-09	Phone Tracking System	15-DEC-24	17-AUG-25	Ongoing
P-10	Daily Tracking System	16-JUL-24	25-MAY-25	Ongoing
P-11	Route Management System	20-DEC-24	10-JUL-25	Ongoing
P-12	Payment System	01-JUN-24	11-DEC-24	Ongoing
P-13	Fake News Detection System	11-DEC-24	12-MAR-25	Ongoing
P-14	Fake Comment Detection System	05-SEP-24	20-JUN-25	Completed
P-15	Movie Recommendation System	01-OCT-24	01-OCT-25	Ongoing

15 rows selected.

Figure 37 Showing the inserted values of Project Details



The screenshot shows the Oracle SQL Developer interface. The left sidebar displays a tree view of database objects under the 'Coursework' schema, including tables like Comment, MILESTONE, PROJECTDETAILS, RESOURCES, SUBTASK, TASKDETAILS, TASKRESOURCEDETAILS, USERDETAILS, USERPROJECTDETAILS, and USERPROJECTTASKDETAILS. The main workspace has tabs for 'Coursework~1.sql', 'Coursework', 'Logical (Untitled_1)', 'Relational_1 (Untitled_1)', and 'Relational_1(2) (Untitled_1)'. The 'Worksheet' tab is active, showing a SQL script with several INSERT statements and a COMMIT command. The 'Script Output' tab below shows the results of the execution: '1 row inserted.', '1 row inserted.', and 'Commit complete.'.

```
INSERT INTO userprojectdetails VALUES ('UP23', 'P-08', 'U9', 'Tester');
INSERT INTO userprojectdetails VALUES ('UP24', 'P-09', 'U10', 'Project Manager');
INSERT INTO userprojectdetails VALUES ('UP25', 'P-10', 'U11', 'Business Analyst');
INSERT INTO userprojectdetails VALUES ('UP26', 'P-11', 'U12', 'Designer');
INSERT INTO userprojectdetails VALUES ('UP27', 'P-12', 'U13', 'Data Scientist');
INSERT INTO userprojectdetails VALUES ('UP28', 'P-13', 'U14', 'Developer');
INSERT INTO userprojectdetails VALUES ('UP29', 'P-14', 'U15', 'Tester');
INSERT INTO userprojectdetails VALUES ('UP30', 'P-15', 'U1', 'Developer');
INSERT INTO userprojectdetails VALUES ('UP31', 'P-05', 'U6', 'Developer');

COMMIT;
```

Figure 38 Inserting values inside the user-project-details table

USERPROJECT	PROJECTID	USERID	USERROLE
UP1	P-01	U1	Developer
UP2	P-02	U2	Designer
UP3	P-03	U3	Project Manager
UP4	P-04	U4	Developer
UP5	P-05	U5	Tester
UP6	P-06	U6	Developer
UP7	P-07	U7	Designer
UP8	P-08	U8	Developer
UP9	P-09	U9	Business Analyst
UP10	P-10	U10	Tester
UP11	P-11	U11	Developer
UP12	P-12	U12	Designer
UP13	P-13	U13	Data Scientist
UP14	P-14	U14	Developer
UP15	P-15	U15	Developer
UP16	P-01	U2	Designer
UP17	P-02	U3	Tester
UP18	P-03	U4	Developer
UP19	P-04	U5	Project Manager
UP20	P-05	U6	Data Analyst
UP21	P-06	U7	Designer
UP22	P-07	U8	Developer
UP23	P-08	U9	Tester
UP24	P-09	U10	Project Manager
UP25	P-10	U11	Business Analyst
UP26	P-11	U12	Designer
UP27	P-12	U13	Data Scientist
UP28	P-13	U14	Developer
UP29	P-14	U15	Tester
UP30	P-15	U1	Developer
UP31	P-05	U6	Developer

31 rows selected.

SQL> |

Figure 39 Showing the inserted values of user-project-details table

The screenshot shows the Oracle SQL Developer interface. The top window is titled 'Worksheet' and contains a SQL script for inserting 15 rows into the 'TaskDetails' table. The bottom window is titled 'Script Output' and displays the results of the execution.

```

Worksheet Query Builder
INSERT INTO TaskDetails VALUES ('T-08', 'Search Functionality', TO_DATE('2025-01-15', 'YYYY-MM-DD'), TO_DATE('2025-01-25', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-09', 'File Upload Feature', TO_DATE('2025-01-28', 'YYYY-MM-DD'), TO_DATE('2025-02-05', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-10', 'Data Backup System', TO_DATE('2025-02-10', 'YYYY-MM-DD'), TO_DATE('2025-02-20', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-11', 'User Permission Setup', TO_DATE('2025-02-25', 'YYYY-MM-DD'), TO_DATE('2025-03-05', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-12', 'Notification Module', TO_DATE('2025-03-10', 'YYYY-MM-DD'), TO_DATE('2025-03-20', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-13', 'Cache Management', TO_DATE('2025-03-25', 'YYYY-MM-DD'), TO_DATE('2025-04-05', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-14', 'Load Balancer Setup', TO_DATE('2025-04-10', 'YYYY-MM-DD'), TO_DATE('2025-04-20', 'YYYY-MM-DD'));
INSERT INTO TaskDetails VALUES ('T-15', 'Error Logging System', TO_DATE('2025-04-25', 'YYYY-MM-DD'), TO_DATE('2025-05-05', 'YYYY-MM-DD'));

COMMIT;

```

Script Output | Task completed in 0.19 seconds

```

1 row inserted.

1 row inserted.

Commit complete.

```

Figure 40 Inserting values inside Task-Details table

The screenshot shows the Oracle SQL Developer interface with a terminal window displaying the results of a SELECT query on the 'TaskDetails' table.

```

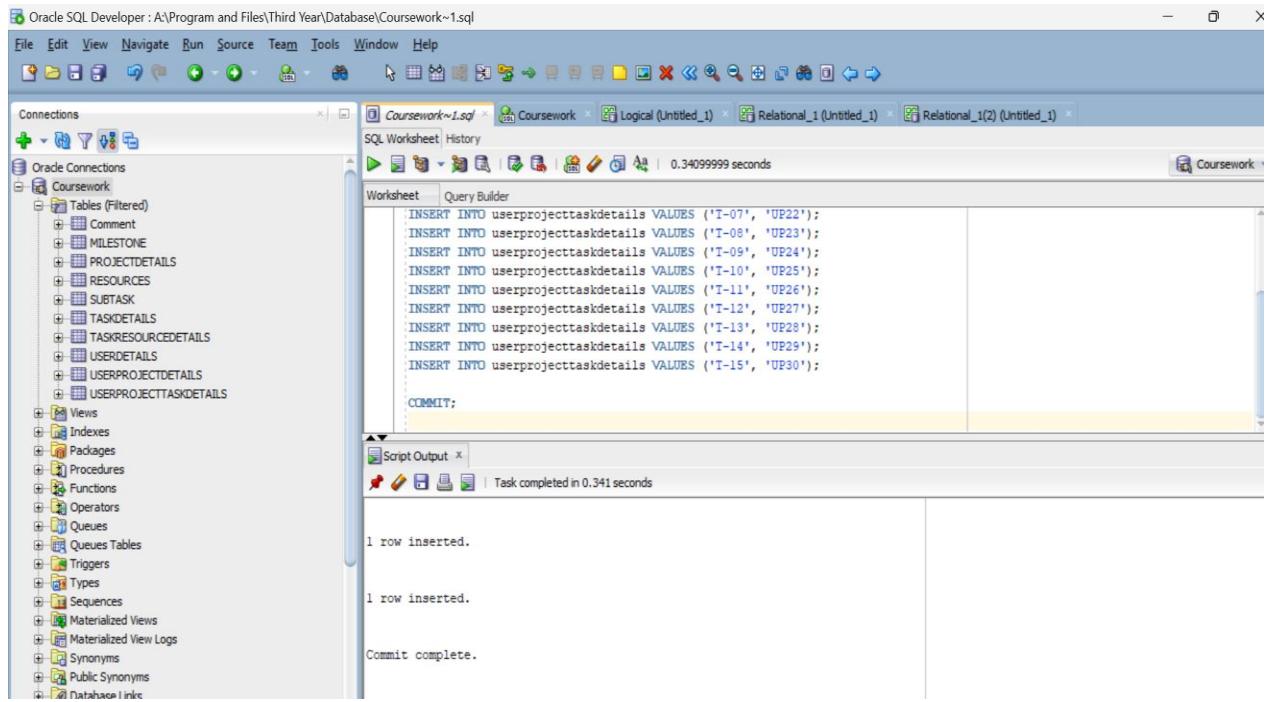
SQL> Select * from TaskDetails;

TASKID      TASKNAME          STARTDATE    DUEDATE      STATUS
-----      -----
T-01        Login Page Design 01-OCT-24   10-OCT-24   Completed
T-02        API Integration   05-OCT-24   20-OCT-24   Ongoing
T-03        Schema Development 01-NOV-24   15-NOV-24   Not Started
T-04        Email Service Setup 10-NOV-24   25-NOV-24   Ongoing
T-05        Authentication Module 01-DEC-24   10-DEC-24   Not Started
T-06        Analytics Dashboard 15-DEC-24   30-DEC-24   Ongoing
T-07        Reporting Tool Setup 01-JAN-25   10-JAN-25   Not Started
T-08        Search Functionality 15-JAN-25   25-JAN-25   Ongoing
T-09        File Upload Feature  28-JAN-25   05-FEB-25   Not Started
T-10       Data Backup System   10-FEB-25   20-FEB-25   Not Started
T-11       User Permission Setup 25-FEB-25   05-MAR-25   Not Started
T-12       Notification Module   10-MAR-25   20-MAR-25   Not Started
T-13       Cache Management     25-MAR-25   05-APR-25   Not Started
T-14       Load Balancer Setup   10-APR-25   20-APR-25   Not Started
T-15       Error Logging System  25-APR-25   05-MAY-25   Not Started

15 rows selected.

```

Figure 41 Showing details inserted into Task Details tables



The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the 'Connections' tree, which includes an 'Oracle Connections' node and a 'Coursework' node under it. The 'Tables (Filtered)' section of the 'Coursework' node is expanded, showing various tables such as Comment, MILESTONE, PROJECTDETAILS, RESOURCES, SUBTASK, TASKDETAILS, TASKRESOURCEDETAILS, USERDETAILS, USERPROJECTDETAILS, and USERPROJECTTASKDETAILS. The main workspace is a 'Worksheet' tab in the 'Query Builder' mode. It contains the following SQL code:

```
INSERT INTO userprojecttaskdetails VALUES ('T-07', 'UP22');
INSERT INTO userprojecttaskdetails VALUES ('T-08', 'UP23');
INSERT INTO userprojecttaskdetails VALUES ('T-09', 'UP24');
INSERT INTO userprojecttaskdetails VALUES ('T-10', 'UP25');
INSERT INTO userprojecttaskdetails VALUES ('T-11', 'UP26');
INSERT INTO userprojecttaskdetails VALUES ('T-12', 'UP27');
INSERT INTO userprojecttaskdetails VALUES ('T-13', 'UP28');
INSERT INTO userprojecttaskdetails VALUES ('T-14', 'UP29');
INSERT INTO userprojecttaskdetails VALUES ('T-15', 'UP30');

COMMIT;
```

Below the worksheet, a 'Script Output' tab shows the results of the execution:

```
1 row inserted.

1 row inserted.

Commit complete.
```

Figure 42 Inserting values inside user-project-task-details table

```
SQL> COLUMN taskid FORMAT A10 HEADING 'Task ID'
SQL> COLUMN userprojectid FORMAT A15 HEADING 'User Project ID'
SQL>
SQL> SELECT * FROM userprojecttaskdetails;

Task ID      User Project ID
-----      -----
T-01          UP1
T-01          UP16
T-02          UP17
T-02          UP2
T-03          UP18
T-03          UP3
T-04          UP19
T-04          UP4
T-05          UP20
T-05          UP5
T-06          UP21
T-06          UP6
T-07          UP22
T-07          UP7
T-08          UP23
T-08          UP8
T-09          UP24
T-09          UP9
T-10          UP10
T-10          UP25
T-11          UP11
T-11          UP26
T-12          UP12
T-12          UP27
T-13          UP13
T-13          UP28
T-14          UP14
T-14          UP29
T-15          UP15
T-15          UP30

30 rows selected.
```

Figure 43 Showing details of user-project-task details

The screenshot shows the MySQL Workbench interface. The top window displays an SQL script for inserting data into a 'Resources' table:

```
INSERT INTO Resources VALUES ('R-08', 'Feedback Forms', 'Forms used for gathering feedback from participants.');
INSERT INTO Resources VALUES ('R-09', 'High-Speed Wi-Fi', 'Ultra-fast wireless internet connection for seamless work.');
INSERT INTO Resources VALUES ('R-10', 'Open Data Repositories', 'A collection of publicly available datasets for research');
INSERT INTO Resources VALUES ('R-11', 'Arduino Kits', 'Starter kits for learning embedded systems and programming.');
INSERT INTO Resources VALUES ('R-12', 'Development PC', 'Desktop computer for software development and testing.');
INSERT INTO Resources VALUES ('R-13', 'Rackmount Servers', 'Rack-mounted servers for handling enterprise-level data.');
INSERT INTO Resources VALUES ('R-14', 'Cloud Storage', 'Cloud-based storage for remote data access and backup.');
INSERT INTO Resources VALUES ('R-15', 'Router', 'High-performance router for managing internet traffic in networks.');

COMMIT;
```

The bottom window, titled "Script Output", shows the results of the execution:

```
1 row inserted.

1 row inserted.

Commit complete.
```

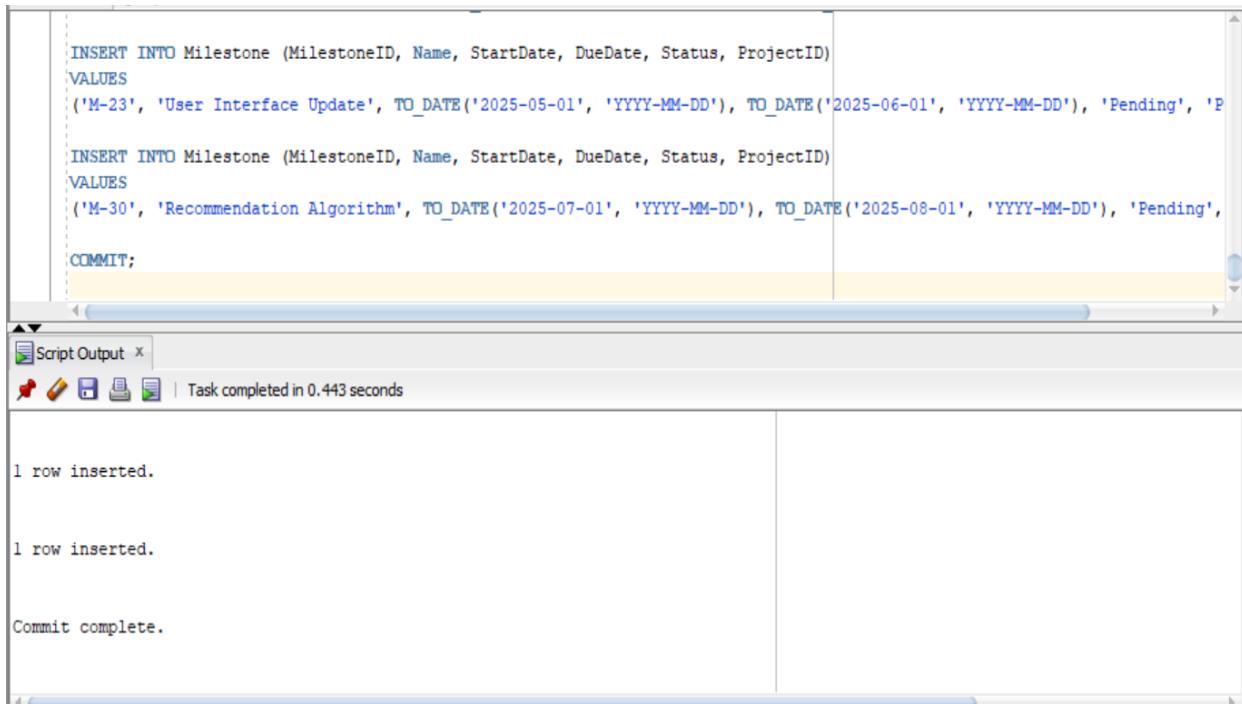
A status bar at the bottom indicates "Task completed in 0.305 seconds".

Figure 44 Inserting values inside the Resources table

RESOURCEID	NAME	Description
R-01	Pressure Sensor	Sensor for detecting and measuring pressure variations.
R-02	Workstation	Powerful workstation for development and 3D rendering.
R-03	Curved Monitor	32-inch curved display for immersive work and gaming.
R-04	Training Lab	Room equipped with tools and materials for practical sessions.
R-05	Presentation Room	Room with AV equipment for hosting seminars and meetings.
R-06	3D Printer	Printer for creating 3D models and prototypes.
R-07	Sound System	Surround sound system for high-quality audio playback.
R-08	Feedback Forms	Forms used for gathering feedback from participants.
R-09	High-Speed Wi-Fi	Ultra-fast wireless internet connection for seamless work.
R-10	Open Data Repositories	A collection of publicly available datasets for research purposes.
R-11	Arduino Kits	Starter kits for learning embedded systems and programming.
R-12	Development PC	Desktop computer for software development and testing.
R-13	Rackmount Servers	Rack-mounted servers for handling enterprise-level data.
R-14	Cloud Storage	Cloud-based storage for remote data access and backup.
R-15	Router	High-performance router for managing internet traffic in networks.

15 rows selected.

Figure 45 Showing the inserted values of resource table



The screenshot shows an Oracle SQL Developer interface. In the top-left pane, there is an SQL script window containing the following code:

```

INSERT INTO Milestone (MilestoneID, Name, StartDate, DueDate, Status, ProjectID)
VALUES
('M-23', 'User Interface Update', TO_DATE('2025-05-01', 'YYYY-MM-DD'), TO_DATE('2025-06-01', 'YYYY-MM-DD'), 'Pending', 'P-01');

INSERT INTO Milestone (MilestoneID, Name, StartDate, DueDate, Status, ProjectID)
VALUES
('M-30', 'Recommendation Algorithm', TO_DATE('2025-07-01', 'YYYY-MM-DD'), TO_DATE('2025-08-01', 'YYYY-MM-DD'), 'Pending', 'P-02');

COMMIT;

```

In the bottom-left pane, there is a "Script Output" tab showing the results of the execution:

```

1 row inserted.

1 row inserted.

Commit complete.

```

A status bar at the bottom indicates "Task completed in 0.443 seconds".

Figure 46 Inserting values inside Milestone table

SQL> Select * from milestone;					
MILESTONEID	STARTDATE	DUEDATE	NAME	PROJECTID	
M-01	5-SEP-24	01-OCT-24	Completed	Prototype Design	P-01
M-02	1-OCT-24	15-OCT-24	Completed	Database Setup	P-01
M-03	1-NOV-24	20-NOV-24	OnProcess	System Testing	P-01
M-04	0-NOV-24	05-DEC-24	Pending	Final Deployment	P-01
M-05	0-JAN-24	25-JAN-24	Completed	Requirement Analysis	P-02
M-06	1-MAY-24	15-JUN-24	OnProcess	Feature Implementation	P-02
M-07	1-AUG-24	01-SEP-24	Pending	System Integration	P-02
M-08	1-MAR-24	20-MAR-24	Completed	Initial Mockup	P-03
M-09	1-JUN-24	15-JUL-24	Completed	Alpha Release	P-03
M-10	1-AUG-24	20-AUG-24	OnProcess	User Feedback Collection	P-03

Figure 47 Showing details of inserted values of Milestone table

The screenshot shows the Oracle SQL Developer interface. The top window is titled 'Worksheet' and contains a block of SQL code:

```
INSERT INTO taskresourcedetails VALUES ('T-05', 'R-13');
INSERT INTO taskresourcedetails VALUES ('T-06', 'R-01');
INSERT INTO taskresourcedetails VALUES ('T-07', 'R-14');
INSERT INTO taskresourcedetails VALUES ('T-08', 'R-09');
INSERT INTO taskresourcedetails VALUES ('T-09', 'R-05');
INSERT INTO taskresourcedetails VALUES ('T-10', 'R-11');
INSERT INTO taskresourcedetails VALUES ('T-11', 'R-02');
INSERT INTO taskresourcedetails VALUES ('T-12', 'R-07');
INSERT INTO taskresourcedetails VALUES ('T-13', 'R-15');
INSERT INTO taskresourcedetails VALUES ('T-14', 'R-03');
INSERT INTO taskresourcedetails VALUES ('T-15', 'R-10');
commit;
```

The bottom window is titled 'Script Output' and displays the results of the execution:

```
1 row inserted.

1 row inserted.

Commit complete.
```

Figure 48 Inserting values inside task-resource-details table

SQL> Select * from taskresourcedetails;	
TASKID	RESOURCEID
T-01	R-04
T-01	R-09
T-02	R-05
T-02	R-08
T-03	R-06
T-03	R-12
T-04	R-03
T-04	R-12
T-05	R-07
T-05	R-13
T-06	R-01
T-06	R-10
T-07	R-02
T-07	R-14
T-08	R-06
T-08	R-09
T-09	R-05
T-09	R-11
T-10	R-11
T-10	R-14
T-11	R-01
T-11	R-02
T-12	R-04
T-12	R-07
T-13	R-13
T-13	R-15
T-14	R-03

Figure 49 Showing the inserted values of task-resource-details

The screenshot shows the Oracle SQL Developer interface. In the top-left corner, there are tabs for 'Worksheet' and 'Query Builder'. The main area contains the following SQL code:

```

VALUES
('st-23', 'Cache Cleanup Routine', 'Set up regular cache cleanup.', TO_DATE('16-NOV-24', 'DD-MON-YY'), TO_DATE('20-NOV-24', 'DD-MON-YY'), 'U1', 'T-01')
INSERT INTO Subtask (SUBTASKID, NAME, DESCRIPTION, STARTDATE, DUEDATE, STATUS, USERID, TASKID)
VALUES
('st-24', 'Load Balancer Monitoring', 'Monitor load balancer performance.', TO_DATE('21-NOV-24', 'DD-MON-YY'), TO_DATE('25-NOV-24', 'DD-MON-YY'), 'U1', 'T-02')
INSERT INTO Subtask (SUBTASKID, NAME, DESCRIPTION, STARTDATE, DUEDATE, STATUS, USERID, TASKID)
VALUES
('st-25', 'Error Log Alerts', 'Set up alerts for critical errors.', TO_DATE('26-NOV-24', 'DD-MON-YY'), TO_DATE('30-NOV-24', 'DD-MON-YY'), 'U1', 'T-03')
commit;

```

In the bottom panel, under 'Script Output', it says 'Task completed in 0.091 seconds'. The output window shows the results of the inserted rows:

```

1 row inserted.

1 row inserted.

Commit complete.

```

Figure 50 Inserting values inside Subtask table

The screenshot shows the results of a SELECT query on the 'Subtask' table. The output is a grid of data with columns: SUBTASKID, NAME, Description, STARTDATE, DUEDATE, Status, USERID, and Task.

SUBTASKID	NAME	Description	STARTDATE	DUEDATE	Status	USERID	Task
st-01	Form Validation	Validate input fields	18-SEP-24	20-SEP-24	Completed	U1	T-01
st-02	Form Submission	Ensure data is submitted correctly	20-SEP-24	25-SEP-24	Ongoing	U11	T-01
st-03	UI Design	Create dashboard UI	20-SEP-24	25-SEP-24	Completed	U2	T-02
st-04	Chart Integration	Add charts to dashboard	26-SEP-24	30-SEP-24	Pending	U13	T-02
st-05	Schema Design	Design initial database schema	15-JAN-24	20-JAN-24	Completed	U2	T-03
st-06	Normalization	Normalize database tables	21-JAN-24	29-JAN-24	Ongoing	U15	T-03
st-07	API Integration	Setup APIs for payments	19-MAR-24	25-MAR-24	Completed	U3	T-04
st-08	Testing	Test user profiles	26-MAR-24	20-APR-24	Ongoing	U13	T-05
st-09	Tracking System Enhancement	Allow users to track their details	15-MAR-24	18-MAR-24	Completed	U1	T-06
st-10	Inventory Home Page Update	Enhance home page of inventory system.	18-AUG-24	30-AUG-24	Pending	U5	T-08
st-11	Login Page Redesign	Update UI and UX for the login page.	01-SEP-24	10-SEP-24	Pending	U1	T-01
st-12	API Performance Testing	Ensure API calls meet performance benchmarks.	05-SEP-24	15-SEP-24	In Progress	U2	T-02
st-13	Database Indexing	Implement indexing for faster query execution.	12-SEP-24	20-SEP-24	Completed	U3	T-03
st-14	SMTP Configuration	Configure SMTP server for email services.	22-SEP-24	30-SEP-24	Pending	U4	T-04
st-15	OAuth Setup	Integrate OAuth for secure authentication.	01-OCT-24	05-OCT-24	Pending	U5	T-05
st-16	Dashboard Data Sync	Sync analytics dashboard with live data.	06-OCT-24	12-OCT-24	Pending	U6	T-06
st-17	Report Format Update	Revise report templates and formats.	13-OCT-24	18-OCT-24	Pending	U7	T-07
st-18	Search Algorithm Enhancement	Improve search functionality.	19-OCT-24	25-OCT-24	Pending	U8	T-08
st-19	File Type Validation	Add validation for uploaded files.	26-OCT-24	31-OCT-24	Pending	U9	T-09
st-20	Backup Schedule Setup	Automate data backup process.	01-NOV-24	05-NOV-24	Pending	U10	T-10
st-21	Permission Level Testing	Test user permissions thoroughly.	06-NOV-24	10-NOV-24	Pending	U11	T-11
st-22	Notification Template Design	Design templates for notifications.	11-NOV-24	15-NOV-24	Pending	U12	T-12
st-23	Cache Cleanup Routine	Set up regular cache cleanup.	16-NOV-24	20-NOV-24	Pending	U13	T-13
st-24	Load Balancer Monitoring	Monitor load balancer performance.	21-NOV-24	25-NOV-24	Pending	U14	T-14
st-25	Error Log Alerts	Set up alerts for critical errors.	26-NOV-24	30-NOV-24	Pending	U15	T-15

25 rows selected.

Figure 51 Showing details of the inserted values

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the 'Connections' tree, which includes an 'Oracle Connections' node and a 'Coursework' node under it. The 'Tables (Filtered)' section of the 'Coursework' node is expanded, showing various tables like Comment, CommentID, Comment, Date, TaskID, Milestone, ProjectDetails, Resources, Subtask, TaskDetails, TaskResourceDetails, UserDetails, UserProjectDetails, and UserProjectTaskDetails. The main workspace contains a 'Worksheet' tab with the following SQL code:

```
INSERT INTO "Comment" VALUES ('C-22', 'Update shipping tracking page to include live updates.', TO_DATE('2024-10-06', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-23', 'Add dynamic search bar functionality on the homepage.', TO_DATE('2024-10-07', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-24', 'Integrate a recommendation engine for suggested products based on user preferences.', TO_DATE('2024-10-08', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-25', 'Improve homepage content layout for better user engagement.', TO_DATE('2024-10-09', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-26', 'Implement multi-currency support for international customers.', TO_DATE('2024-10-10', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-27', 'Add customer support live chat functionality.', TO_DATE('2024-10-11', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-28', 'Refactor code for better handling of user data in the database.', TO_DATE('2024-10-12', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-29', 'Fix broken link issue on product pages.', TO_DATE('2024-10-13', 'YYYY-MM-DD'), 'U1');
INSERT INTO "Comment" VALUES ('C-30', 'Implement a mobile-optimized version of the product catalog page.', TO_DATE('2024-10-14', 'YYYY-MM-DD'), 'U1');
COMMIT;
```

The 'Script Output' tab below the worksheet shows the results of the execution:

```
1 row inserted.  
1 row inserted.  
Commit complete.
```

Figure 52 Inserting values inside Comment table

COMMENTID	Comment	Date	USERID	Task
C-01	Implement user-friendly interface for the settings page.	15-SEP-24	U12	T-03
C-02	Fix issue with incorrect calculation of delivery charges.	16-SEP-24	U4	T-08
C-03	Add tooltip support to enhance user navigation.	17-SEP-24	U15	T-10
C-04	Check and resolve the cross-browser compatibility issue on checkout page.	18-SEP-24	U1	T-02
C-05	Add real-time notifications for new offers and discounts.	19-SEP-24	U9	T-12
C-06	Refactor the profile update functionality for better usability.	20-SEP-24	U7	T-11
C-07	Update payment gateway integration for added security features.	21-SEP-24	U5	T-06
C-08	Fix the issue of missing customer reviews on product pages.	22-SEP-24	U14	T-07
C-09	Rework the checkout page for faster processing of orders.	23-SEP-24	U3	T-09
C-10	Implement session timeout and auto logout for security reasons.	24-SEP-24	U2	T-04
C-11	Add an auto-save feature for incomplete forms.	25-SEP-24	U10	T-13
C-12	Optimize image loading for faster website performance.	26-SEP-24	U6	T-05

Figure 53 Showing the details of the inserted values

12. Basic form

12.1. User Details

The screenshot shows a web application interface for 'Project Management'. The left sidebar has a blue header 'Project Management' and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users (selected), User Projects, and Project Milestones. The main content area is titled 'User Details' and 'User Management Dashboard'. It displays three summary cards: 'Total Users' (18), 'New Users' (3), and 'Recent Activities' (15). Below these is a section titled 'New User Registration' with a large '+' icon.

Figure 54 Basic form of User Details table I

The screenshot shows the same 'Project Management' application. The main content area is titled 'User Details' and contains two sections: 'New User Registration' (with a '+ icon and 'Create New User' button) and 'Users Directory' (with a table having columns: Actions, ID, Username, Email, and Contact).

Figure 55 Basic form of User-Details II

User Details

Users Directory

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U1	Nishan Thapa	nishanl@gmail.com	9817665544
<button>Edit</button> <button>Delete</button>	U2	Dikshya	dikshya55@gmail.com	9847245567
<button>Edit</button> <button>Delete</button>	U3	Kushal	kushal89@gmail.com	9876544987
<button>Edit</button> <button>Delete</button>	U4	Drishya	drishya7a@gmail.com	9856889012

Figure 56 Basic Form of User Details III

User Details

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U5	Cal	cal57@gmail.com	9899887764
<button>Edit</button> <button>Delete</button>	U6	Samyam	samyam05@gmail.com	9865887536
<button>Edit</button> <button>Delete</button>	U7	Binita	binita98@gmail.com	9765789935
<button>Edit</button> <button>Delete</button>	U8	Ujwol	ujjwal65@gmail.com	9867345123
<button>Edit</button> <button>Delete</button>	U9	Tyson	tyson9@gmail.com	9800067310
<button>Edit</button>	U10	Mahesh	mahesh123@gmail.com	9865777000

Figure 57 Basic Form of User Details IV

User Details

	ID	Username	Email	Contact
Edit	U8	Ujwol	ujjwal65@gmail.com	9867345123
Edit	U9	Tyson	tyson9@gmail.com	9800067310
Edit	U10	Neha	neha4@gmail.com	9805777386

1 2

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Figure 58 Basic Form of User Details V Pagination for page change

User Details

Actions	ID	Username	Email	Contact
Edit	UI1	Ojash	ojashcr7@gmail.com	9806598809
Edit	UI2	Anish	anish@gmail.com	9876429007
Edit	UI3	Nidhika	nidhishree@gmail.com	9887859978
Edit	UI4	Shubham	shubam6@gmail.com	9809012345
Edit	UI5	Shreeta	shreeta5@gmail.com	9815998901

Figure 59 Basic Form of User Details VI

The screenshot shows a web-based project management application. On the left, a vertical sidebar menu includes options: Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is currently selected), User Projects, and Project Milestones. The main content area is titled "User Details" and displays a table of user information. The table has columns for ID, Name, Email, and Phone Number. Each row contains "Edit" and "Delete" buttons. The users listed are:

ID	Name	Email	Phone Number
U15	Shreeta	shreeta5@gmail.com	9815998901
U16	PewPewl	pew77@gmail.com	908877665
U17	Lekhnath	lekh@gmail.com	1111111111
U18	Riyaz	kidreyaaz@gmail.com	908877666

At the bottom of the table, there are navigation links for page 1 and 2. In the top right corner of the main area, there is a user profile icon labeled "Admin User".

Figure 60 Basic form of UserDetails.VII

12.2. Task Details

Actions	ID	Task Name	Status	Due Date	Start Date
<button>Edit</button> <button>Delete</button>	T-01	Login Page Design	COMPLETED	Oct 10, 2024	Oct 01, 2024
<button>Edit</button> <button>Delete</button>	T-02	API Integration	COMPLETED	Oct 20, 2024	Oct 05, 2024
<button>Edit</button> <button>Delete</button>	T-03	Schema Development	COMPLETED	Nov 15, 2024	Nov 01, 2024
<button>Edit</button> <button>Delete</button>	T-04	Email Service Setup	COMPLETED	Nov 25, 2024	Nov 10, 2024

Figure 61 Basic form of Task-Details I

Actions	ID	Task Name	Status	Due Date	Start Date
<button>Edit</button> <button>Delete</button>	T-01	Login Page Design	COMPLETED	Oct 10, 2024	Oct 01, 2024
<button>Edit</button> <button>Delete</button>	T-02	API Integration	COMPLETED	Oct 20, 2024	Oct 05, 2024
<button>Edit</button> <button>Delete</button>	T-03	Schema Development	COMPLETED	Nov 15, 2024	Nov 01, 2024
<button>Edit</button> <button>Delete</button>	T-04	Email Service Setup	COMPLETED	Nov 25, 2024	Nov 10, 2024

Figure 62 Basic form of Task-Details II

The screenshot shows the 'Task Details' page of a Project Management application. The left sidebar has a blue header 'Project Management' and items: Dashboard, Projects, Milestones, Tasks (selected), Subtasks, Users, User Projects, and Project Milestones. The main area has a header 'Task Details' and a user 'Admin User'. Below is a table with 10 rows:

			Task ID	Task Name	Status	Start Date	End Date
Edit	Delete	T-05	Authentication Module	ONGOING	Dec 10, 2024	Dec 01, 2024	
Edit	Delete	T-06	Analytics Dashboard	COMPLETED	Dec 30, 2024	Dec 15, 2024	
Edit	Delete	T-07	Reporting Tool Setup	COMPLETED	Jan 10, 2025	Jan 01, 2025	
Edit	Delete	T-08	Search Functionality	ONGOING	Jan 25, 2025	Jan 15, 2025	
Edit	Delete	T-09	File Upload Feature	ONGOING	Feb 05, 2025	Jan 28, 2025	
Edit	Delete	T-10	Data Backup System	COMPLETED	Feb 20, 2025	Feb 10, 2025	

Figure 63 Basic form of Task-Details III

The screenshot shows the 'Task Details' page of a Project Management application. The left sidebar has a blue header 'Project Management' and items: Dashboard, Projects, Milestones, Tasks (selected), Subtasks, Users, User Projects, and Project Milestones. The main area has a header 'Task Details' and a user 'Admin User'. Below is a table with 10 rows, and a red box highlights the page numbers '1 2' at the bottom of the table.

			Task ID	Task Name	Status	Start Date	End Date
Edit	Delete	T-10	Data Backup System	COMPLETED	Feb 20, 2025	Feb 10, 2025	

Add New Task

Create a New Task
Add a new task to start tracking your work

[+ Add New Task](#)

Figure 64 Basic form of Task-Details IV Pagination

Actions	ID	Task Name	Status	Due Date	Start Date
<button>Edit</button> <button>Delete</button>	T-11	User Permission Setup	ONGOING	Mar 05, 2025	Feb 25, 2025
<button>Edit</button> <button>Delete</button>	T-12	Notification Module	COMPLETED	Mar 20, 2025	Mar 10, 2025
<button>Edit</button> <button>Delete</button>	T-13	Cache Management	ONGOING	Apr 05, 2025	Mar 25, 2025
<button>Edit</button> <button>Delete</button>	T-14	Load Balancer Setup	COMPLETED	Apr 20, 2025	Apr 10, 2025
<button>Edit</button> <button>Delete</button>	T-15	Error Logging System	COMPLETED	May 05, 2025	Apr 25, 2025

Figure 65 Basic form of Task-Details V

<button>Edit</button> <button>Delete</button>	T-15	Error Logging System	COMPLETED	May 05, 2025	Apr 25, 2025
<button>Edit</button> <button>Delete</button>	T-16	FYP-Interim	COMPLETED	May 05, 2025	Apr 25, 2025
<button>Edit</button> <button>Delete</button>	T-17	DB-Coursework	PENDING	Mar 19, 2025	Mar 18, 2025

Add New Task

Figure 66 Basic form of Task-Details VI

12.3. Subtasks

The screenshot shows the 'Subtask Management' section of a project management application. On the left, a sidebar menu includes 'Dashboard', 'Projects', 'Milestones', 'Tasks', 'Subtasks' (which is selected and highlighted in blue), 'Users', 'User Projects', and 'Project Milestones'. The main area has a title 'Subtask Management' with the subtitle 'Efficiently manage and track subtasks'. Below this are four summary cards: 'Total Subtasks' (30), 'Completed' (5), 'In Progress' (4), and 'Pending' (0). A 'Subtask List' table follows, with columns: Actions, ID, Name, Description, Status, Due Date, Start Date, Assigned User, and Task. A green 'New Subtask' button is located at the top right of the list.

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-01	Form Validation	Validate input fields	COMPLETED	Sep 20, 2024	Sep 18, 2024	U8 - Ujwol	T-08 - Search Functionality
<button>Edit</button> <button>Delete</button>	st-02	Form Submission	Ensure data is submitted correctly	DELAYED	Sep 25, 2024	Sep 20, 2024	U11 - Ojash	T-01 - Login Page Design
<button>Edit</button> <button>Delete</button>	st-03	UI Design	Create dashboard UI	IN PROGRESS	Sep 25, 2024	Sep 20, 2024	U2 - Dikshya	T-02 - API Integration
<button>Edit</button> <button>Delete</button>	st-04	Chart	Add charts to	PENDING	Sep 25, 2024	Sep 20, 2024	U13 -	T-02 - API

Figure 67 Basic form of Subtask-Details I

This screenshot shows a detailed view of a subtask within the 'Subtask List'. The subtask details are as follows:

- ID:** st-01
- Name:** Form Validation
- Description:** Validate input fields
- Status:** COMPLETED
- Due Date:** Sep 20, 2024
- Start Date:** Sep 18, 2024
- Assigned User:** U8 - Ujwol
- Task:** T-08 - Search Functionality

At the bottom of the subtask card, there are 'Edit' and 'Delete' buttons.

Figure 68 Basic form of Subtask-Details II

Subtask										Admin User
	Subtask ID	Task Name	Description	Status	Start Date	End Date	Assignee	Notes	Action	User
	st-04	Chart Integration	Add charts to dashboard	PENDING	Sep 30, 2024	Sep 26, 2024	UI3 - Nidhika	T-02 - API Integration	<button>Edit</button> <button>Delete</button>	Admin User
	st-05	Schema Design	Design initial database schema	COMPLETED	Jan 20, 2024	Jan 15, 2024	U2 - Dikshya	T-03 - Schema Development	<button>Edit</button> <button>Delete</button>	Admin User
	st-06	Normalization	Normalize database tables	ONGOING	Jan 29, 2024	Jan 21, 2024	UI5 - Shreeta	T-03 - Schema Development	<button>Edit</button> <button>Delete</button>	Admin User
	st-07	API Integration	Setup APIs for payments	COMPLETED	Mar 25, 2024	Mar 19, 2024	U3 - Kushal	T-04 - Email Service Setup	<button>Edit</button> <button>Delete</button>	Admin User
	st-08	Testing	Test user profiles	ONGOING	Apr 20, 2024	Mar 26, 2024	UI3 - Nidhika	T-05 - Authentication Module	<button>Edit</button> <button>Delete</button>	Admin User

Figure 69 Basic form of Subtask-Details III

Subtask										Admin User
	Subtask ID	Task Name	Description	Status	Start Date	End Date	Assignee	Notes	Action	User
	st-07	API Integration	for payments	COMPLETED	Feb 20, 2024	Feb 15, 2024	Kushal	Service Setup	<button>Edit</button> <button>Delete</button>	Admin User
	st-08	Testing	Test user profiles	ONGOING	Apr 20, 2024	Mar 26, 2024	UI3 - Nidhika	T-05 - Authentication Module	<button>Edit</button> <button>Delete</button>	Admin User
	st-09	Tracking System Enhancement	Allow users to track their details	COMPLETED	Mar 18, 2024	Mar 15, 2024	UI - Nishan Chettri	T-06 - Analytics Dashboard	<button>Edit</button> <button>Delete</button>	Admin User
	st-10	Inventory Home Page Update	Enhance home page of inventory system.	PENDING	Aug 30, 2024	Aug 18, 2024	U5 - Cal	T-08 - Search Functionality	<button>Edit</button> <button>Delete</button>	Admin User

Figure 70 Basic form of Subtask-Details IV Pagination

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-11	Login Page Redesign	Update UI and UX for the login page.	PENDING	Sep 10, 2024	Sep 01, 2024	UI - Nishan Chettri	T-01 - Login Page Design
<button>Edit</button> <button>Delete</button>	st-12	API Performance Testing	Ensure API calls meet performance benchmarks.	IN PROGRESS	Sep 15, 2024	Sep 05, 2024	U2 - Dikshya	T-02 - API Integration
<button>Edit</button> <button>Delete</button>	st-13	Database Indexing	Implement indexing for faster query execution.	COMPLETED	Sep 20, 2024	Sep 12, 2024	U3 - Kushal	T-03 - Schema Development
<button>Edit</button> <button>Delete</button>	st-14	SMTP Configuration	Configure SMTP server for email services.	PENDING	Sep 30, 2024	Sep 22, 2024	U4 - Drishya	T-04 - Email Service Setup

Figure 71 Basic form of Subtask-Details V

Actions	ID	Name	Description	Status	Oct 05, 2024	Oct 01, 2024	U5 - Cal	T-05 - Authentication Module
<button>Edit</button> <button>Delete</button>	st-15	OAuth Setup	OAuth for secure authentication.	PENDING	Oct 05, 2024	Oct 01, 2024	U5 - Cal	T-05 - Authentication Module
<button>Edit</button> <button>Delete</button>	st-16	Dashboard Data Sync	Sync analytics dashboard with live data.	PENDING	Oct 12, 2024	Oct 06, 2024	U6 - Samyam	T-06 - Analytics Dashboard
<button>Edit</button> <button>Delete</button>	st-17	Report Format Update	Revise report templates and formats.	PENDING	Oct 18, 2024	Oct 13, 2024	U7 - Binita	T-07 - Reporting Tool Setup
<button>Edit</button> <button>Delete</button>	st-18	Search Algorithm Enhancement	Improve search functionality.	PENDING	Oct 25, 2024	Oct 19, 2024	U8 - Ujwol	T-08 - Search Functionality
<button>Edit</button> <button>Delete</button>	st-19	File Type Validation	Add validation for uploaded files.	PENDING	Oct 31, 2024	Oct 26, 2024	U9 - Tyson	T-09 - File Upload Feature

Figure 72 Basic form of Subtask-Details VI

Subtask										Admin User	
	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task	Action		
	st-17	Format Update	templates and formats.	PENDING	18, 2024	13, 2024	U7 - Binita	Reporting Tool Setup	<button>Edit</button> <button>Delete</button>		
	st-18	Search Algorithm Enhancement	Improve search functionality.	PENDING	Oct 25, 2024	Oct 19, 2024	U8 - Ujwol	T-08 - Search Functionality	<button>Edit</button> <button>Delete</button>		
	st-19	File Type Validation	Add validation for uploaded files.	PENDING	Oct 31, 2024	Oct 26, 2024	U9 - Tyson	T-09 - File Upload Feature	<button>Edit</button> <button>Delete</button>		
	st-20	Backup Schedule Setup	Automate data backup process.	PENDING	Nov 05, 2024	Nov 01, 2024	U10 - Neha	T-10 - Data Backup System	<button>Edit</button> <button>Delete</button>		

Figure 73 Basic form of Subtask-Details VII

Subtask										Admin User	
	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task	Actions		
	st-21	Permission Level Testing	Test user permissions thoroughly.	PENDING	Nov 10, 2024	Nov 06, 2024	U11 - Ojash	T-11 - User Permission Setup	<button>Edit</button> <button>Delete</button>		
	st-22	Notification Template Design	Design templates for notifications.	PENDING	Nov 15, 2024	Nov 11, 2024	U12 - Anish	T-12 - Notification Module	<button>Edit</button> <button>Delete</button>		
	st-23	Cache Cleanup Routine	Set up regular cache cleanup.	PENDING	Nov 20, 2024	Nov 16, 2024	U13 - Nidhika	T-13 - Cache Management	<button>Edit</button> <button>Delete</button>		
	st-24	Load Balancer Monitoring	Monitor load balancer performance.	PENDING	Nov 25, 2024	Nov 21, 2024	U14 - Shubham	T-14 - Load Balancer Setup	<button>Edit</button> <button>Delete</button>		

Figure 74 Basic form of Subtask-Details VIII

Subtask										Admin User
	st-	Task ID	Description	Status	Start Date	End Date	Assignee	Notes	Action	
	st-	25	Error Log Alerts	PENDING	Nov 30, 2024	Nov 26, 2024	UI5 - Shreeta	T-1b - Error Logging System	Edit Delete	
	st-	26	Error Log Alerts	IN PROGRESS	Mar 29, 2025	Mar 24, 2025	UI2 - Anish	T-02 - API Integration	Edit Delete	
	st-	27	Db Coursework	DELAYED	Mar 26, 2025	Mar 15, 2025	UI7 - Lekhnath	T-02 - API Integration	Edit Delete	
	st-	28	complete erd	DELAYED	Mar 31, 2025	Mar 01, 2025	UI3 - Nidhika	T-15 - Error Logging System	Edit Delete	
	st-	29	Complete Testing	IN PROGRESS	Mar 26, 2025	Mar 22, 2025	UI8 - Riyaz	T-16 - FYP- Interim	Edit Delete	
Finalise and submit the report										

Figure 75 Basic form of Subtask IX

Subtask										Admin User
	st-	Task ID	Description	Status	Start Date	End Date	Assignee	Notes	Action	
	st-	29	Complete Testing	IN PROGRESS	Mar 26, 2025	Mar 22, 2025	UI8 - Riyaz	T-16 - FYP- Interim	Edit Delete	
	st-	30	Complete Report	COMPLETED	Mar 26, 2025	Mar 16, 2025	UI - Nishan Chettri	T-17 - DB- Coursework	Edit Delete	
1 2 3										
Add New Subtask										

Figure 76 Basic form of Subtask X

The screenshot shows the 'Subtask' creation form within the 'Project Management' application. The left sidebar has a blue header 'Project Management' and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks (which is selected and highlighted in blue), Users, User Projects, and Project Milestones. The main area has a title 'Subtask' at the top right with a user icon 'Admin User'. Below it is a sub-section titled 'Add New Subtask' with a list icon. The central part of the form is titled 'Create a New Subtask' with a sub-instruction 'Add a new subtask to manage your tasks effectively'. At the bottom is a teal button labeled '+ Add New Subtask'.

