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**Student Name: Divya Shrestha**

**London Met ID: 22085527**

**College ID: NP01CPS230022**

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## 1 Introduction

LS Corporation experiences major project management issues due to splintered systems that produce subpar communication and insufficient monitoring of project status and operational inefficiencies. A web-based central project management system will be the focus of this coursework because it will solve the current problems. The solution provides a project data consolidation feature together with task management streamlining and team-wide data visibility. Both Oracle SQL Developer Data Modeler and ASP.NET form the foundation of the designed system which creates defined data connections among users and projects and their respective tasks and subtasks and milestones and resources. The combined approach leads to more effective project management because it enables LS Corporation to obtain real-time data updates and enhance coordination through better communication flow.

### 1.1 Aims

- The development of a centralized project management solution will provide LS Corporation with a scalable framework to resolve organizational inefficiencies while promoting team-wide cooperation.
- The development of a strong relational database system with workflow models which maintains data consistency and provides user access.
- We will develop a user-friendly web platform that combines advanced features to track projects effectively while allowing smooth user engagement.

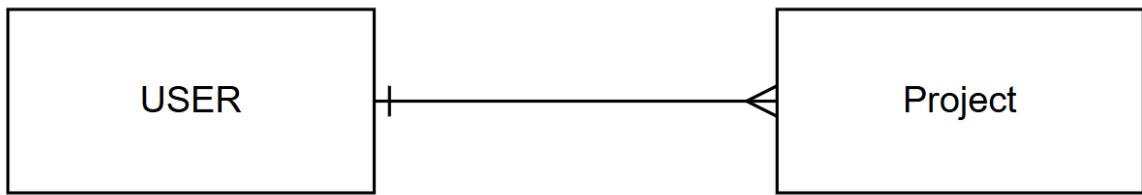
## 1.2 Objectives

- Extract significant entities and attributes along with their essential relationships from the case study to define what systems should handle.
- Normalize the database model using techniques up to 3NF to reduce duplications and create structures with proper primary/foreign keys definitions as well as dependencies and constraints.
- The design process and cardinality information should be included when implementing the normalized schema model using Oracle SQL Developer Data Modeler.
- To develop and create DDL scripts to build database tables and load test data while testing the system's capacity through SQL query execution.
- To handle CRUD features for user management alongside interfaces for controlling projects and tasks alongside subtasks and milestones that also support dynamic display of user-project relations and project milestone overview while showing leaderboards per project.
- Make graphical homepage equipped with navigational menus to reach all system features easily.
- Test of CRUD operations and complex queries and error handling will be confirmed using screenshots in the execution of test cases.
- Create manual for users should include detailed instructions paired with pictures and specific guidance to fix potential issues.

## 2 Textual Analysis

Textual Analysis represents a qualitative research methodology which allows investigators to analyze written materials and verbal or pictorial texts to dissect their meaning patterns alongside contextual elements. This approach is widely used in disciplines such as literature, media studies, cultural studies, and sociology to explore how texts convey cultural, social, or political messages (McKee, 2001).

### 2.1 User and Project



*Figure 1: Textual Analysis User and Project*

The relationship illustrates the connection between **Users** and **Projects**. The figure indicates that a single user can be associated with multiple projects, establishing a **one-to-many** relationship, which shows one user can participate in several projects simultaneously, each project is managed or worked on by multiple users.

## 2.2 User and Task

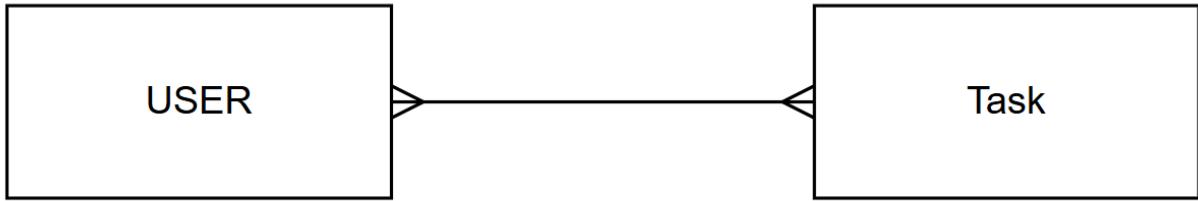


Figure 2: Textual Analysis: User and Task

The relationship illustrates the connection between **Users** and **Task**. The figure indicates that a multiple user can be assigned to multiple tasks, creating a **many-to-many relationship**, which shows while several users can handle several tasks, several tasks are assigned to several users at a time.

## 2.3 Task and Sub-Task

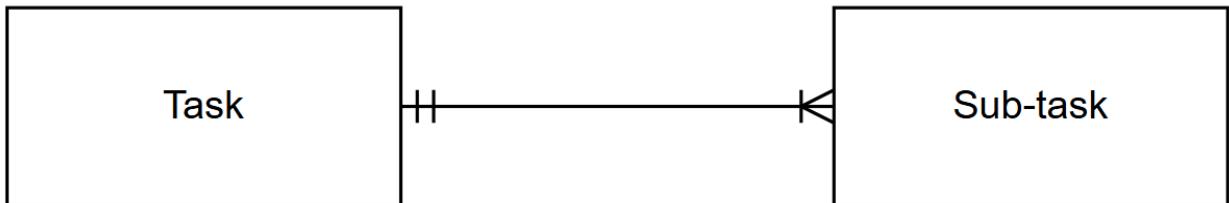


Figure 3: Textual Analysis Task and Sub-Task

The relationship illustrates the connection between **Task** and **Sub-Tasks**. The figure indicates that a single Task has multiple sub-tasks, establishing a **one-to-many relationship**, which shows one Task has several sub-tasks simultaneously, many sub-tasks form a task.