Figure 77 Basic form of Subtask XI

12.4. Project Details

The screenshot shows the 'Project Details' page within the 'Project Management' application. The left sidebar is identical to Figure 77. The main area has a title 'Project Details' with a sub-instruction 'Manage your projects efficiently and track progress'. Below this is a summary section with four cards: '16 Total Projects', '3 Completed', '1 Active Projects', and '0 Upcoming Deadlines'. At the bottom is a 'Projects List' table with columns: Actions, ID, Project Name, Status, Start Date, and Due Date. A teal 'New Project' button is located at the top right of the list.

Figure 78 Basic form of Project-Details I

Actions	ID	Project Name	Status	Start Date	Due Date
<button>Edit</button> <button>Delete</button>	P-01	Enrolment System	PLANNING	Sep 18, 2024	Dec 09, 2024
<button>Edit</button> <button>Delete</button>	P-02	Attendance System	COMPLETED	Jan 10, 2024	Mar 21, 2025
<button>Edit</button> <button>Delete</button>	P-03	Registration System	ON HOLD	Mar 10, 2024	Sep 05, 2024
<button>Edit</button> <button>Delete</button>	P-04	Rental System	ON HOLD	Oct 10, 2024	Dec 25, 2024

Figure 79 Basic form of Project-Details II

Actions	ID	Project Name	Status	Start Date	Due Date
<button>Edit</button> <button>Delete</button>	P-05	Diet Tracking System	ONGOING	Jan 19, 2024	Nov 25, 2024
<button>Edit</button> <button>Delete</button>	P-06	Expense Tracking System	ONGOING	May 01, 2024	Feb 01, 2025
<button>Edit</button> <button>Delete</button>	P-07	Logistic Management System	ONGOING	Aug 15, 2024	Jul 30, 2025
<button>Edit</button> <button>Delete</button>	P-08	Car Rental System	COMPLETED	Oct 01, 2024	Jul 15, 2025
<button>Edit</button> <button>Delete</button>	P-09	Phone Tracking System	ONGOING	Dec 15, 2024	Aug 17, 2025
<button>Edit</button> <button>Delete</button>	P-10	Daily Tracking System	DELAYED	Jul 16, 2024	May 25, 2025

Figure 80 Basic form of Project-Details III

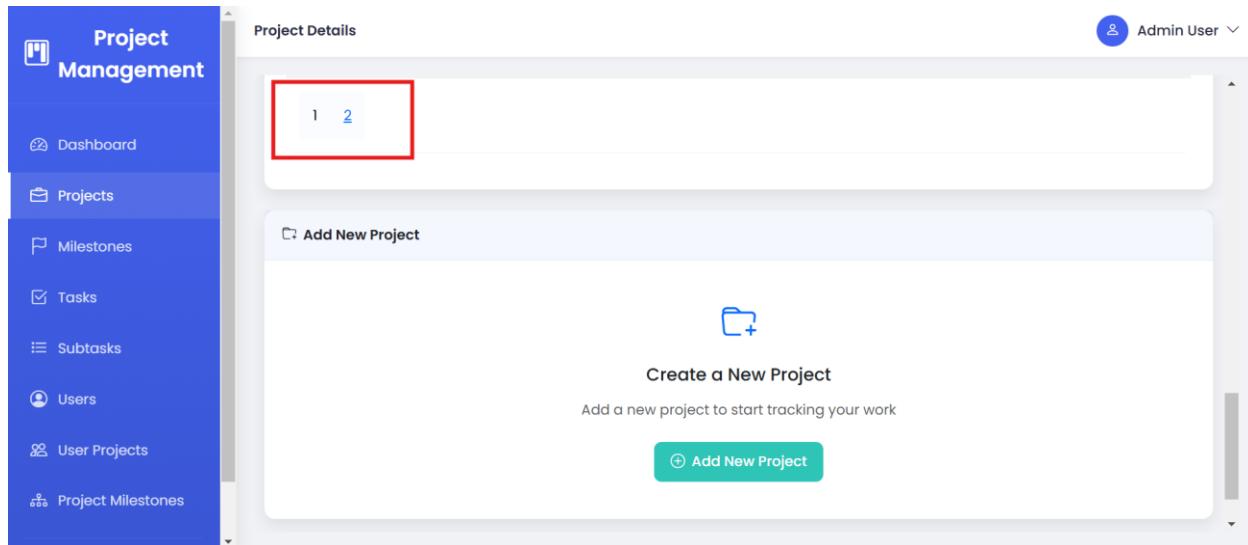


Figure 81 Basic form of Project-Details IV Pagination

The screenshot shows the 'Project Details' page of a web application. On the left is a blue sidebar with the 'Project Management' logo and links for Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main content area has a header 'Project Details' and a user profile 'Admin User'. Below this is a table with six rows of project data. Each row contains edit and delete buttons. The table includes columns for ID, Project Name, Status, Start Date, and End Date.

ID	Project Name	Status	Start Date	End Date
P-11	Route Management System	ONGOING	Dec 20, 2024	Jul 10, 2025
P-12	Payment System	ONGOING	Jun 01, 2024	Dec 11, 2024
P-13	Fake News Detection System	ONGOING	Dec 11, 2024	Mar 12, 2025
P-14	Fake Comment Detection System	COMPLETED	Sep 05, 2024	Jun 20, 2025
P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025
P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025

Figure 82 Basic form of Project-Details V

12.5. Milestone

The screenshot shows the 'Milestone Management' section of a project management application. On the left, a sidebar menu includes 'Dashboard', 'Projects', 'Milestones' (selected), 'Tasks', 'Subtasks', 'Users', 'User Projects', and 'Project Milestones'. The main area has a blue header with the title 'Milestone Management' and a subtitle 'Track, update and manage project milestones efficiently'. Below the header are four cards: 'Total Milestones' (30), 'Completed' (4), 'In Progress' (3), and 'Delayed' (3). A 'Milestone List' table follows, with columns: Actions, ID, Name, Status, Start Date, Due Date, and Project. A green 'New Milestone' button is at the top right of the list.

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-01	Prototype Design	PENDING	Sep 15, 2024	Oct 01, 2024	P-04 - Rental System
<button>Edit</button> <button>Delete</button>	M-02	Database Setup	DELAYED	Oct 01, 2024	Oct 15, 2024	P-05 - Diet Tracking System
<button>Edit</button> <button>Delete</button>	M-03	System Testing	COMPLETE	Nov 01, 2024	Nov 20, 2024	P-09 - Phone Tracking System
<button>Edit</button> <button>Delete</button>	M-04	Final Deployment	DELAYED	Nov 20, 2024	Dec 05, 2024	P-04 - Rental System

Figure 83 Basic form of Milestone I

This screenshot shows a more detailed view of the 'Milestone List'. The table columns are: Actions, ID, Name, Status, Start Date, Due Date, and Project. The data rows are identical to Figure 83, but each row now includes a blue 'Edit' button and a red 'Delete' button next to the 'Actions' column.

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-01	Prototype Design	PENDING	Sep 15, 2024	Oct 01, 2024	P-04 - Rental System
<button>Edit</button> <button>Delete</button>	M-02	Database Setup	DELAYED	Oct 01, 2024	Oct 15, 2024	P-05 - Diet Tracking System
<button>Edit</button> <button>Delete</button>	M-03	System Testing	COMPLETE	Nov 01, 2024	Nov 20, 2024	P-09 - Phone Tracking System
<button>Edit</button> <button>Delete</button>	M-04	Final Deployment	DELAYED	Nov 20, 2024	Dec 05, 2024	P-04 - Rental System

Figure 84 Basic form of Milestone II

Milestone						
Edit	Delete	M-04	Final Deployment	DELAYED	Nov 20, 2024	Dec 05, 2024
Edit	Delete	M-05	Requirement Analysis	COMPLETED	Jan 10, 2024	Jan 25, 2024
Edit	Delete	M-06	Feature Implementation	COMPLETE	May 01, 2024	Jun 15, 2024
Edit	Delete	M-07	System Integration	IN PROGRESS	Aug 01, 2024	Sep 01, 2024
Edit	Delete	M-08	Initial Mockup II	COMPLETED	Mar 01, 2024	Mar 20, 2024
		M-			Jun 01	Jul 15
					P-13 - Fake News Detection	

Figure 85 Basic form of Milestone III

Milestone						
Edit	Delete	M-07	System Integration	IN PROGRESS	Aug 01, 2024	Sep 01, 2024
Edit	Delete	M-08	Initial Mockup II	COMPLETED	Mar 01, 2024	Mar 20, 2024
Edit	Delete	M-09	Alpha Release	COMPLETED	Jun 01, 2024	Jul 15, 2024
Edit	Delete	M-10	User Feedback Collection	ONPROCESS	Aug 01, 2024	Aug 20, 2024
1	2	3				

Figure 86 Basic form of Milestone IV Pagination

Actions	ID	Name	Status	Start Date	Due Date	Project	
Edit	Delete	M-11	Rental Module Design	PENDING	Oct 01, 2024	Oct 20, 2024	P-04 - Rental System
Edit	Delete	M-12	Payment Gateway Integration	PENDING	Dec 01, 2024	Dec 10, 2024	P-04 - Rental System
Edit	Delete	M-13	Feature Planning	COMPLETED	Feb 10, 2024	Mar 01, 2024	P-05 - Diet Tracking System
Edit	Delete	M-14	User Authentication Setup	ONPROCESS	Jun 01, 2024	Jul 01, 2024	P-05 - Diet Tracking System
Edit	Delete	M-15	Beta Testing	PENDING	Oct 20, 2024	Nov 10, 2024	P-05 - Diet Tracking System

Figure 87 Basic form of Milestone V

Actions	ID	Name	Status	Start Date	Due Date	Project	
Edit	Delete	M-15	Beta Testing	PENDING	Oct 20, 2024	Nov 10, 2024	P-05 - Diet Tracking System
Edit	Delete	M-16	Expense Analysis Module	COMPLETED	Jun 01, 2024	Jul 01, 2024	P-01 - Enrolment System
Edit	Delete	M-17	Report Generation Feature	PENDING	Dec 01, 2024	Dec 15, 2024	P-06 - Expense Tracking System
Edit	Delete	M-18	Backend Development	COMPLETED	Oct 01, 2024	Nov 01, 2024	P-07 - Logistic Management System
Edit	Delete	M-19	API Integration	ONPROCESS	Mar 01, 2025	Apr 01, 2025	P-07 - Logistic Management System
Edit	Delete	M-20	User Registration Function	COMPLETED	Oct 01, 2024	Oct 15, 2024	P-08 - Car Rental System

Figure 88 Basic form of Milestone VI

The screenshot shows a project management application interface. On the left, a sidebar menu includes options like Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The 'Milestones' option is selected. The main area displays a table titled 'Milestone' with one row:

	Edit	Delete	M-20	User Registration Feature	COMPLETED	Oct 01, 2024	Oct 15, 2024	P-08 - Car Rental System
	1	2	3					

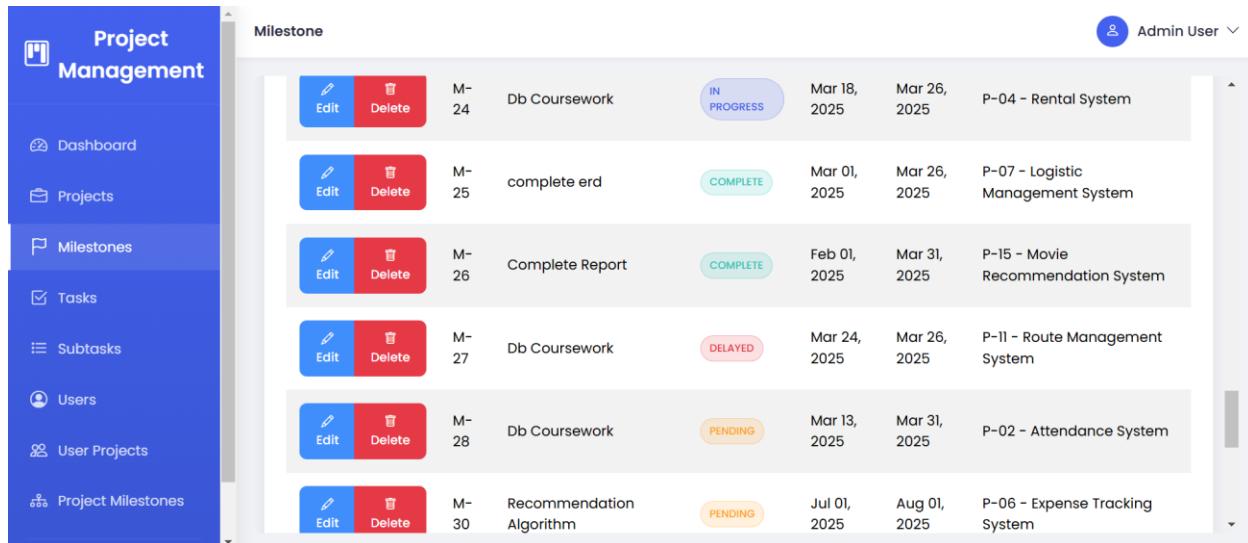
Below the table is a section titled 'Add New Milestone' with a 'Create a New Milestone' button and a 'Add New Milestone' button.

Figure 89 Basic form of Milestone VII

The screenshot shows a project management application interface. On the left, a sidebar menu includes options like Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The 'Milestones' option is selected. The main area displays a table titled 'Milestone' with six rows:

	Edit	Delete	M-20	User Registration Feature	COMPLETED	Oct 01, 2024	Oct 15, 2024	P-08 - Car Rental System
	1	2	3	4	5	6	7	8
	Edit	Delete	M-21	Admin Panel Setup	PENDING	Apr 01, 2025	May 01, 2025	P-08 - Car Rental System
	Edit	Delete	M-22	Geolocation API Integration	ONPROCESS	Jan 20, 2025	Feb 15, 2025	P-09 - Phone Tracking System
	Edit	Delete	M-23	User Interface Update	PENDING	May 01, 2025	Jun 01, 2025	P-09 - Phone Tracking System
	Edit	Delete	M-30	Recommendation Algorithm	PENDING	Jul 01, 2025	Aug 01, 2025	P-06 - Expense Tracking System
	Edit	Delete	M-	Dh Coursework	IN	Mar 18,	Mar 29,	P-15 - Movie

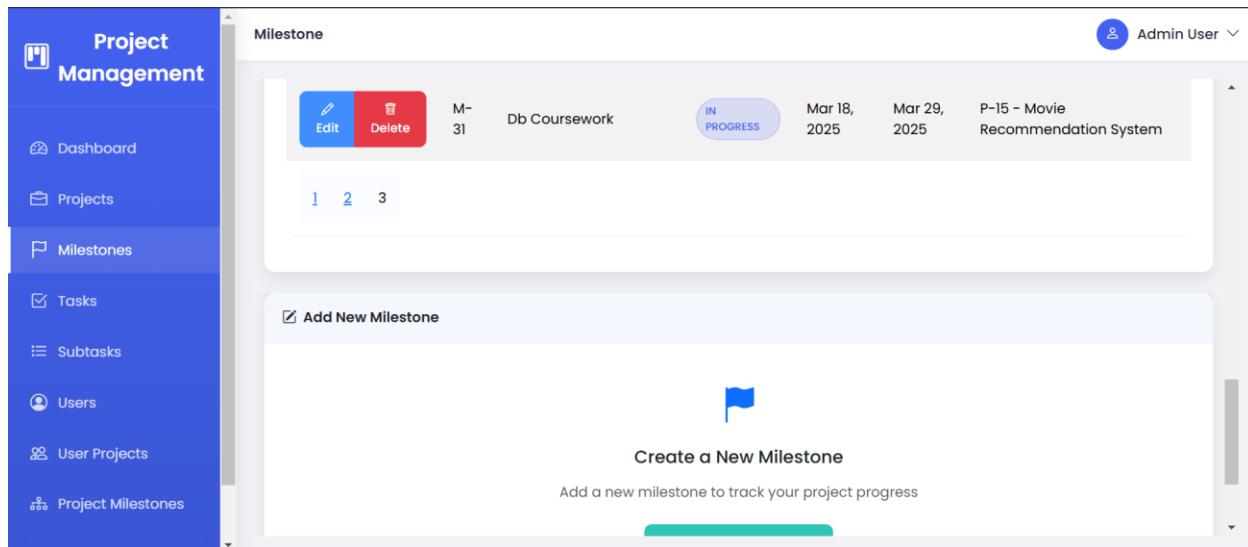
Figure 90 Basic form of Milestone VII



The screenshot shows the 'Milestone' section of the Project Management application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones (selected), Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area displays a table titled 'Milestone' with the following data:

		Milestone ID	Description	Status	Start Date	End Date	Project Reference
		Action	Action	Action	Action	Action	Action
		M-24	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 26, 2025	P-04 - Rental System
		M-25	complete erd	COMPLETE	Mar 01, 2025	Mar 26, 2025	P-07 - Logistic Management System
		M-26	Complete Report	COMPLETE	Feb 01, 2025	Mar 31, 2025	P-15 - Movie Recommendation System
		M-27	Db Coursework	DELAYED	Mar 24, 2025	Mar 26, 2025	P-11 - Route Management System
		M-28	Db Coursework	PENDING	Mar 13, 2025	Mar 31, 2025	P-02 - Attendance System
		M-30	Recommendation Algorithm	PENDING	Jul 01, 2025	Aug 01, 2025	P-06 - Expense Tracking System

Figure 91 Basic form of Milestone I



The screenshot shows the 'Create New Milestone' form. The sidebar is identical to Figure 91. The main area has a table for existing milestones at the top, followed by a section for creating a new one:

- Add New Milestone:** A checkbox labeled "Add New Milestone".
- Create a New Milestone:** A large input field with a placeholder "Add a new milestone to track your project progress".
- Submit:** A blue button with a checkmark icon.

Figure 92 Basic form of Milestone X

13. Complex Form

13.1. User Project

The screenshot shows a left sidebar titled "Project Management" with a blue header. The sidebar includes links for Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects (which is highlighted in blue), and Project Milestones. The main content area is titled "User Project Details" and contains a sub-section titled "Select User" with a placeholder "Choose a user to view their project details:" followed by a text input field containing "Nishan Thapa". Below this is another section titled "Project Details".

Figure 93 Complex form of User Project I

This screenshot shows the same interface as Figure 93, but the "Project Details" section now displays a table with two rows of data. The table has columns for Username, Email, Contact, Project Name, Start Date, Due Date, and Status.

Username	Email	Contact	Project Name	Start Date	Due Date	Status
Nishan Thapa	nishan1@gmail.com	9817665544	Enrolment System	Sep 18, 2024	Dec 09, 2024	Planning
Nishan Thapa	nishan1@gmail.com	9817665544	Movie Recommendation System	Oct 01, 2024	Oct 01, 2025	Ongoing

Figure 94 Complex form of User Project II

13.2. Project Milestone

The screenshot shows a project management application interface. On the left is a sidebar with a blue header "Project Management" and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The "Project Milestones" item is highlighted with a blue background. The main content area has a header "Project Milestone" with a user icon and "Admin User". Below it is a large blue banner with the title "Project Milestones" and the subtitle "Track project progress with key milestones". A "Select Project" section contains a dropdown menu with "Rental System" selected. A "Milestones" section displays a table with the following data:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design1	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed
Rental System	Oct 10, 2024	Dec 25, 2024	Rental Module Design	Oct 01, 2024	Oct 20, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Payment Gateway Integration	Dec 01, 2024	Dec 10, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Db Coursework	Mar 18, 2025	Mar 26, 2025	In Progress

Figure 95 Complex form of Project-Milestone I

The screenshot shows the same project management application interface as Figure 95. The "Project Milestones" section now displays a table with the following data:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design1	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed
Rental System	Oct 10, 2024	Dec 25, 2024	Rental Module Design	Oct 01, 2024	Oct 20, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Payment Gateway Integration	Dec 01, 2024	Dec 10, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Db Coursework	Mar 18, 2025	Mar 26, 2025	In Progress

Figure 96 Complex form of Project-Milestone II

The screenshot shows a project management application interface. On the left is a sidebar with a blue header "Project Management" and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The "Project Milestones" item is highlighted with a blue background. The main content area has a title "Project Milestone". It contains a table with columns: Project Name, Project Start Date, Project Due Date, Milestone Name, Milestone Start Date, Milestone Due Date, and Status. There are five rows of data for a project named "Rental System". The last row, "Db Coursework", has a status of "In Progress". A user profile icon at the top right indicates "Admin User".

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design1	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed
Rental System	Oct 10, 2024	Dec 25, 2024	Rental Module Design	Oct 01, 2024	Oct 20, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Payment Gateway Integration	Dec 01, 2024	Dec 10, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Db Coursework	Mar 18, 2025	Mar 26, 2025	In Progress

Figure 97 Complex form of Project-Milestone III

13.3. Top Three Performers

The screenshot shows a project management application interface. On the left is a sidebar with a blue header "Project Management" and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The "Tasks" item is highlighted with a blue background. The main content area has a title "Top Three Performers". It features a large blue callout box with the heading "Top Three Performers" and the subtext "Identify and recognize your top contributors". Below this is a section titled "Select Project" with a dropdown menu showing "Enrolment System1". At the bottom is a section titled "Top Performers" which is currently empty.

Figure 98 Complex Form of Top Three Performers I

The screenshot shows a complex form titled "Top Three Performers". On the left is a sidebar menu with "Management" at the top, followed by "Dashboard", "Projects", "Milestones", "Tasks", "Subtasks", "Users", "User Projects", "Project Milestones", and "Top Performers" which is currently selected. At the top right is a user icon labeled "Admin User". The main content area has a header "Top Three Performers" and a sub-header "Choose a project to view its top performers:". A search bar contains the text "Enrolment System1". Below this is a section titled "Top Performers" with a table:

User Name	Project Name	Completed Tasks
Kushal	Enrolment System1	3
Dikshya	Enrolment System1	1
Nishan Thapa	Enrolment System1	1

Figure 99 Complex Form of Top Three Performers II

14. Dashboard

The screenshot shows the "Project Management Dashboard". The sidebar menu is identical to Figure 99. The main content area has a header "Welcome to Project Management Dashboard" and a sub-header "Get a quick overview of your project metrics and performance indicators.". It features several cards and charts:

- Metrics:** Shows counts for Projects (16), Milestones (30), Tasks (17), Subtasks (30), and Users (18).
- Project Status Distribution:** A chart titled "Projects by Status" showing three categories: one orange bar at level 2 and two teal bars at level 3.
- User Project Distribution:** A chart titled "Projects per User" showing multiple blue bars, with the highest being at level 3.

Figure 100 Screenshot of Dashboard I

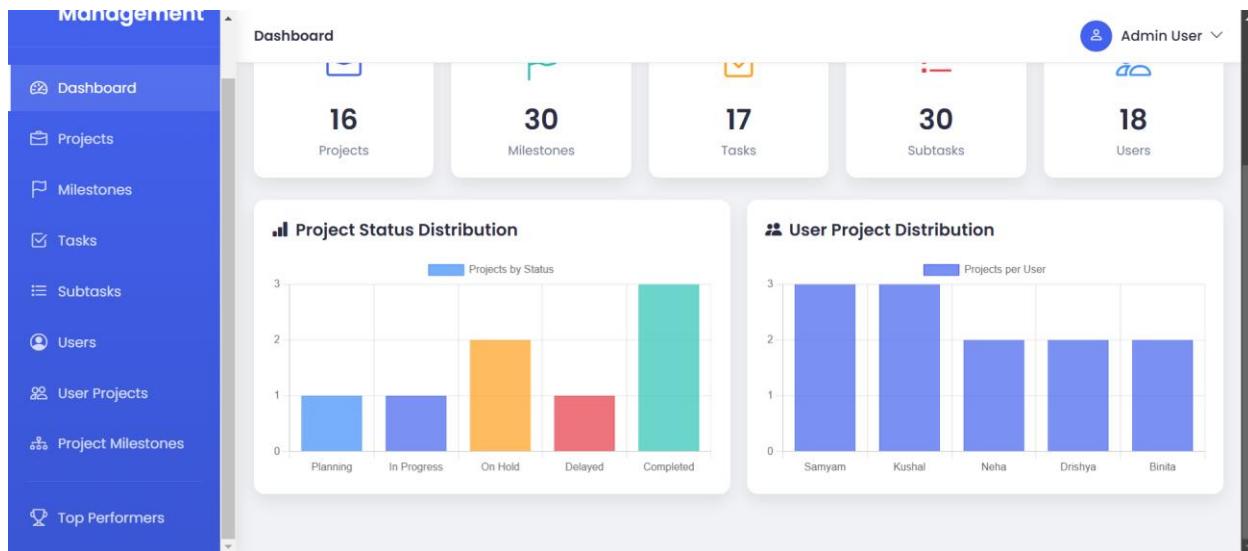


Figure 101 Screenshot of Dashboard II

15. SQL Query

15.1. Project-Milestone Details

```
SELECT
```

```

pd.projectId,
pd.projectName,
pd.projectstartDate,
pd.projectdueDate,
m.milestoneId,
m.Name,
m.startdate,
m.duedate,
```

```
m.status  
FROM  
ProjectDetails pd  
LEFT JOIN  
Milestone m ON pd.projectId = m.projectId where pd.projectId = :projectId">
```

15.2. Top Three Performers

```
SELECT userId, userName, projectId, projectName, Completed_Tasks  
FROM (   
SELECT  
ud.userId,  
ud.userName,  
pd.projectId,  
pd.projectName,  
COUNT(DISTINCT td.taskId) AS Completed_Tasks,  
RANK() OVER (PARTITION BY pd.projectId ORDER BY COUNT(DISTINCT td.taskId)  
DESC) AS rank  
FROM UserDetails ud  
JOIN UserProjectDetails upd ON ud.userId = upd.userId  
JOIN ProjectDetails pd ON upd.projectId = pd.projectId  
JOIN UserProjectTaskDetails uptd ON upd.userProjectId = uptd.userProjectId
```

```
JOIN TaskDetails td ON uptd.taskId = td.taskId  
WHERE td.Status = 'Completed' AND pd.projectId = :projectId  
GROUP BY ud.userId, ud.userName, pd.projectId, pd.projectName  
)  
WHERE rank <= 3">
```

15.3. User-Project

```
SELECT  
    ud.userId,  
    ud.userName,  
    ud.useremail,  
    ud.usercontact,  
    pd.projectId,  
    pd.projectName,  
    pd.projectstartDate  
    pd.projectdueDate,  
    pd.projectStatus  
FROM UserDetails ud  
JOIN UserProjectDetails upd ON  
    ud.userId = upd.userId  
JOIN ProjectDetails pd ON  
    upd.projectId = pd.projectId  
WHERE ud.userId = :userId
```

16. User Manual

16.1. User Details

Dashboard with Navbar and grids showing dynamic information

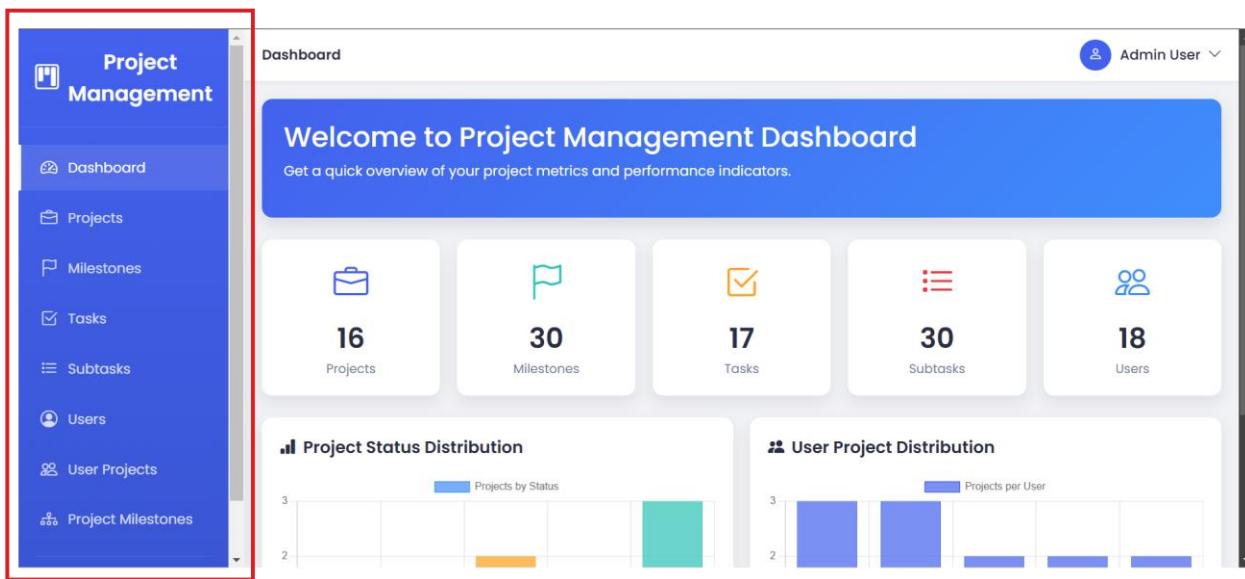


Figure 102 Screenshot of Dashboard Navigation

The screenshot shows a dashboard interface titled "Management". On the left sidebar, there are several menu items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, Project Milestones, and Top Performers. The "Top Performers" item is currently selected. The main content area is titled "Top Three Performers" and contains a search bar with the placeholder "Choose a project to view its top performers:" and a dropdown menu showing "Enrolment System". Below this, a table titled "Top Performers" lists three users: Kushal, Dikshya, and Nishan Chettri, all associated with the "Enrolment System" project.

User Name	Project Name	Completed Tasks
Kushal	Enrolment System	3
Dikshya	Enrolment System	1
Nishan Chettri	Enrolment System	1

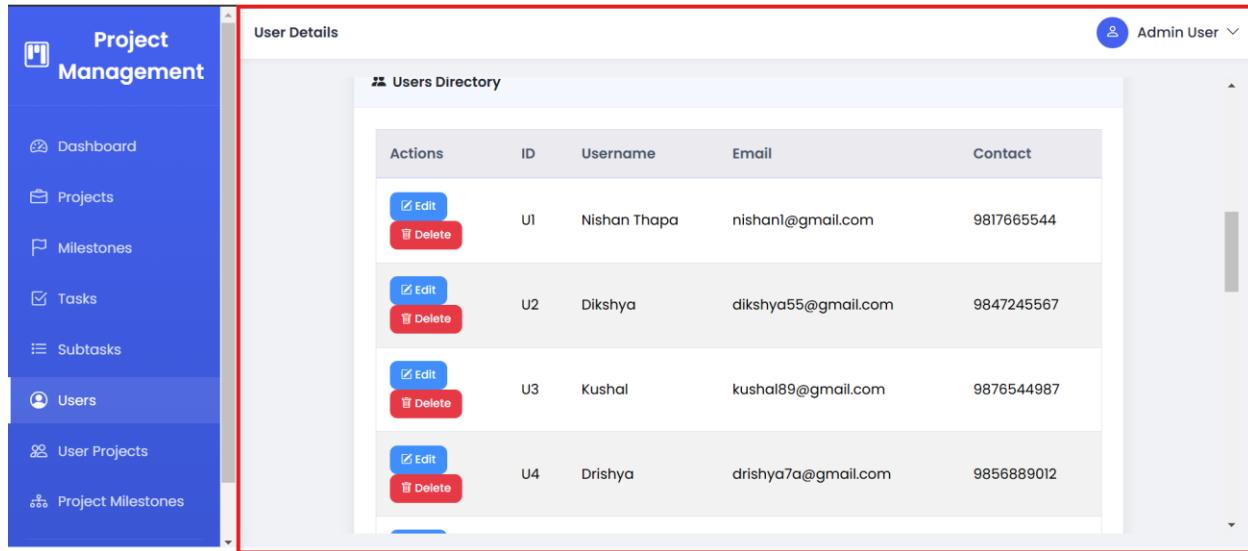
Figure 103 Screenshot of Dashboard II

User details dashboard which shows dynamic values for total users, new users and their recent activites

The screenshot shows a dashboard interface titled "Project Management". On the left sidebar, there are several menu items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The "Users" item is currently selected. The main content area is titled "User Details" and features a large blue header box with the title "User Management Dashboard" and the subtitle "Manage user details efficiently and securely". Below this, there are three summary cards: "Total Users" (18), "New Users" (3), and "Recent Activities" (15). At the bottom, there is a section titled "New User Registration" with a plus sign icon.

Figure 104 Screenshot of User Dashboard – Total Users, new users and recent activities

User information being displayed

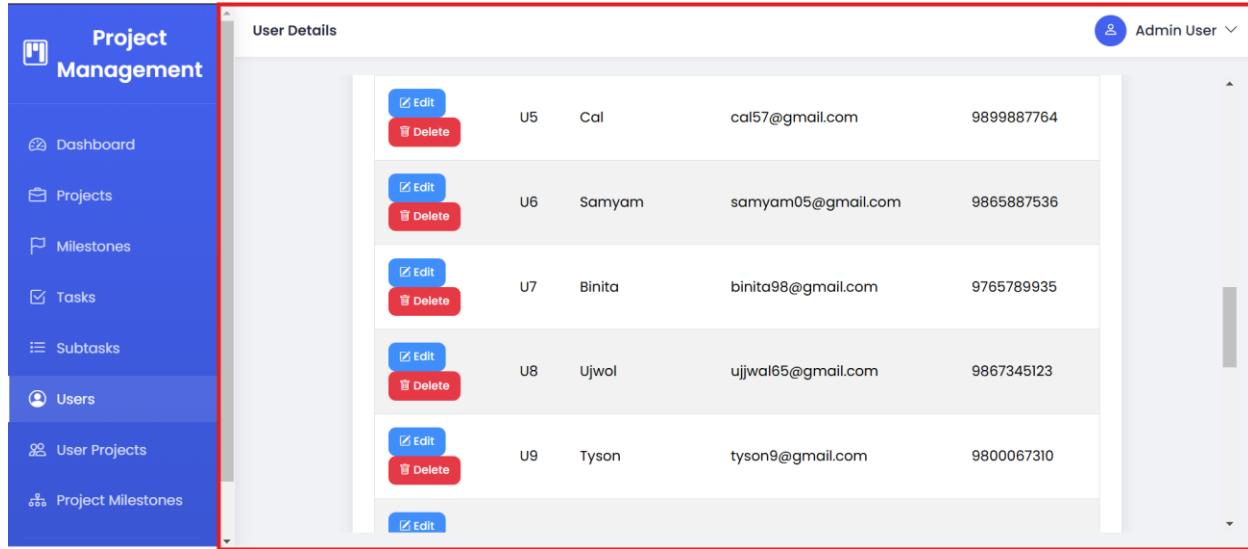


The screenshot shows a 'User Details' page within a 'Project Management' application. The sidebar on the left includes options like Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is selected), User Projects, and Project Milestones. The main content area is titled 'User Details' and contains a sub-section 'Users Directory'. A table lists four users:

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U1	Nishan Thapa	nishanl@gmail.com	9817665544
<button>Edit</button> <button>Delete</button>	U2	Dikshya	dikshya55@gmail.com	9847245567
<button>Edit</button> <button>Delete</button>	U3	Kushal	kushal89@gmail.com	9876544987
<button>Edit</button> <button>Delete</button>	U4	Drishya	drishya7a@gmail.com	9856889012

Figure 105 Screenshot of User-Details I

More User Details shown by scrolling



The screenshot shows the same 'User Details' page after scrolling down. Now, nine user entries are visible in the table:

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U5	Cal	cal57@gmail.com	9899887764
<button>Edit</button> <button>Delete</button>	U6	Samyam	samyam05@gmail.com	9865887536
<button>Edit</button> <button>Delete</button>	U7	Binita	binita98@gmail.com	9765789935
<button>Edit</button> <button>Delete</button>	U8	Ujwol	ujjwal65@gmail.com	9867345123
<button>Edit</button> <button>Delete</button>	U9	Tyson	tyson9@gmail.com	9800067310
<button>Edit</button>				

Figure 106 Screenshot of User-Details II

Form for adding new users

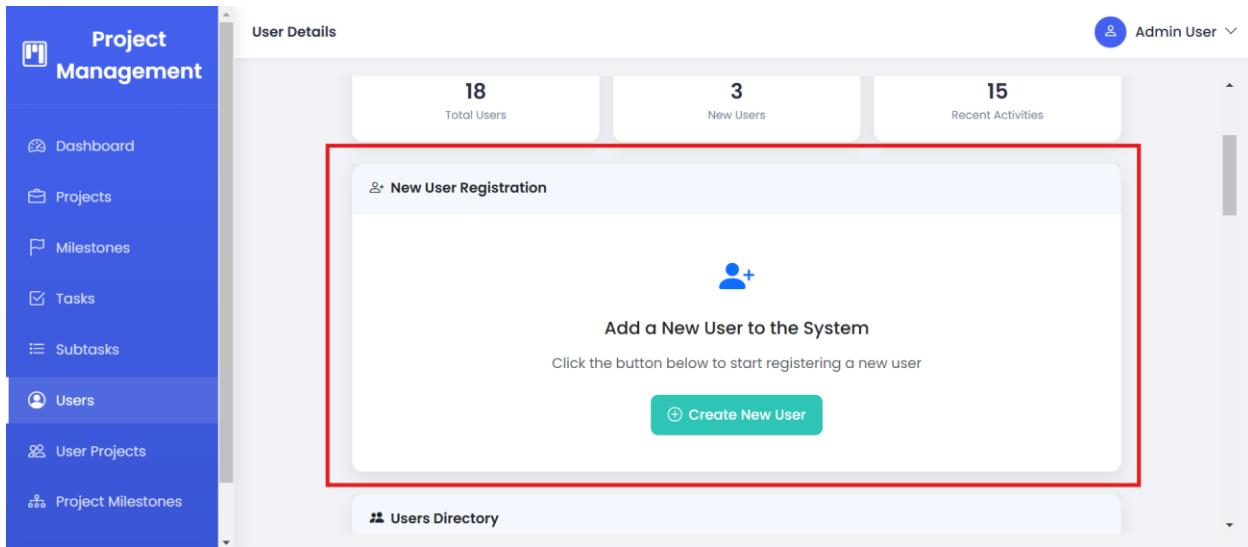


Figure 107 Screenshot of grid for adding a new-user

Click New user button to create a new user

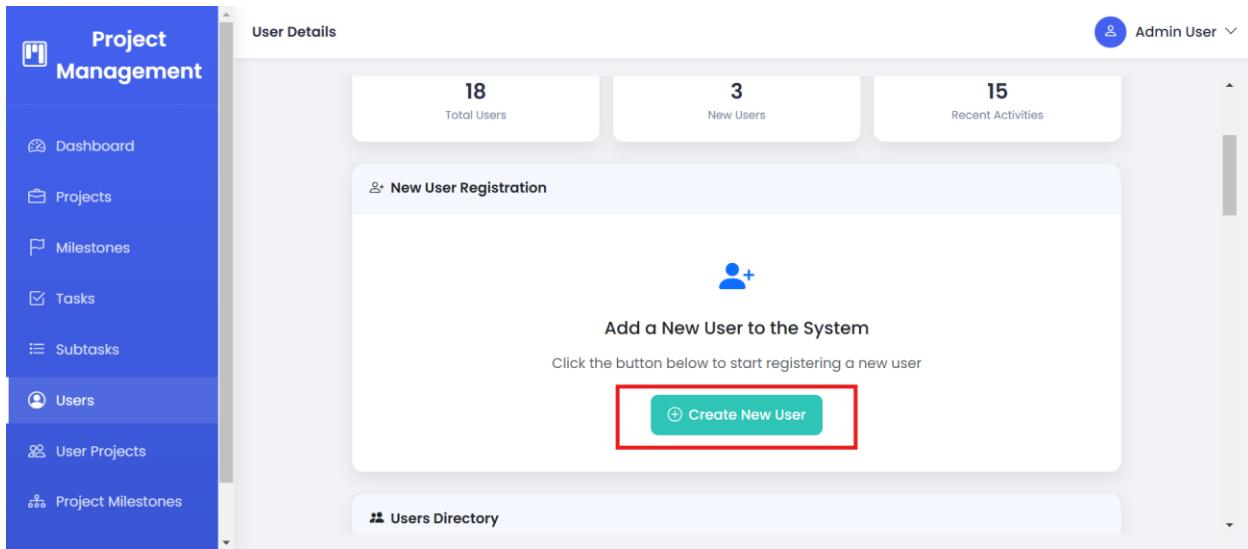


Figure 108 Screenshot of create new user button

A form will be displayed asking for certain information to be added

The screenshot shows the 'Project Management' application interface. On the left, a sidebar menu includes 'Dashboard', 'Projects', 'Milestones', 'Tasks', 'Subtasks', 'Users' (which is selected), 'User Projects', and 'Project Milestones'. The main area is titled 'User Details' and displays statistics: '18 Total Users', '3 New Users', and '15 Recent Activities'. A modal window titled 'New User Registration' is open, containing fields for 'User ID' (with placeholder '# Enter user ID'), 'Username' (placeholder 'Enter username'), 'Email Address' (placeholder 'Enter email address'), and 'Contact Number' (placeholder 'Enter contact number'). At the bottom of the modal are 'Save User' and 'Cancel' buttons. The entire 'New User Registration' modal is highlighted with a red border.

Figure 109 Screenshot of form for new user-details

Fill the details with valid information and click Save User

This screenshot is similar to Figure 109, showing the 'Project Management' application. The 'Users' option in the sidebar is selected. The 'User Details' section shows '18 Total Users', '3 New Users', and '15 Recent Activities'. A 'New User Registration' modal is open, with its fields populated: 'User ID' is 'U19', 'Username' is 'Purnika', 'Email Address' is 'ka@gmail.com', and 'Contact Number' is '0099887766'. The 'Save User' button at the bottom of the modal is highlighted with a red border.

Figure 110 Screenshot of saving user-details

The grid changed from 18-19 showing a new user was added successfully

The screenshot shows the 'User Management Dashboard' with a blue header bar containing the title and a subtitle: 'Manage user details efficiently and securely'. Below the header are three cards: 'Total Users' (19), 'New Users' (4), and 'Recent Activities' (16). A red box highlights the 'Total Users' card. Below these cards is a section titled 'New User Registration' with a plus sign icon. The left sidebar has a 'Project Management' logo and links for Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is selected), User Projects, and Project Milestones.

Figure 111 Screenshot of grid update after adding a new user

Further scrolling shows the new user being added

The screenshot shows the 'User Details' page with a table listing users. The table has columns for ID, Name, Email, and Phone Number. The last row, which is highlighted with a red box, represents the newly added user: UI9, Purnika, ka@gmail.com, 0099887766. Each row contains 'Edit' and 'Delete' buttons. The left sidebar is identical to Figure 111.

ID	Name	Email	Phone Number
UI6	PewPewl	pew77@gmail.com	908877665
UI7	Lekhnath	lekh@gmail.com	1111111111
UI8	Riyaz	kidreyaaz@gmail.com	908877666
UI9	Purnika	ka@gmail.com	0099887766

Figure 112 Screenshot of new user added

Click the edit button to change values for certain fields

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U1	Nishan Thapa	nishanl@gmail.com	9817665544
<button>Edit</button> <button>Delete</button>	U2	Dikshya	dikshya55@gmail.com	9847245567
<button>Edit</button> <button>Delete</button>	U3	Kushal	kushal89@gmail.com	9876544987
<button>Edit</button> <button>Delete</button>	U4	Drishya	drishya7a@gmail.com	9856889012
<button>Edit</button> <button>Delete</button>	U5	Cal	cal57@gmail.com	9899887764

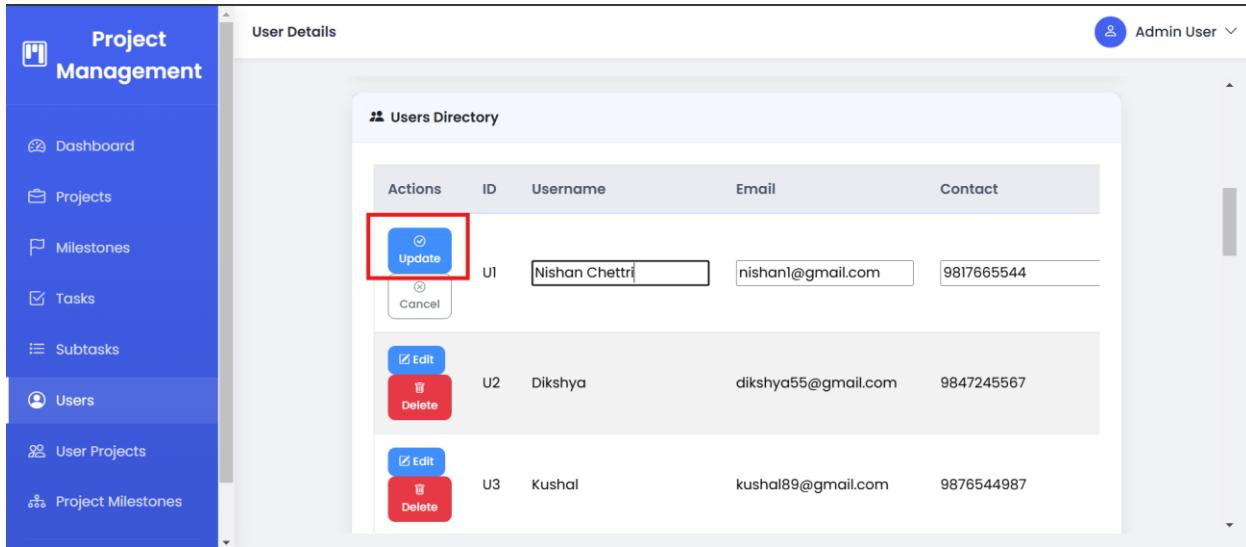
Figure 113 Screenshot of Edit/Delete button

Sur-Name changed from Thapa to Chettri

Actions	ID	Username	Email	Contact
<button>Update</button> <button>Cancel</button>	U1	Nishan Chettri	nishanl@gmail.com	9817665544
<button>Edit</button> <button>Delete</button>	U2	Dikshya	dikshya55@gmail.com	9847245567
<button>Edit</button> <button>Delete</button>	U3	Kushal	kushal89@gmail.com	9876544987

Figure 114 Screenshot of Editing User-Details

Click the update button to save the changes made

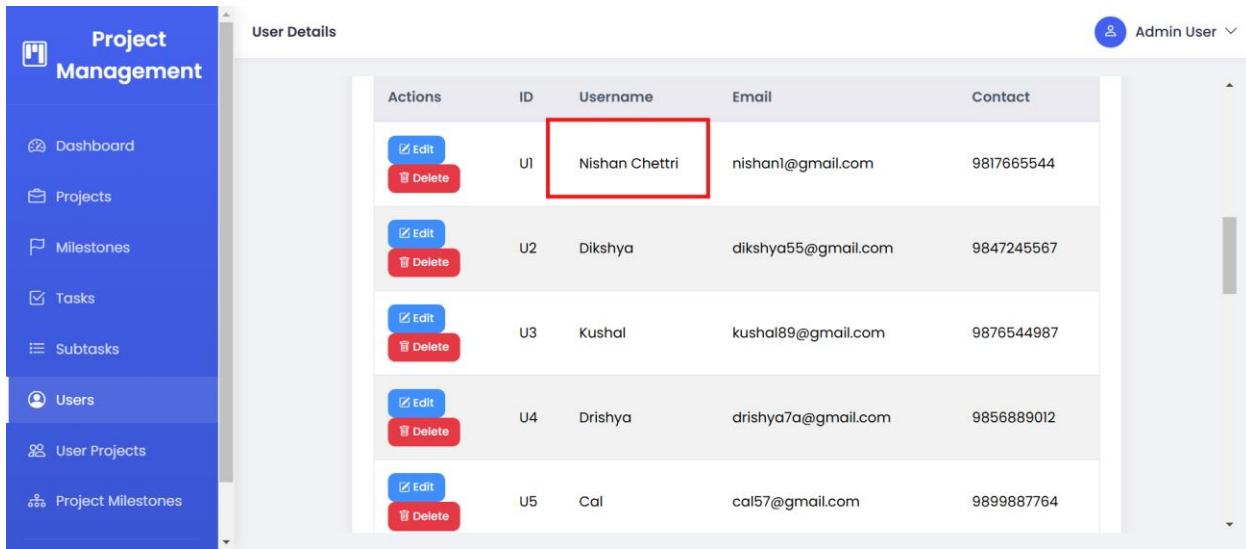


The screenshot shows the 'User Details' section of a 'Project Management' application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is selected), User Projects, and Project Milestones. The main area is titled 'User Details' and contains a sub-section titled 'Users Directory'. A table lists users with columns: Actions, ID, Username, Email, and Contact. The first user listed is U1, Nishan Chettri, with email nishan1@gmail.com and contact 9817665544. An 'Update' button is visible next to the user's row, highlighted with a red box. Below the table are 'Edit' and 'Delete' buttons for each user row.

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U1	Nishan Chettri	nishan1@gmail.com	9817665544
<button>Edit</button> <button>Delete</button>	U2	Dikshya	dikshya55@gmail.com	9847245567
<button>Edit</button> <button>Delete</button>	U3	Kushal	kushal89@gmail.com	9876544987

Figure 115 Screenshot of Clicking update after editing user-details value

Username successfully changed from “Thapa” to “Chettri”



The screenshot shows the 'User Details' section of the 'Project Management' application. The sidebar and main layout are identical to Figure 115. The 'Users Directory' table now shows the updated data. The first user, U1, now has the username 'Nishan Chettri' highlighted with a red box. The other users (Dikshya, Kushal, Drishya, Cal) remain unchanged.

Actions	ID	Username	Email	Contact
<button>Edit</button> <button>Delete</button>	U1	Nishan Chettri	nishan1@gmail.com	9817665544
<button>Edit</button> <button>Delete</button>	U2	Dikshya	dikshya55@gmail.com	9847245567
<button>Edit</button> <button>Delete</button>	U3	Kushal	kushal89@gmail.com	9876544987
<button>Edit</button> <button>Delete</button>	U4	Drishya	drishya7a@gmail.com	9856889012
<button>Edit</button> <button>Delete</button>	U5	Cal	cal57@gmail.com	9899887764

Figure 116 Screenshot of Update made

Click the delete button to delete the user

The screenshot shows a 'User Details' page from a 'Project Management' application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is selected and highlighted in blue), User Projects, and Project Milestones. The main content area displays a table of users with columns: ID, Name, Email, and Phone Number. The fourth user in the list is highlighted with a red box around their 'Delete' button. The user details are: U16, PewPewl, pew77@gmail.com, 908877665; U17, Lekhnath, lekh@gmail.com, 11111111; U18, Riyaz, kidreyaaz@gmail.com, 908877666; and U19, Purnika, ka@gmail.com, 0099887766.

Figure 117 Screenshot of delete button

A pop up will be shown asking if they want to delete the user. Click OK

The screenshot shows a browser window with the URL 'localhost:44347/Dashboard.aspx'. A confirmation dialog box is displayed in the center of the screen, asking 'Are you sure you want to delete this user?'. The 'OK' button is highlighted with a red box. The background shows the same 'User Details' page as Figure 117, with the 'Delete' button for user U19 still highlighted.

Figure 118 Screenshot of delete form and clicking yes

Grid changed from 19 to 18 showing the user being deleted

The screenshot shows the 'User Management Dashboard' with a blue header bar containing the title and a subtitle: 'Manage user details efficiently and securely'. Below the header, there are three cards: 'Total Users' (18), 'New Users' (3), and 'Recent Activities' (17). A red box highlights the 'Total Users' card. At the bottom, there is a section for 'New User Registration' with a plus sign icon.

User Management Dashboard				
Total Users	18	New Users	3	Recent Activities
New User Registration				

Figure 119 Screenshot of grid update showing user-information being deleted

Further scrolling shows the user has been deleted

The screenshot shows the 'User Details' page with a table listing four users. The fourth user, 'Riyaz', has been deleted, as indicated by the absence of a row in the grid. Each user row contains an 'Edit' button and a 'Delete' button.

User Details				
UI5	Shreeta	shreeta5@gmail.com	9815998901	Edit Delete
UI6	PewPewl	pew77@gmail.com	908877665	Edit Delete
UI7	Lekhnath	lekh@gmail.com	111111111	Edit Delete
UI8	Riyaz	kidreyaaz@gmail.com	908877666	Edit Delete

Figure 120 Screenshot of User Deleted

16.2. Project Details

Project Details dashboard which shows dynamic values for total project, completed, active project and upcoming deadlines

The screenshot shows the 'Project Management' dashboard with a sidebar on the left containing links for Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area is titled 'Project Details' with the sub-header 'Manage your projects efficiently and track progress'. It features four summary cards: 'Total Projects' (16), 'Completed' (3), 'Active Projects' (1), and 'Upcoming Deadlines' (0). Below these is a 'Projects List' section with a red border, containing a table with columns: Actions, ID, Project Name, Status, Start Date, and Due Date. The table lists four projects: P-01 (Enrolment System, Planning, Sep 18, 2024, Dec 09, 2024), P-02 (Attendance System, Completed, Jan 10, 2024, Mar 21, 2025), P-03 (Registration System, On Hold, Mar 10, 2024, Sep 05, 2024), and P-04 (Rental System, On Hold, Oct 10, 2024, Dec 25, 2024). A green 'New Project' button is located at the top right of the list.

Figure 121 Screenshot of Project-Details: Total Projects, Completed, Active and upcoming deadlines

Scrolling shows the project details

This screenshot is similar to Figure 121 but shows the 'Projects List' section after scrolling down. The table now displays four additional rows of project data, making a total of eight rows. The columns remain the same: Actions, ID, Project Name, Status, Start Date, and Due Date. The new projects listed are: P-05 (Enrolment System, Planning, Sep 18, 2024, Dec 09, 2024), P-06 (Attendance System, Completed, Jan 10, 2024, Mar 21, 2025), P-07 (Registration System, On Hold, Mar 10, 2024, Sep 05, 2024), and P-08 (Rental System, On Hold, Oct 10, 2024, Dec 25, 2024).

Figure 122 Screenshot of Project-Details

Click on the new project button.

The screenshot shows the 'Project Management' application interface. On the left is a sidebar with navigation links: Dashboard, Projects (selected), Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area is titled 'Project Details' and contains a 'Projects List' table. The table has columns: Actions, ID, Project Name, Status, Start Date, and Due Date. It lists four projects: P-01 (Enrolment System), P-02 (Attendance System), P-03 (Registration System), and P-04 (Rental System). Each project row includes 'Edit' and 'Delete' buttons. The status column uses color-coded buttons: blue for P-01 (PLANNING), green for P-02 (COMPLETED), orange for P-03 (ON HOLD), and orange for P-04 (ON HOLD). The start and due dates are listed for each project. In the top right corner of the main area, there is a user profile icon labeled 'Admin User' and a red box highlighting the green 'New Project' button.

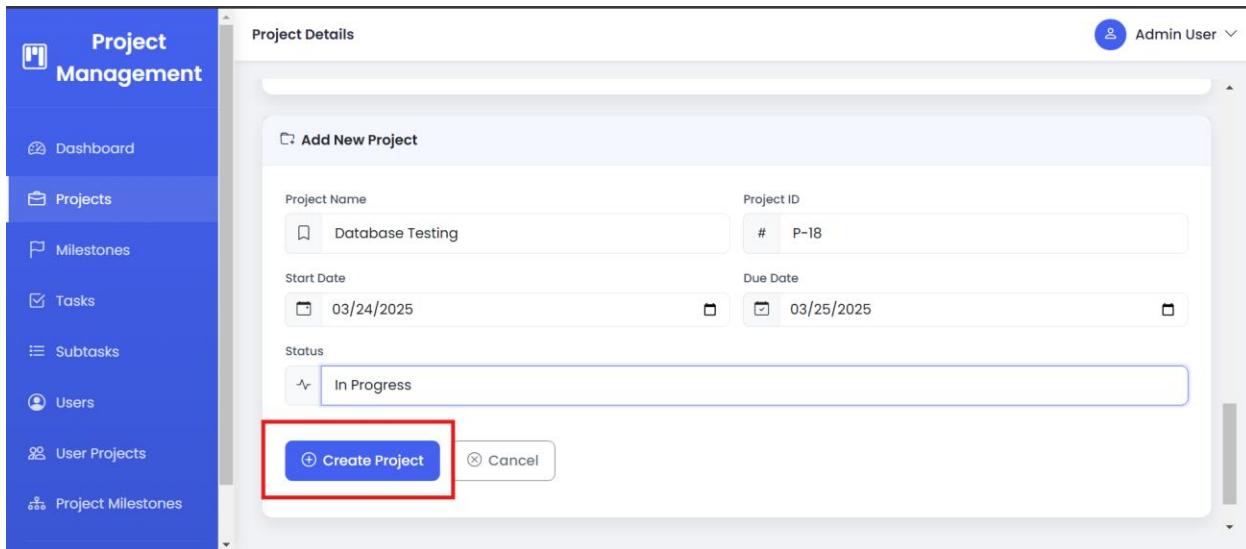
Figure 123 Screenshot of adding new project

A form will be displayed

The screenshot shows the 'Project Management' application interface. The sidebar is identical to Figure 123. The main area is titled 'Project Details' and contains a modal window titled 'Add New Project'. The form fields include: 'Project Name' (input field with placeholder 'Enter project name'), 'Project ID' (input field with placeholder '# PROJ001'), 'Start Date' (date picker), 'Due Date' (date picker), 'Status' (dropdown menu set to 'Planning'), and two buttons at the bottom: 'Create Project' (blue) and 'Cancel' (white). A red box highlights the entire 'Add New Project' modal window.

Figure 124 Screenshot of form to add new project

Fill the form and click create project button



The screenshot shows the 'Project Management' application interface. On the left, a sidebar menu includes 'Dashboard', 'Projects', 'Milestones', 'Tasks', 'Subtasks', 'Users', 'User Projects', and 'Project Milestones'. The main area is titled 'Project Details' and contains a form for adding a new project. The form fields are: 'Project Name' (Database Testing), 'Project ID' (# P-18), 'Start Date' (03/24/2025), 'Due Date' (03/25/2025), and 'Status' (In Progress). At the bottom of the form are two buttons: a blue 'Create Project' button with a plus sign and a white 'Cancel' button with a circle and cross. The 'Create Project' button is highlighted with a red rectangular box.

Figure 125 Screenshot of adding details and creating project

The grid value changed from 16-17 showing the project being created. There was also a change in the upcoming deadline grid.

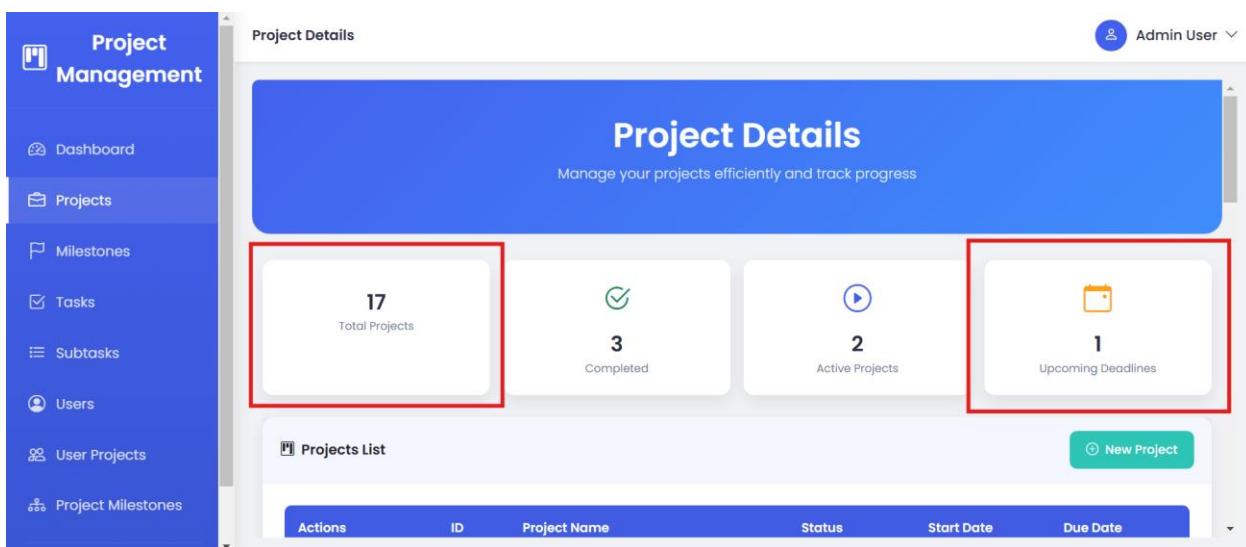


Figure 126 Screenshot of Grid update as project was created

Scrolling down shows the project being created

P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025	1 month
P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025	1 day
P-18	Database Testing	IN PROGRESS	Mar 24, 2025	Mar 25, 2025	1 day

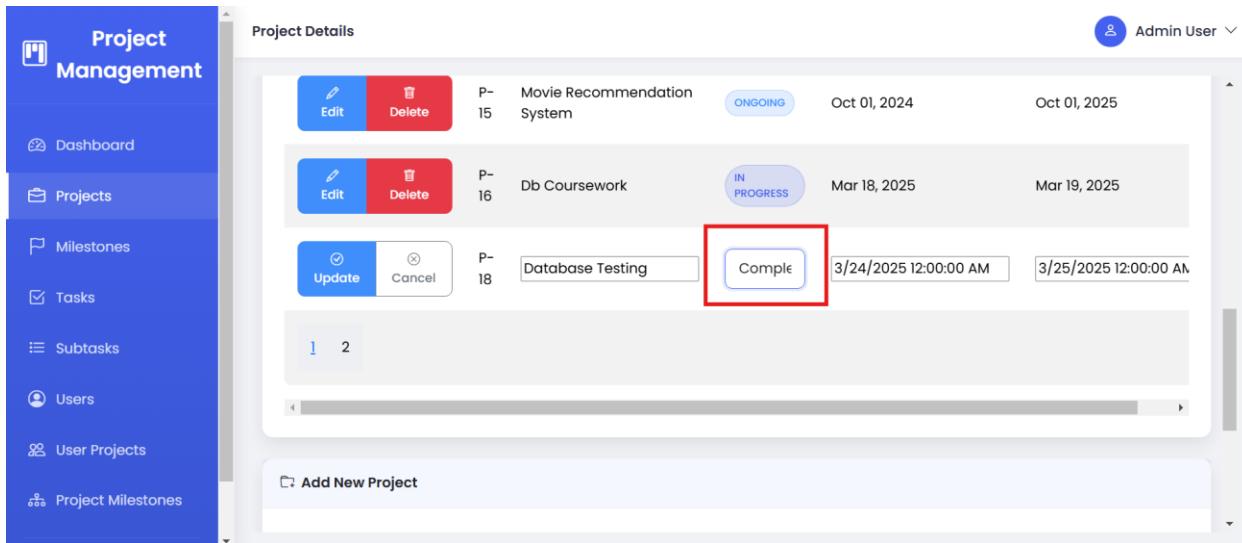
Figure 127 Screenshot of new project that was created

Click on edit button to edit some values

P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025	1 month
P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025	1 day
P-18	Database Testing	IN PROGRESS	Mar 24, 2025	Mar 25, 2025	1 day

Figure 128 Edit/Delete button for Project-Details

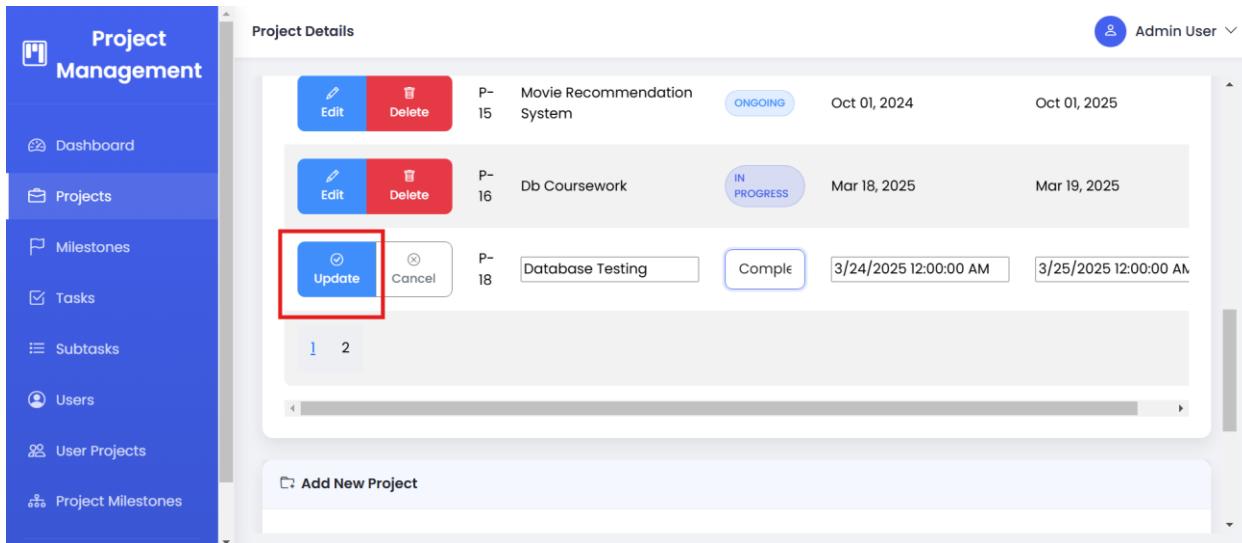
Status changed from in-progress to completed



The screenshot shows a 'Project Details' page within a 'Project Management' application. On the left is a sidebar with navigation links: Dashboard, Projects (selected), Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area displays a table of projects. The second project in the list is 'Db Coursework' (ID 16). Its original status was 'IN PROGRESS', indicated by a blue oval. A user has changed this status to 'COMPLETED', indicated by a white button with blue text. The 'Complete' button is highlighted with a red box. Other columns in the table include 'Edit' and 'Delete' buttons, project ID (P-15, P-16, P-18), project name, status, start date ('Oct 01, 2024'), end date ('Oct 01, 2025'), and a timeline bar.

Figure 129 Screenshot of changing the status field

Click on the update button



This screenshot is similar to Figure 129 but taken immediately after the 'Update' button was clicked. The 'Db Coursework' project's status has been updated to 'COMPLETED', as shown in the table. The 'Update' button, which triggered the change, is now highlighted with a red box. The rest of the interface remains the same, with the sidebar and other project details visible.

Figure 130 Screenshot of clicking update after the changes

The grid shows 4 completed projects. Previously it was only 3, showing that the update made was successful.

Project Management

Project Details

Manage your projects efficiently and track progress

17 Total Projects

4 Completed

1 Active Projects

1 Upcoming Deadlines

Projects List

New Project

Actions	ID	Project Name	Status	Start Date	Due Date
Edit	P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025
Edit	P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025
Edit	P-18	Database Testing	COMPLETED	Mar 24, 2025	Mar 25, 2025
Edit	P-19	System Integration	PENDING	Apr 01, 2025	Apr 05, 2025

Figure 131 Screenshot of Grid update after the project-details were updated

Scrolling shows the status being changed.

Project Management

Project Details

Admin User

Actions	ID	Project Name	Status	Start Date	Due Date
Edit	P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025
Edit	P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025
Edit	P-18	Database Testing	COMPLETED	Mar 24, 2025	Mar 25, 2025
Edit	P-19	System Integration	PENDING	Apr 01, 2025	Apr 05, 2025

Figure 132 Screenshot of status changed

Click the delete button

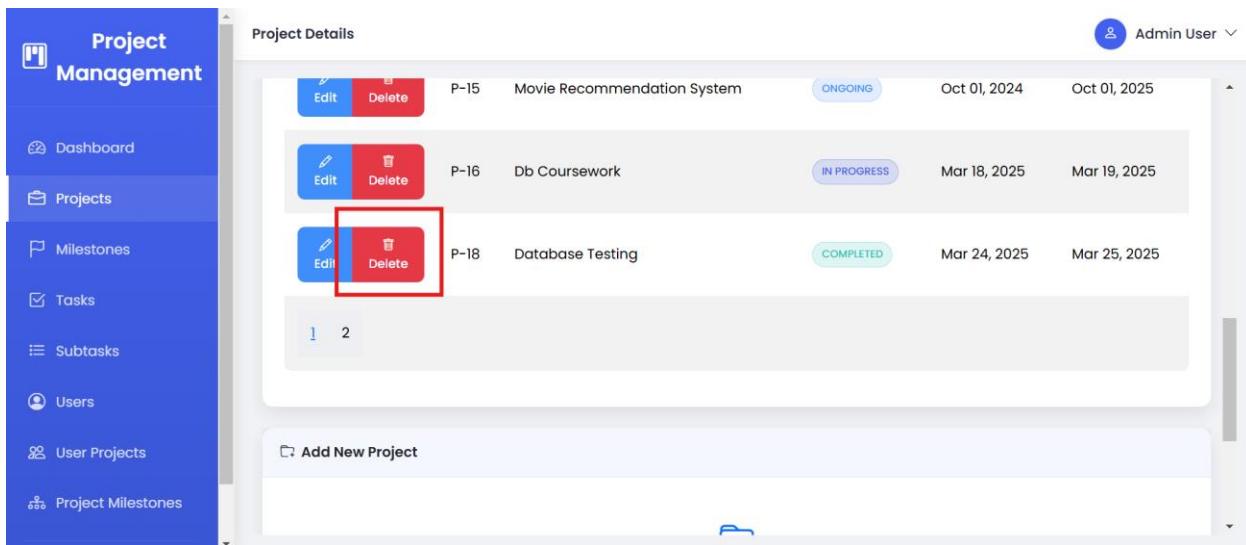


Figure 133 Screenshot of delete button

Click on OK after the pop up is displayed

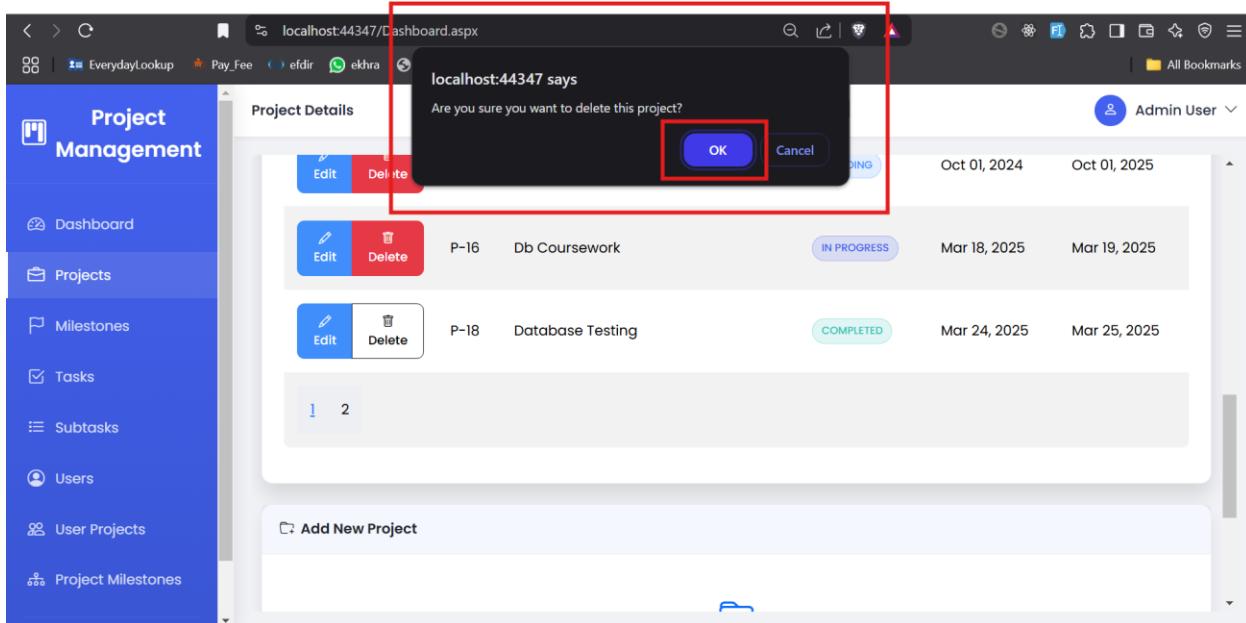


Figure 134 Screenshot of clicking yes for the dialogue box

Total project value changed from 17-16 showing the project being deleted

The screenshot shows the 'Project Details' section of a web-based project management tool. On the left is a sidebar with various navigation options: Dashboard, Projects (selected), Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area has a title 'Project Details' and a subtitle 'Manage your projects efficiently and track progress'. It features several cards: 'Total Projects' (16, highlighted with a red box), 'Completed' (3), 'Active Projects' (1), and 'Upcoming Deadlines' (0). Below these is a 'Projects List' table with columns: Actions, ID, Project Name, Status, Start Date, and Due Date. A green 'New Project' button is visible. The top right corner shows the user is 'Admin User'.

Figure 135 Screenshot of grid change after the project deletion

Scrolling shows that the project was deleted successfully

This screenshot shows the 'Project Details' page again, but with a different view. A red box highlights the 'Delete' button for a project entry. The entry details are: ID P-16, Project Name 'Db Coursework', Status 'IN PROGRESS', Start Date 'Mar 18, 2025', and Due Date 'Mar 19, 2025'. The rest of the interface is similar to Figure 135, including the sidebar and the 'Add New Project' section at the bottom.

Figure 136 Screenshot of Project being deleted

16.3. Task Details

Task Details dashboard which shows the dynamic values for Total Tasks, Completed, Active task and Upcoming deadline.

The screenshot shows the 'Task Details' dashboard. On the left is a sidebar with 'Project Management' navigation: Dashboard, Projects, Milestones, Tasks (selected), Subtasks, Users, User Projects, and Project Milestones. The main area has a title 'Task Details' and a subtitle 'Manage your tasks efficiently and track progress'. A red box highlights a row of four cards: 'Total Tasks' (17), 'Completed' (11), 'Active Tasks' (5), and 'Upcoming Deadlines' (0). Below this is a 'Tasks List' section with a table:

Actions	ID	Task Name	Status	Due Date	Start Date
<button>Edit</button> <button>Delete</button>	T-01	Login Page Design	COMPLETED	Oct 10, 2024	Oct 01, 2024
<button>Edit</button> <button>Delete</button>	T-02	API Integration	COMPLETED	Oct 20, 2024	Oct 05, 2024
<button>Edit</button> <button>Delete</button>	T-03	Schema Development	COMPLETED	Nov 15, 2024	Nov 01, 2024
<button>Edit</button> <button>Delete</button>	T-04	Email Service Setup	COMPLETED	Nov 25, 2024	Nov 10, 2024

A green 'New Task' button is at the top right of the tasks list.

Figure 137 Screenshot of Task Details Dashboard

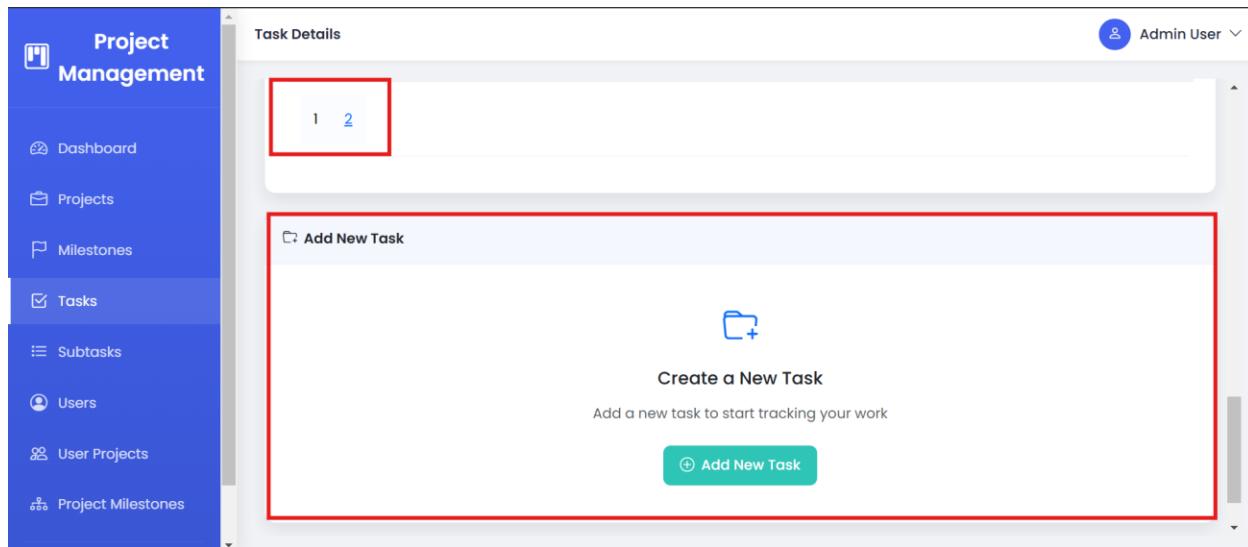
Task Details being displayed

The screenshot shows the 'Task Details' dashboard with the 'Tasks' menu selected in the sidebar. The main area displays a 'Tasks List' table with a red box around it:

Actions	ID	Task Name	Status	Due Date	Start Date
<button>Edit</button> <button>Delete</button>	T-01	Login Page Design	COMPLETED	Oct 10, 2024	Oct 01, 2024
<button>Edit</button> <button>Delete</button>	T-02	API Integration	COMPLETED	Oct 20, 2024	Oct 05, 2024
<button>Edit</button> <button>Delete</button>	T-03	Schema Development	COMPLETED	Nov 15, 2024	Nov 01, 2024
<button>Edit</button> <button>Delete</button>	T-04	Email Service Setup	COMPLETED	Nov 25, 2024	Nov 10, 2024

Figure 138 Screenshot of Task Details

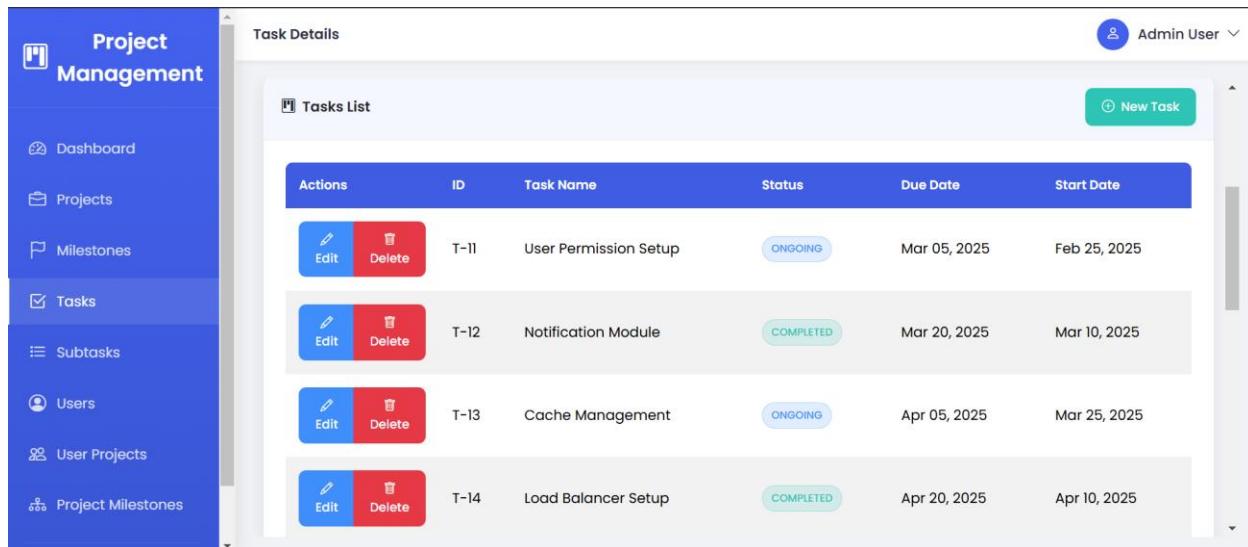
Pagination for Task Details and form for adding new task



The screenshot shows the 'Task Details' section of a Project Management application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks (selected), Subtasks, Users, User Projects, and Project Milestones. The main area has a header 'Task Details' and a user profile 'Admin User'. At the top, there is a pagination control with '1' and '2'. Below it is a form titled 'Add New Task' with a 'Create a New Task' button. The entire 'Add New Task' section is highlighted with a red box.

Figure 139 Screenshot of Task Details Pagination and Form for adding new task

Pagination to other page for more Task Details



The screenshot shows the 'Task Details' section of a Project Management application. The sidebar is identical to Figure 139. The main area shows a 'Tasks List' table with the following data:

Actions	ID	Task Name	Status	Due Date	Start Date
<button>Edit</button> <button>Delete</button>	T-11	User Permission Setup	ONGOING	Mar 05, 2025	Feb 25, 2025
<button>Edit</button> <button>Delete</button>	T-12	Notification Module	COMPLETED	Mar 20, 2025	Mar 10, 2025
<button>Edit</button> <button>Delete</button>	T-13	Cache Management	ONGOING	Apr 05, 2025	Mar 25, 2025
<button>Edit</button> <button>Delete</button>	T-14	Load Balancer Setup	COMPLETED	Apr 20, 2025	Apr 10, 2025

Figure 140 Screenshot of Task Details II

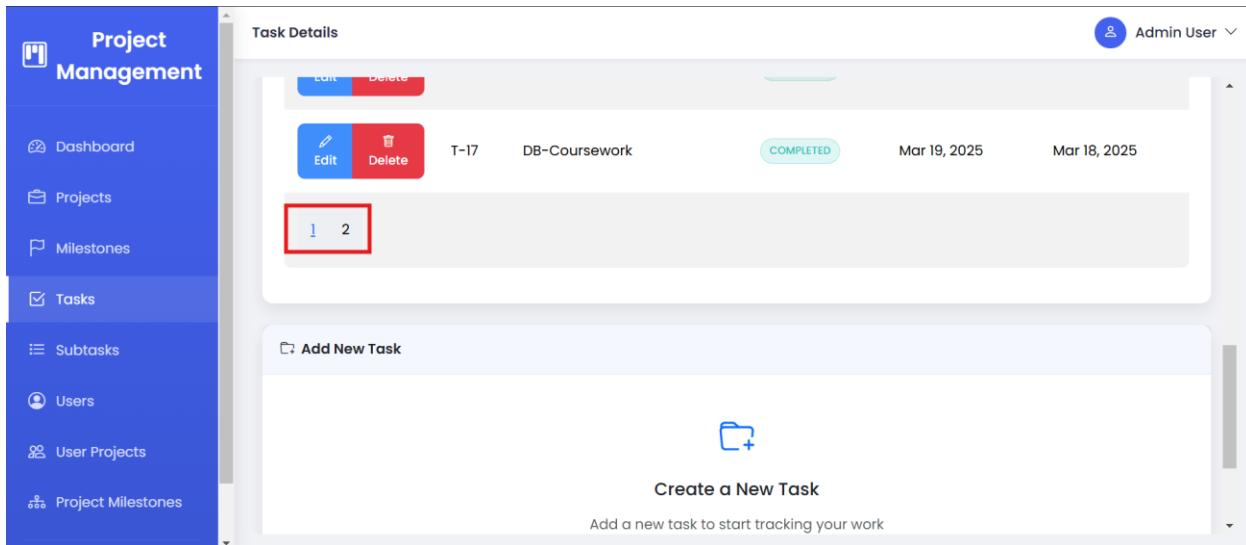


Figure 141 Screenshot of Task Details III

Click on Add new Task

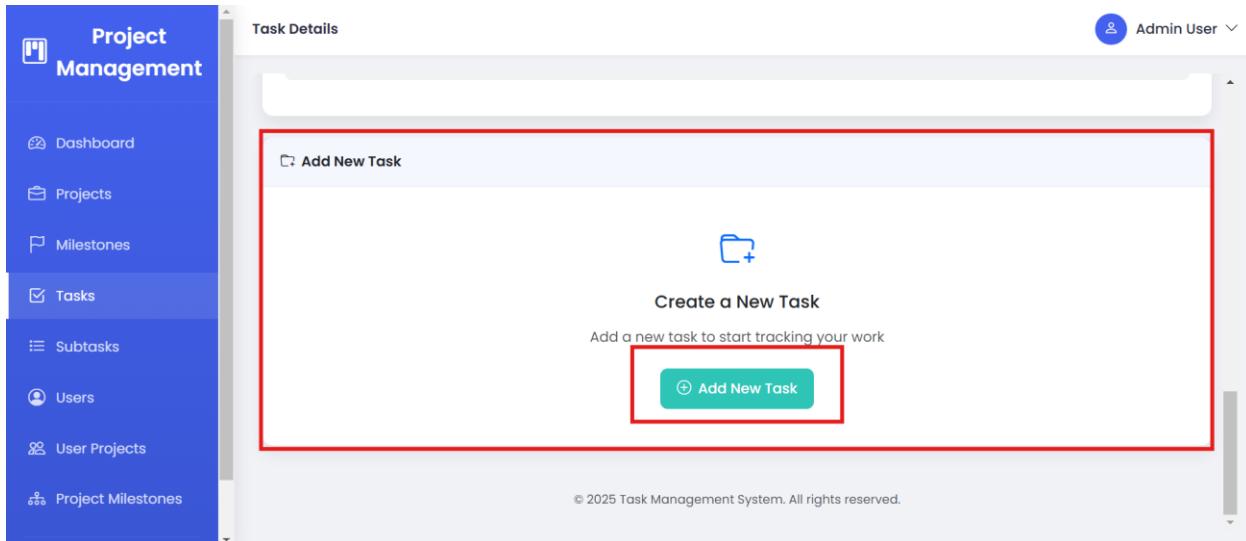
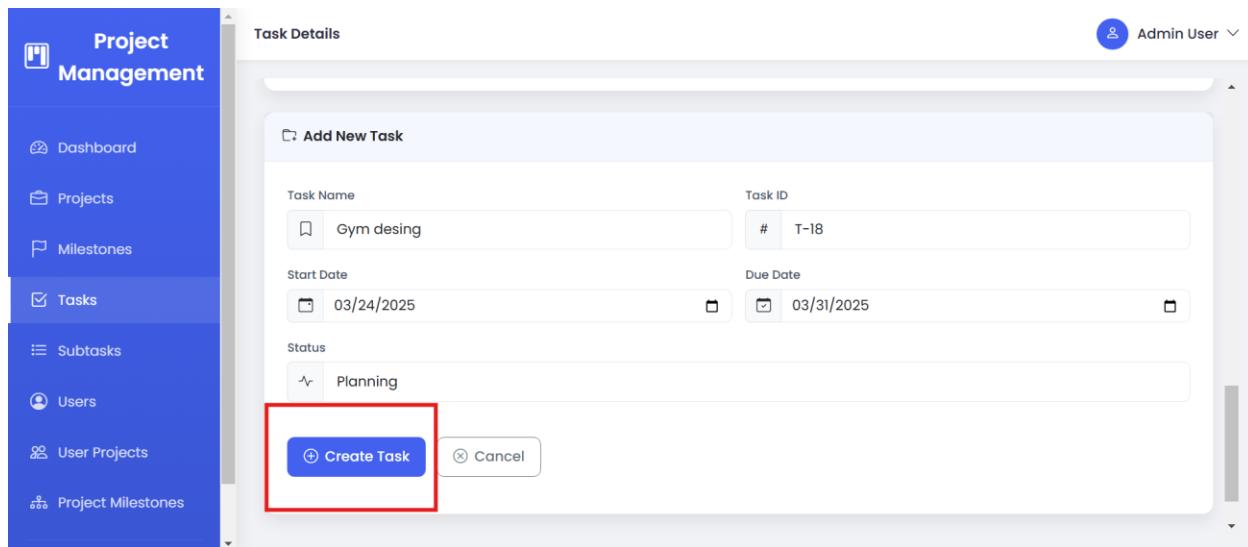


Figure 142 Screenshot of Adding a new task

Fill in the details in the form and click on create Task.