## 2.4 Task and Resources

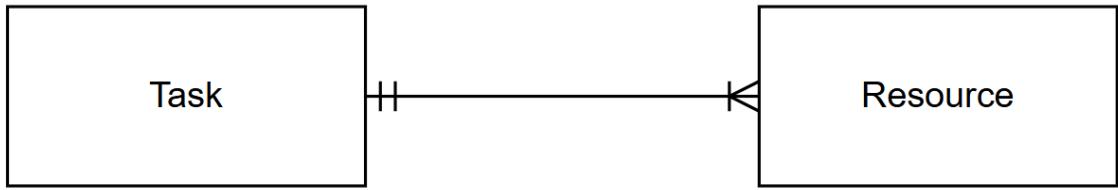


Figure 4: Textual Analysis Task and Resources

The relationship between **Tasks** and **Resources** is represented by a **one-to-many relationship**. This means that a single task can require multiple resources to be completed

## 2.5 Task and Comments

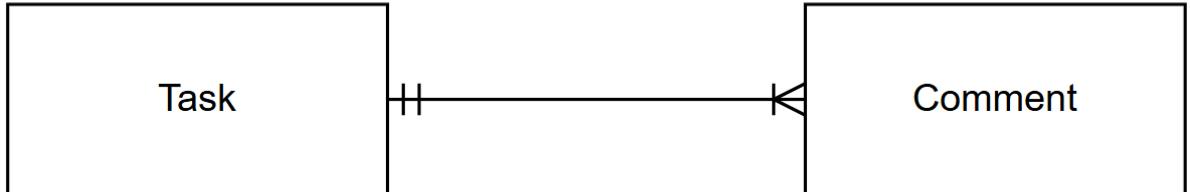
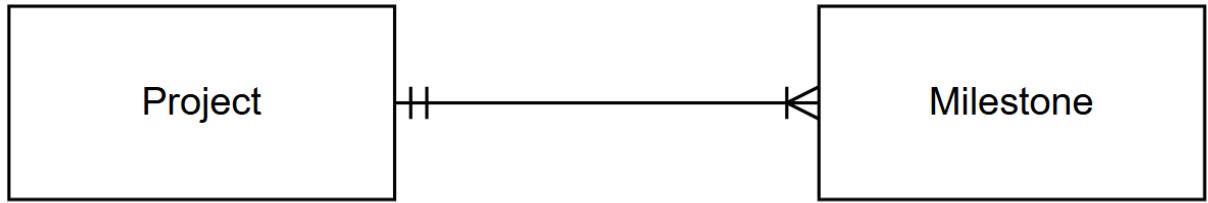


Figure 5: Textual Analysis Task and Comments

The relationship between **Tasks** and **Comments** is a **one-to-many relationship**. This means that a single task can have multiple comments associated with it.

## 2.6 Project and Milestone



*Figure 6: Textual Analysis Project and Milestone*

The relationship between **Projects** and **Milestones** is a **one-to-many relationship**. This means that a single project can have multiple milestones associated with it. Each milestone represents a significant stage or achievement within the project.

### 3 Initial Entity Relationship Diagram

The Entity-Relationship Diagram (ERD) illustrates how the project management system fundamental structure operates. The system puts projects at its core through an implementation of multiple milestones tracking functions. A project management system enables users to work across multiple projects at once and contains Tasks which can be split into Subtasks for extensive control. Task-related comments enable user communication and users can assign project resources to tasks according to their requirements. The outlined model delivers an effective structure for project management efficiency.