The screenshot shows the 'Project Management' application interface. On the left, a sidebar menu includes 'Dashboard', 'Projects', 'Milestones', 'Tasks' (selected), 'Subtasks', 'Users', 'User Projects', and 'Project Milestones'. The main area is titled 'Task Details' and contains a form for 'Add New Task'. The form fields are: Task Name ('Gym desing'), Task ID ('# T-18'), Start Date ('03/24/2025'), Due Date ('03/31/2025'), and Status ('Planning'). At the bottom of the form are two buttons: a blue 'Create Task' button (highlighted with a red box) and a grey 'Cancel' button.

Figure 143 Screenshot of adding details and creating new task

Total task grid changed from 17-18 showing task being created successfully

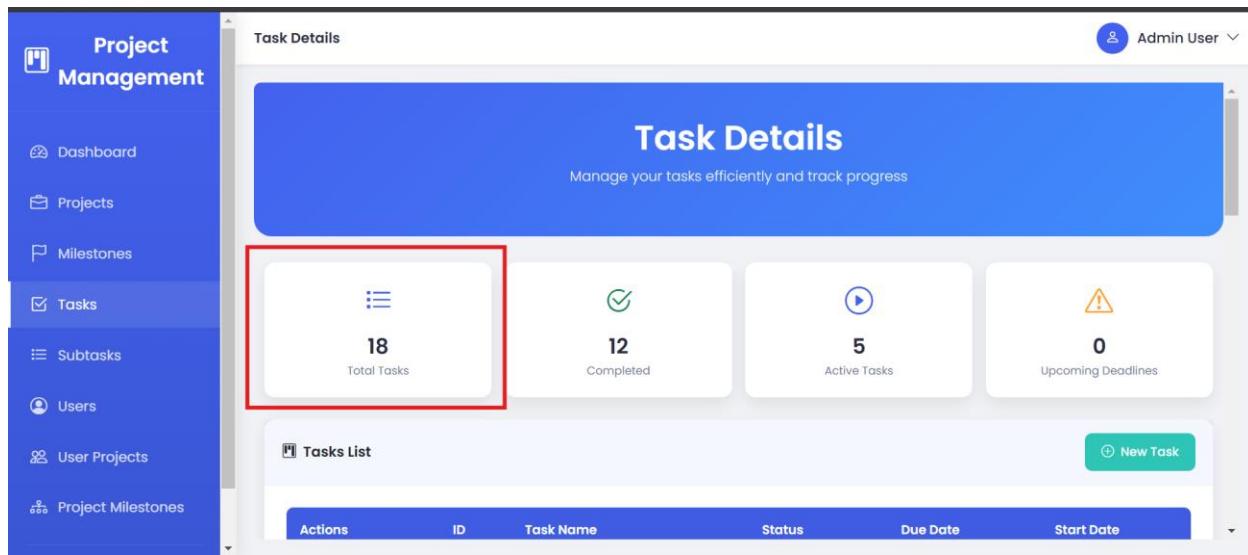


Figure 144 Screenshot of Grid update after adding new task

Further scrolling shows the task being created successfully

The screenshot shows a project management interface. On the left is a sidebar with a blue header 'Project Management' and a list of options: Dashboard, Projects, Milestones, Tasks (which is selected and highlighted in blue), Subtasks, Users, User Projects, and Project Milestones. The main area has a header 'Task Details' and a user 'Admin User'. It lists three tasks:

ID	Name	Status	Start Date	End Date
T-16	FYP-Interim	COMPLETED	May 05, 2025	Apr 25, 2025
T-17	DB-Coursework	COMPLETED	Mar 19, 2025	Mar 18, 2025
T-18	Gym desing	PLANNING	Mar 31, 2025	Mar 24, 2025

A red box highlights the 'Edit' button for Task T-18. Below the table is a footer with a 'Add New Task' button.

Figure 145 Screenshot of new task added

Click on edit button

The screenshot shows the same project management interface as Figure 145. The 'Tasks' option is still selected in the sidebar. The task list shows the same three tasks. A red box highlights the 'Edit' button for Task T-18. The 'Edit' button for Task T-18 is now highlighted with a red box, indicating it is being edited.

Figure 146 Screenshot of Editing task

Change the status from “Planning” to “Completed”

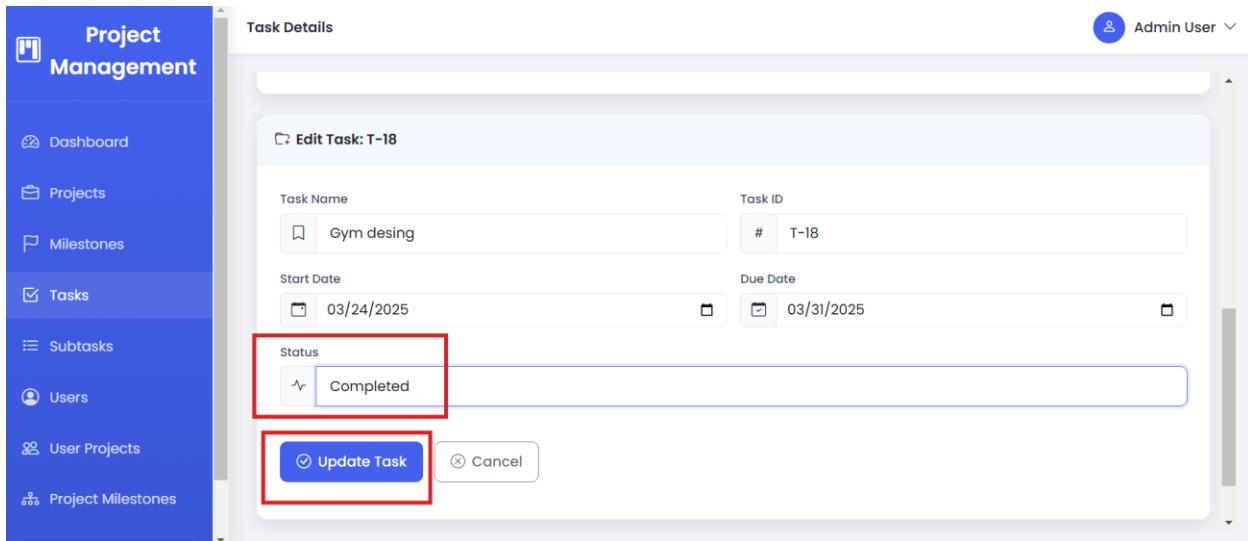


Figure 147 Screenshot of editing the status

Completed task grid changed from 12-13.

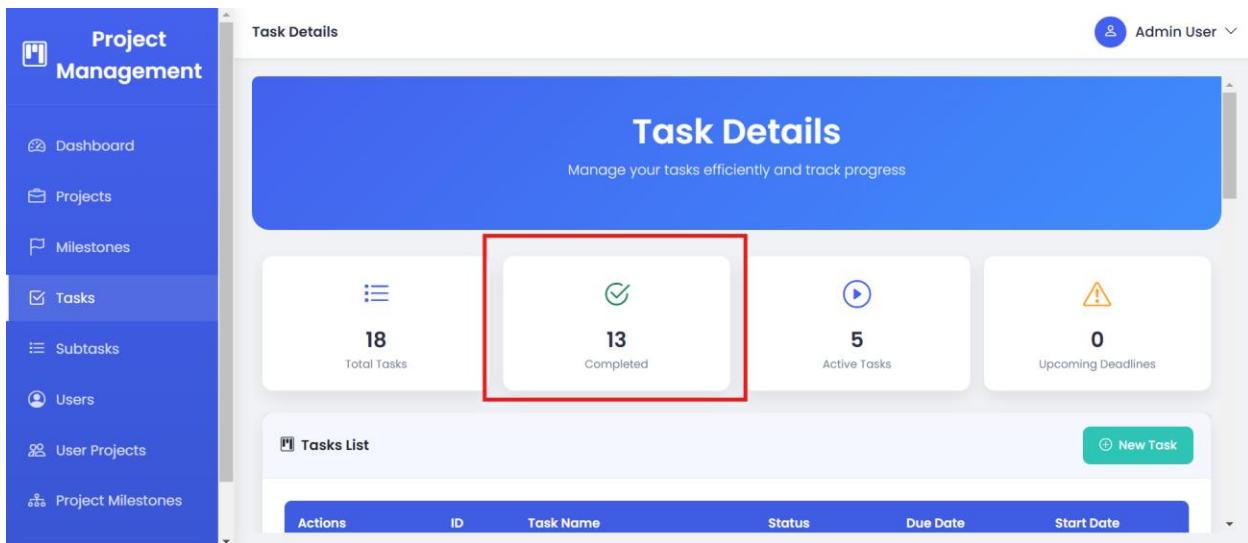


Figure 148 Screenshot of Grid update after status change

Scrolling shows the status was edited successfully

The screenshot shows a project management interface. On the left is a sidebar with the following navigation items:

- Dashboard
- Projects
- Milestones
- Tasks** (selected)
- Subtasks
- Users
- User Projects
- Project Milestones

The main content area is titled "Task Details". It displays three tasks in a table format:

ID	Name	Status	Start Date	End Date
T-16	FYP-Interim	COMPLETED	May 05, 2025	Apr 25, 2025
T-17	DB-Coursework	COMPLETED	Mar 19, 2025	Mar 18, 2025
T-18	Gym desing	COMPLETED	Mar 31, 2025	Mar 24, 2025

A red box highlights the "COMPLETED" status of Task T-18. At the bottom of the table, there are two pages indicated by "1" and "2". A button labeled "Add New Task" is also visible.

Figure 149 Screenshot of status updated

Click on Delete button

This screenshot is identical to Figure 149, showing the same project management interface and task details. However, the "Delete" button for Task T-18 is now highlighted with a red box, indicating it is the target of the next action.

Figure 150 Screenshot of Deleting task

Click yes when the pop up shows up

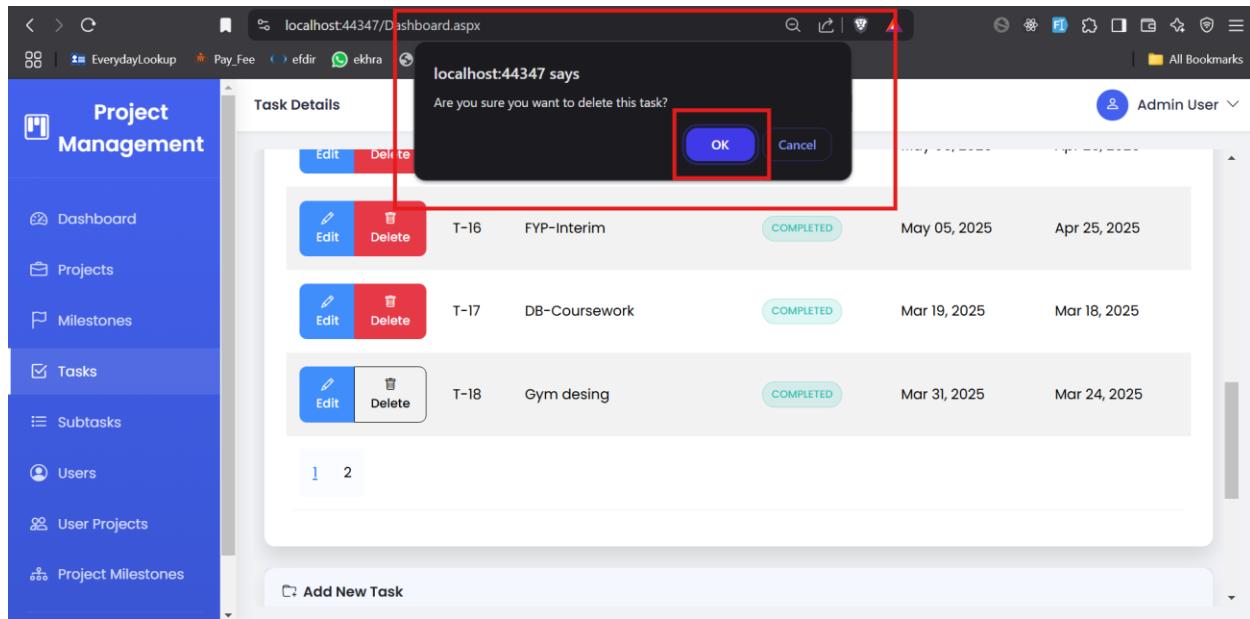


Figure 151 Screenshot of Dialogue box of confirming the deletion

The total task grid changed from 18-17 and completed task changed from 13-12

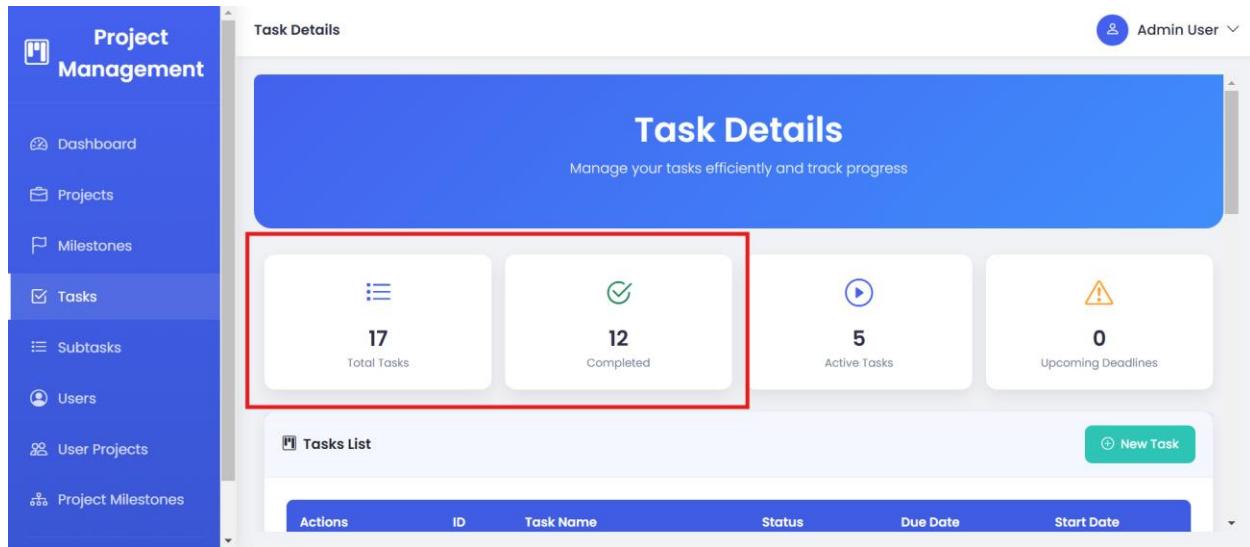


Figure 152 Screenshot of Grid update after deletion

Further scrolling shows the task being deleted successfully

The screenshot shows the 'Task Details' section of the Project Management application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks (selected), Subtasks, Users, User Projects, and Project Milestones. The main area displays 'Task Details' for Task T-16 and Task T-17. Task T-16 is for 'FYP-Interim' and is marked as 'COMPLETED' with a due date of May 05, 2025. Task T-17 is for 'DB-Coursework' and is also marked as 'COMPLETED' with a due date of Mar 19, 2025. Both tasks have 'Edit' and 'Delete' buttons. A red box highlights Task T-17. Below the tasks is a section for 'Add New Task'.

Figure 153 Screenshot of Task Deleted

16.4. Sub-task

Subtask dashboard which shows total subtask, completed, in progress and pending

The screenshot shows the 'Subtask' dashboard. The sidebar includes links for Dashboard, Projects, Milestones, Tasks, Subtasks (selected), Users, User Projects, and Project Milestones. The main area features a large blue header with the text 'Subtask Management' and 'Efficiently manage and track subtasks'. Below this is a summary section with four cards: 'Total Subtasks' (30), 'Completed' (5), 'In Progress' (4), and 'Pending' (0). A red box highlights this summary section. At the bottom is a 'Subtask List' table with columns: Actions, ID, Name, Description, Status, Due, Start, Assigned, and Task. A green button labeled 'New Subtask' is located at the top right of the list.

Figure 154 Screenshot of Sub-Task Dashboard

Subtask details being displayed

The screenshot shows a 'Subtask' list page within a 'Project Management' application. The left sidebar has a 'Subtasks' section selected. The main area displays a table with four rows of subtask data:

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-01	Form Validation	Validate input fields	DELAYED	Sep 20, 2024	Sep 18, 2024	U8 - Ujwol	T-08 - Search Functionality
<button>Edit</button> <button>Delete</button>	st-02	Form Submission	Ensure data is submitted correctly	DELAYED	Sep 25, 2024	Sep 20, 2024	U11 - Ojash	T-01 - Login Page Design
<button>Edit</button> <button>Delete</button>	st-03	UI Design	Create dashboard UI	IN PROGRESS	Sep 25, 2024	Sep 20, 2024	U2 - Dikshya	T-02 - API Integration
<button>Edit</button> <button>Delete</button>	st-04	Chart	Add charts to	PENDING	Sep 30.	Sep 26.	UI3 -	T-02 - API

Figure 155 Screenshot of Sub-Task Details

Pagination shown for the subtask details

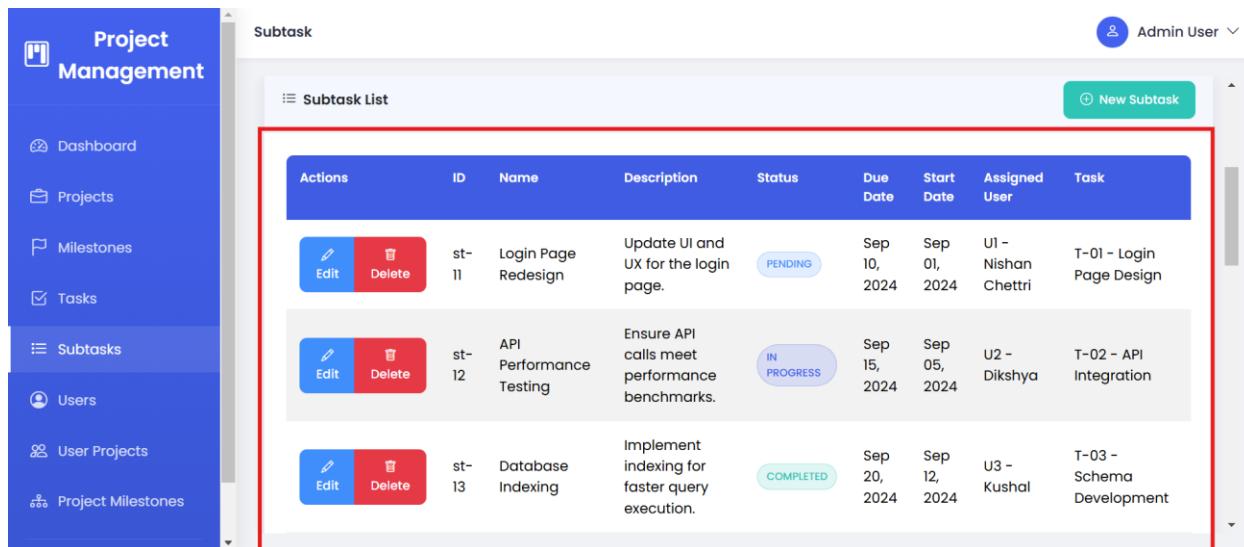
The screenshot shows a 'Subtask' list page with a red box highlighting the page navigation numbers at the bottom. The left sidebar has a 'Subtasks' section selected. The main area displays a table with four rows of subtask data:

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-07	API Integration	Integrate payment gateway	COMPLETED	Apr 25, 2024	Apr 19, 2024	U3 - Kushal	T-04 - Email Service Setup
<button>Edit</button> <button>Delete</button>	st-08	Testing	Test user profiles	ONGOING	Apr 20, 2024	Mar 26, 2024	UI3 - Nidhika	T-05 - Authentication Module
<button>Edit</button> <button>Delete</button>	st-09	Tracking System Enhancement	Allow users to track their details	COMPLETED	Mar 18, 2024	Mar 15, 2024	UI - Nishan Chettri	T-06 - Analytics Dashboard
<button>Edit</button> <button>Delete</button>	st-10	Inventory Home Page Update	Enhance home page of inventory system.	PENDING	Aug 30, 2024	Aug 18, 2024	U5 - Cal	T-08 - Search Functionality

1 2 3

Figure 156 Screenshot of Sub-Task Pagination

Paginating to other pages

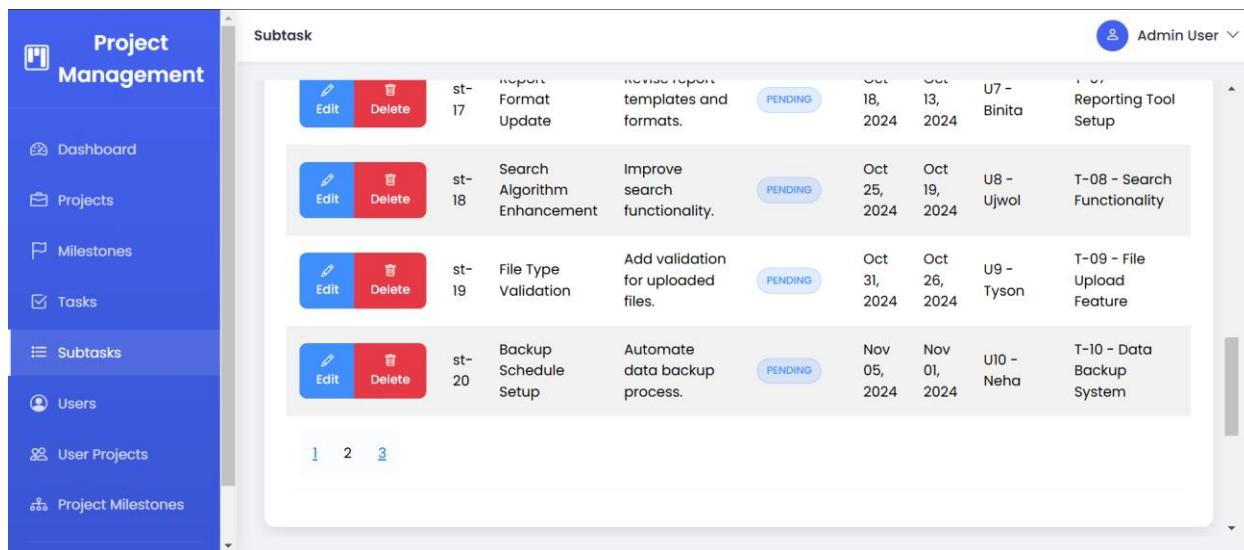


The screenshot shows the Project Management application interface. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks, Subtasks (selected), Users, User Projects, and Project Milestones. The main area is titled "Subtask" and contains a "Subtask List". The list table has columns: Actions, ID, Name, Description, Status, Due Date, Start Date, Assigned User, and Task. There are three rows of data:

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-11	Login Page Redesign	Update UI and UX for the login page.	PENDING	Sep 10, 2024	Sep 01, 2024	UI - Nishan Chettri	T-01 - Login Page Design
<button>Edit</button> <button>Delete</button>	st-12	API Performance Testing	Ensure API calls meet performance benchmarks.	IN PROGRESS	Sep 15, 2024	Sep 05, 2024	U2 - Dikshya	T-02 - API Integration
<button>Edit</button> <button>Delete</button>	st-13	Database Indexing	Implement indexing for faster query execution.	COMPLETED	Sep 20, 2024	Sep 12, 2024	U3 - Kushal	T-03 - Schema Development

Figure 157 Screenshot of Sub-Task Details II

Scrolling for further subtask details.



The screenshot shows the Project Management application interface, similar to Figure 157. The sidebar and "Subtask" list are visible. The list table has four rows of data:

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-17	Report Format Update	Revise report templates and formats.	PENDING	Sep 18, 2024	Sep 13, 2024	U7 - Binita	Reporting Tool Setup
<button>Edit</button> <button>Delete</button>	st-18	Search Algorithm Enhancement	Improve search functionality.	PENDING	Oct 25, 2024	Oct 19, 2024	U8 - Ujwol	T-08 - Search Functionality
<button>Edit</button> <button>Delete</button>	st-19	File Type Validation	Add validation for uploaded files.	PENDING	Oct 31, 2024	Oct 26, 2024	U9 - Tyson	T-09 - File Upload Feature
<button>Edit</button> <button>Delete</button>	st-20	Backup Schedule Setup	Automate data backup process.	PENDING	Nov 05, 2024	Nov 01, 2024	U10 - Neha	T-10 - Data Backup System

At the bottom of the list, there is a pagination bar with numbers 1, 2, and 3.

Figure 158 Screenshot of Sub-Task Details III

More scrolling for subtask details

The screenshot shows the Project Management application interface. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks, Subtasks (selected), Users, User Projects, and Project Milestones. The main area is titled "Subtask" and contains a "Subtask List". The list table has columns: Actions, ID, Name, Description, Status, Due Date, Start Date, Assigned User, and Task. The table shows three rows of subtask data, each with Edit and Delete buttons. A green "New Subtask" button is at the top right of the list area. The bottom of the list shows a progress bar and the text "Load Monitor load Nov Nov T-14 - Load".

Subtask List								
Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-21	Permission Level Testing	Test user permissions thoroughly.	PENDING	Nov 10, 2024	Nov 06, 2024	UI1 - Ojash	T-11 - User Permission Setup
<button>Edit</button> <button>Delete</button>	st-22	Notification Template Design	Design templates for notifications.	PENDING	Nov 15, 2024	Nov 11, 2024	UI2 - Anish	T-12 - Notification Module
<button>Edit</button> <button>Delete</button>	st-23	Cache Cleanup Routine	Set up regular cache cleanup.	PENDING	Nov 20, 2024	Nov 16, 2024	UI3 - Nidhika	T-13 - Cache Management
			Load	Monitor load	Nov	Nov		T-14 - Load

Figure 159 Screenshot of Sub-Task Details IV

Paginating to page 3

The screenshot shows the Project Management application interface, similar to Figure 159 but with different data. The sidebar and main title are the same. The main area shows a "Subtask List" with four rows of data. The columns are identical to Figure 159. The bottom of the list shows a pagination control with numbers 1, 2, and 3.

Subtask List								
Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-27	Db Coursework	Finish screenshot	DELAYED	Mar 26, 2025	Mar 15, 2025	UI7 - Lekhnath	T-02 - API Integration
<button>Edit</button> <button>Delete</button>	st-28	complete erd	Final and initial erd completed	DELAYED	Mar 31, 2025	Mar 01, 2025	UI3 - Nidhika	T-15 - Error Logging System
<button>Edit</button> <button>Delete</button>	st-29	Complete Testing	Testing of the app.	IN PROGRESS	Mar 26, 2025	Mar 22, 2025	UI8 - Riyaz	T-16 - FYP- Interim
<button>Edit</button> <button>Delete</button>	st-30	Complete Report	Finalise and submit the report	COMPLETED	Mar 26, 2025	Mar 16, 2025	UI - Nishan Chettri	T-17 - DB- Coursework

Figure 160 Screenshot of Sub-Task Details V

Click on Add new subtask button

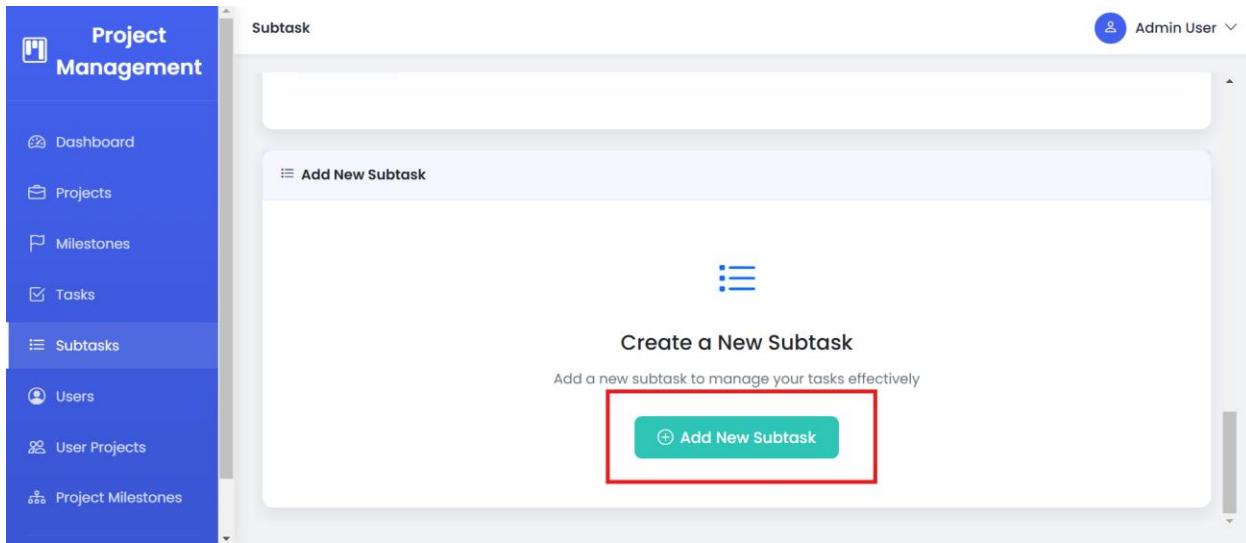


Figure 161 Screenshot of creating new Sub-Task

A form will be shown asking for details to be filled

The screenshot shows the 'Add New Subtask' form from Figure 161. The entire form is highlighted with a red border. It contains the following fields:

- Subtask ID:** # SUB001
- Name:** Enter subtask name
- Description:** Enter subtask description
- Due Date:** mm/dd/yyyy
- Start Date:** mm/dd/yyyy
- User:** UI2 - Anish
- Task:** T-02 - API Integration
- Status:** (empty field)

Figure 162 Screenshot of form for creating new Sub-Task

Form being shown for more details to be filled

The screenshot shows the Project Management application's interface. On the left, there is a sidebar with various navigation options: Dashboard, Projects, Milestones, Tasks, Subtasks (which is currently selected), Users, User Projects, and Project Milestones. The main area is titled "Subtask" and contains a form. The form fields include:

- Enter subtask description: A text input field.
- Due Date: A date picker set to "mm/dd/yyyy".
- Start Date: A date picker set to "mm/dd/yyyy".
- User: A dropdown menu showing "UI2 - Anish".
- Task: A dropdown menu showing "T-02 - API Integration".
- Status: A dropdown menu showing "Planning". This field is highlighted with a red box.
- Create Subtask: A blue button.
- Cancel: A grey button.

Figure 163 Screenshot of creating new Sub-task

Fill the form with suitable values and click on Create subtask button

The screenshot shows the Project Management application's interface with the same sidebar as Figure 163. The main area is titled "Subtask" and displays the "Add New Subtask" form. The form fields are filled with the following values:

- Subtask ID: "# st-31"
- Name: "Testing"
- Description: "Check for adding"
- Due Date: "03/27/2025"
- Start Date: "03/01/2025"
- User: "UI8 - Riyaz"
- Task: "T-08 - Search Functionality"
- Status: (This field is not explicitly visible in the screenshot but is part of the highlighted area)

Figure 164 Screenshot of adding details to create new subtask

The screenshot shows the 'Subtask' creation dialog. It includes fields for Due Date (03/27/2025), Start Date (03/01/2025), User (UI8 - Riyaz), Task (T-08 - Search Functionality), and Status (Planning). A red box highlights the 'Create Subtask' button at the bottom left.

Figure 165 Screenshot of creating new subtask

The grid for total subtask changed from 30-31 showing that the subtask was added successfully.

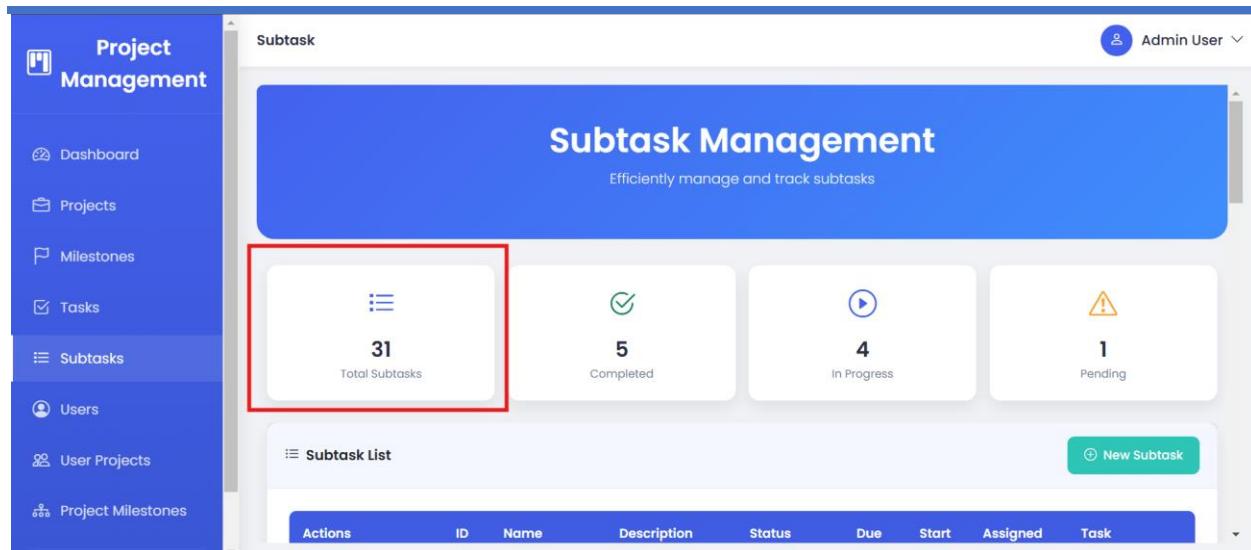
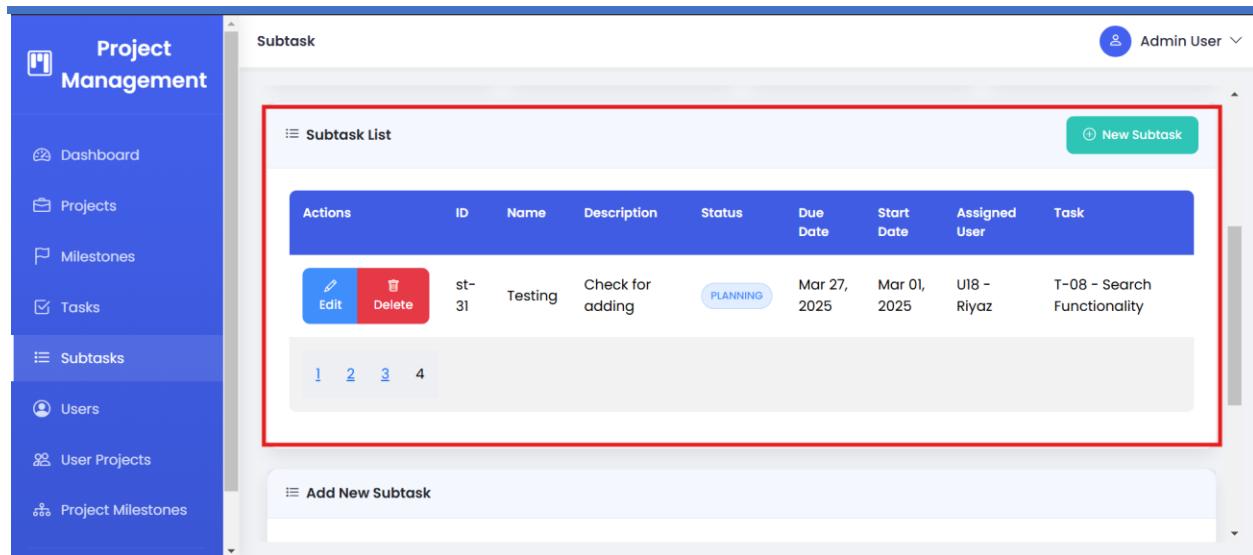


Figure 166 Screenshot of grid update after adding new task

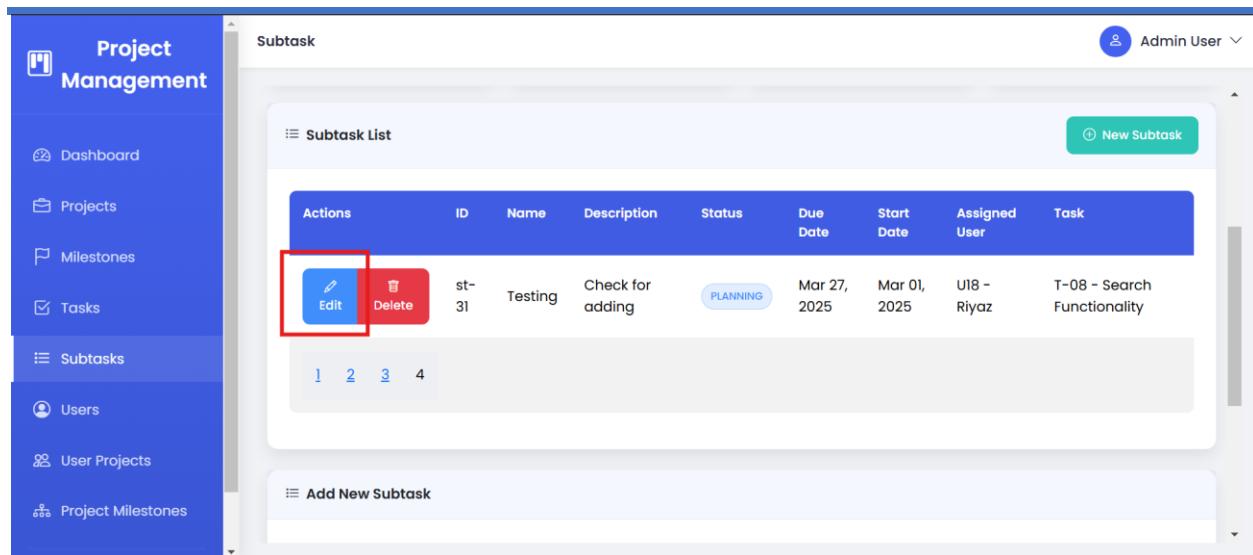
Further scrolling shows the subtask being created



The screenshot shows the 'Subtask' page within the 'Project Management' application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks, Subtasks (selected), Users, User Projects, and Project Milestones. The main area has a header 'Subtask' and a top right corner showing 'Admin User'. A red box highlights the 'Subtask List' table. The table has columns: Actions, ID, Name, Description, Status, Due Date, Start Date, Assigned User, and Task. One row is visible: ID st-31, Name Testing, Description Check for adding, Status PLANNING, Due Date Mar 27, 2025, Start Date Mar 01, 2025, Assigned User UI8 - Riyaz, and Task T-08 - Search Functionality. Below the table is a navigation bar with buttons 1, 2, 3, 4. At the bottom is a section titled 'Add New Subtask'.

Figure 167 Screenshot of new Subtask being added

Click the edit button.



This screenshot is identical to Figure 167, showing the 'Subtask' page. However, the 'Edit' button in the first row of the 'Subtask List' table is highlighted with a red box. All other elements, including the table structure and the 'Add New Subtask' section at the bottom, remain the same.

Figure 168 Screenshot of editing subtask

Change the status from Planning to Completed

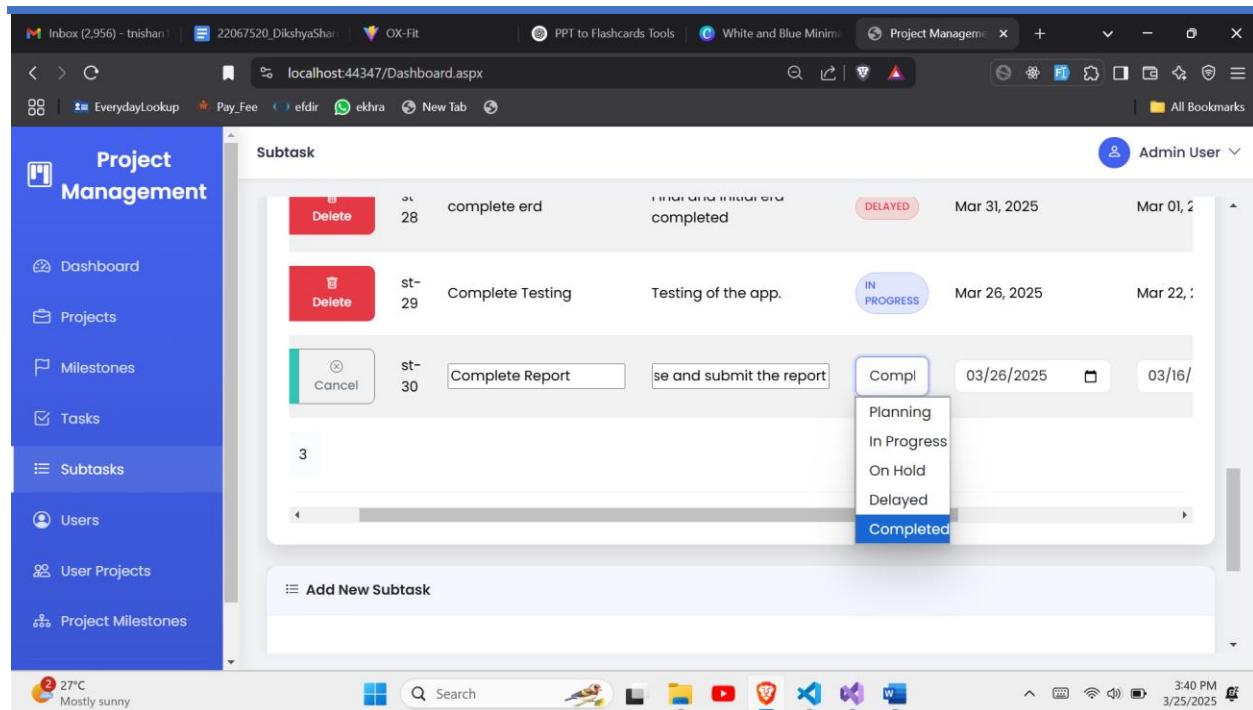


Figure 169 Screenshot of drop down of status

Click the update button after the changes made

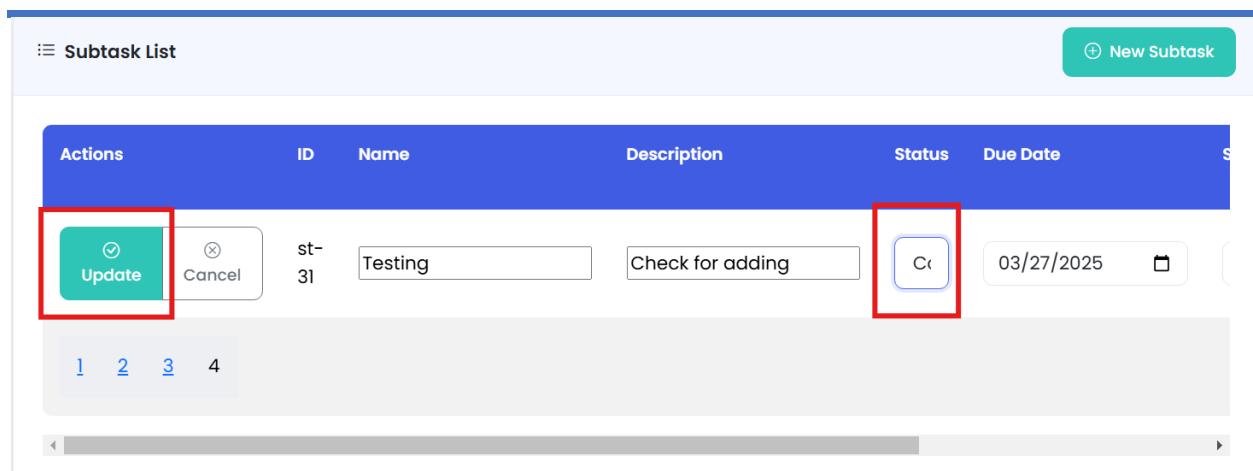


Figure 170 Screenshot of updating the status to completed

You can also change the user from the user dropdown

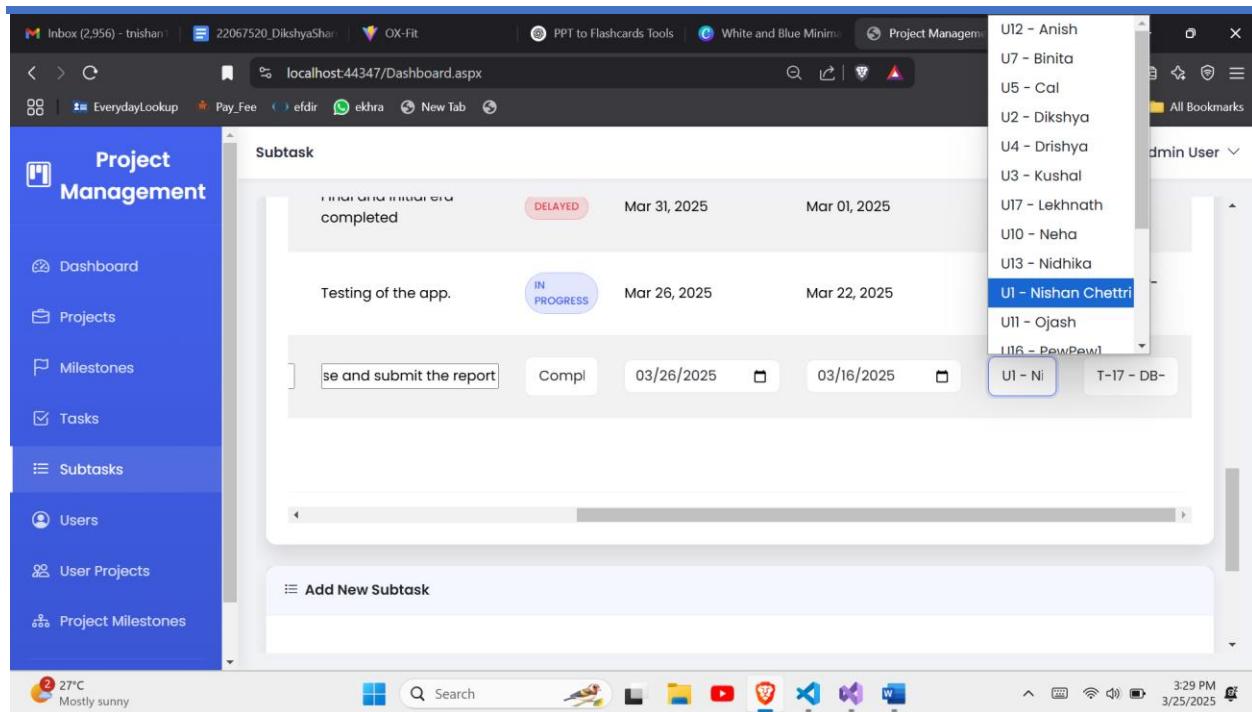


Figure 171 Screenshot of drop down for user details

You can also change the task from task drop down

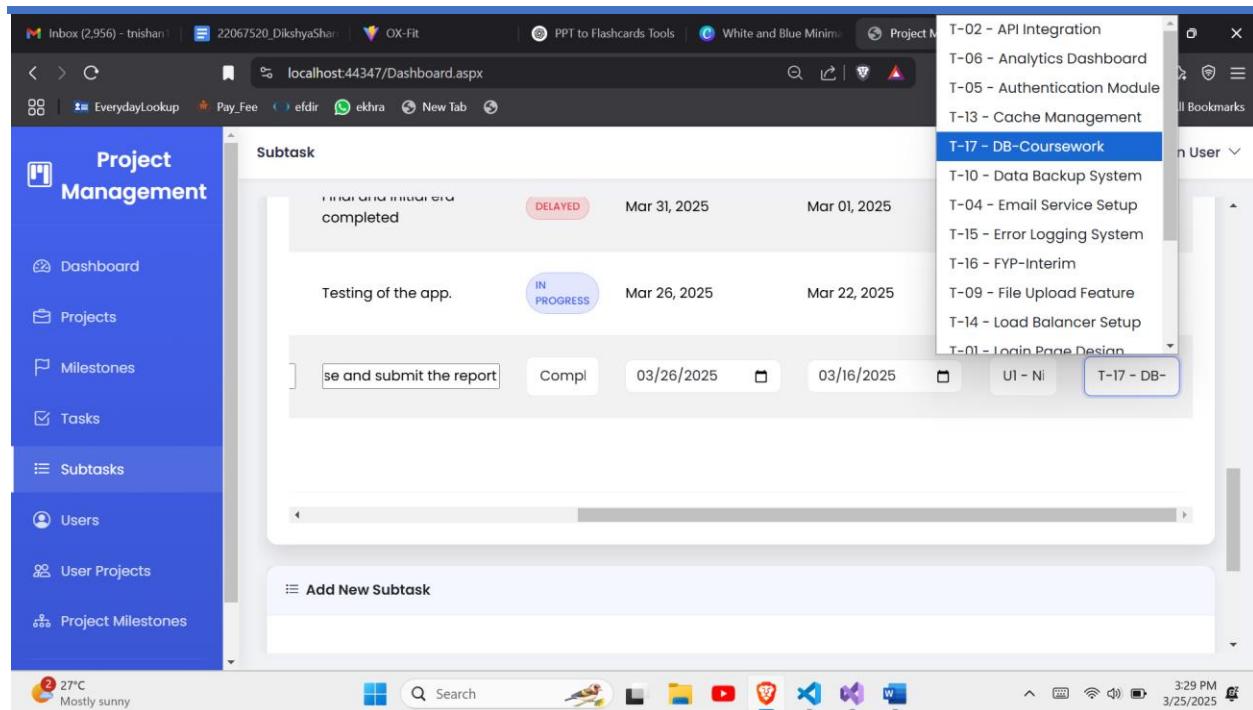


Figure 172 Screenshot of dropdown for task details

The grid shows 6 completed subtask which shows that the update was successful.

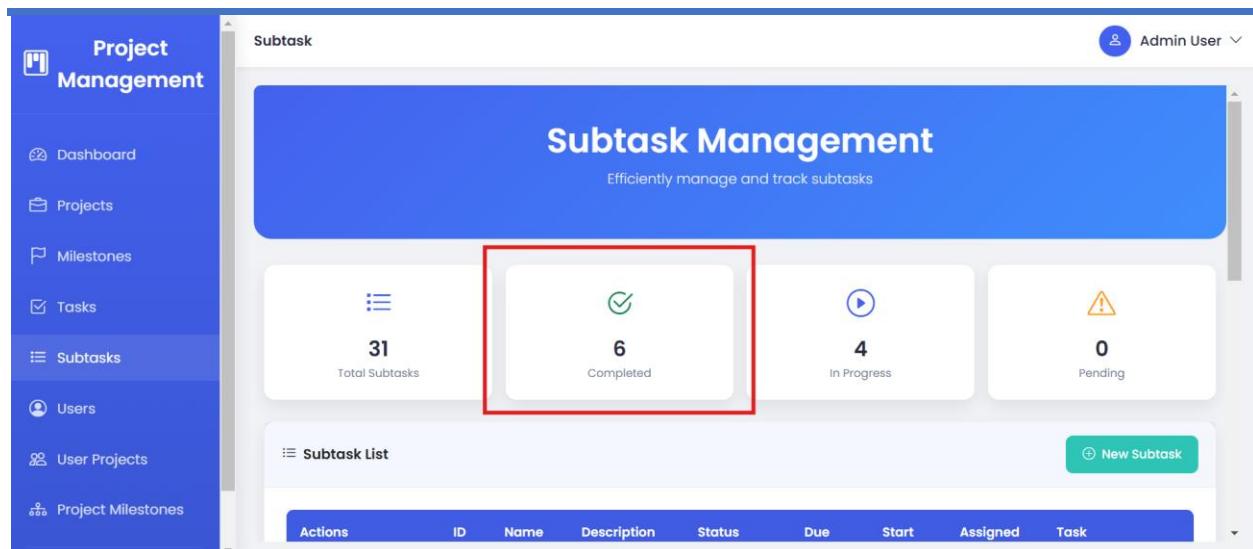


Figure 173 Screenshot of grid update after changes made

Scrolling down shows the status being changed to completed

The screenshot shows a 'Subtask' page within a 'Project Management' application. The sidebar on the left includes options like Dashboard, Projects, Milestones, Tasks, Subtasks (which is selected), Users, User Projects, and Project Milestones. The main area displays a 'Subtask List' with the following data:

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-31	Testing	Check for adding	COMPLETED	Mar 27, 2025	Mar 01, 2025	UI8 - Riyaz	T-08 - Search Functionality

Below the table, there are navigation links 1, 2, 3, 4. At the bottom, there's a section for 'Add New Subtask'.

Figure 174 Screenshot of status change to completed

Click the delete button

This screenshot shows the same 'Subtask' page after the 'Delete' button has been clicked. The 'Delete' button is now highlighted with a red box. The rest of the data in the table remains the same as in Figure 174.

Figure 175 Screenshot of deleting subtask

Click OK after the pop up is shown

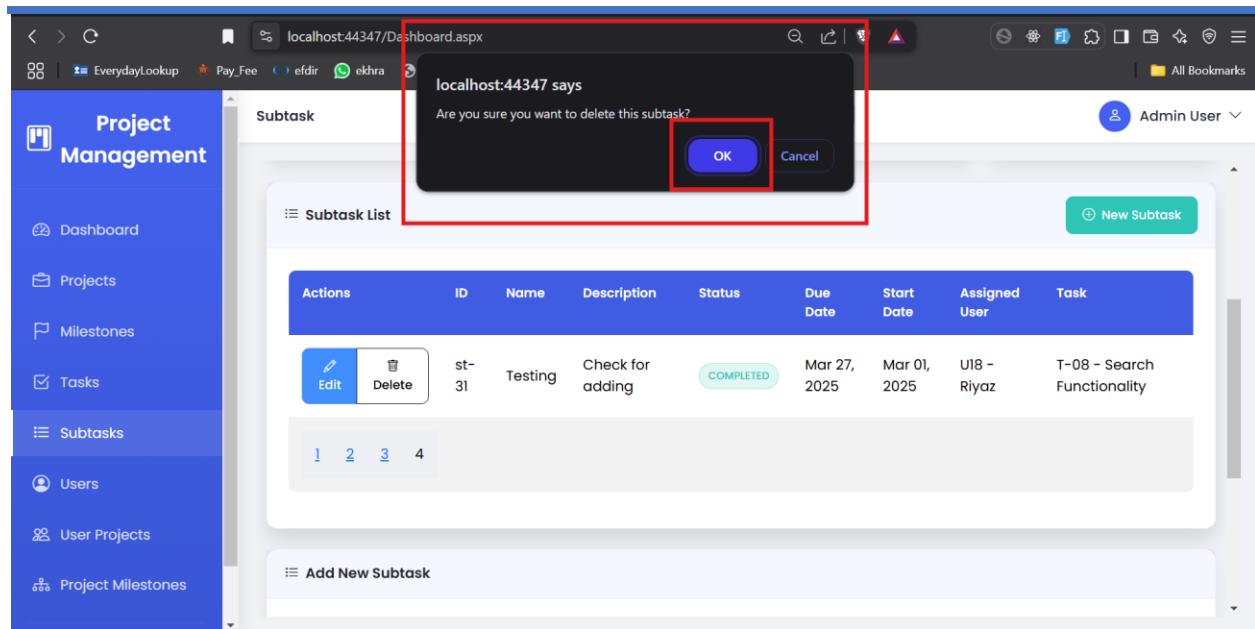


Figure 176 Screenshot of dialogue box for deleting subtask

The subtask grid changed from 31-30 showing that the subtask was deleted successfully

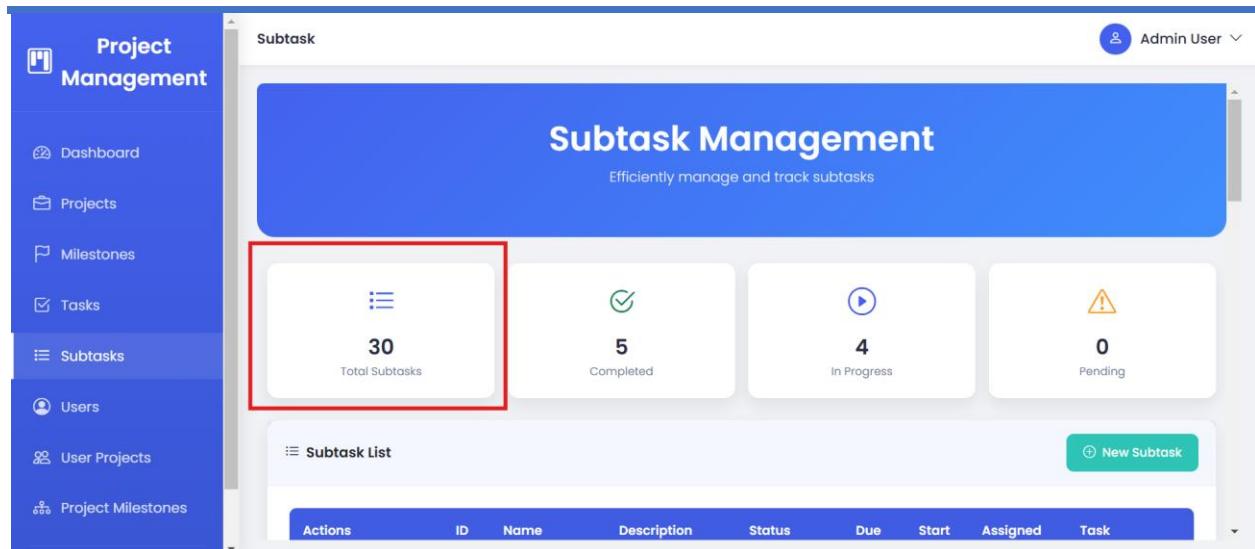


Figure 177 Screenshot of grid update after deletion

Further scrolling shows the subtask being deleted

The screenshot shows a 'Subtask' management page. On the left is a sidebar with 'Project Management' branding and links for Dashboard, Projects, Milestones, Tasks, Subtasks (which is the active tab), Users, User Projects, and Project Milestones. The main area has a header 'Subtask' with columns: ID, Name, Status, Description, Due Date, Start Date, and Assigned To. Three subtasks are listed:

ID	Name	Status	Description	Due Date	Start Date	Assigned To
st-28	complete erd	DELAYED	initial erd completed	31, 01, 2025		UI3 - Nidhika
st-29	Complete Testing	IN PROGRESS	Testing of the app.	Mar 26, 2025	Mar 22, 2025	UI8 - Riyaz
st-30	Complete Report	COMPLETED	Finalise and submit the report	Mar 26, 2025	Mar 16, 2025	UI - Nishan Chettri

Below the table is a navigation bar with buttons for 1, 2, and 3. At the bottom is a section for 'Add New Subtask'.

Figure 178 Screenshot of Sub-Task being deleted

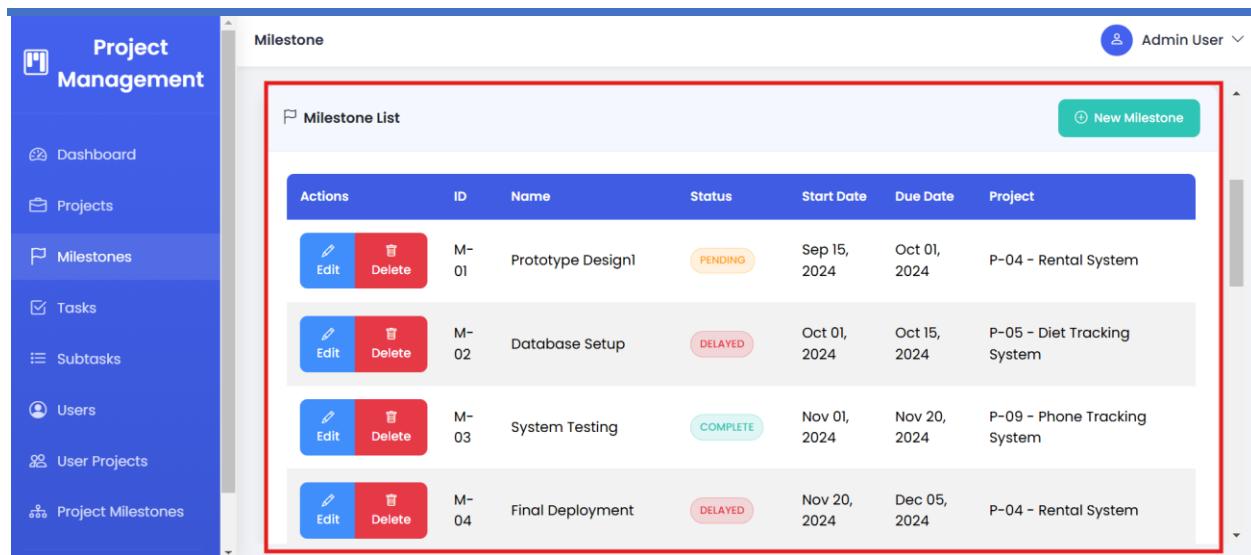
16.5. Milestone

Milestone dashboard shows the total milestones, completed, in-progress and delayed

The screenshot shows a 'Milestone' management page. The sidebar is identical to Figure 178. The main area features a large blue header 'Milestone Management' with the subtext 'Track, update and manage project milestones efficiently'. Below is a summary card with four boxes: 'Total Milestones' (30), 'Completed' (4), 'In Progress' (3), and 'Delayed' (3). A red box highlights the first three boxes. Below is a 'Milestone List' table with columns: Actions, ID, Name, Status, Start Date, Due Date, and Project. A green button for 'New Milestone' is at the top right of the list.

Figure 179 Screenshot of Milestone Dashboard

Milestone details being displayed

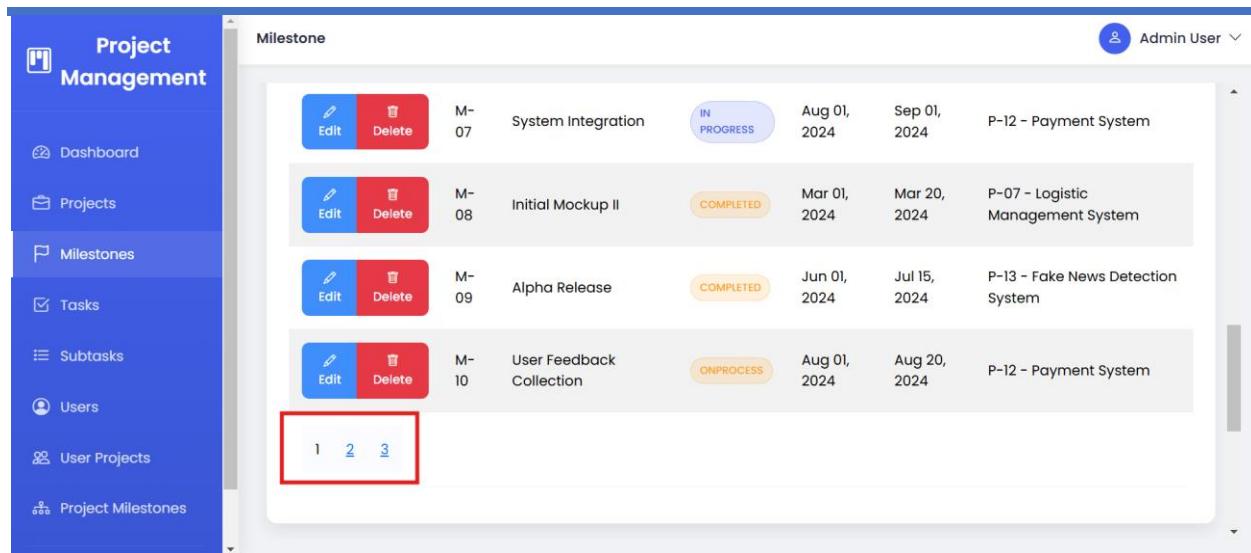


The screenshot shows the Project Management application's interface. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones (which is selected and highlighted in blue), Tasks, Subtasks, Users, User Projects, and Project Milestones. The main content area is titled "Milestone" and contains a sub-section titled "Milestone List". A green button at the top right says "New Milestone". Below it is a table with columns: Actions, ID, Name, Status, Start Date, Due Date, and Project. The table lists four milestones:

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-01	Prototype Design I	PENDING	Sep 15, 2024	Oct 01, 2024	P-04 - Rental System
<button>Edit</button> <button>Delete</button>	M-02	Database Setup	DELAYED	Oct 01, 2024	Oct 15, 2024	P-05 - Diet Tracking System
<button>Edit</button> <button>Delete</button>	M-03	System Testing	COMPLETE	Nov 01, 2024	Nov 20, 2024	P-09 - Phone Tracking System
<button>Edit</button> <button>Delete</button>	M-04	Final Deployment	DELAYED	Nov 20, 2024	Dec 05, 2024	P-04 - Rental System

Figure 180 Screenshot of Milestone Details I

Pagination for Milestone



The screenshot shows the Project Management application's interface, similar to Figure 180. The sidebar and "Milestone List" section are identical. At the bottom of the table, there is a pagination control with three numbered buttons: 1, 2, and 3. The button "2" is highlighted with a red box.

Figure 181 Screenshot of Milestone Pagination

Shows more details after pagination for milestone

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-11	Rental Module Design	PENDING	Oct 01, 2024	Oct 20, 2024	P-04 - Rental System
<button>Edit</button> <button>Delete</button>	M-12	Payment Gateway Integration	PENDING	Dec 01, 2024	Dec 10, 2024	P-04 - Rental System
<button>Edit</button> <button>Delete</button>	M-13	Feature Planning	COMPLETED	Feb 10, 2024	Mar 01, 2024	P-05 - Diet Tracking System
<button>Edit</button> <button>Delete</button>	M-14	User Authentication	ONPROCESS	Jun 01, 2024	Jul 01, 2024	P-05 - Diet Tracking System

Figure 182 Screenshot of Milestone Details II

Paginating to page 3

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-17	Report Generation Feature	PENDING	Dec 01, 2024	Dec 15, 2024	P-06 - Expense Tracking System
<button>Edit</button> <button>Delete</button>	M-18	Backend Development	COMPLETED	Oct 01, 2024	Nov 01, 2024	P-07 - Logistic Management System
<button>Edit</button> <button>Delete</button>	M-19	API Integration	ONPROCESS	Mar 01, 2025	Apr 01, 2025	P-07 - Logistic Management System
<button>Edit</button> <button>Delete</button>	M-20	User Registration Feature	COMPLETED	Oct 01, 2024	Oct 15, 2024	P-08 - Car Rental System

Figure 183 Screenshot of Milestone Details III

More Details shown for milestone in page 3

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-21	Admin Panel Setup	PENDING	Apr 01, 2025	May 01, 2025	P-08 - Car Rental System
<button>Edit</button> <button>Delete</button>	M-22	Geolocation API Integration	ONPROCESS	Jan 20, 2025	Feb 15, 2025	P-09 - Phone Tracking System
<button>Edit</button> <button>Delete</button>	M-23	User Interface Update	PENDING	May 01, 2025	Jun 01, 2025	P-09 - Phone Tracking System
<button>Edit</button> <button>Delete</button>	M-24	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 26, 2025	P-04 - Rental System

Figure 184 Screenshot of Milestone Details IV

More Details shown for milestone in page 3

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-27	Db Coursework	DELAYED	Mar 24, 2025	Mar 26, 2025	P-11 - Route Management System
<button>Edit</button> <button>Delete</button>	M-28	Db Coursework	PENDING	Mar 13, 2025	Mar 31, 2025	P-02 - Attendance System
<button>Edit</button> <button>Delete</button>	M-30	Recommendation Algorithm	PENDING	Jul 01, 2025	Aug 01, 2025	P-06 - Expense Tracking System
<button>Edit</button> <button>Delete</button>	M-31	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 29, 2025	P-15 - Movie Recommendation System

Figure 185 Screenshot of Milestone Details V

Click on Add new milestone button

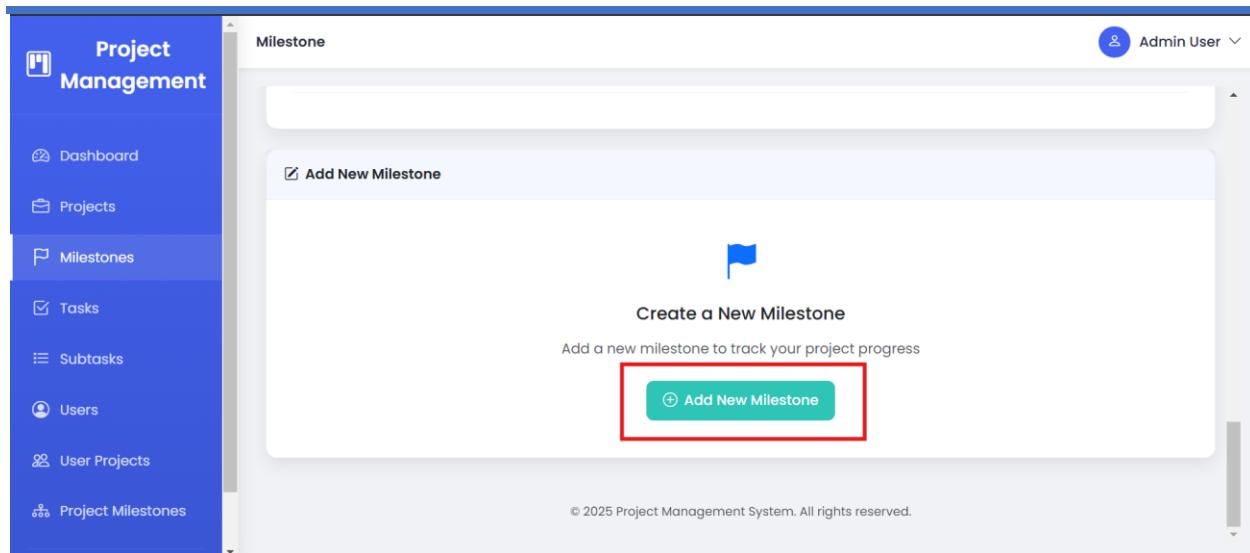


Figure 186 Screenshot of button for adding new milestone

Milestone form will be shown

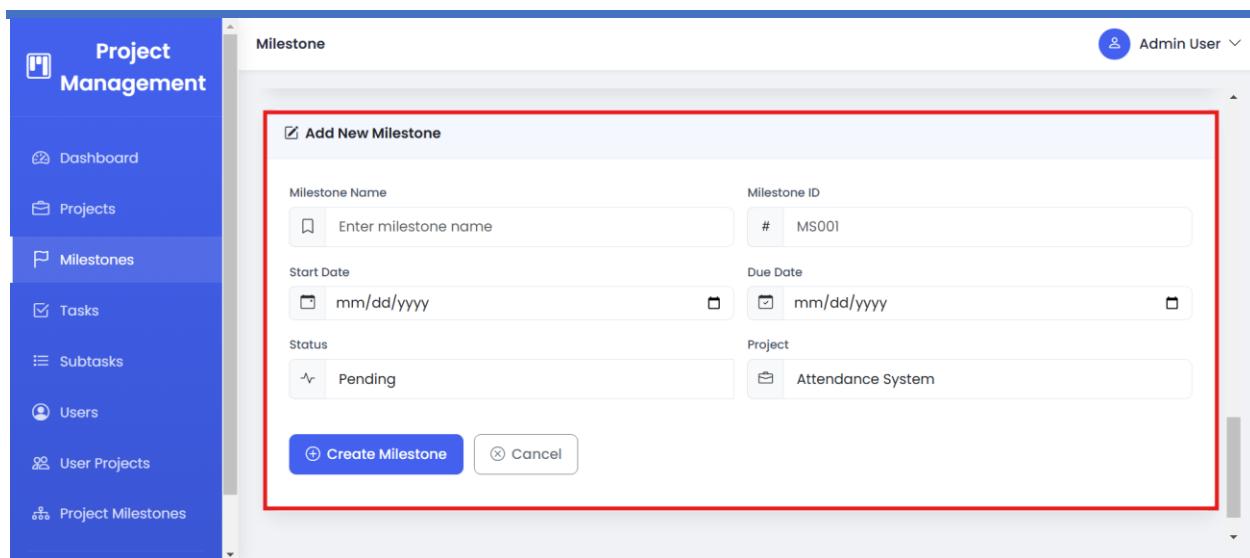


Figure 187 Screenshot of form for creating new milestone

Fill the form with suitable values and select project from project drop down

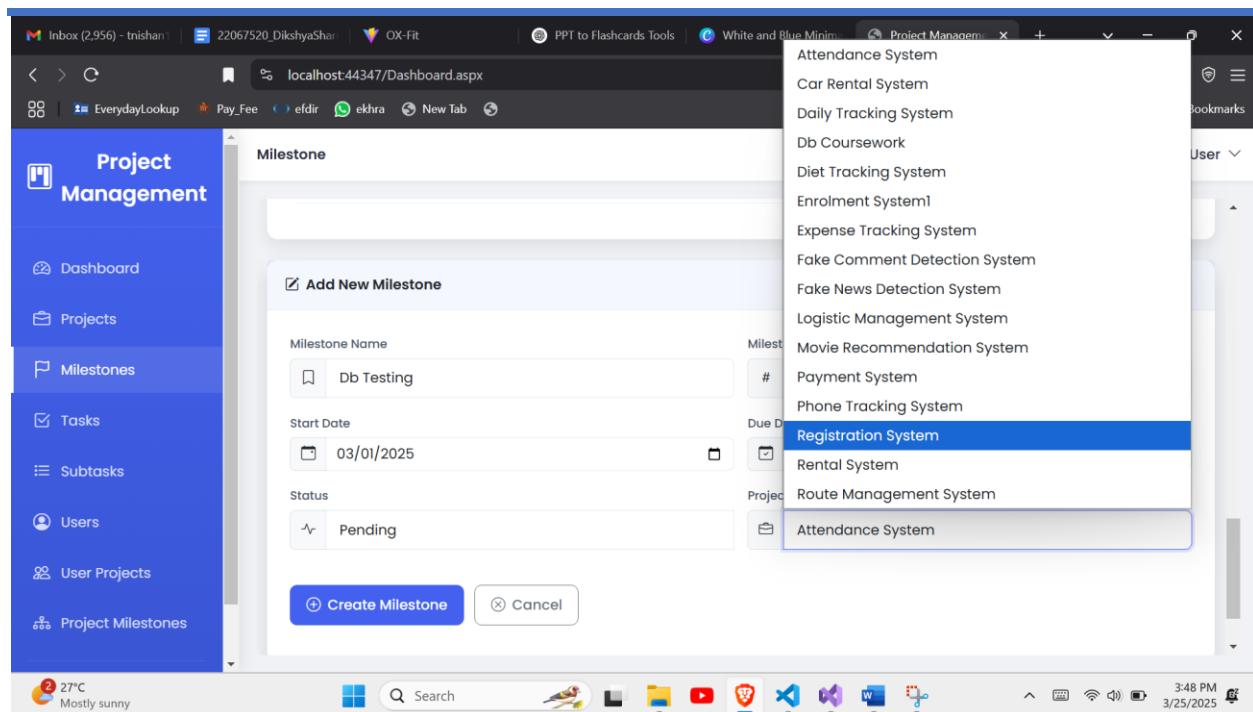


Figure 188 Screenshot of Projects details dropdown

Choose the status for the milestone from the drop down

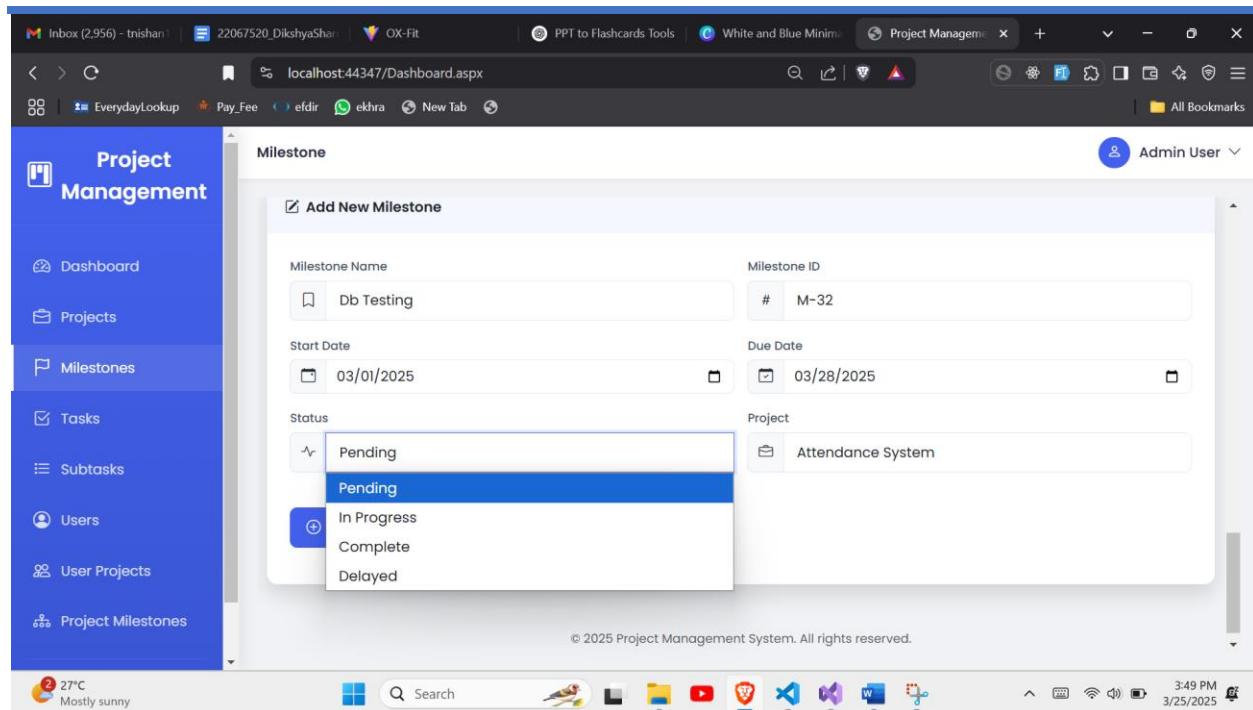


Figure 189 Screenshot of status dropdown

Click on Create new milestone button

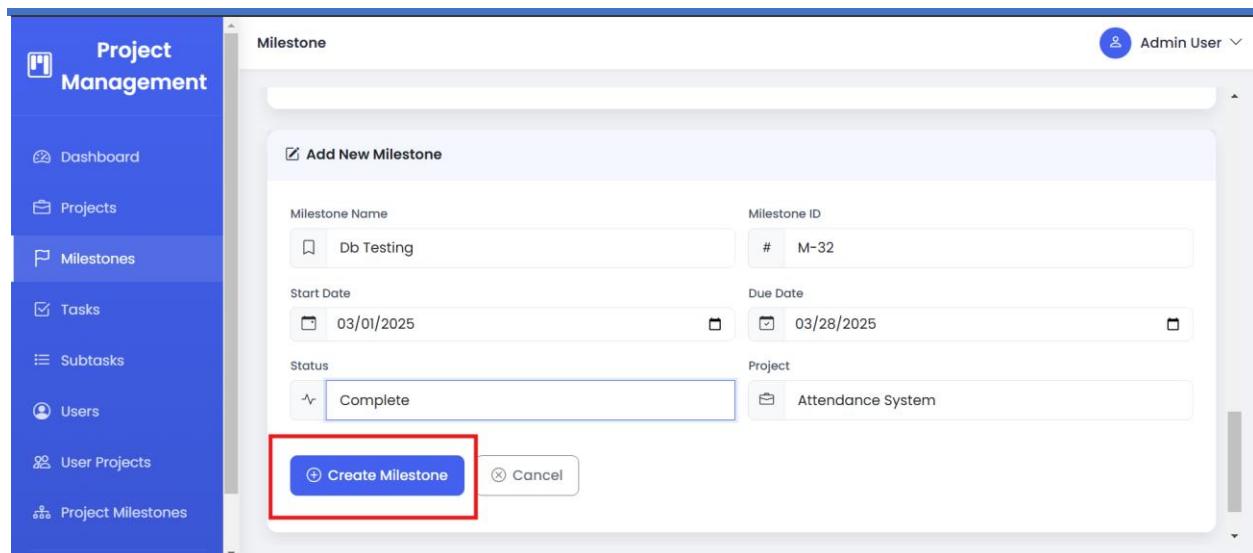


Figure 190 Screenshot of creating a new Milestone

Grid value changes from 30-31 showing milestone being created successfully

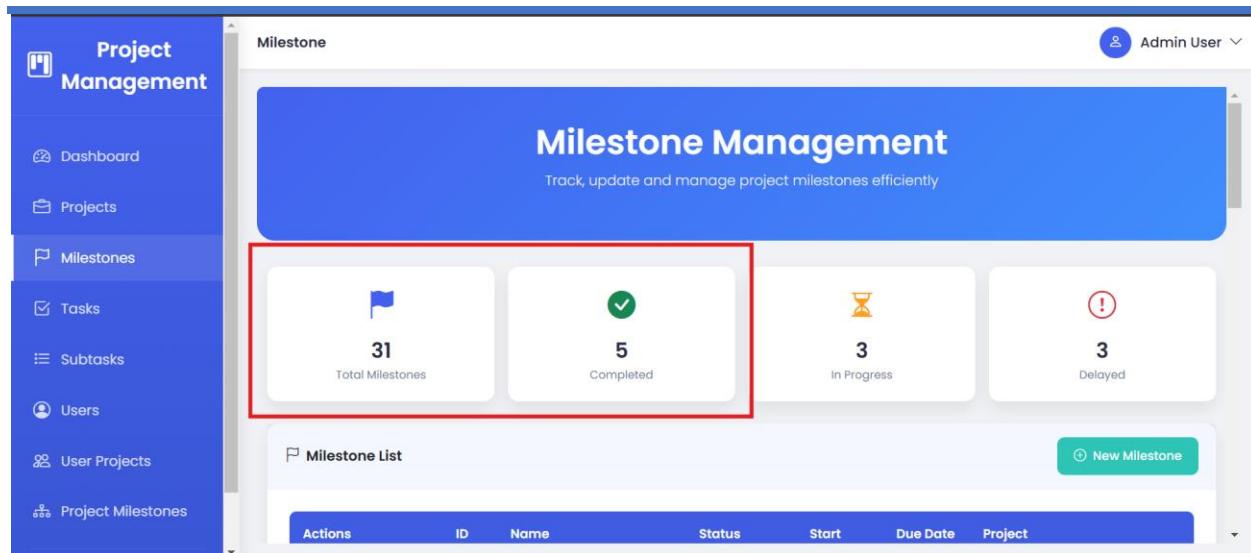


Figure 191 Screenshot of grid change after milestone creation

Further scrolling shows milestone being created successfully

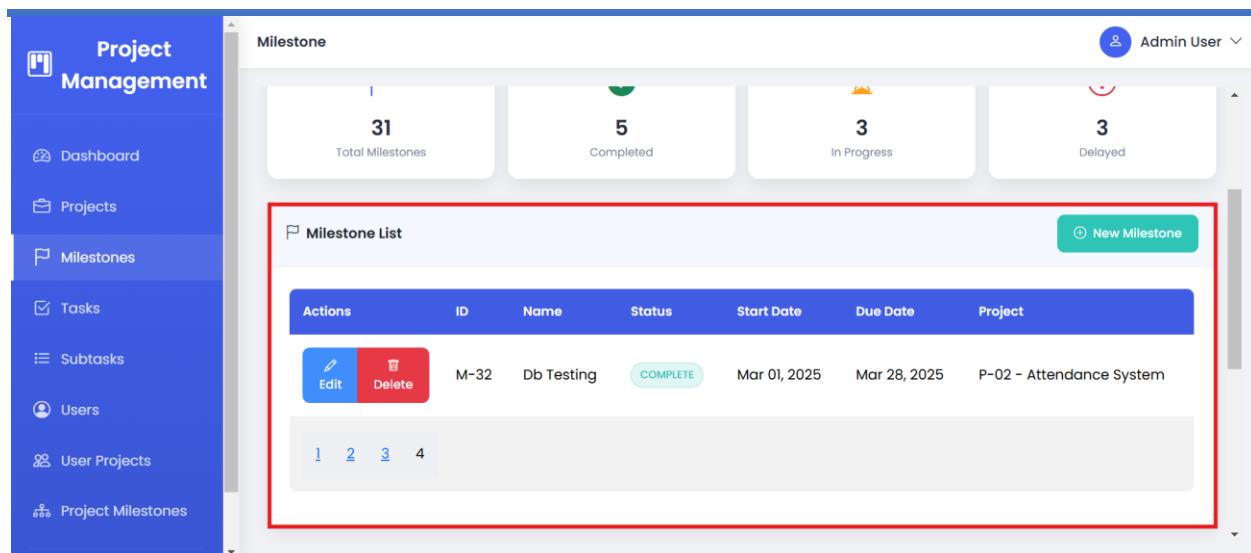


Figure 192 Screenshot of Milestone being created

Click the edit button to change the values of status to delayed.