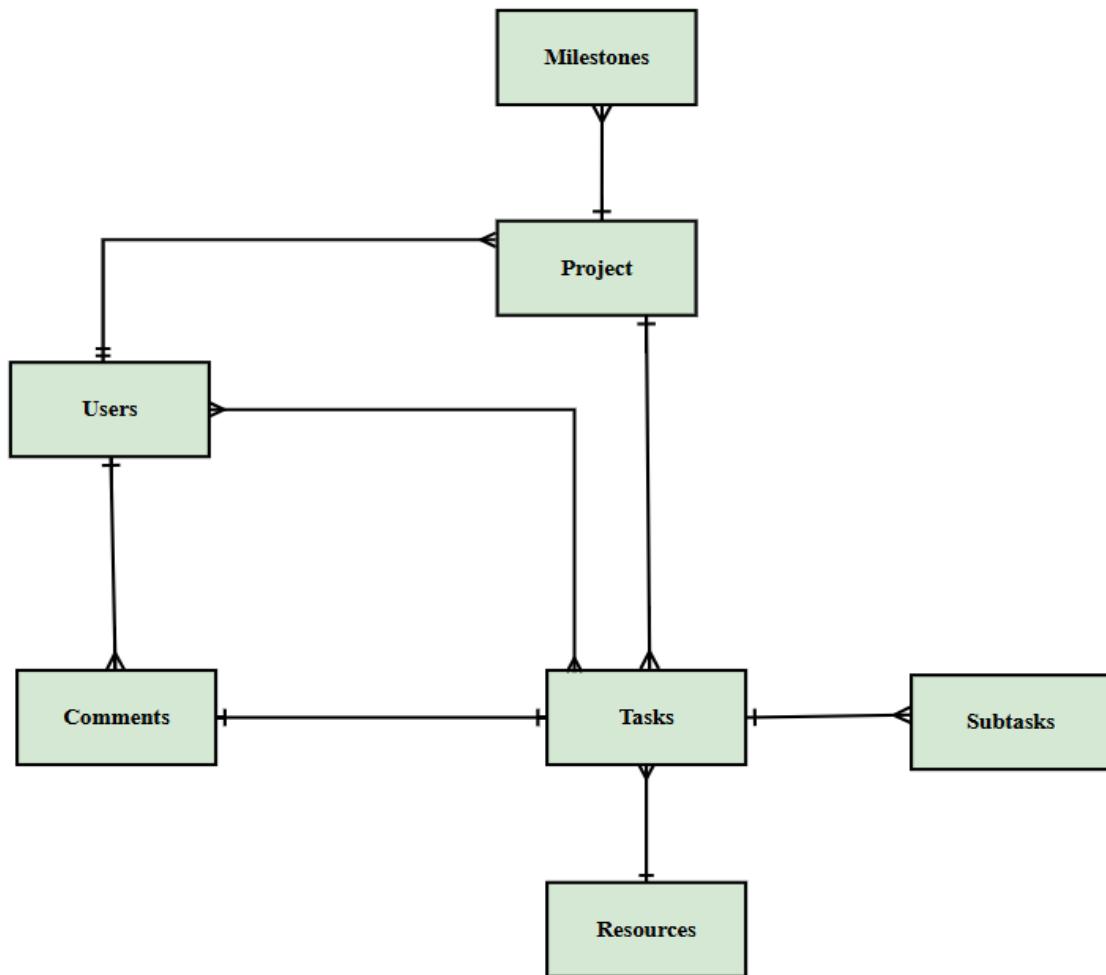


Figure 7: Initial ERD

## 4 Normalization

Normalization is a crucial process in database design that ensures data is logically stored to reduce redundancy and enhance data integrity (Ramez Elmasri, 2024). Normalization is a process of decomposing large tables into smaller, related tables with a view of removing data redundancy which could be a concern while inserting, deleting or updating records in a database. This practice not only corrects inaccuracies and inconsistencies in the information but also allows optimizing the functioning and increase the efficiency of the database system (Ramez Elmasri, Pearson, 2024).

Key objectives of Normalization:

- **Eliminate Data Redundancy**
- **Ensure Data Integrity**
- **Simplify Maintenance**
- **Optimize Storage**

### 4.1 Normalization of Given Figure

#### 4.1.1 UNF

UNF - (user\_id, user\_name, user\_email, user\_contact, {project\_id, project\_name, project\_date, project\_status, {task\_id, task\_name, start\_date, due\_date, task\_status}})

#### 4.1.2 1NF

We can separate repeating data and repeating group. After separating the repeating data, we need to separate it into 3 different tables and select the Primary Key and Foreign key in the table.

Table in 1NF:

**User-1 => (user\_id, user\_name, user\_email, user\_contact)**

**Project-User-1 => (project\_id, project\_name, project\_start\_date, project\_due\_date, project\_Status, user\_id\*)**

**User-Project-Task-1 => (task\_id, task\_name, start\_date, due\_date, task\_status, user\_id\*, project\_id\*)**

#### 4.1.3 2NF

For converting 1NF to 2NF we have to we have to eliminate partial dependencies.

For User table, there is only one key, therefore there cannot be any partial dependencies. So, User table is already in 2NF

User-2

**User-2 => (user\_id, user\_name, user\_email, user\_contact)**

For User-Project table, there are two keys, so we need to check for partial dependencies in the User-Project table and remove it.

**Project-User-2 => {**

**project\_id -> project\_name, project\_start\_date, project\_due\_date, project\_status**

**user\_id -> (non-key attribute of the project depends on this user)**

**}**

Project-2 => (project\_id, project\_name, project\_start\_date, project\_due\_date, project\_Status)

Project-User-2 => ((user\_id, project\_id) \*)

Similarly, For User-Project-Task table, there are two keys, so we need to check for partial dependencies in the User-Project-Task table and remove it.

Project-User-Task-2{

task\_id -> task\_name, start\_date, due\_date, task\_status

user\_id, project\_id -> (non-key attributes of the task table depends upon this table)

}

Task-2 => (task\_id, task\_name, start\_date, due\_date, task\_status)

Project-User-Task-2 => ((user\_id, project\_id, task\_id) \*)

So, tables in 2NF are:

User-3 => (user\_id, user\_name, user\_email, user\_contact)

Project-3 => (project\_id, project\_name, project\_start\_date, project\_due\_date, project\_Status)

Project-User-3 => ((user\_id, project\_id) \*)

Task-3 => (task\_id, task\_name, start\_date, due\_date, task\_status)

Project-User-Task-3 => ((user\_id, project\_id, task\_id) \*)

#### 4.1.4 3NF

For converting 2NF to 3NF we must remove transitive dependencies, i.e., when a non-key attribute gives another non-key attribute.

Since there are no transitive dependencies in these tables, the final tables are:

User-3 => (**user\_id**, user\_name, user\_email, user\_contact)

Project-3 => (**project\_id**, project\_name, project\_start\_date, project\_due\_date, project\_Status)

Project-User-3 => ((**user\_id**, **project\_id**) \*)

Task-3 => (**task\_id**, task\_name, start\_date, due\_date, task\_status)

Project-User-Task-3 => ((**user\_id**, **project\_id**, **task\_id**) \*)

## 5 Integration and Assumptions

- Projects contain tasks and milestones.
- Tasks can have subtasks
- Users are assigned to projects and tasks/
- Resources are shared across tasks

## 6 Final Entity Relationship Diagram

An Entity-Relationship Diagram (ERD) represents a project management system that contains seven fundamental entities including Users, Projects, Tasks, Subtasks, Comments, Resources and Milestones. Users maintain links with multiple Projects and Tasks along with a delineation between Tasks that include Subtasks for specific management needs. Users can add Comments for task communication whereas Resources denote materials and tools necessary for task fulfillment. Project monitoring uses Milestones as organizational units to follow progress. The information system includes various entities that possess individual properties while maintaining distinct connections between them including the relationship between tasks and users along with tasks and projects and tasks and resources and milestones connecting to projects.

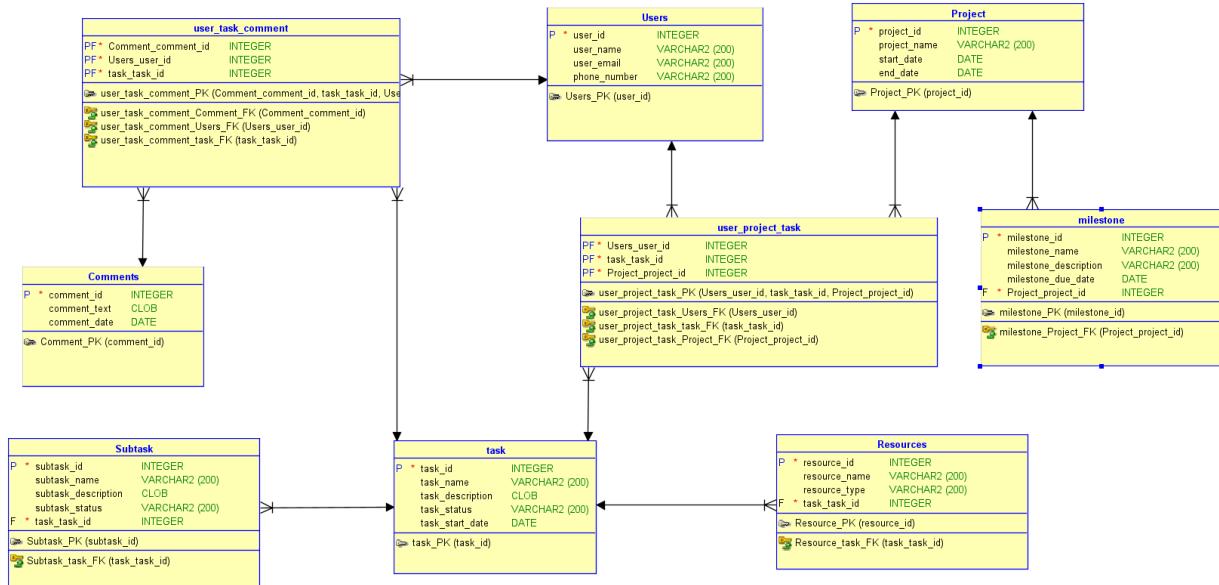


Figure 8: Final ERD

## 7 Data Dictionary

### 7.1 User Table

Attribute Name	Data Type	Description
User_ID	INTEGER	Unique identifier for the user (Primary Key)
User_Name	VARCHAR2(30)	Name of the user
User_Email	VARCHAR2(50)	Email of the user
Phone_number	VARCHAR (200)	Contact number of the user

Table 1: User Table 1

### 7.2 Project Table

Attribute Name	Data Type	Description
Project_ID	INTEGER	Unique identifier for the project (Primary Key)
Project_Name	VARCHAR2(200)	Name of the project
Start_Date	DATE	Project start date
Due_Date	DATE	Project due date

Table 2: Project Table

### 7.3 Milestone Table

Attribute Name	Data Type	Description
Milestone_ID	INTEGER	Unique identifier for the milestone (Primary Key)
Milestone_Name	VARCHAR2(200)	Name of the milestone
Milestone_Description	CLOB	Description of MileStone
Due_Date	DATE	Milestone completion due date
Project_ID	INTEGER	References Project_ID from Project table (Foreign Key)

Table 3: Milestone Table

## 7.4 Task Table

Attribute Name	Data Type	Description
Task_ID	INTEGER	Unique identifier for the task (Primary Key)
Task_Name	VARCHAR2(200)	Name of the task
Task_Status	VARCHAR2(200)	Status of the project!
Start_Date	DATE	Task start date
Due_Date	DATE	Task due date
Project_ID	INTEGER	References Project_ID from Project table (Foreign Key)

Table 4: Task Table

## 7.5 Comment Table

Attribute Name	Data Type	Description
Comment_ID	INTEGER	Unique identifier for the comment (Primary Key)
Comment_text	VARCHAR2(200)	Text content of the comment
Comment_date	DATE	Date when the comment was created

Table 5: Comment Table

## 7.6 Resource Table

Attribute Name	Data Type	Description
Resource_ID	INTEGER	Unique identifier for the resource (Primary Key)
Resource_Type	VARCHAR2(200)	Type of the resource
Resource_Name	VARCHAR2(100)	Name of the resource