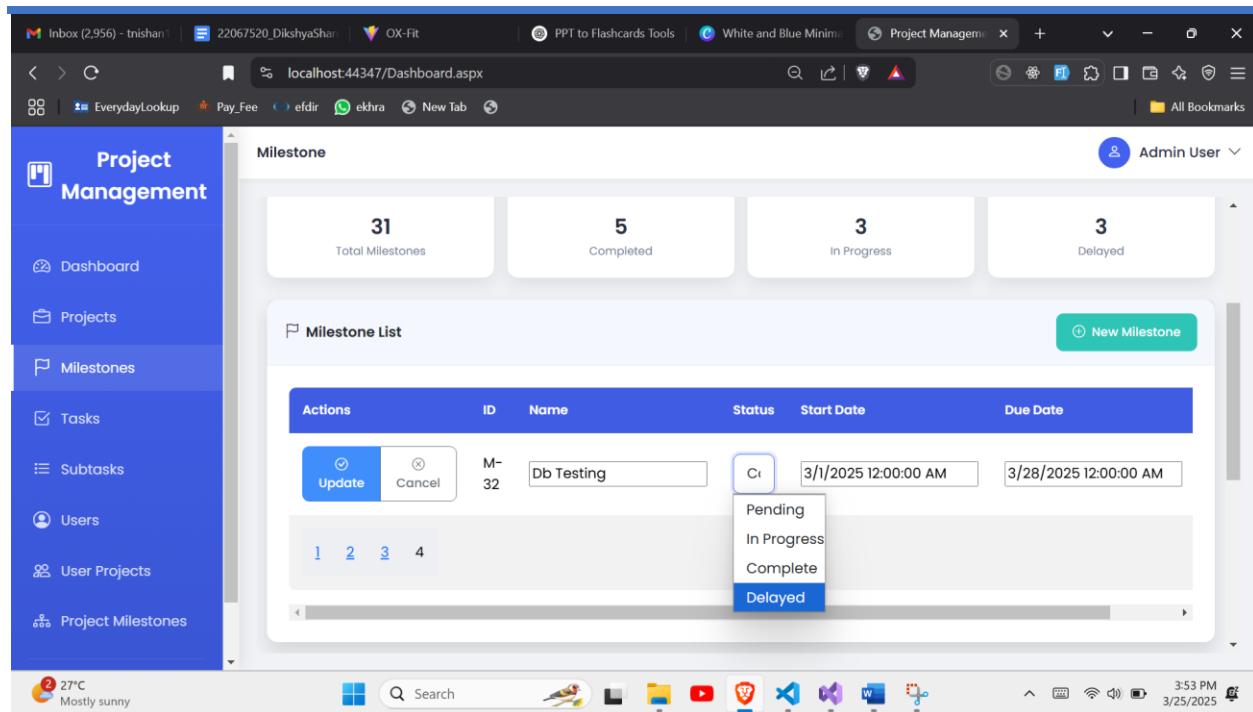


Figure 193 Screenshot of Milestone Editing

Click on update to save the changes made

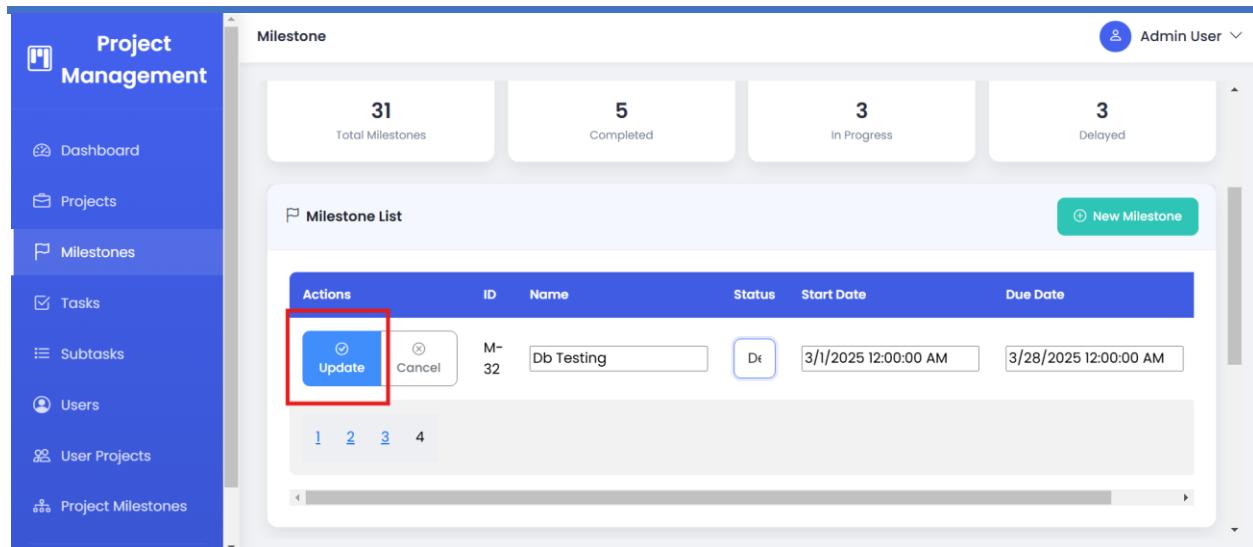


Figure 194 Screenshot of Milestone status being updated

The grid shows the delayed project value from 3-4

This screenshot shows the 'Milestone Management' section of a project management application. On the left is a sidebar with a blue header 'Project Management' and various navigation items: Dashboard, Projects, Milestones (selected), Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area has a title 'Milestone Management' with the subtitle 'Track, update and manage project milestones efficiently'. Below this are four cards: 'Total Milestones' (31), 'Completed' (4), 'In Progress' (3), and 'Delayed' (4). A red box highlights the 'Delayed' card. Below these cards is a 'Milestone List' table with columns: Actions, ID, Name, Status, Start Date, Due Date, and Project. One row in the table is highlighted.

Actions	ID	Name	Status	Start Date	Due Date	Project
Edit	M-32	Db Testing	DELAYED	Mar 01, 2025	Mar 28, 2025	P-02 - Attendance System

Figure 195 Screenshot of grid after update

Further scrolling shows status changed to delayed

This screenshot shows the 'Milestone List' after further scrolling. The 'Delayed' status is now explicitly shown in the 'Status' column of the table. The table structure is identical to Figure 195, with the 'Delayed' status now clearly visible for the Db Testing milestone.

Actions	ID	Name	Status	Start Date	Due Date	Project
Edit	M-32	Db Testing	DELAYED	Mar 01, 2025	Mar 28, 2025	P-02 - Attendance System

Figure 196 Screenshot of Milestone Status being updated

Click delete button to delete the milestone

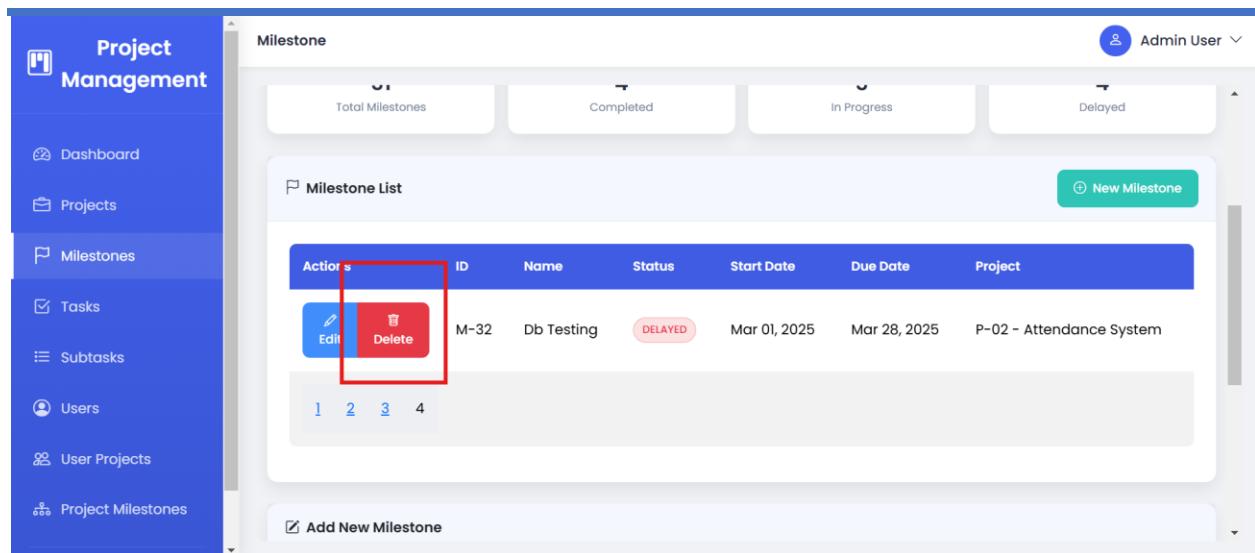


Figure 197 Screenshot of deleting milestone

Click cancel if you don't want to delete

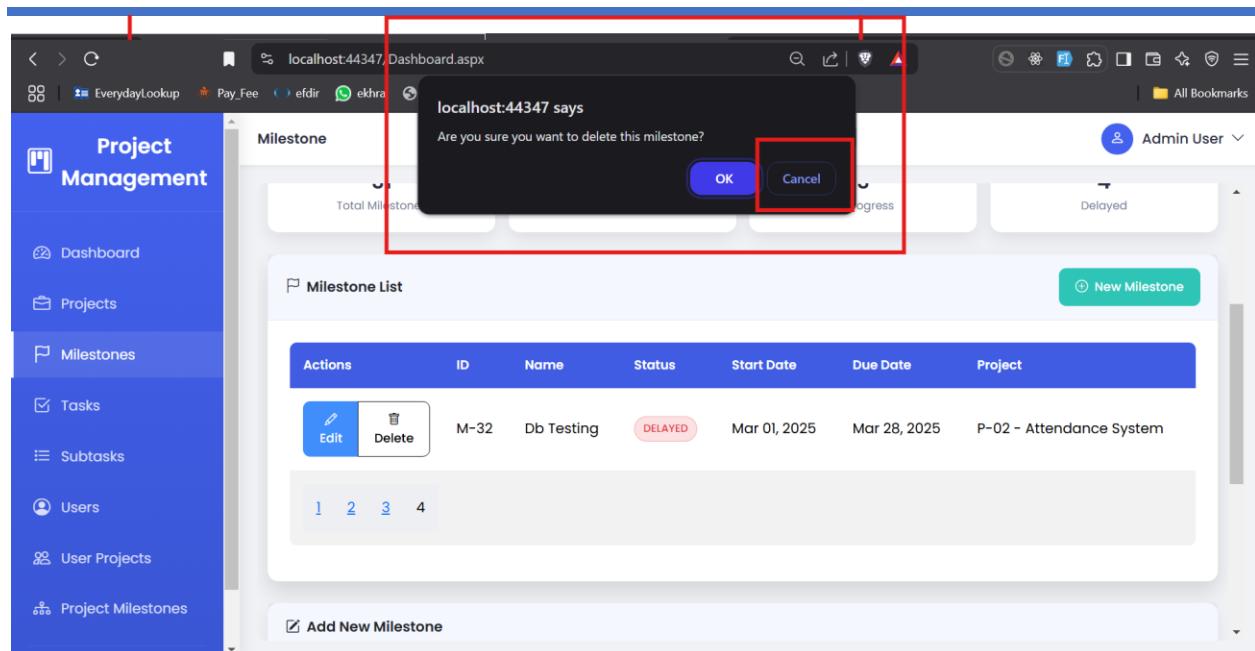


Figure 198 Screenshot of Cancel button being pressed

No changes were made which means milestone is not deleted

The screenshot shows the 'Milestone' section of the Project Management application. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones (selected), Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area displays a 'Milestone List' with the following data:

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-32	Db Testing	DELAYED	Mar 01, 2025	Mar 28, 2025	P-02 - Attendance System

Below the table are page navigation numbers 1, 2, 3, 4. At the bottom is a button labeled 'Add New Milestone'.

Figure 199 Screenshot of no change after cancelling

Click OK if you want to delete the Milestone

The screenshot shows the same 'Milestone' section as Figure 199. A confirmation dialog box is overlaid on the page, asking 'Are you sure you want to delete this milestone?'. The 'OK' button in the dialog is highlighted with a red box.

Figure 200 Screenshot of clicking OK for deleting milestone

Total milestone changed from 31-30 and delayed grid changed from 4-3

The screenshot shows the 'Milestone Management' section of a project management application. On the left is a sidebar with 'Project Management' navigation. The main area has a title 'Milestone Management' with a subtitle 'Track, update and manage project milestones efficiently'. Below this are four cards: 'Total Milestones' (30), 'Completed' (4), 'In Progress' (3), and 'Delayed' (3). The 'Delayed' card is highlighted with a red border. A 'Milestone List' table follows, with columns: Actions, ID, Name, Status, Start, Due Date, Project. The 'Delayed' row is present in the list. A green 'New Milestone' button is at the bottom right.

Figure 201 Screenshot of grid update after milestone deletion

Further scrolling shows the milestone being deleted successfully

This screenshot shows the same interface after further scrolling. The 'Delayed' row from Figure 201 is no longer visible in the 'Milestone List'. Instead, a new row for 'Db Coursework' (ID M-31) is shown, which is currently 'IN PROGRESS'. This row is also highlighted with a red border. The rest of the table structure remains the same.

Figure 202 Screenshot of Milestone being deleted

16.6. User Project

User project dashboard which shows the user and the project they are associated with.

The screenshot shows a 'User Project Details' page with a red box highlighting the 'Select User' dropdown. The dropdown contains the name 'Nishan Chettri'. The left sidebar has a 'User Projects' section selected.

Figure 203 Screenshot of User-Project Dashboard

Click on the choose user drop down to select the user

The screenshot shows a 'User Project Details' page with a red box highlighting a table of project details. The table has columns: Username, Email, Contact, Project Name, Start Date, Due Date, and Status. It lists two entries for 'Nishan Chettri'.

Username	Email	Contact	Project Name	Start Date	Due Date	Status
Nishan Chettri	nishan1@gmail.com	9817665544	Enrolment System	Sep 18, 2024	Dec 09, 2024	Planning
Nishan Chettri	nishan1@gmail.com	9817665544	Movie Recommendation System	Oct 01, 2024	Oct 01, 2025	Ongoing

Figure 204 Screenshot of User and the project they are associated with

Here Samyam was chosen

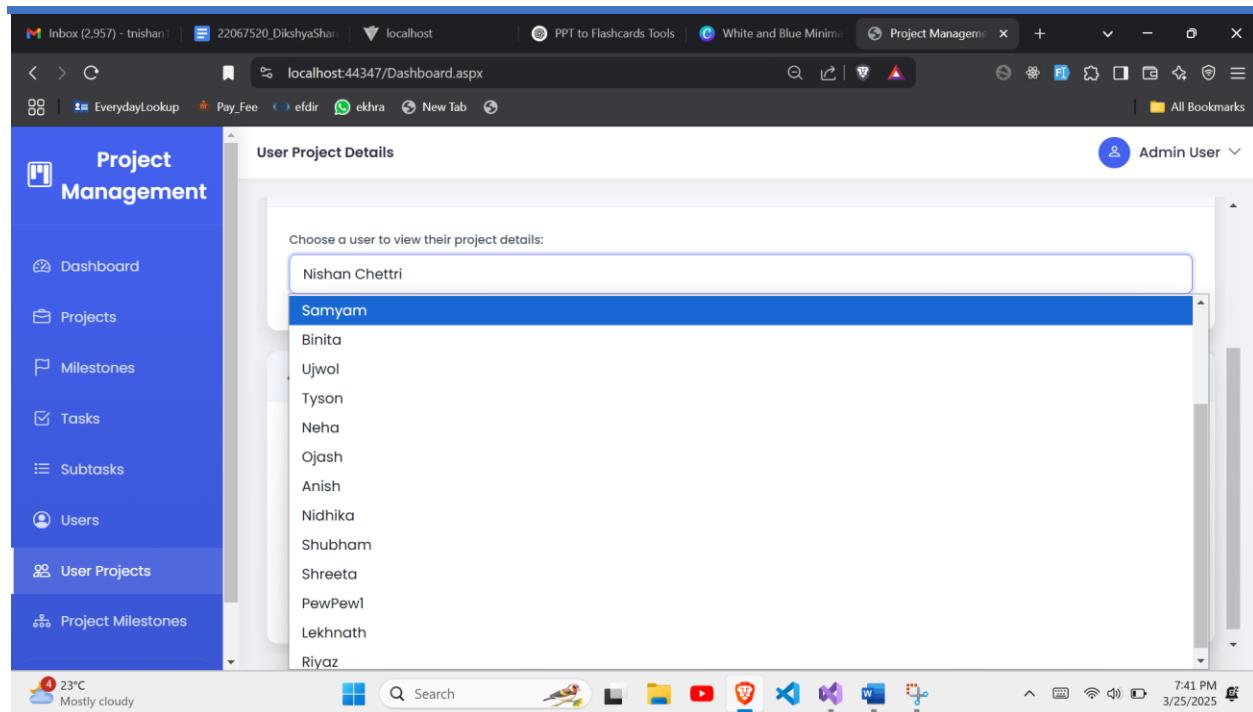


Figure 205 Screenshot of selecting User

Samyam and the projects he is associated with are displayed in the dashboard

The screenshot shows the same "User Project Details" page as Figure 205, but now the "Project Details" section is expanded and highlighted with a red border. This section contains a table with columns: Username, Email, Contact, Project Name, Start Date, Due Date, and Status. There are three rows of data, all corresponding to the user "Samyam".

Username	Email	Contact	Project Name	Start Date	Due Date	Status
Samyam	samyam05@gmail.com	9865887536	Expense Tracking System	May 01, 2024	Feb 01, 2025	Ongoing
Samyam	samyam05@gmail.com	9865887536	Diet Tracking System	Jan 19, 2024	Nov 25, 2024	Ongoing
Samyam	samyam05@gmail.com	9865887536	Diet Tracking System	Jan 19, 2024	Nov 25, 2024	Ongoing

Figure 206 Screenshot of the project they are associated with

16.7. Project Milestone

Project Milestone dashboard which shows the Project and its milestone

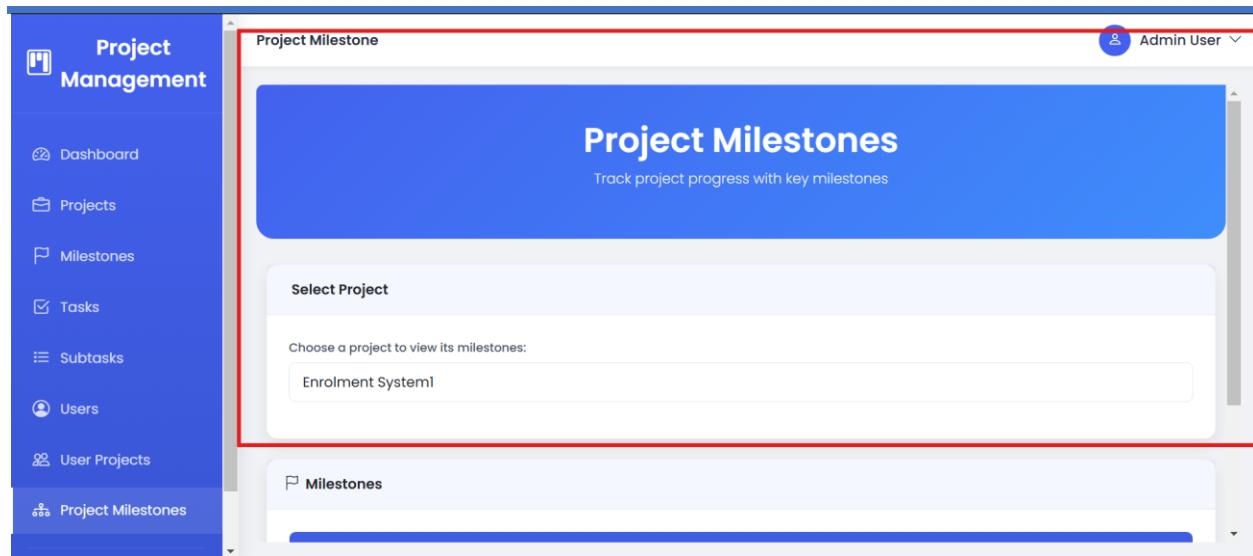


Figure 207 Screenshot of Project Milestone Dashboard

Select a project by clicking the choose a project dropdown

The screenshot shows the same 'Project Management' application interface as Figure 207. The 'Select Project' dropdown is still set to 'Enrolment System1'. Below it, a 'Milestones' section is displayed with a table. A red box highlights this table.

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Enrolment System1	Sep 18, 2024	Dec 09, 2024	Expense Analysis Module	Jun 01, 2024	Jul 01, 2024	Completed

Figure 208 Screenshot of Project and its Milestones

Here Rental System Project was selected

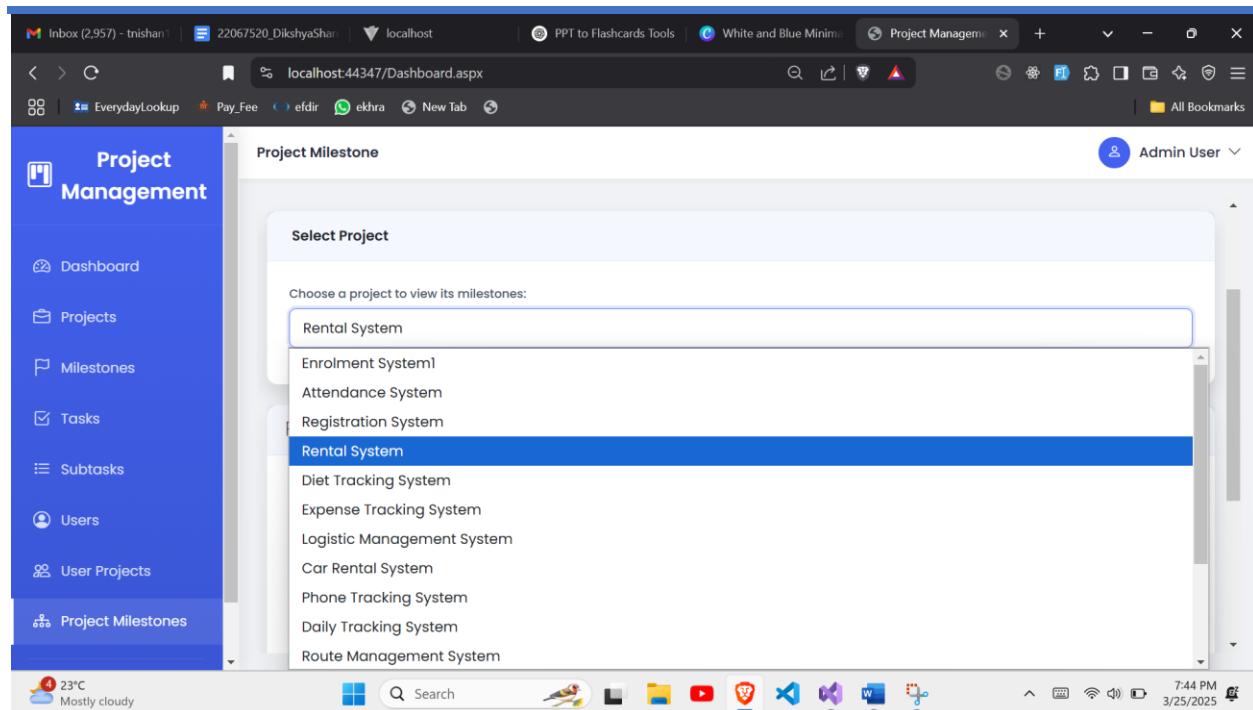


Figure 209 Screenshot of selecting Project

Rental Project and its milestone was displayed

The screenshot shows the same 'Project Milestone' page as Figure 209, but now the 'Milestones' section is highlighted with a red border. This section contains a table with columns: Project Name, Project Start Date, Project Due Date, Milestone Name, Milestone Start Date, Milestone Due Date, and Status. There are two rows of data:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed

Figure 210 Screenshot of Project and its related Milestones |

More milestones for rental project

The screenshot shows the Project Management application interface. On the left, a sidebar menu lists various project management tasks: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The 'Project Milestones' option is selected. The main content area is titled 'Project Milestone' and displays a table of milestones for a project named 'Rental System'. The table has columns for Project Name, Project Start Date, Project Due Date, Milestone Name, Milestone Start Date, Milestone Due Date, and Status. The data in the table is as follows:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design1	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed
Rental System	Oct 10, 2024	Dec 25, 2024	Rental Module Design	Oct 01, 2024	Oct 20, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Payment Gateway Integration	Dec 01, 2024	Dec 10, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Db Coursework	Mar 18, 2025	Mar 26, 2025	In Progress

Figure 211 Screenshot of Project and its related Milestones II

16.8. Top Three Performers

Top Three Performers dashboard which shows the Top Three Performers for a certain project.

The screenshot shows the 'Top Three Performers' dashboard. The sidebar menu on the left is identical to the one in Figure 211. The main content area is titled 'Top Three Performers' and features a blue header bar with the text 'Top Three Performers' and 'Identify and recognize your top contributors'. Below this is a section titled 'Select Project' with the sub-instruction 'Choose a project to view its top performers:' followed by a dropdown menu containing the option 'Enrolment System'. At the bottom of the dashboard is a section titled 'Top Performers'.

Figure 212 Screenshot of Top Three Performers Dashboard

Select a project from the Project Drop down. Here Enrollment system was selected

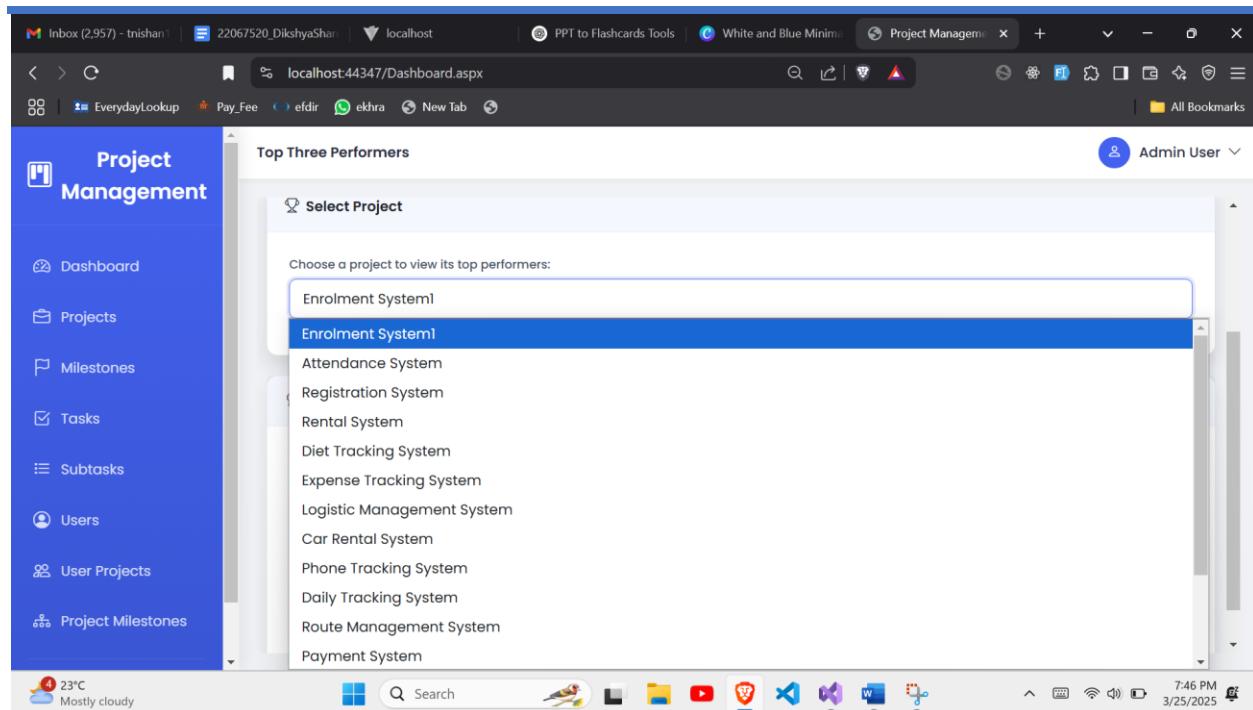


Figure 213 Screenshot of selecting Project

Top Three Performers for the Enrollments system is displayed

User Name	Project Name	Completed Tasks
Kushal	Enrolment System	3
Dikshya	Enrolment System	1
Nishan Chettri	Enrolment System	1

Figure 214 Screenshot of Project and its Top Three Performers

17. Testing

17.1 Test for CRUD for User-Details

Test Number	1
Objective	To test the create, read, update and delete of UserDetails table
Action	<p>For table creation:</p> <ul style="list-style-type: none"> • Click Create New User button • Fill in the details <p>UserID: U19</p> <p>Username: Test1</p> <p>Email: test@gmail.com</p> <p>Phone: 9861858040</p> <ul style="list-style-type: none"> • Click on Save User <p>For update</p> <ul style="list-style-type: none"> • Click on edit button • Edit some values • Click on Update button <p>For delete</p> <ul style="list-style-type: none"> • Click on delete button • Click yes on the dialogue box
Expected Result	The CRUD operation should be executed successfully

Actual Result	The execution of the CRUD operation was successful
Conclusion	The test was successful.

Table 1 User-Details CRUD Test Table

The screenshot shows the 'User Details' page of a 'Project Management' application. On the left is a blue sidebar with navigation links: Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is selected), User Projects, and Project Milestones. The main area has a header 'User Details' and a sub-header 'Admin User'. Below this is a section titled 'New User Registration' with a sub-section 'Add a New User to the System'. It includes a button labeled '+ Create New User' which is highlighted with a red box. At the bottom is a 'Users Directory' table with columns Actions, ID, Username, Email, and Contact.

Figure 215 Clicking Create New User button

This screenshot shows the 'New User Registration' form from Figure 215. The form is displayed in a modal window. It contains four input fields: 'User ID' (with placeholder 'Enter user ID'), 'Username' (with placeholder 'Enter username'), 'Email Address' (with placeholder 'Enter email address'), and 'Contact Number' (with placeholder 'Enter contact number'). At the bottom are two buttons: 'Save User' (highlighted with a red box) and 'Cancel'.

Figure 216 Form opens on clicking button

User Details

18 Total Users 3 New Users 15 Recent Activities

New User Registration

User ID: # UI9 Username: Test1

Email Address: test@gmail.com Contact Number: 9861858040

Figure 217 Form filled with details

User Details

18 Total Users 3 New Users 15 Recent Activities

New User Registration

User ID: # UI9 Username: Test1

Email Address: test@gmail.com Contact Number: 9861858040

Figure 218 Clicking Save User

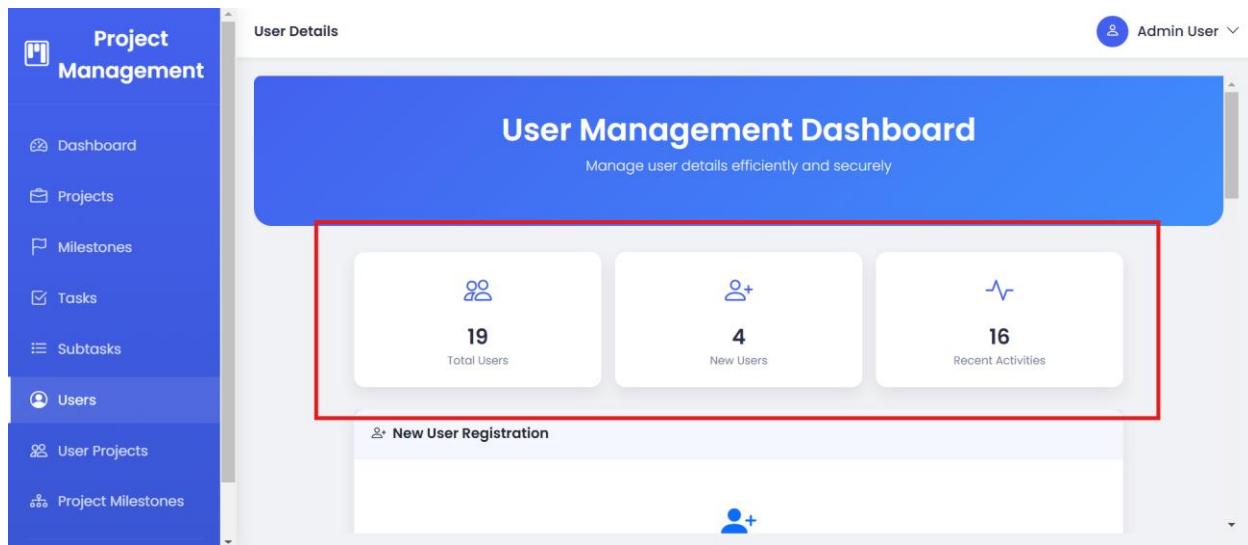


Figure 219 Grid update after adding user

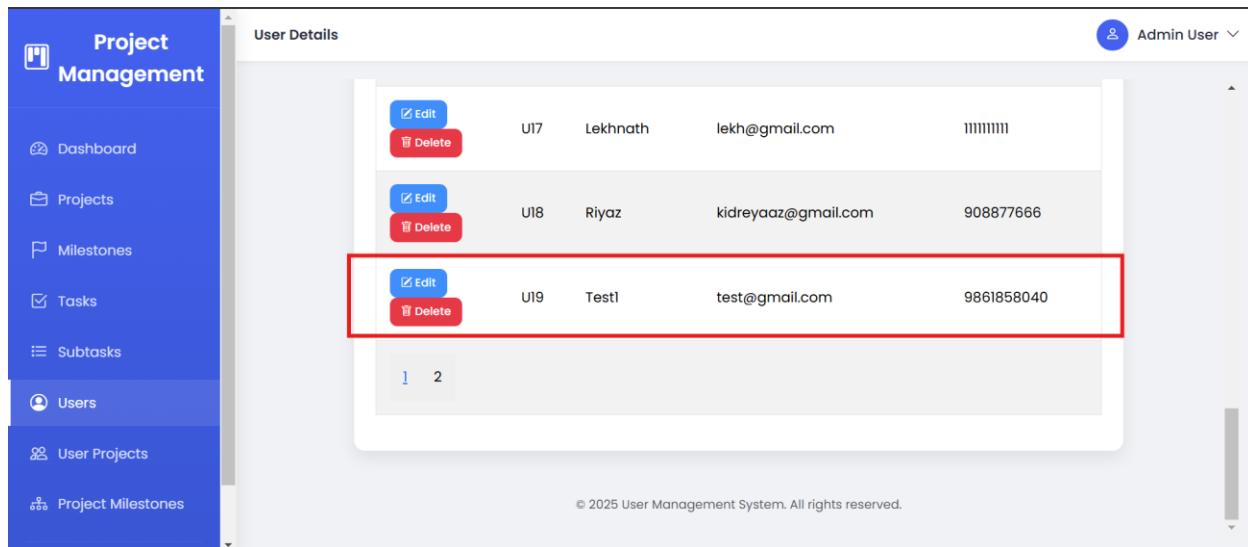


Figure 220 User added successfully

The screenshot shows the 'User Details' page of a 'Project Management' application. The left sidebar includes links for Dashboard, Projects, Milestones, Tasks, Subtasks, Users (which is currently selected), User Projects, and Project Milestones. The main content area displays a table of users:

User ID	Name	Email	Phone Number
UI7	Lekhnath	lekh@gmail.com	1111111111
UI8	Riyaz	kidreyaaz@gmail.com	908877666
UI9	Test1	test@gmail.com	9861858040

Each row has 'Edit' and 'Delete' buttons. The 'Edit' button for user UI9 is highlighted with a red box. At the bottom, there are navigation links '1' and '2', and a copyright notice: © 2025 User Management System. All rights reserved.

Figure 221 Clicking edit button

This screenshot shows the same 'User Details' page after clicking the 'Edit' button for user UI9. The user information for UI9 is now displayed in an edit form, which is highlighted with a red box. The form fields are:

- Name: Test1
- Email: test@gmail.com
- Phone Number: 9861858040

The 'Update' button in the form is also highlighted with a red box. The rest of the page remains the same as in Figure 221.

Figure 222 Edit form

User Details

ID	Name	Email	Phone
U17	Lekhnath	lekh@gmail.com	1111111111
U18	Riyaz	kidreyaaz@gmail.com	908877666
U19	Purnika	test@gmail.com	9861858040

Admin User

Dashboard | Projects | Milestones | Tasks | Subtasks | **Users** | User Projects | Project Milestones

Figure 223 Name changed

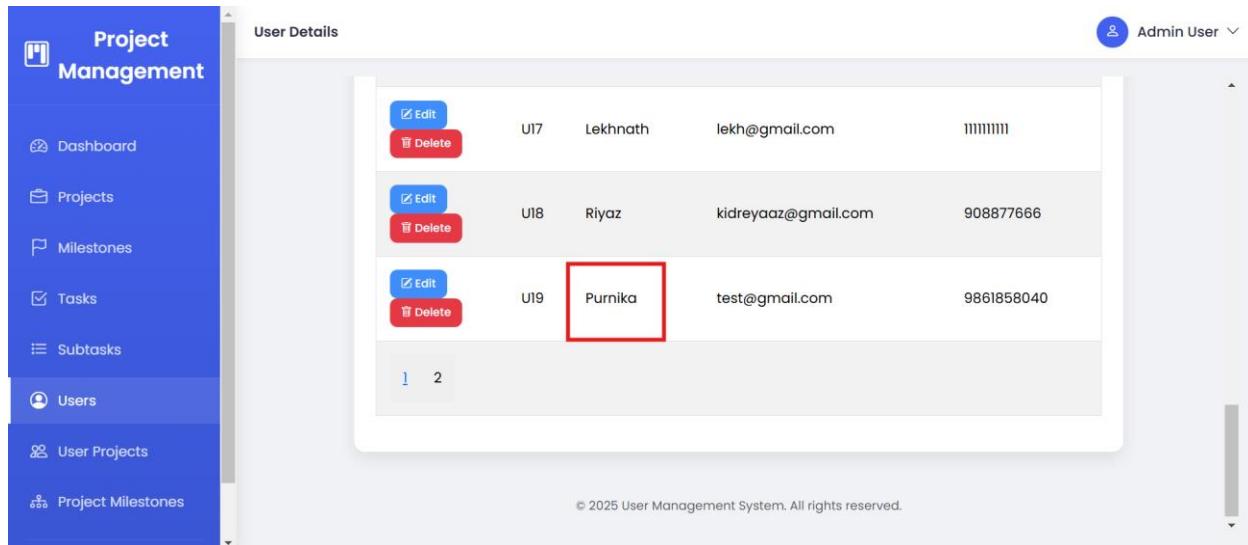
User Details

ID	Name	Email	Phone
U17	Lekhnath	lekh@gmail.com	1111111111
U18	Riyaz	kidreyaaz@gmail.com	908877666
U19	Purnika	test@gmail.com	9861858040

Admin User

Dashboard | Projects | Milestones | Tasks | Subtasks | **Users** | User Projects | Project Milestones

Figure 224 Clicking update

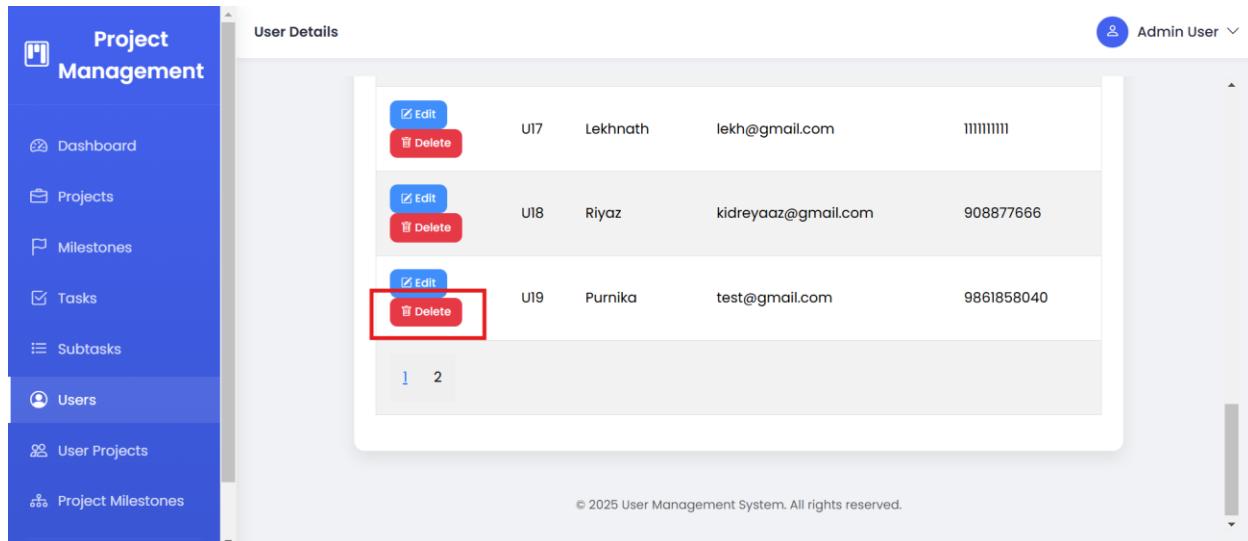


User Details

ID	Name	Email	Phone
UI7	Lekhnath	lekh@gmail.com	1111111111
UI8	Riyaz	kidreyaaz@gmail.com	908877666
UI9	Purnika	test@gmail.com	9861858040

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Figure 225 Username updated



User Details

ID	Name	Email	Phone
UI7	Lekhnath	lekh@gmail.com	1111111111
UI8	Riyaz	kidreyaaz@gmail.com	908877666
UI9	Purnika	test@gmail.com	9861858040

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Figure 226 Clicking delete button

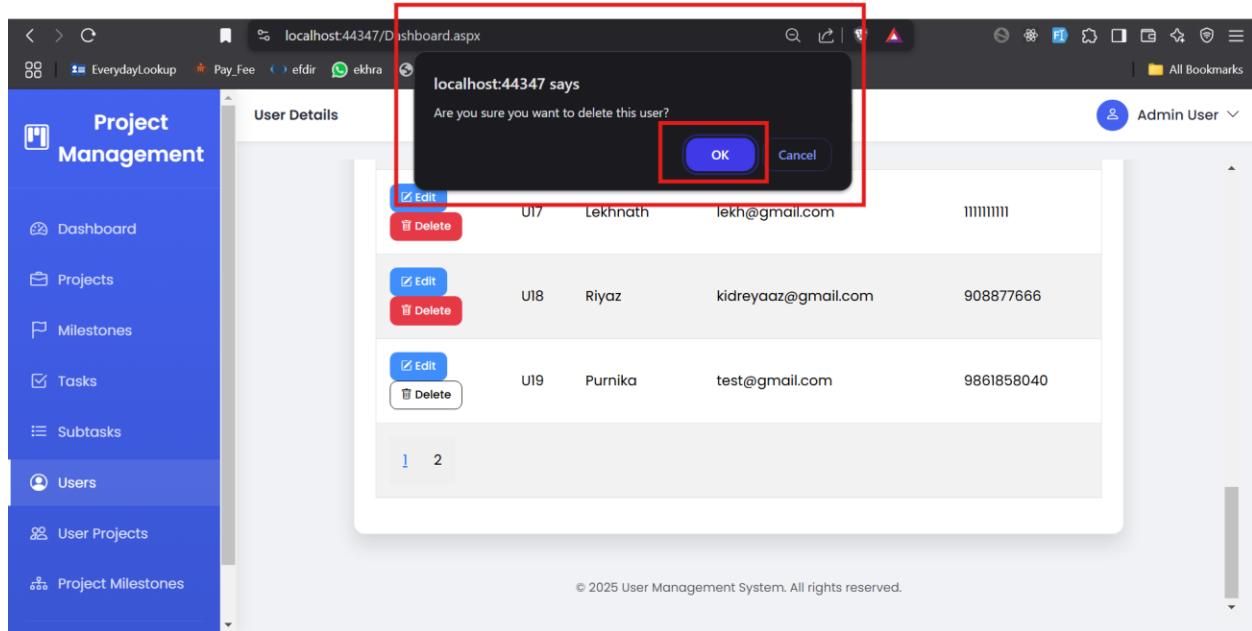


Figure 227 Clicking yes on the dialogue box

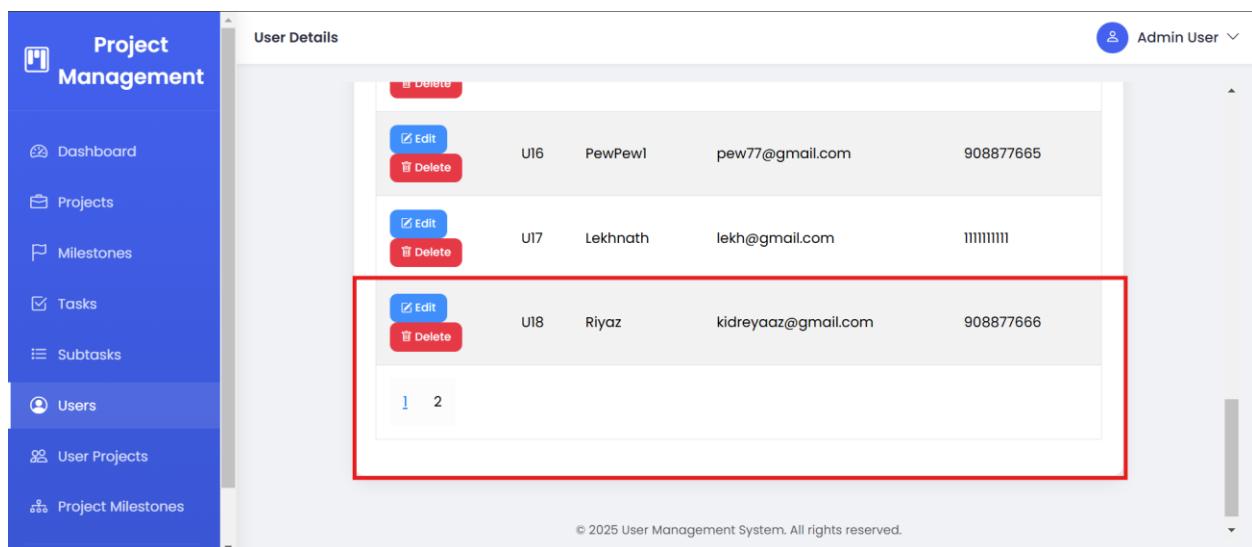


Figure 228 User deleted successfully

17.2 Test for CRUD for Project-Details

Test Number	2
-------------	---

Objective	To test the create, read, update and delete of ProjectDetails table
Action	<p>For table creation:</p> <ul style="list-style-type: none"> • Click Create New Project button • Fill in the details ProjectName: Db Testing ProjectID: P-17 Start-Date: 25th March, 2025. Due-Date: 31st March, 2025 Status: In-Progress • Click on Create Project <p>For update</p> <ul style="list-style-type: none"> • Click on edit button • Edit some values • Click on Update button <p>For delete</p> <ul style="list-style-type: none"> • Click on delete button • Click yes on the dialogue box
Expected Result	The CRUD operation should be executed successfully
Actual Result	The execution of the CRUD operation was successful
Conclusion	The test was successful.