Table 6: Resource Table

## 7.7 Sub-Task Table

Attribute Name	Data Type	Description
SubTask_ID	INTEGER	Unique identifier for the subtask (Primary Key)
Sub_task_name	VARCHAR2(200)	Name of the SubTask
Sub_Task_description	VARCHAR2(200)	Subtask Description
Task_ID	INTEGER	References Task_ID from Task table (Foreign Key)
Status	VARCHAR2(30)	Status of the subtask

Table 7: Subtask table

## 7.8 User Task Comment Table

Attribute Name	Data Type	Description
Task_ID	INTEGER	References Task_ID from Task table (Foreign Key)
Comment_ID	INTEGER	References Comment_ID from Comment table (Foreign Key)
User_ID	INTEGER	References User_ID from User table (Foreign Key)

Table 8: User Task Comment Table

## 7.9 User Project Task Table

Attribute Name	Data Type	Description
Task_ID	INTEGER	References Task_ID from Task table (Foreign Key)
Project_ID	INTEGER	References Project_ID from Project table (Foreign Key)
User_ID	INTEGER	References User_ID from User table (Foreign Key)

Table 9: User Project Task Table

## 8 Script

### 8.1 Create Statements

#### 8.1.1 Users Table

The screenshot shows the Oracle SQL Developer interface. In the main editor window, there is a code block containing the following SQL statements:

```
CREATE TABLE users (
    user_id      INTEGER NOT NULL,
    user_name    VARCHAR2(200),
    user_email   VARCHAR2(200),
    phone_number VARCHAR2(200)
);

ALTER TABLE users ADD CONSTRAINT users_pk PRIMARY KEY ( user_id );
```

Below the editor, a "Script Output" tab is open, showing the results of the execution:

- Task completed in 0.105 seconds
- Table USERS created.
- Table USERS altered.

Figure 9: Users Table

#### 8.1.2 Project Table

The screenshot shows the Oracle SQL Developer interface. In the main editor window, there is a code block containing the following SQL statements:

```
CREATE TABLE project (
    project_id    INTEGER NOT NULL,
    project_name  VARCHAR2(200),
    start_date    DATE,
    end_date      DATE
);

ALTER TABLE project ADD CONSTRAINT project_pk PRIMARY KEY ( project_id );
```

Below the editor, a "Script Output" tab is open, showing the results of the execution:

- Task completed in 0.1 seconds
- Table PROJECT created.
- Table PROJECT altered.

Figure 10: Project Table Creation

### 8.1.3 Comment Table

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

```
CREATE TABLE comments (
    comment_id    INTEGER NOT NULL,
    comment_text  CLOB,
    comment_date  DATE
);

ALTER TABLE comments ADD CONSTRAINT comment_pk PRIMARY KEY (comment_id);
```

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

```
Table COMMENTS created.

Table COMMENTS altered.
```

Figure 11: Comment Table Creation

### 8.1.4 Milestone Table

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

```
CREATE TABLE milestone (
    milestone_id      INTEGER NOT NULL,
    milestone_name    VARCHAR2(200),
    milestone_description VARCHAR2(200),
    milestone_due_date DATE,
    project_project_id INTEGER NOT NULL
);

ALTER TABLE milestone ADD CONSTRAINT milestone_pk PRIMARY KEY (milestone_id);
```

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

```
Table COMMENTS created.

Table COMMENTS altered.

Table MILESTONE created.

Table MILESTONE altered.
```

Figure 12: Milestone Table Creation

### 8.1.5 Task Table

The screenshot shows the Oracle SQL Developer interface. In the top panel, there is a code editor window containing the following SQL script:

```

CREATE TABLE task (
    task_id      INTEGER NOT NULL,
    task_name    VARCHAR2(200),
    task_description CLOB,
    task_status   VARCHAR2(200),
    task_start_date DATE
);

ALTER TABLE task ADD CONSTRAINT task_pk PRIMARY KEY ( task_id );

```

In the bottom panel, there is a "Script Output" window with the message "Task completed in 0.079 seconds".

Table TASK created.

Table TASK altered.

*Figure 13: Task Table*

### 8.1.6 Sub Task Table

The screenshot shows the Oracle SQL Developer interface. In the top panel, there is a code editor window containing the following SQL script:

```

CREATE TABLE subtask (
    subtask_id      INTEGER NOT NULL,
    subtask_name    VARCHAR2(200),
    subtask_description CLOB,
    subtask_status   VARCHAR2(200),
    task_task_id    INTEGER NOT NULL
);

ALTER TABLE subtask ADD CONSTRAINT subtask_pk PRIMARY KEY ( subtask_id );

```

In the bottom panel, there is a "Script Output" window with the message "Task completed in 0.09 seconds".

Table SUBTASK created.

Table SUBTASK altered.

*Figure 14: Sub task table creation*

### 8.1.7 Resources Table

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

```

CREATE TABLE resources (
    resource_id    INTEGER NOT NULL,
    resource_name  VARCHAR2(200),
    resource_type  VARCHAR2(200),
    task_task_id   INTEGER NOT NULL
);
ALTER TABLE resources ADD CONSTRAINT resource_pk PRIMARY KEY ( resource_id );

```

In the bottom-right pane, the "Script Output" tab is active, displaying the results of the execution:

```

Table RESOURCES created.

Table RESOURCES altered.

```

The status bar at the bottom indicates "Task completed in 0.041 seconds".

Figure 15: Resources Table

### 8.1.8 User Project Task Table

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

```

CREATE TABLE user_project_task (
    users_user_id      INTEGER NOT NULL,
    task_task_id       INTEGER NOT NULL,
    project_project_id INTEGER NOT NULL
);

ALTER TABLE user_project_task
    ADD CONSTRAINT user_project_task_pk PRIMARY KEY ( users_user_id,
                                                    task_task_id,
                                                    project_project_id );

```

In the bottom-right pane, the "Script Output" tab is active, displaying the results of the execution:

```

Table USER_PROJECT_TASK created.

Table USER_PROJECT_TASK altered.

```

The status bar at the bottom indicates "Task completed in 0.092 seconds".

Figure 16: User Project Task Table

### 8.1.9 User Task Comment Table

```
CREATE TABLE user_task_comment (
    comment_comment_id INTEGER NOT NULL,
    users_user_id      INTEGER NOT NULL,
    task_task_id       INTEGER NOT NULL
);

ALTER TABLE user_task_comment
    ADD CONSTRAINT user_task_comment_pk PRIMARY KEY (comment_comment_id,
                                                    task_task_id,
                                                    users_user_id );
```

Script Output X | Task completed in 0.091 seconds

Table USER\_TASK\_COMMENT created.

Table USER\_TASK\_COMMENT altered.

Figure 17: User Task Comment Table

## 8.2 Insert Statements

### 8.2.1 User Table

The screenshot shows the Oracle SQL Developer interface with the 'coursework' schema selected. The 'Worksheet' tab is active, displaying an 'INSERT ALL' statement that inserts 20 rows into the 'users' table. The 'Script Output' tab shows the successful execution of the query, indicating 20 rows inserted.

```

INSERT ALL
INTO users (user_id, user_name, user_email, phone_number) VALUES (1, 'Aarav Sharma', 'aarav.sharma@gmail.com', '977-9841234567')
INTO users (user_id, user_name, user_email, phone_number) VALUES (2, 'Priya Adhikari', 'priya.adhikari@gmail.com', '977-9851234568')
INTO users (user_id, user_name, user_email, phone_number) VALUES (3, 'Sanjay Thapa', 'sanjay.thapa@gmail.com', '977-9861234569')
INTO users (user_id, user_name, user_email, phone_number) VALUES (4, 'Anisha Poudel', 'anisha.poudel@gmail.com', '977-9871234570')
INTO users (user_id, user_name, user_email, phone_number) VALUES (5, 'Rajesh KC', 'rajesh.kc@gmail.com', '977-9881234571')
INTO users (user_id, user_name, user_email, phone_number) VALUES (6, 'Sarita Basnet', 'sarita.basnet@gmail.com', '977-9891234572')
INTO users (user_id, user_name, user_email, phone_number) VALUES (7, 'Biplov Maharjan', 'biplov.maharjan@gmail.com', '977-9841234573')
INTO users (user_id, user_name, user_email, phone_number) VALUES (8, 'Kabita Shrestha', 'kabita.shrestha@gmail.com', '977-9851234574')
INTO users (user_id, user_name, user_email, phone_number) VALUES (9, 'Deepak Karki', 'deepak.karki@gmail.com', '977-9861234575')
INTO users (user_id, user_name, user_email, phone_number) VALUES (10, 'Sabina Rai', 'sabina.rai@gmail.com', '977-9871234576')
INTO users (user_id, user_name, user_email, phone_number) VALUES (11, 'Prakash Gurung', 'prakash.gurung@gmail.com', '977-9881234577')
INTO users (user_id, user_name, user_email, phone_number) VALUES (12, 'Neha Tamang', 'neha.tamang@gmail.com', '977-9891234578')
INTO users (user_id, user_name, user_email, phone_number) VALUES (13, 'Suraj Magar', 'suraj.magar@gmail.com', '977-9841234579')
INTO users (user_id, user_name, user_email, phone_number) VALUES (14, 'Pratima BK', 'pratima.bk@gmail.com', '977-9851234580')
INTO users (user_id, user_name, user_email, phone_number) VALUES (15, 'Bipin Limbu', 'bipin.limbu@gmail.com', '977-9861234581')
INTO users (user_id, user_name, user_email, phone_number) VALUES (16, 'Samjhana Dahal', 'samjhana.dahal@gmail.com', '977-9871234582')
INTO users (user_id, user_name, user_email, phone_number) VALUES (17, 'Nabin Bhattarai', 'nabin.bhattarai@gmail.com', '977-9881234583')
INTO users (user_id, user_name, user_email, phone_number) VALUES (18, 'Rekha Chhetri', 'rekha.chhetri@gmail.com', '977-9891234584')
INTO users (user_id, user_name, user_email, phone_number) VALUES (19, 'Bikash Oli', 'bikash.olii@gmail.com', '977-9841234585')
INTO users (user_id, user_name, user_email, phone_number) VALUES (20, 'Puja Subedi', 'puja.subedi@gmail.com', '977-9851234586')
SELECT * FROM dual;

```

Table USER\_TASK altered.  
Table USER\_TASK altered.  
20 rows inserted.