Table 2 Project-Details CRUD Test Table

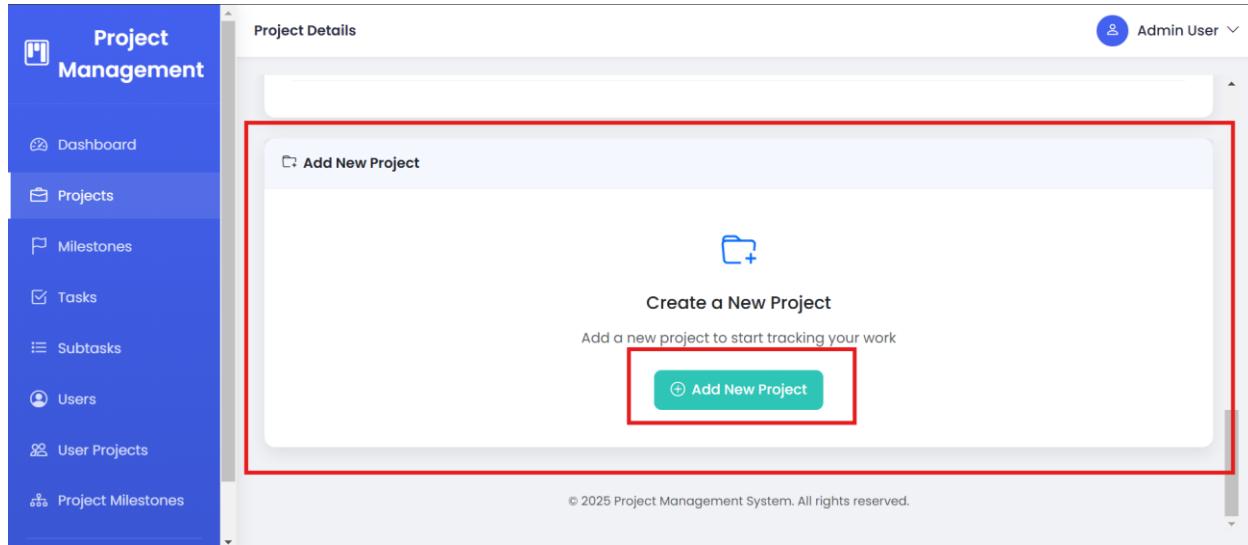


Figure 229 Clicking Create New Project button

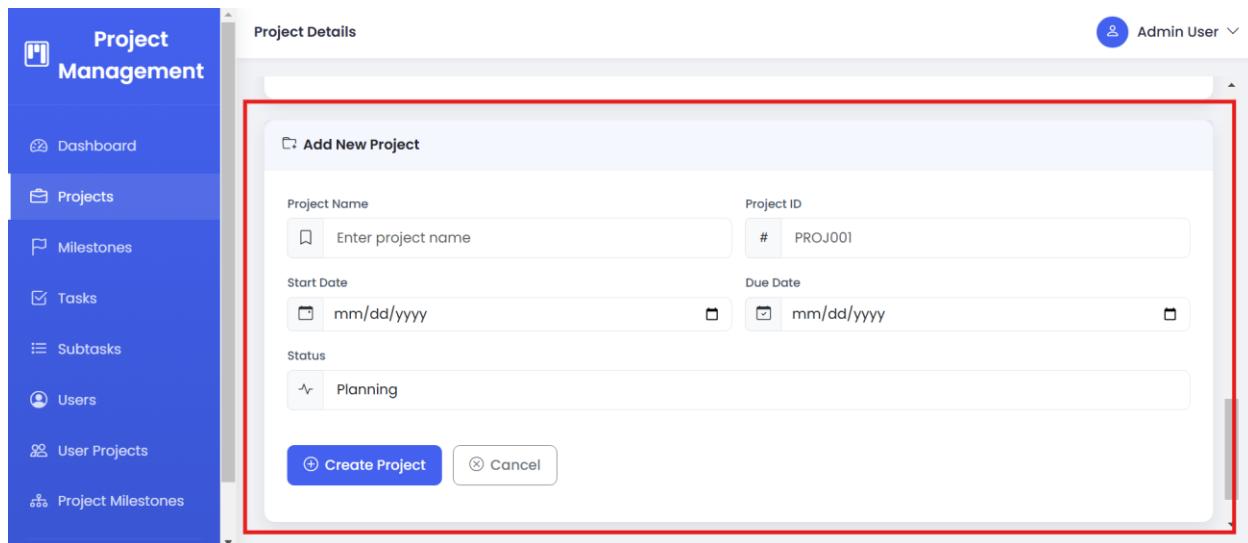


Figure 230 Create new project form

Project Management

Project Details

Add New Project

Project Name: Db Testing

Project ID: # P-17

Start Date: 03/25/2025

Due Date: 03/31/2025

Status: In Progress

Create Project Cancel

Figure 231 Form filled with valid details

Project Management

Project Details

Add New Project

Project Name: Db Testing

Project ID: # P-17

Start Date: 03/25/2025

Due Date: 03/31/2025

Status: In Progress

Create Project Cancel

Figure 232 Clicking Create project

Project Details

Manage your projects efficiently and track progress

Total Projects: 17

Completed: 3

Active Projects: 2

Upcoming Deadlines: 1

Projects List

New Project

Actions	ID	Project Name	Status	Start Date	Due Date
Edit Delete	P-15	Movie Recommendation System	Ongoing	Oct 01, 2024	Oct 01, 2025
Edit Delete	P-16	Db Coursework	In Progress	Mar 18, 2025	Mar 19, 2025
Edit Delete	P-17	Db Testing	In Progress	Mar 25, 2025	Mar 31, 2025

Figure 233 Grid update showing that the project was created

Project Details

Manage your projects efficiently and track progress

Total Projects: 17

Completed: 3

Active Projects: 2

Upcoming Deadlines: 1

Projects List

Add New Project

Actions	ID	Project Name	Status	Start Date	Due Date
Edit Delete	P-15	Movie Recommendation System	Ongoing	Oct 01, 2024	Oct 01, 2025
Edit Delete	P-16	Db Coursework	In Progress	Mar 18, 2025	Mar 19, 2025
Edit Delete	P-17	Db Testing	In Progress	Mar 25, 2025	Mar 31, 2025

Figure 234 Project created successfully

Figure 235 Edit button

Figure 236 Changed the values

The screenshot shows a 'Project Details' page within a web-based project management application. The sidebar on the left includes options like Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area displays a table of projects:

ID	Name	Status	Start Date	End Date
P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025
P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025
P-17	Db Coursework	COMPLETED	3/25/2025 12:00:00 AM	3/31/2025 12:00:00 AM

At the bottom of the table, there are buttons for 'Update' and 'Cancel'. The 'Update' button is highlighted with a red box.

Figure 237 Clicking Update

This screenshot shows the 'Project Details' page after an update. The sidebar remains the same. The main area now displays a summary grid:

Total Projects	Completed	Active Projects	Upcoming Deadlines
17	4	1	1

The 'Completed' cell, which previously contained a checkmark icon, now displays the number '4'. The entire 'Completed' cell is highlighted with a red box.

Figure 238 Grid status changed

Project Details

ID	Name	Status	Start Date	End Date
P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025
P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025
P-17	Db Coursework	COMPLETED	Mar 25, 2025	Mar 31, 2025

Add New Project

Figure 239 Updated successfully

Project Details

ID	Name	Status	Start Date	End Date
P-15	Movie Recommendation System	ONGOING	Oct 01, 2024	Oct 01, 2025
P-16	Db Coursework	IN PROGRESS	Mar 18, 2025	Mar 19, 2025
P-17	Db Coursework	COMPLETED	Mar 25, 2025	Mar 31, 2025

Add New Project

Figure 240 Delete button

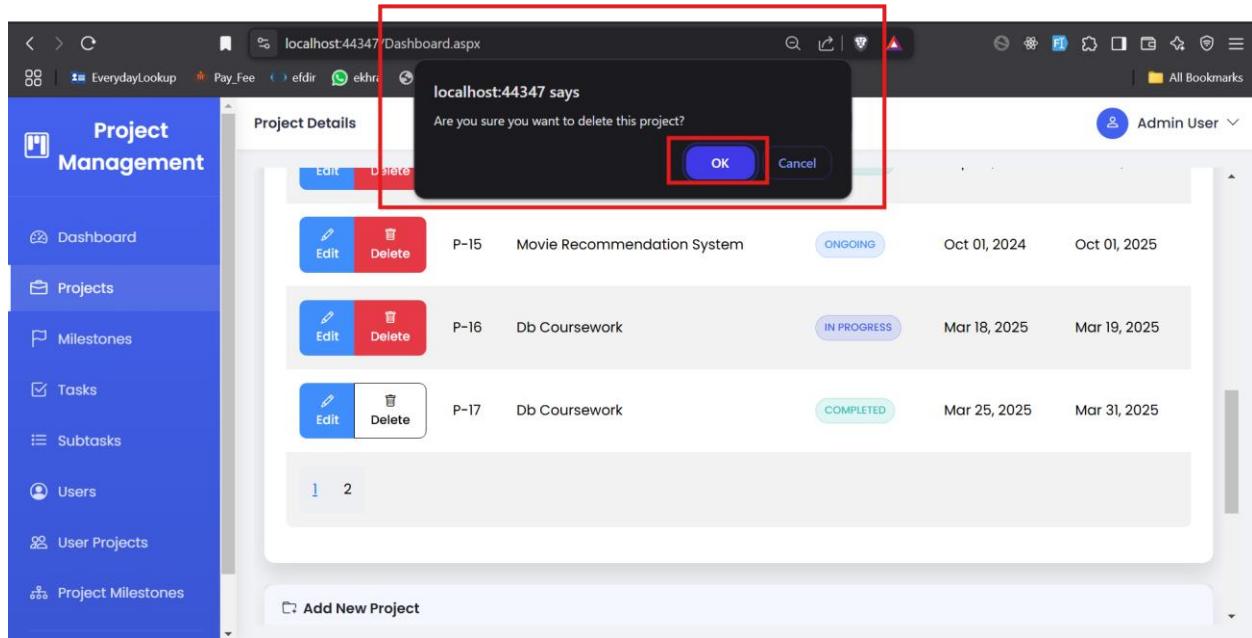


Figure 241 Clicking ok

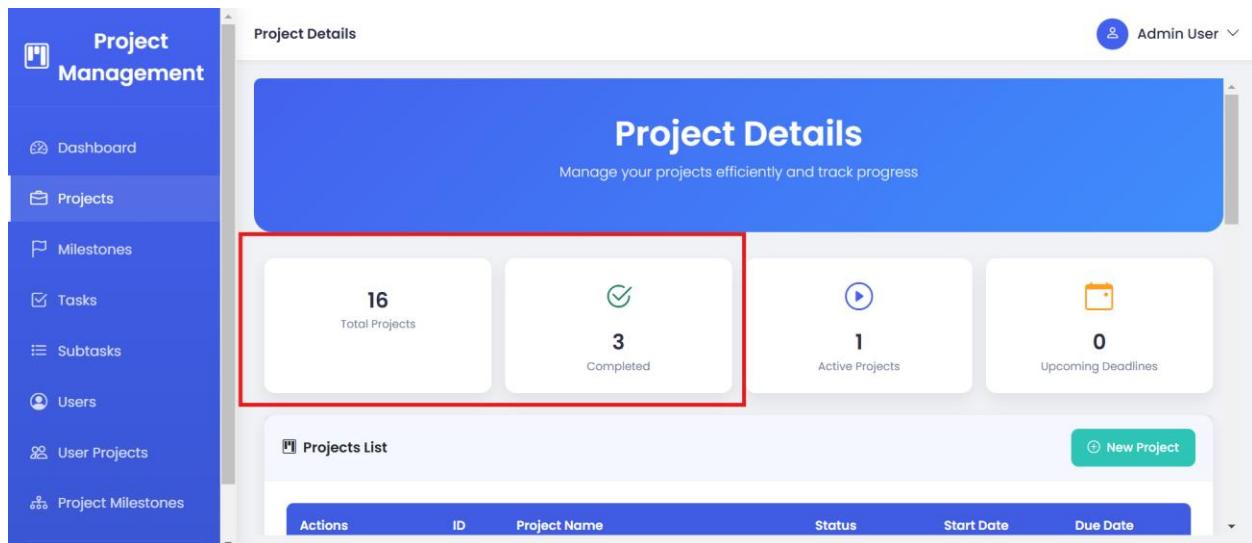


Figure 242 Grid update after deletion

The screenshot shows a web-based project management system. On the left is a sidebar with the following menu items: Dashboard, Projects (selected), Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area is titled 'Project Details' and lists three projects:

- P-14: Fake Comment Detection System (Status: COMPLETED, Dates: Sep 05, 2024 - Jun 20, 2025)
- P-15: Movie Recommendation System (Status: ONGOING, Dates: Oct 01, 2024 - Oct 01, 2025)
- P-16: Db Coursework (Status: IN PROGRESS, Dates: Mar 18, 2025 - Mar 19, 2025)

A red box highlights the row for 'Db Coursework'. At the bottom of the main area, there is a navigation bar with a link to 'Add New Project'.

Figure 243 Project Deleted Successfully

17.3. Test for CRUD for Task

Test Number	3
Objective	To test the create, read, update and delete of TaskDetails table
Action	<p>For table creation:</p> <ul style="list-style-type: none"> Click Create New User button Fill in the details <p>TaskName: Report Testing TaskID: T-18 Start-Date: 25th March, 2025 Due-Date: 26th March, 2025 Status: Completed</p> <ul style="list-style-type: none"> Click on Create Task <p>For update</p> <ul style="list-style-type: none"> Click on edit button

	<ul style="list-style-type: none"> • Edit some values • Click on Update button <p>For delete</p> <ul style="list-style-type: none"> • Click on delete button • Click yes on the dialogue box
Expected Result	The CRUD operation should be executed successfully
Actual Result	The execution of the CRUD operation was successful
Conclusion	The test was successful.

Table 3 Task-Details CRUD Test Table

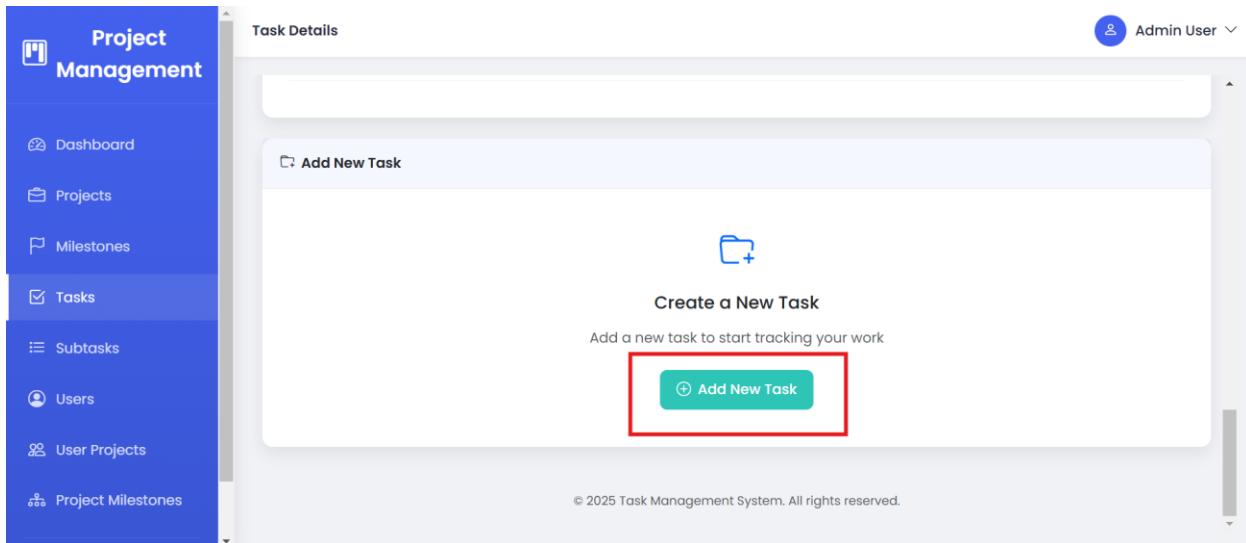


Figure 244 Create new Subtask button

The screenshot shows a 'Project Management' application interface. On the left, a sidebar menu includes 'Dashboard', 'Projects', 'Milestones', 'Tasks' (selected), 'Subtasks', 'Users', 'User Projects', and 'Project Milestones'. The main area is titled 'Task Details' and contains a sub-section 'Add New Task'. It has fields for 'Task Name' (Report Testing), 'Task ID' (# T-18), 'Start Date' (03/25/2025), 'Due Date' (03/26/2025), and 'Status' (Completed). A red box surrounds the blue 'Create Task' button at the bottom.

Figure 245 Form filled and create task clicked

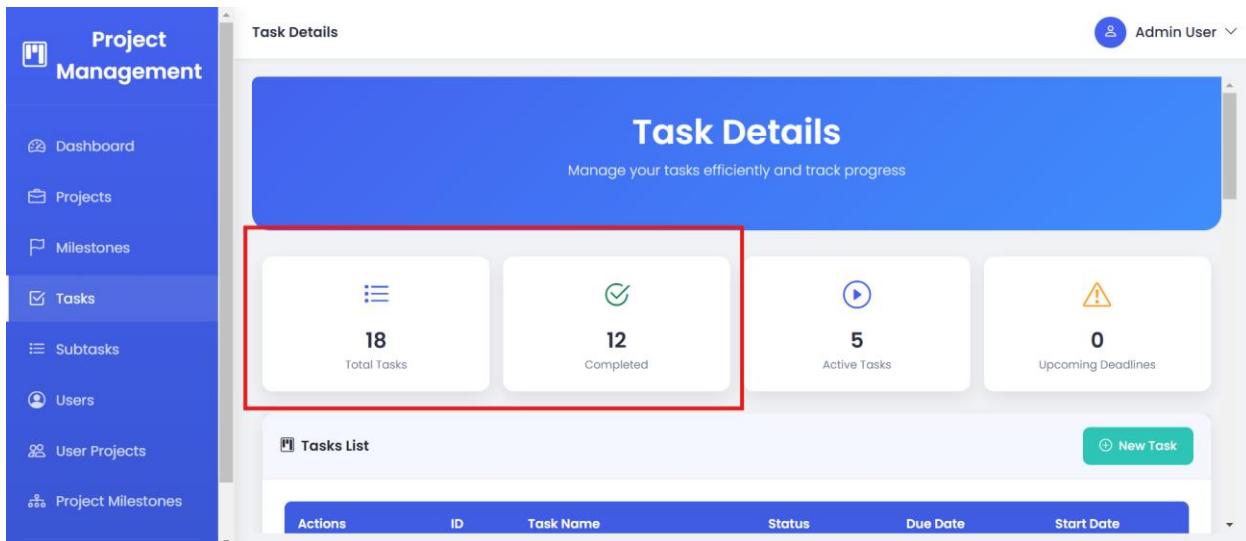


Figure 246 Grid update after task creation

The screenshot shows a 'Project Management' application interface. On the left is a sidebar with navigation links: Dashboard, Projects, Milestones, Tasks (selected), Subtasks, Users, User Projects, and Project Milestones. The main area is titled 'Task Details' and lists three tasks:

ID	Name	Status	Start Date	End Date
T-16	FYP-Interim	COMPLETED	May 05, 2025	Apr 25, 2025
T-17	DB-Coursework	COMPLETED	Mar 19, 2025	Mar 18, 2025
T-18	Report Testing	COMPLETED	Mar 26, 2025	Mar 25, 2025

Below the table, there are two numbered buttons (1 and 2) and a 'Add New Task' button.

Figure 247 Task created successfully

This screenshot is identical to Figure 247, showing the same list of tasks. However, the 'Edit' button for Task T-18 is now highlighted with a red border, indicating it has been selected or is the focus of the action.

Figure 248 clicking edit button

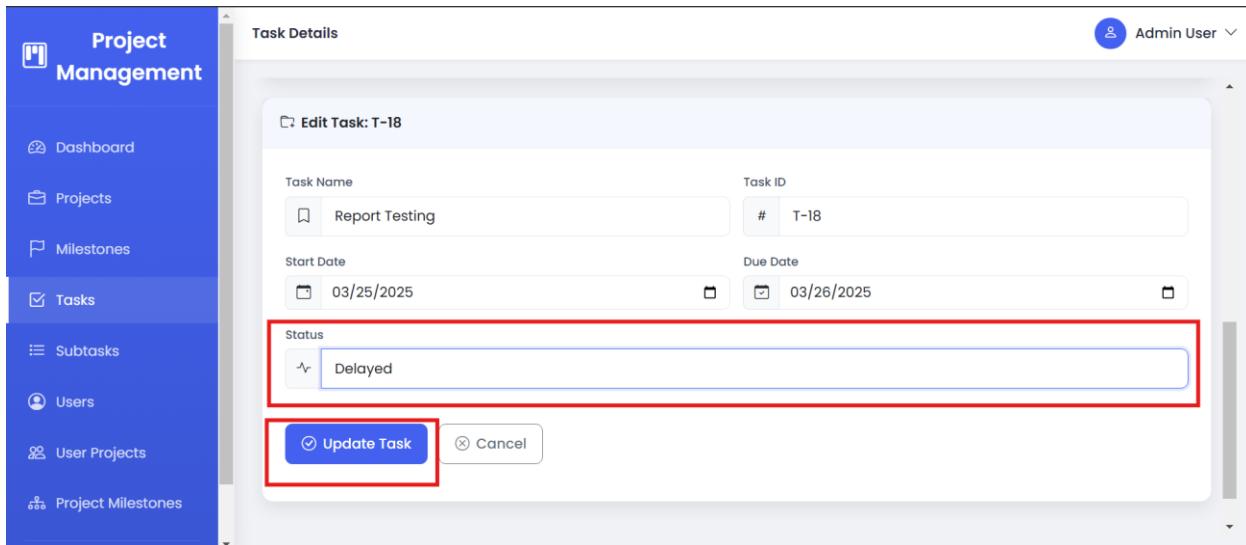


Figure 249 Status changed and update button clicked

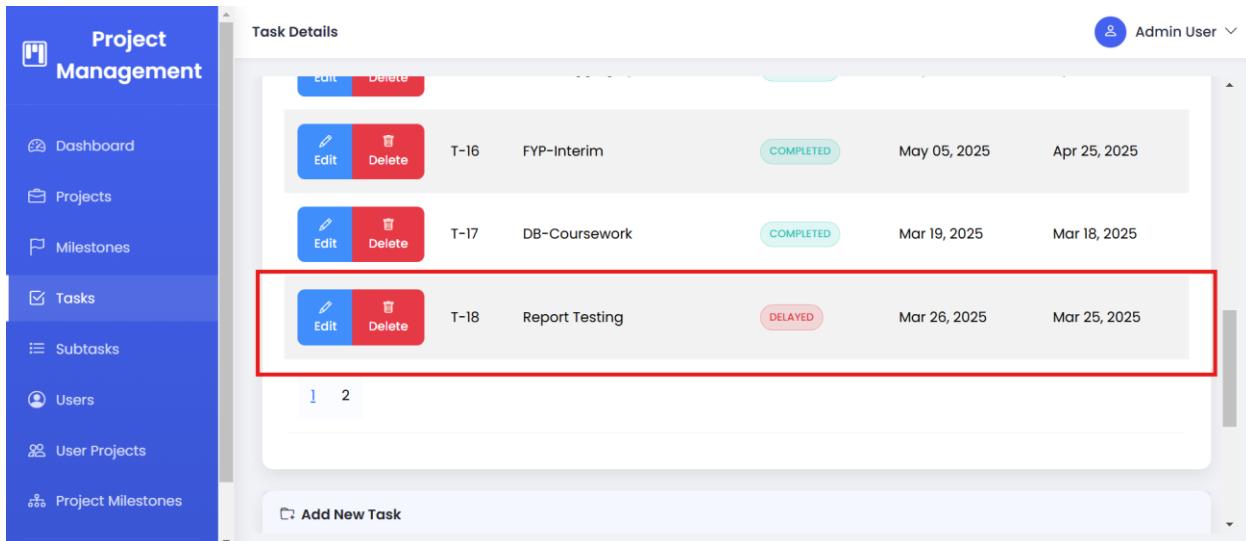


Figure 250 Status updated successful

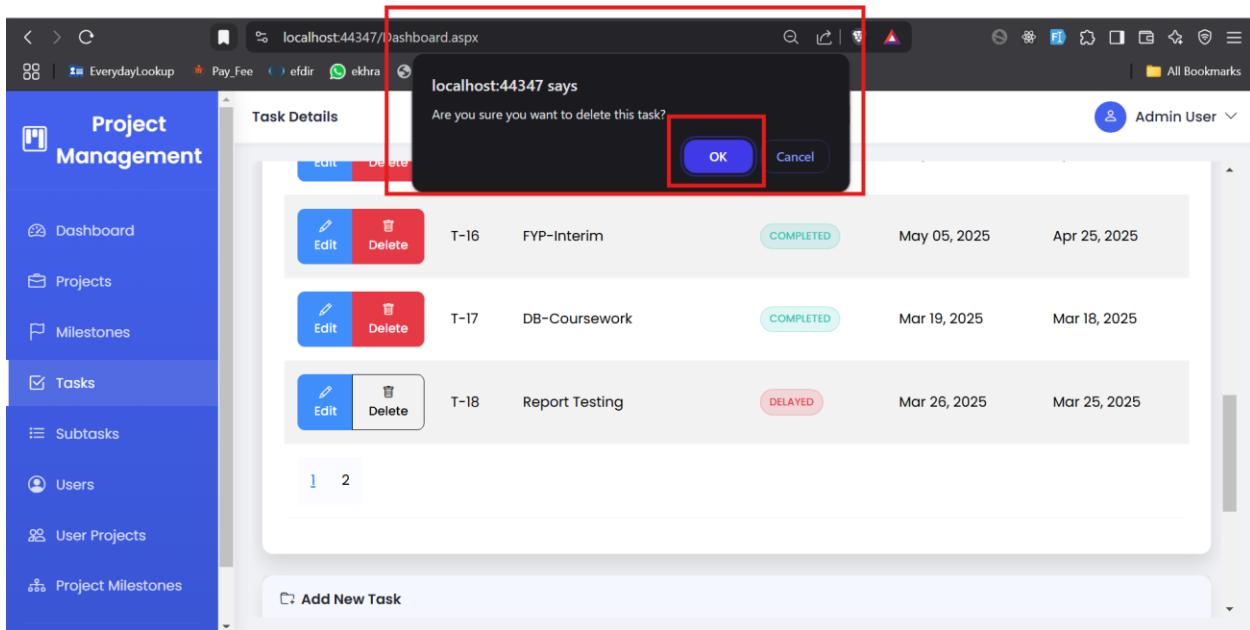


Figure 251 Pop up after delete button clicked

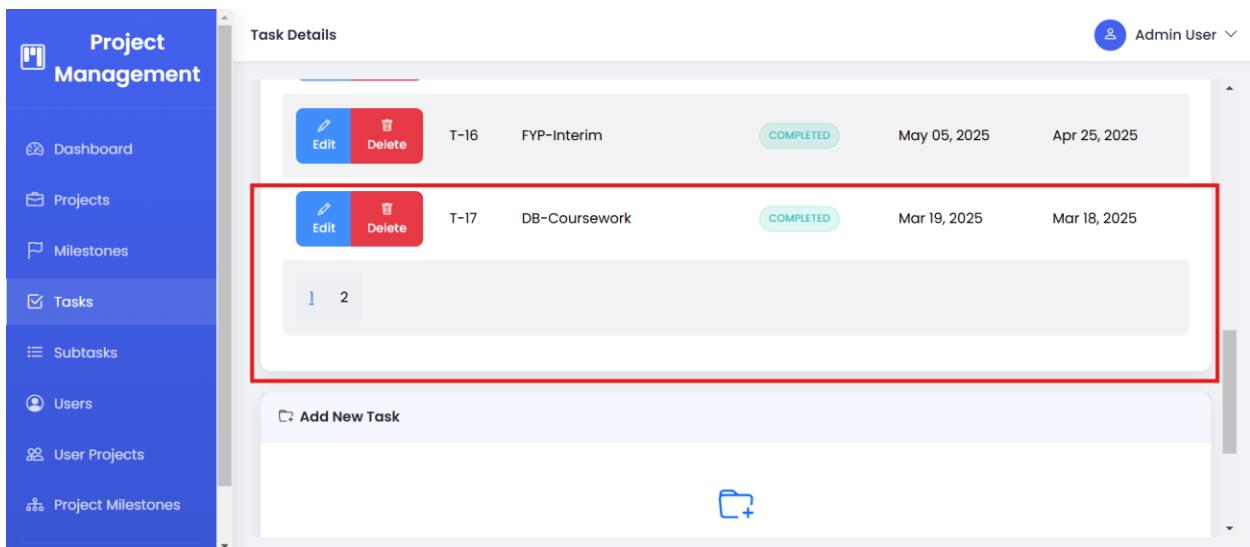


Figure 252 Task deleted successful

17.4. Test for CRUD for Sub-Task

Test Number	4
Objective	To test the create, read, update and delete of SubTask Details table
Action	<p>For table creation:</p> <ul style="list-style-type: none"> • Click Create New Subtask button • Fill in the details <p>SubtaskID: s-32</p> <p>SubtaskName: Report structure</p> <p>Description: Complete the report</p> <p>Due-Date: 25th March, 2025,</p> <p>Start-Date: 25th March, 2025.</p> <p>User: Anish</p> <p>Project: T-17-DB-Coursework</p> <p>Status: Delayed</p> <ul style="list-style-type: none"> • Click on Create Subtask <p>For update</p> <ul style="list-style-type: none"> • Click on edit button • Edit some values • Click on Update button <p>For delete</p> <ul style="list-style-type: none"> • Click on delete button • Click yes on the dialogue box

Expected Result	The CRUD operation should be executed successfully
Actual Result	The execution of the CRUD operation was successful
Conclusion	The test was successful.

Table 4 Subtask-Details CRUD Test Table

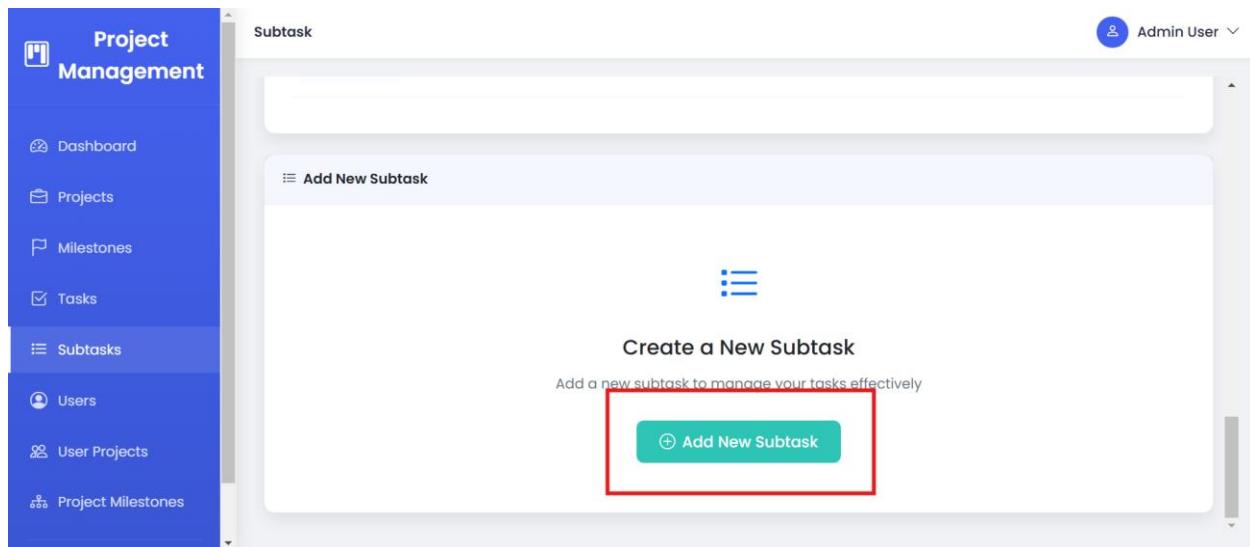


Figure 253 Create new subtask button

A screenshot of the same project management application. The left sidebar is identical to Figure 253. The main content area shows a detailed form for creating a new subtask. The form fields are: Subtask ID (# st-32), Name (Report Structure), Description (Complete the report), Due Date (03/25/2025), Start Date (03/25/2025), User (UI2 - Anish), Task (T-17 - DB-Coursework), and Status (Delivered). The entire form area is highlighted with a thick red box.

Figure 254 Form filled and details filled

Project Management

Subtask

Complete the report

Due Date: 03/25/2025 Start Date: 03/25/2025

User: UI2 - Anish Task: T-17 - DB-Coursework

Status: Delayed

Create Subtask

Figure 255 Create subtask button clicked

Subtask List

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
Edit Delete	st-32	Report Structure	Complete the report	DELAYED	Mar 25, 2025	Mar 25, 2025	UI2 - Anish	T-17 - DB-Coursework

New Subtask

Add New Subtask

Figure 256 Subtask created successfully

The screenshot shows a web-based project management application. On the left, a sidebar menu includes options like Dashboard, Projects, Milestones, Tasks, Subtasks (which is currently selected), Users, User Projects, and Project Milestones. The main content area is titled 'Subtask' and displays a 'Subtask List'. A table lists subtasks with columns for Actions, ID, Name, Description, Status, Due Date, Start Date, Assigned User, and Task. One row shows a subtask named 'Report Structure' with ID 32, due on Mar 25, 2025, assigned to UI2 - Anish, and linked to Task T-17 - DB-Coursework. The 'Edit' button in the Actions column for this row is highlighted with a red box. A green 'New Subtask' button is visible at the top right of the list area.

Figure 257 Edit button clicked

This screenshot shows the same project management application interface. The 'Subtask List' table now includes a 'Assigned User' column. In the row for the 'Report Structure' subtask, the 'Assigned User' field contains 'UI2 -' followed by a dropdown arrow. A dropdown menu is open, listing various user names such as Binita, Cal, Dikshya, Drishya, Kushal, Lekhnath, Neha, Nidhika, Nishan Chettri, Ojash, PewPew1, and Riyaz. The option 'UI1 - Nishan Chettri' is highlighted with a blue selection bar.

Figure 258 Drop down for user change

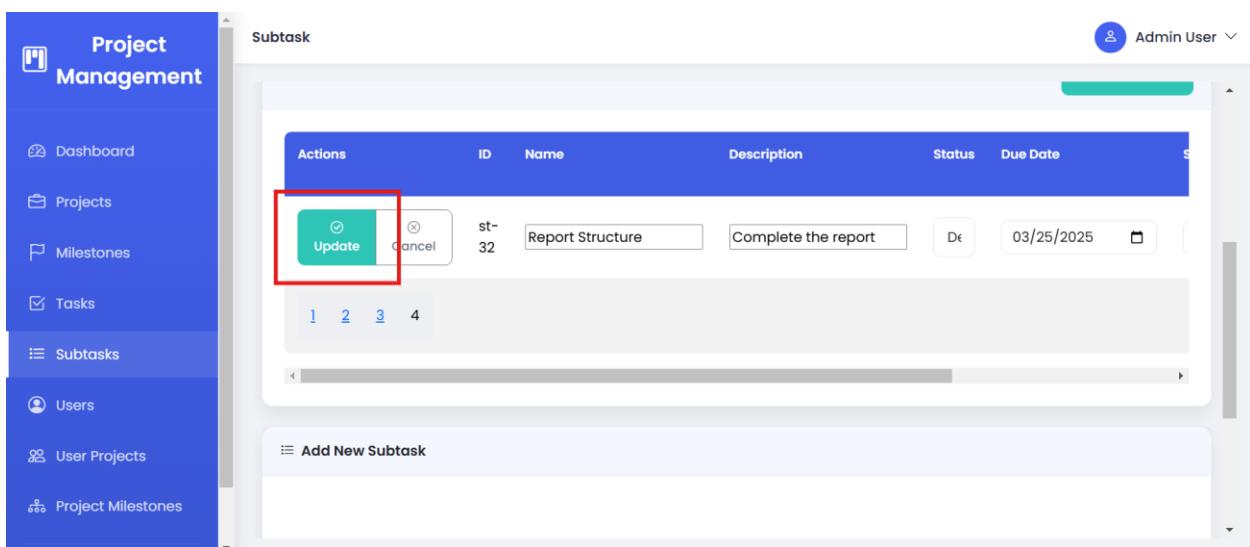
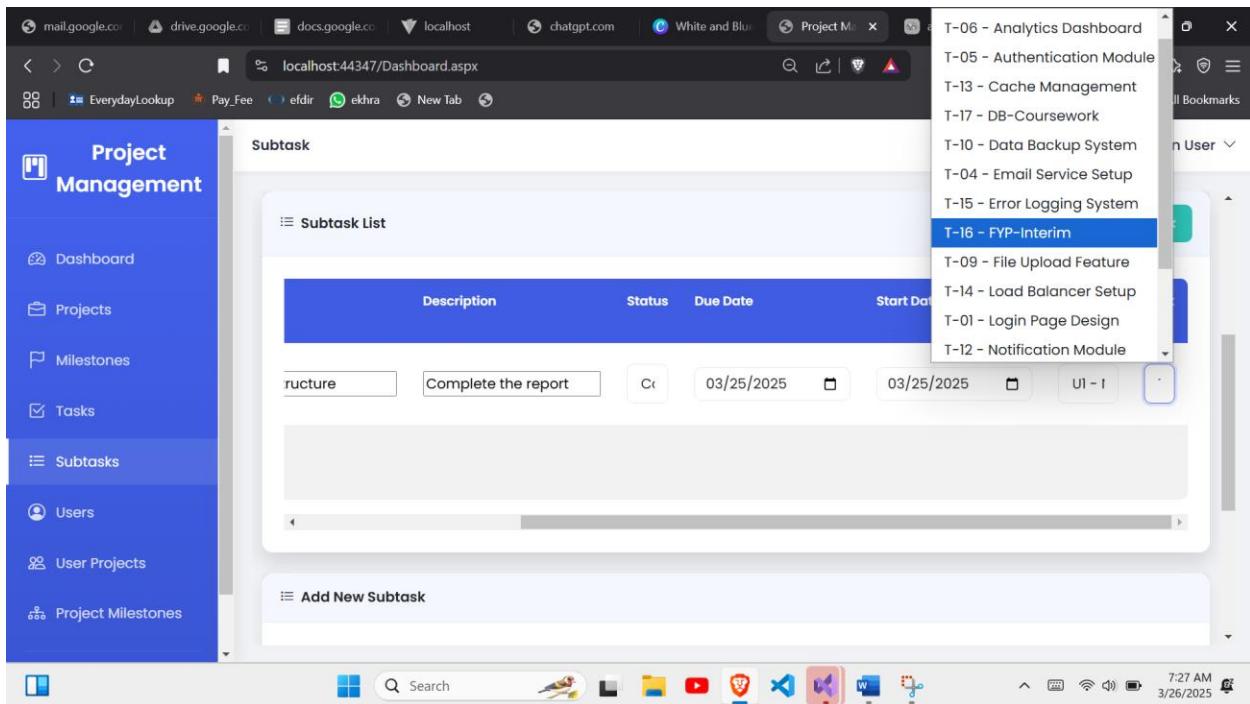


Figure 259 User changed and update button clicked

The screenshot shows the 'Subtask' page of a project management application. The sidebar on the left includes links for Dashboard, Projects, Milestones, Tasks, Subtasks (selected), Users, User Projects, and Project Milestones. The main area displays a summary of subtasks: 31 Total Subtasks, 5 Completed, 4 In Progress, and 0 Pending. Below this is a 'Subtask List' table with the following data:

Actions	ID	Name	Description	Status	Due Date	Start Date	Assigned User	Task
<button>Edit</button> <button>Delete</button>	st-32	Report Structure	Complete the report	DELAYED	Mar 25, 2025	Mar 25, 2025	UI - Nishan Chettri	T-16 - FYP-Interim

Pagination at the bottom shows pages 1, 2, 3, 4.

Figure 260 User and Task updated

This screenshot is identical to Figure 260, showing the 'Subtask' page with the same summary and table structure. The difference is that the 'Delete' button in the 'Actions' column of the first table row is highlighted with a red box.