Figure 18: User Table Insertion

### 8.2.2 Project Table

The screenshot shows the Oracle SQL Developer interface with the 'coursework' schema selected. The 'Worksheet' tab is active, displaying an 'INSERT ALL' statement that inserts 20 rows into the 'project' table. The 'Script Output' tab shows the successful execution of the query, indicating 20 rows inserted.

```

INSERT ALL
INTO project (project_id, project_name, start_date, end_date) VALUES (1, 'Kathmandu Smart City Initiative', TO_DATE('2024-01-01', 'YYYY-MM-DD'), TO_DATE('2024-12-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (2, 'Pokhara Tourism Portal', TO_DATE('2024-02-01', 'YYYY-MM-DD'), TO_DATE('2024-08-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (3, 'Nepal Digital Payment System', TO_DATE('2024-03-01', 'YYYY-MM-DD'), TO_DATE('2024-09-30', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (4, 'Everest Weather Monitoring', TO_DATE('2024-04-01', 'YYYY-MM-DD'), TO_DATE('2024-10-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (5, 'Chitwan Conservation App', TO_DATE('2024-05-01', 'YYYY-MM-DD'), TO_DATE('2024-11-30', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (6, 'Lumbini Heritage Mapping', TO_DATE('2024-06-01', 'YYYY-MM-DD'), TO_DATE('2024-12-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (7, 'Nepali E-learning Platform', TO_DATE('2024-07-01', 'YYYY-MM-DD'), TO_DATE('2025-01-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (8, 'Bhaktapur Craft Marketplace', TO_DATE('2024-08-01', 'YYYY-MM-DD'), TO_DATE('2025-02-28', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (9, 'Himalayan Trekking Guide', TO_DATE('2024-09-01', 'YYYY-MM-DD'), TO_DATE('2025-03-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (10, 'Nepal Agriculture Analytics', TO_DATE('2024-10-01', 'YYYY-MM-DD'), TO_DATE('2025-04-30', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (11, 'Fatan Cultural Database', TO_DATE('2024-11-01', 'YYYY-MM-DD'), TO_DATE('2025-05-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (12, 'Jharap Smaam Transport', TO_DATE('2024-12-01', 'YYYY-MM-DD'), TO_DATE('2025-06-30', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (13, 'Agricultural Irrigation System', TO_DATE('2025-01-01', 'YYYY-MM-DD'), TO_DATE('2025-07-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (14, 'Bureau Industrial IoT', TO_DATE('2025-02-01', 'YYYY-MM-DD'), TO_DATE('2025-08-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (15, 'Janapura Temple VR Tour', TO_DATE('2025-03-01', 'YYYY-MM-DD'), TO_DATE('2025-09-30', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (16, 'Nepali Earthquake Monitor', TO_DATE('2025-04-01', 'YYYY-MM-DD'), TO_DATE('2025-10-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (17, 'Nepali Language AI', TO_DATE('2025-05-01', 'YYYY-MM-DD'), TO_DATE('2025-11-30', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (18, 'Mustang Wind Farm Data', TO_DATE('2025-06-01', 'YYYY-MM-DD'), TO_DATE('2025-12-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (19, 'Ilam Tea E-commerce', TO_DATE('2025-07-01', 'YYYY-MM-DD'), TO_DATE('2026-01-31', 'YYYY-MM-DD'))
INTO project (project_id, project_name, start_date, end_date) VALUES (20, 'Bardia Wildlife Tracker', TO_DATE('2025-08-01', 'YYYY-MM-DD'), TO_DATE('2026-02-28', 'YYYY-MM-DD'))
SELECT * FROM dual;

```

Table USER\_TASK altered.  
Table USER\_TASK altered.  
20 rows inserted.  
20 rows inserted.

Figure 19: Project Table Insertion

### 8.2.3 Task Table

```

INSERT INTO task VALUES (1, 'Infrastructure Planning', 'Planning phase for basic infrastructure', 'In Progress', TO_DATE('2024-01-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (2, 'Environmental Assessment', 'Conduct environmental impact study', 'Completed', TO_DATE('2024-01-10', 'YYYY-MM-DD'));
INSERT INTO task VALUES (3, 'Stakeholder Consultation', 'Meet with local stakeholders', 'Pending', TO_DATE('2024-01-15', 'YYYY-MM-DD'));
INSERT INTO task VALUES (4, 'Budget Allocation', 'Finalize budget distribution', 'In Progress', TO_DATE('2024-01-20', 'YYYY-MM-DD'));
INSERT INTO task VALUES (5, 'Resource Mobilization', 'Mobilize required resources', 'Not Started', TO_DATE('2024-01-25', 'YYYY-MM-DD'));
INSERT INTO task VALUES (6, 'Technical Design', 'Prepare technical blueprints', 'In Progress', TO_DATE('2024-02-01', 'YYYY-MM-DD'));
INSERT INTO task VALUES (7, 'Community Engagement', 'Engage local communities', 'Completed', TO_DATE('2024-02-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (8, 'Project Documentation', 'Document project progress', 'In Progress', TO_DATE('2024-02-10', 'YYYY-MM-DD'));
INSERT INTO task VALUES (9, 'Quality Assurance', 'Ensure quality standards', 'Pending', TO_DATE('2024-02-15', 'YYYY-MM-DD'));
INSERT INTO task VALUES (10, 'Risk Assessment', 'Evaluate potential risks', 'In Progress', TO_DATE('2024-02-20', 'YYYY-MM-DD'));
INSERT INTO task VALUES (11, 'Site Survey', 'Conduct site survey', 'Completed', TO_DATE('2024-02-25', 'YYYY-MM-DD'));
INSERT INTO task VALUES (12, 'Permit Acquisition', 'Obtain necessary permits', 'In Progress', TO_DATE('2024-03-01', 'YYYY-MM-DD'));
INSERT INTO task VALUES (13, 'Equipment Procurement', 'Procure required equipment', 'Not Started', TO_DATE('2024-03-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (14, 'Team Training', 'Train project team', 'Not Started', TO_DATE('2024-03-10', 'YYYY-MM-DD'));
INSERT INTO task VALUES (15, 'Safety Protocol', 'Establish safety measures', 'Completed', TO_DATE('2024-03-15', 'YYYY-MM-DD'));
INSERT INTO task VALUES (16, 'Progress Monitoring', 'Monitor project progress', 'In Progress', TO_DATE('2024-03-20', 'YYYY-MM-DD'));
INSERT INTO task VALUES (17, 'Coordination Meeting', 'Coordinate with stakeholders', 'Pending', TO_DATE('2024-03-25', 'YYYY-MM-DD'));
INSERT INTO task VALUES (18, 'Implementation Plan', 'Plan implementation phase', 'In Progress', TO_DATE('2024-04-01', 'YYYY-MM-DD'));
INSERT INTO task VALUES (19, 'Budget Review', 'Review budget allocation', 'Not Started', TO_DATE('2024-04-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (20, 'Final Report', 'Prepare final report', 'Pending', TO_DATE('2024-04-10', 'YYYY-MM-DD'));