Figure 261 Delete button clicked

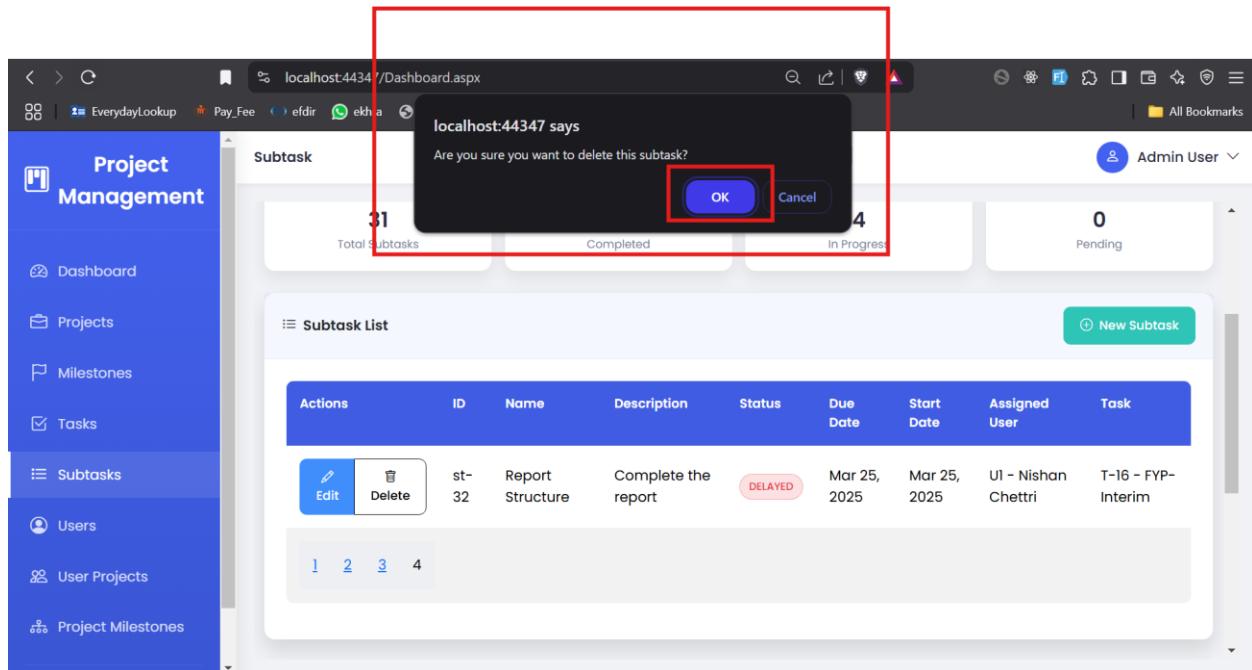


Figure 262 Click ok after pop up

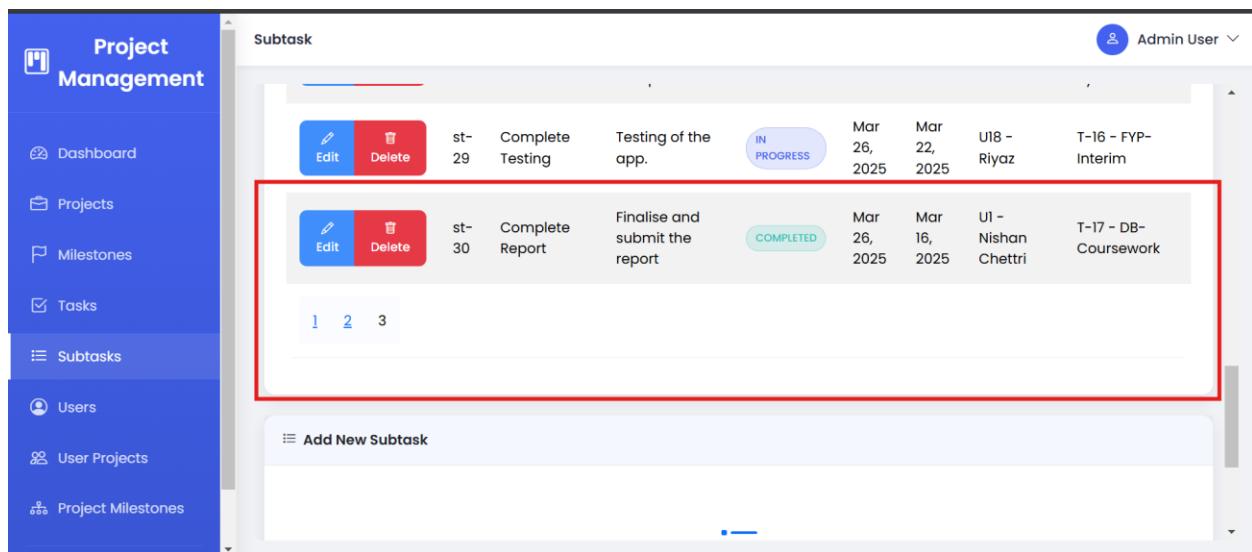


Figure 263 Subtask deleted successfully

17.5. Test for CRUD for Milestone

Test Number	5
Objective	To test the create, read, update and delete of Milestone table
Action	<p>For table creation:</p> <ul style="list-style-type: none"> • Click Add New Milestone button • Fill in the details <p>Milestone Name: Db Submission</p> <p>Milestone ID: M-31</p> <p>Start-Date: Jan 1st, 2025.</p> <p>Due-Date: March 26th, 2025.</p> <p>Status: Complete</p> <p>Project: Db Coursework</p> <ul style="list-style-type: none"> • Click on Create Milestone <p>For update</p> <ul style="list-style-type: none"> • Click on edit button • Edit some values • Click on Update button <p>For delete</p> <ul style="list-style-type: none"> • Click on delete button • Click yes on the dialogue box
Expected Result	The CRUD operation should be executed successfully

Actual Result	The execution of the CRUD operation was successful
Conclusion	The test was successful.

Table 5 Milestone CRUD Test Table

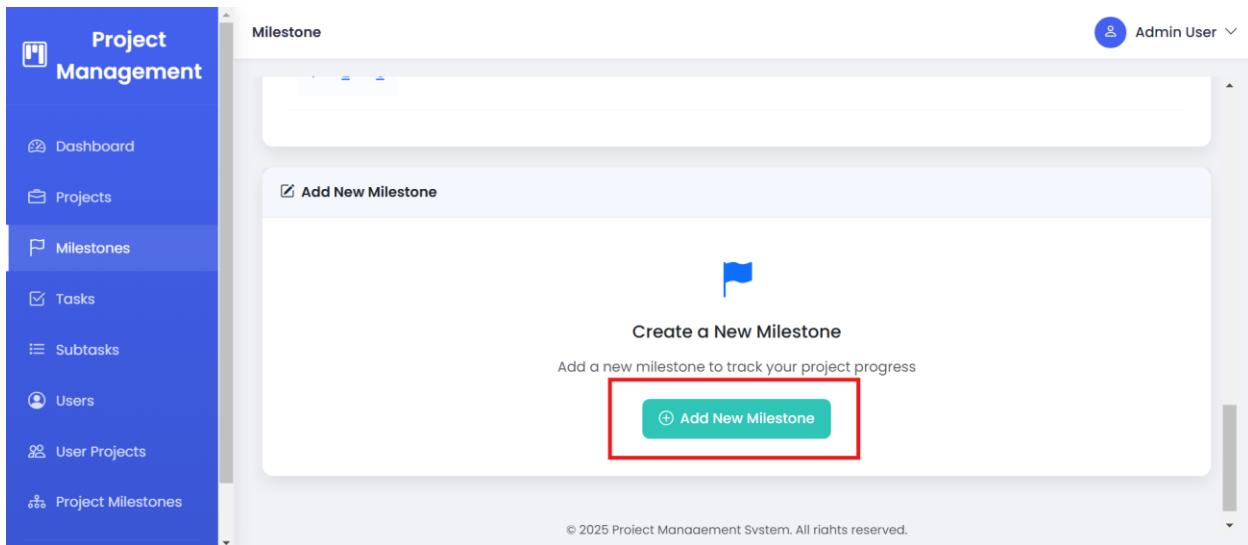


Figure 264 Create new milestone button

This screenshot shows the 'Create Milestone' form filled out. The sidebar on the left is identical to Figure 264. The main form has fields for 'Milestone Name' (Db Submission), 'Milestone ID' (M-31), 'Start Date' (01/01/2025), 'Due Date' (03/26/2025), 'Status' (Complete), and 'Project' (Db Coursework). The 'Create Milestone' button at the bottom left of the form is highlighted with a red box.

Figure 265 Form filled and create milestone

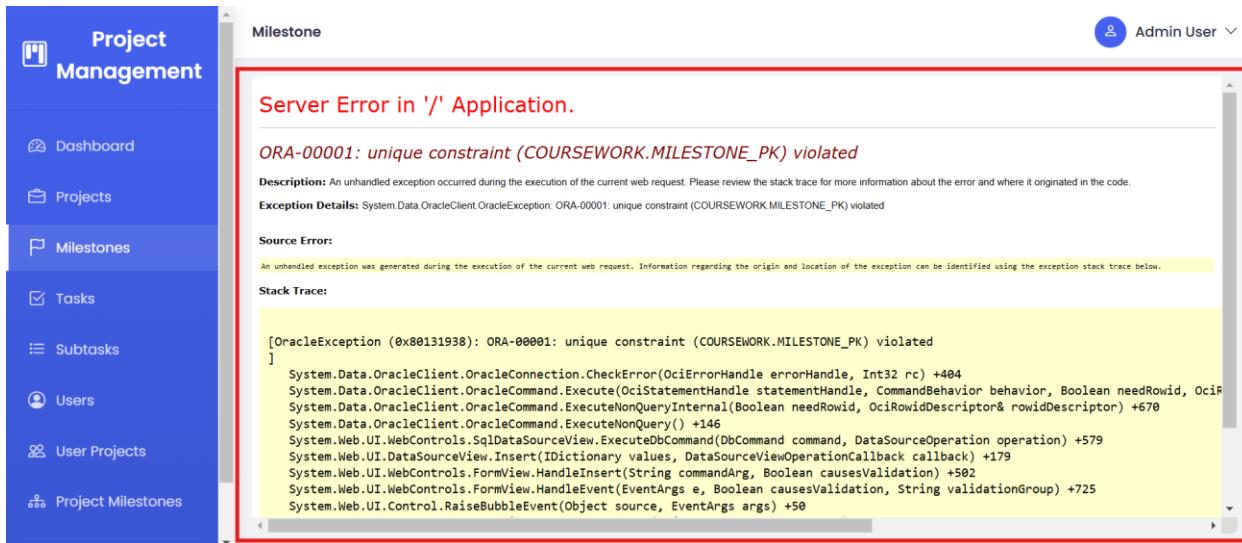


Figure 266 Unique key error

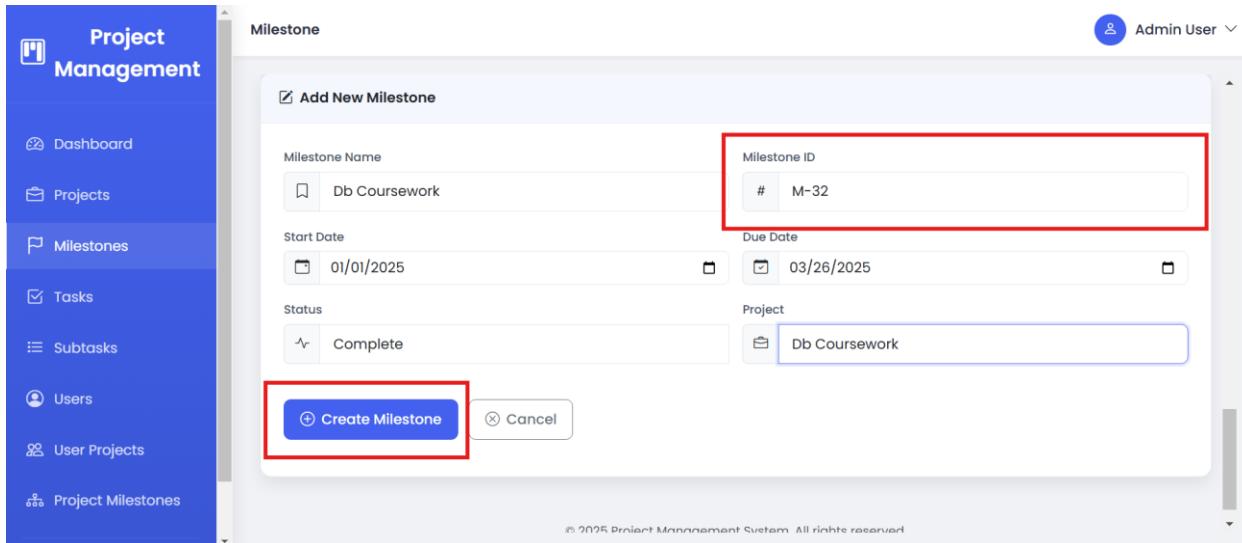


Figure 267 Primary key unique value added

The screenshot shows a project management application interface. On the left, a sidebar menu includes options like Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The main area is titled 'Milestone' and displays a 'Milestone List'. The list table has columns for Actions, ID, Name, Status, Start Date, Due Date, and Project. One row is shown: M-32, Db Coursework, COMPLETE, Jan 01, 2025, Mar 26, 2025, P-16 - Db Coursework. Below the table are navigation links 1, 2, 3, 4. At the bottom, there's a section for adding new milestones.

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-32	Db Coursework	COMPLETE	Jan 01, 2025	Mar 26, 2025	P-16 - Db Coursework

Figure 268 Milestone created

This screenshot is similar to Figure 268, showing the 'Milestone List' screen. The 'Edit' button for the first milestone row is now explicitly highlighted with a red box.

Actions	ID	Name	Status	Start Date	Due Date	Project
<button>Edit</button> <button>Delete</button>	M-32	Db Coursework	COMPLETE	Jan 01, 2025	Mar 26, 2025	P-16 - Db Coursework

Figure 269 edit button clicked

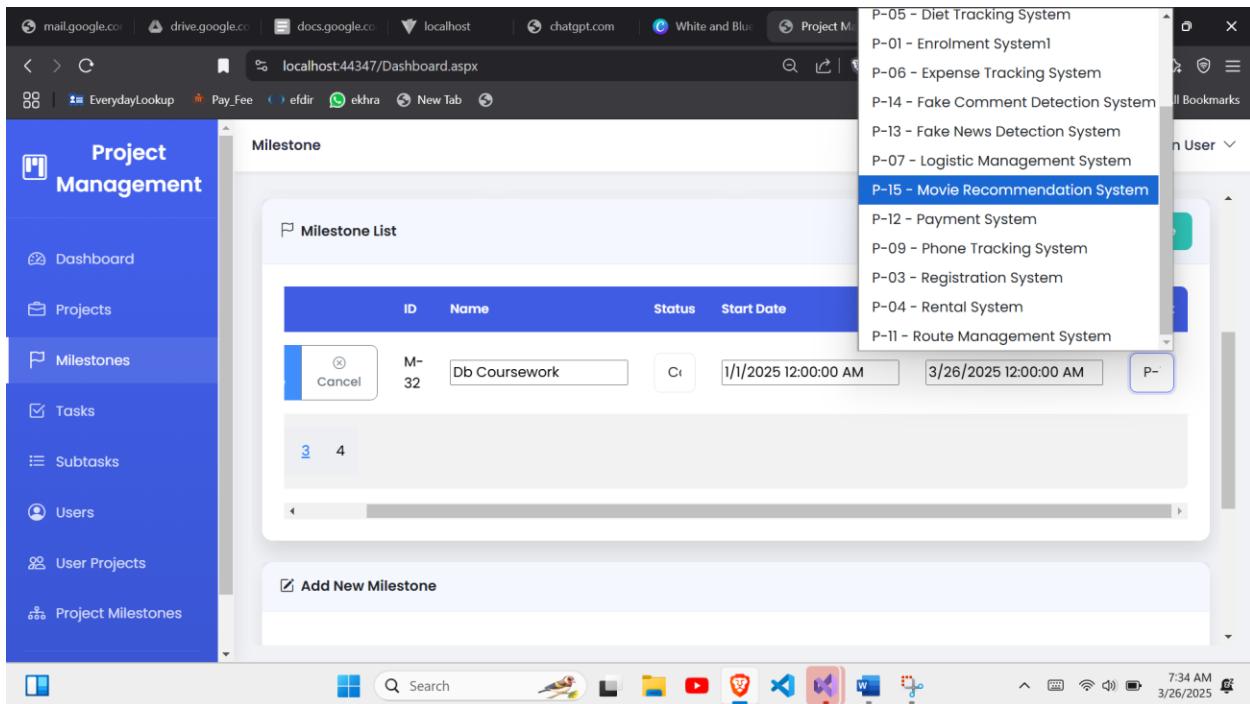


Figure 270 Project Dropdown

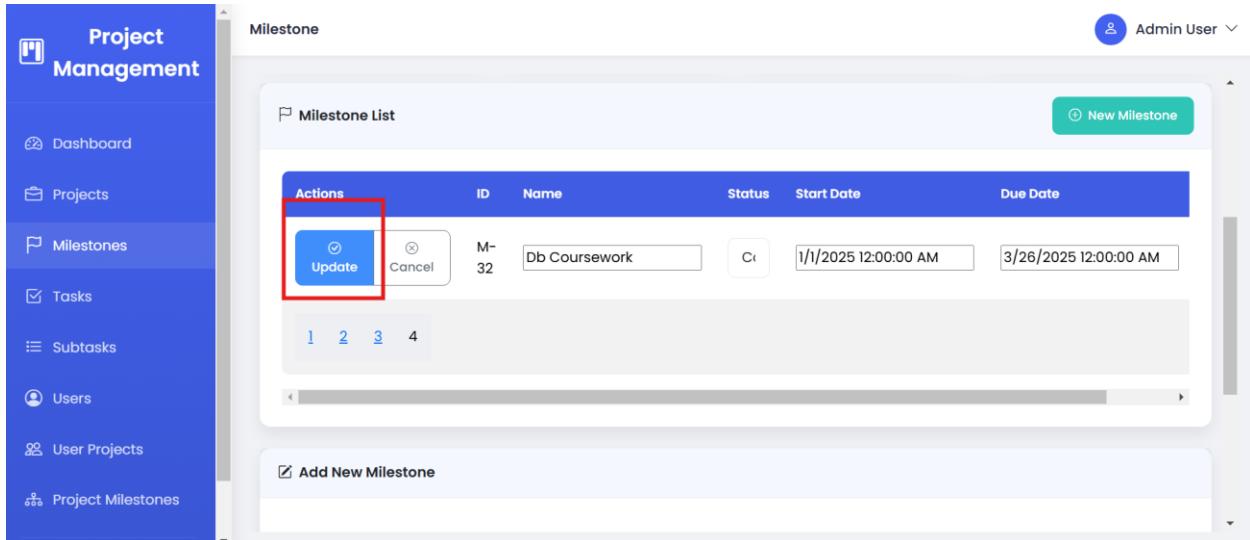


Figure 271 Click Update button

Actions	ID	Name	Status	Start Date	Due Date	Project
Edit	M-32	Db Coursework	COMPLETE	Jan 01, 2025	Mar 26, 2025	P-15 - Movie Recommendation System

Figure 272 Project Updated

Actions	ID	Name	Status	Start Date	Due Date	Project
Edit	M-32	Db Coursework	COMPLETE	Jan 01, 2025	Mar 26, 2025	P-15 - Movie Recommendation System

Figure 273 Delete button

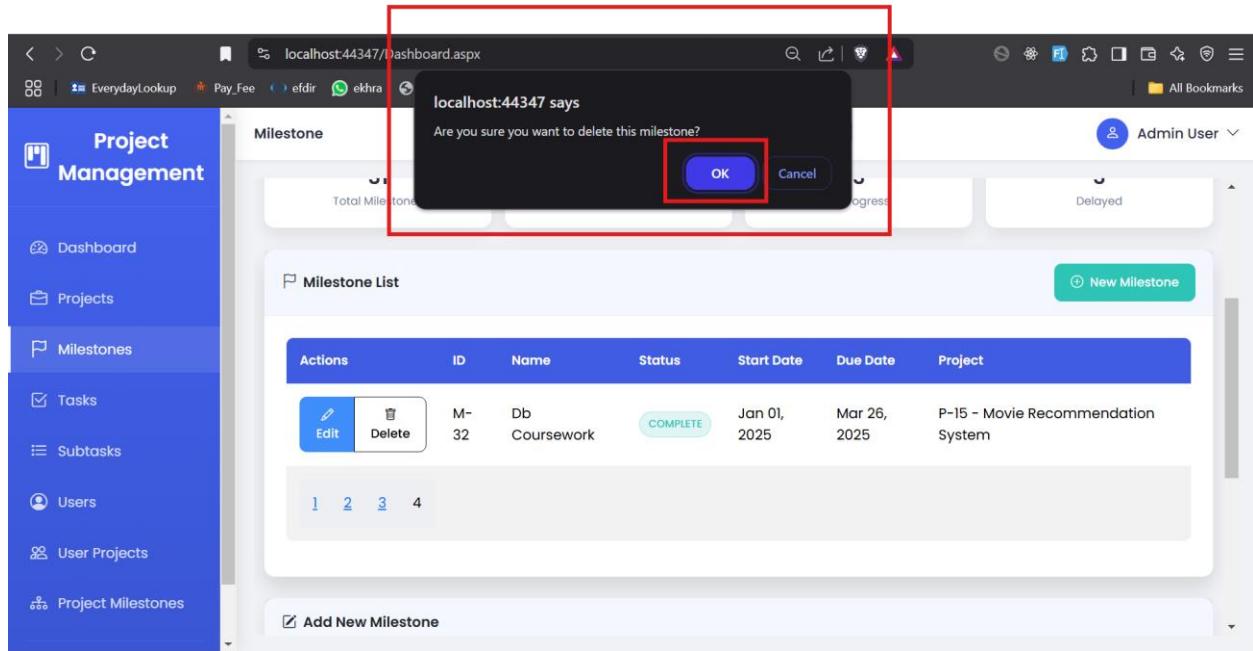


Figure 274 OK clicked on pop up

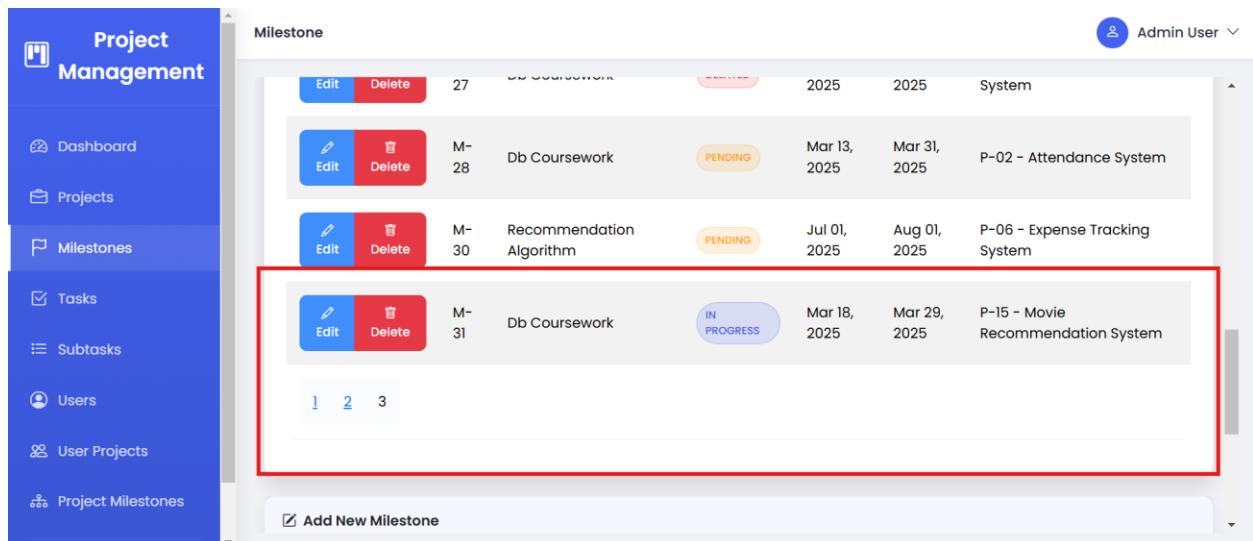


Figure 275 Milestone deleted successfully

17.6. Test for User-Project

Test Number	6
Objective	To test the functionality of the User Project Details Page

Action	<ul style="list-style-type: none"> Select a certain user (e.g., Samyam) from the drop down menu. The dashboard will show the project they are associated with
Expected Result	The dashboard should show the project the selected user is associated with.
Actual Result	The dashboard showed the project the selected user is associated with.
Conclusion	The test was successful.

Table 6 User-Project Test Table

The screenshot shows a left sidebar with a blue header 'Project Management' and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects (which is currently selected), and Project Milestones. The main area has a title 'User Project Details' and a top right corner showing 'Admin User'. Below this is a 'Select User' dropdown menu with a red box highlighting it. The dropdown contains the text 'Choose a user to view their project details:' followed by 'Nishan Chettri'. Below the dropdown is a 'Project Details' section with a table:

Username	Email	Contact	Project Name	Start Date	Due Date	Status
Nishan Chettri	nishanl@gmail.com	9817665544	Enrolment System1	Sep 18, 2024	Dec 09, 2024	Planning
Nishan	nishanl@gmail.com	9817665544	Movie Recommendation	Oct 01,	Oct 01,	Ongoing

Figure 276 User dropdown

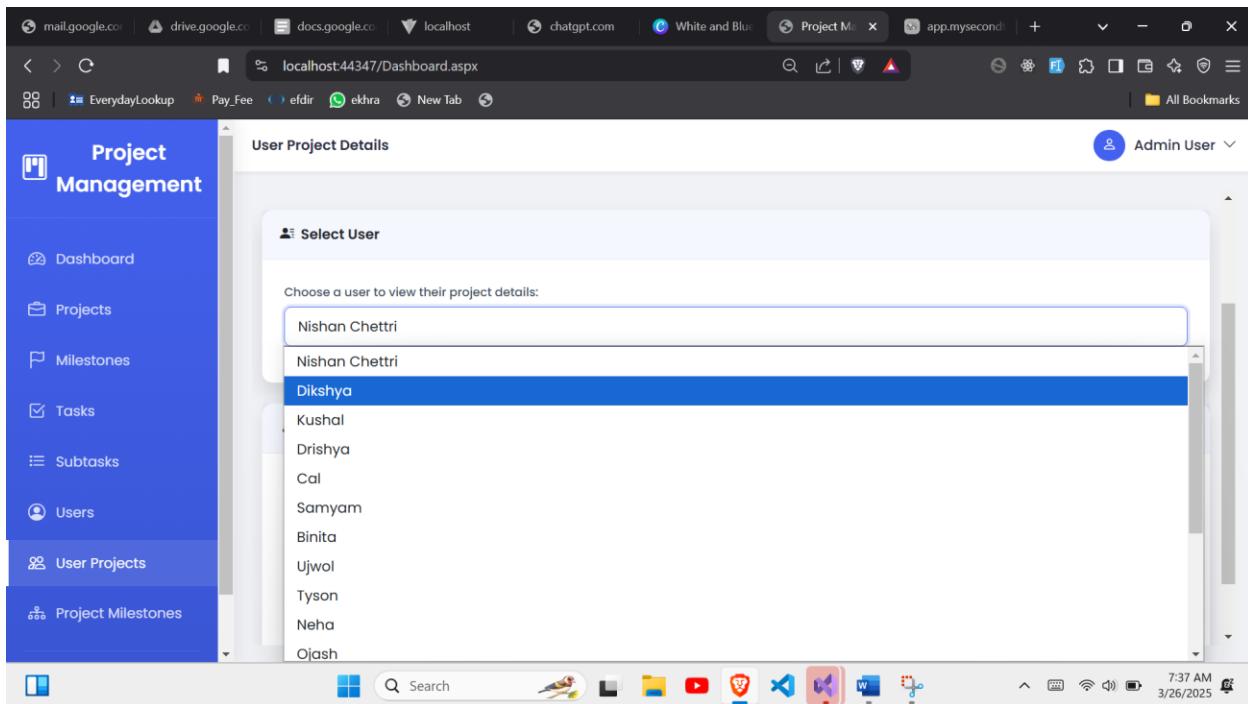


Figure 277 Choosing another User

Username	Email	Contact	Project Name	Start Date	Due Date	Status
Dikshya	dikshya55@gmail.com	9847245567	Attendance System	Jan 10, 2024	Mar 21, 2025	Completed
Dikshya	dikshya55@gmail.com	9847245567	Enrolment System1	Sep 18, 2024	Dec 09, 2024	Planning

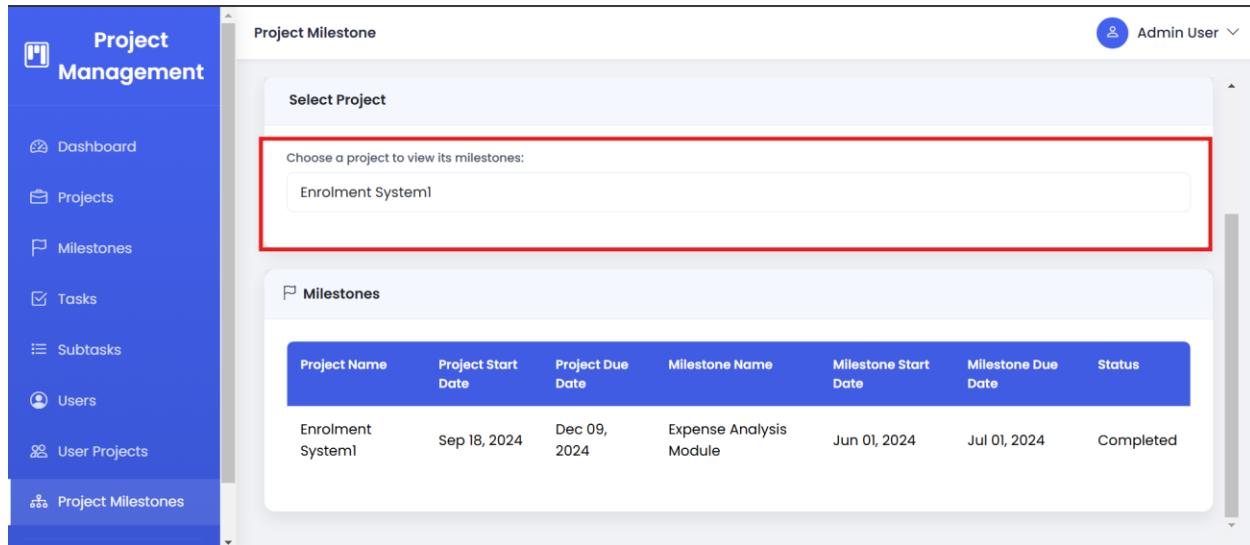
Figure 278 User and their project displayed

17.7. Test for Project-Milestone

Test Number	7
Objective	To show the milestone of each project.

Action	<ul style="list-style-type: none"> Select a certain project from the dropdown menu, e.g., Rental System.
Expected Result	The dashboard should show the milestone of the project, its name due date etc.
Actual Result	The dashboard showed the milestone of the project
Conclusion	The test was successful.

Table 7 Project Milestone Test Table



The screenshot shows a left sidebar with a blue header 'Project Management' and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The 'Project Milestones' item is highlighted with a blue background. The main content area has a title 'Project Milestone' and a sub-section 'Select Project' with a dropdown menu. The dropdown menu has a red border around it and contains the text 'Choose a project to view its milestones:' followed by a search input field containing 'Enrolment System'. Below this, there is another section titled 'Milestones' with a table showing project details:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Enrolment System	Sep 18, 2024	Dec 09, 2024	Expense Analysis Module	Jun 01, 2024	Jul 01, 2024	Completed

Figure 279 Project Dropdown

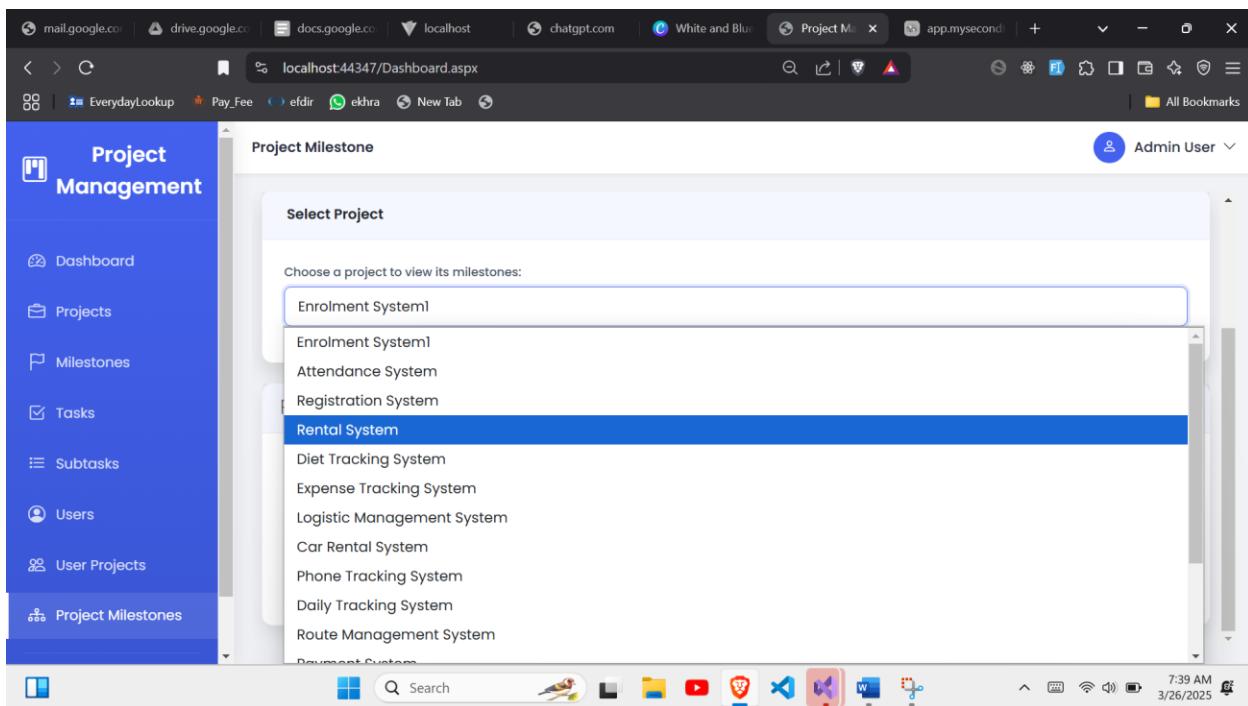


Figure 280 Choosing another Project

The screenshot shows the same web application interface after selecting 'Rental System' from the dropdown. The 'Milestones' section is highlighted with a red border. It displays a table with the following data:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design1	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed

Figure 281 Project and its milestone displayed

The screenshot shows a web-based project management application. On the left, there's a sidebar with a blue header 'Project Management' and a list of navigation items: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, and Project Milestones. The 'Project Milestones' item is currently selected, indicated by a blue background. The main content area is titled 'Project Milestone' and displays a table with the following data:

Project Name	Project Start Date	Project Due Date	Milestone Name	Milestone Start Date	Milestone Due Date	Status
Rental System	Oct 10, 2024	Dec 25, 2024	Prototype Design1	Sep 15, 2024	Oct 01, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Final Deployment	Nov 20, 2024	Dec 05, 2024	Delayed
Rental System	Oct 10, 2024	Dec 25, 2024	Rental Module Design	Oct 01, 2024	Oct 20, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Payment Gateway Integration	Dec 01, 2024	Dec 10, 2024	Pending
Rental System	Oct 10, 2024	Dec 25, 2024	Db Coursework	Mar 18, 2025	Mar 26, 2025	In Progress

Figure 282 Project and its Milestone II

17.8. Test for CRUD for Top Three Performers

Test Number	8
Objective	To show the top three performers of a certain project.
Action	From the drop-down menu choose a project. E.g Enrollment System.
Expected Result	The dashboard should show the top three performers of that project and the task they completed.
Actual Result	The dashboard showed the Top Three performers of the project and the task that they have completed.
Conclusion	The test was successful.

Table 8 Top Three Performers Test Table

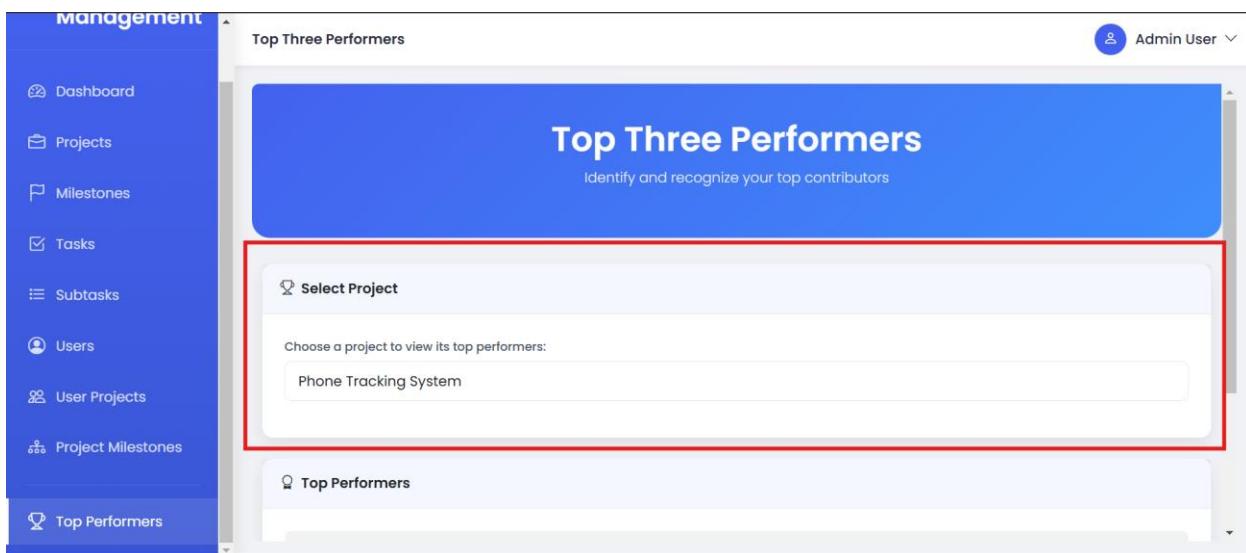


Figure 283 Choose a project

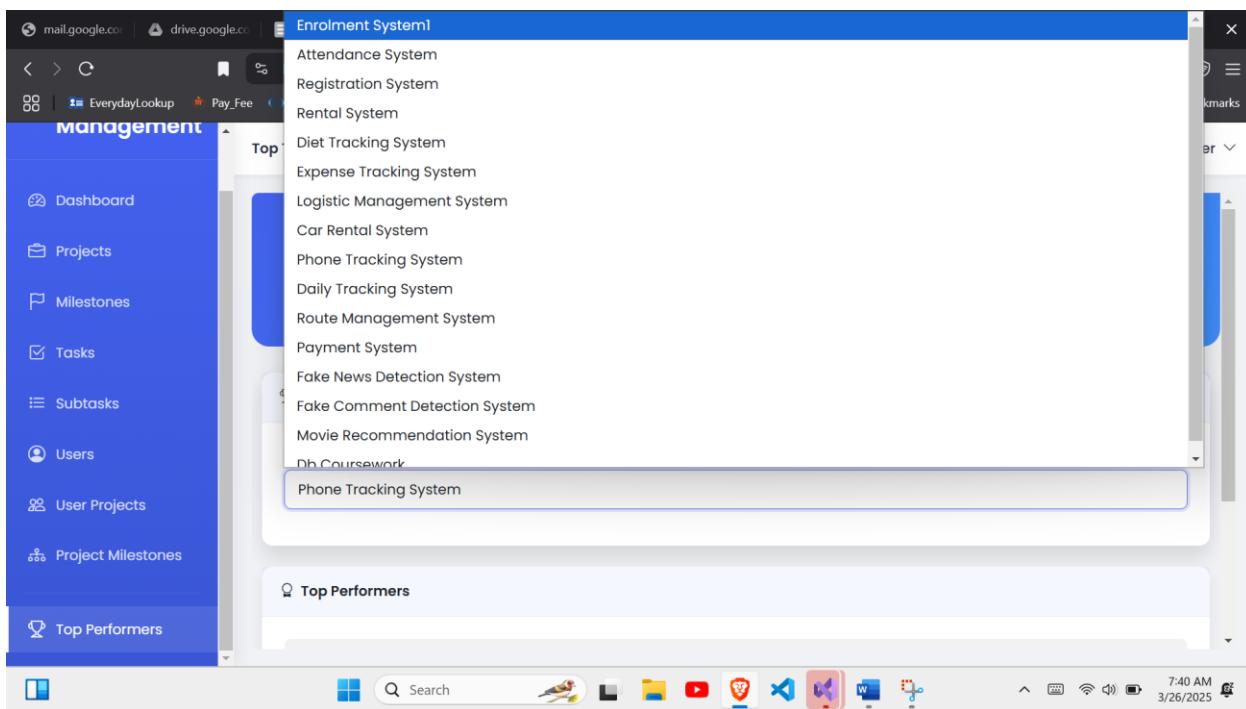


Figure 284 Selected a project

The screenshot shows a web-based management application interface. On the left, a vertical sidebar menu titled 'Management' lists various options: Dashboard, Projects, Milestones, Tasks, Subtasks, Users, User Projects, Project Milestones, and Top Performers. The 'Top Performers' option is highlighted with a blue background. The main content area has a header 'Top Three Performers' and a sub-header 'Select Project'. A search bar contains the text 'Enrolment System1'. Below this, a table titled 'Top Performers' displays three rows of data:

User Name	Project Name	Completed Tasks
Kushal	Enrolment System1	3
Dikshya	Enrolment System1	1
Nishan Chettri	Enrolment System1	1

Figure 285 Projects top three performers shown

18. Future Discussions

The various tools used during the coursework are listed below:

- **SQL Plus**

SQLPlus is an Oracle Corporation utility command-line interface that serves as a terminal-based front end to Oracle Database.

It allows database administrators and developers to execute SQL statements, PL/SQL blocks, and some SQLPlus statements directly against an Oracle database.

SQL*Plus features include the ability to execute scripts, format query results, and perform database administration using a text-based interface ([Oracle, 2025](#)).

- **Oracle SQL Developer**

Oracle SQL Developer is an open-source IDE developed by Oracle Corporation to assist in the administration and development of Oracle databases. Oracle SQL Developer provides a graphical environment for database administration, development of SQL/PL/SQL code, executing queries, and analyzing database objects. The core features include query development, database exploration, inspection of code, and data import/exporting as compared to the command-line interfaces like SQL*Plus, and this makes it convenient to utilize ([Oracle, 2025](#)).

- **Oracle SQL Developer Data-modeler**

Oracle SQL Developer Data Modeler is a data modeling and database design tool which enables database architects and developers to create, browse, and edit logical, relational, physical, and multidimensional models.

It supports forward and reverse engineering, allowing users to design database structures visually and then generate the corresponding SQL scripts, or to import existing

database structures for visualization and modification. The tool supports entity-relationship diagrams, transformations between different model types, and version control of design artifacts ([Oracle, 2025](#)).

- **Visual Studio**

Visual Studio is an integrated development environment (IDE) developed by Microsoft for building applications across multiple platforms. It supports various programming languages including C#, C++, Visual Basic, JavaScript, Python, and more.

Visual Studio provides tools for code editing, debugging, testing, version control integration, and deployment. The environment includes features such as IntelliSense (code completion), code refactoring, a forms designer for building graphical user interfaces, and extensive extension capabilities.

It's available in different editions ranging from the free Community edition to professional and enterprise versions with advanced capabilities ([Microsoft, 2025](#)).

- **Microsoft Word**

Microsoft Word is a word processing application developed by Microsoft Corporation as part of the Microsoft Office suite. It enables users to create, edit, format, and share text documents ranging from simple letters to complex reports with embedded graphics, tables, and other elements.

Word features include document templates, spell checking, grammar checking, collaboration tools, style formatting, and integration with other Microsoft Office applications. It is widely used in business, academic, and personal environments for document creation ([Microsoft, 2025](#)).

19. Conclusion

The Project Management System database provides the practical application of database normalization principles to create an efficient, scalable, and maintainable system. The normalized schema successfully addresses the complex relationships between various project management entities while eliminating redundancy and ensuring data integrity. The implementation includes ten interconnected tables that effectively model the project management domain, from user assignments to task tracking and milestone management.

The extensive testing conducted on the system demonstrates the robustness of the CRUD operations across all entities. Each component, from user management to milestone tracking, functions correctly and maintains referential integrity. The complex forms developed for user-project associations, project milestone tracking, and performance analysis demonstrate the practical utility of the normalized structure. The SQL queries implemented support sophisticated reporting capabilities that would be difficult to achieve with a less structured approach.

The database design balances normalization principles with practical implementation considerations, resulting in a system that not only meets theoretical database design standards but also serves real-world project management needs. The comprehensive documentation, including the detailed entity relationship diagram, data dictionary, and user manual, ensures that future maintenance and enhancements can be undertaken efficiently. This project management database provides a solid foundation for organizational workflow management, resource allocation, and project tracking.

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