```

1 row inserted.

1 row inserted.

1 row inserted.

Figure 20: Task Table Insertion

### 8.2.4 Subtask

```

INSERT INTO task VALUES (1, 'Infrastructure Planning', 'Planning phase for basic infrastructure', 'In Progress', TO_DATE('2024-01-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (2, 'Environmental Assessment', 'Conduct environmental impact study', 'Completed', TO_DATE('2024-01-10', 'YYYY-MM-DD'));
INSERT INTO task VALUES (3, 'Stakeholder Consultation', 'Meet with local stakeholders', 'Pending', TO_DATE('2024-01-15', 'YYYY-MM-DD'));
INSERT INTO task VALUES (4, 'Budget Allocation', 'Finalize budget distribution', 'In Progress', TO_DATE('2024-01-20', 'YYYY-MM-DD'));
INSERT INTO task VALUES (5, 'Resource Mobilization', 'Mobilize required resources', 'Not Started', TO_DATE('2024-01-25', 'YYYY-MM-DD'));
INSERT INTO task VALUES (6, 'Technical Design', 'Prepare technical blueprints', 'In Progress', TO_DATE('2024-02-01', 'YYYY-MM-DD'));
INSERT INTO task VALUES (7, 'Community Engagement', 'Engage local communities', 'Completed', TO_DATE('2024-02-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (8, 'Project Documentation', 'Document project progress', 'In Progress', TO_DATE('2024-02-10', 'YYYY-MM-DD'));
INSERT INTO task VALUES (9, 'Quality Assurance', 'Ensure quality standards', 'Pending', TO_DATE('2024-02-15', 'YYYY-MM-DD'));
INSERT INTO task VALUES (10, 'Risk Assessment', 'Evaluate potential risks', 'In Progress', TO_DATE('2024-02-20', 'YYYY-MM-DD'));
INSERT INTO task VALUES (11, 'Site Survey', 'Conduct site survey', 'Completed', TO_DATE('2024-02-25', 'YYYY-MM-DD'));
INSERT INTO task VALUES (12, 'Permit Acquisition', 'Obtain necessary permits', 'In Progress', TO_DATE('2024-03-01', 'YYYY-MM-DD'));
INSERT INTO task VALUES (13, 'Equipment Procurement', 'Procure required equipment', 'Not Started', TO_DATE('2024-03-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (14, 'Team Training', 'Train project team', 'Not Started', TO_DATE('2024-03-10', 'YYYY-MM-DD'));
INSERT INTO task VALUES (15, 'Safety Protocol', 'Establish safety measures', 'Completed', TO_DATE('2024-03-15', 'YYYY-MM-DD'));
INSERT INTO task VALUES (16, 'Progress Monitoring', 'Monitor project progress', 'In Progress', TO_DATE('2024-03-20', 'YYYY-MM-DD'));
INSERT INTO task VALUES (17, 'Coordination Meeting', 'Coordinate with stakeholders', 'Pending', TO_DATE('2024-03-25', 'YYYY-MM-DD'));
INSERT INTO task VALUES (18, 'Implementation Plan', 'Plan implementation phase', 'In Progress', TO_DATE('2024-04-01', 'YYYY-MM-DD'));
INSERT INTO task VALUES (19, 'Budget Review', 'Review budget allocation', 'Not Started', TO_DATE('2024-04-05', 'YYYY-MM-DD'));
INSERT INTO task VALUES (20, 'Final Report', 'Prepare final report', 'Pending', TO_DATE('2024-04-10', 'YYYY-MM-DD'));

```

1 row inserted.

1 row inserted.

1 row inserted.

Figure 21: Subtask table insertion

### 8.2.5 Resource Table

The screenshot shows the MySQL Workbench interface with a query editor and a script output window. The query editor contains an SQL script for inserting 16 rows into the 'Resources' table. The script lists various resource types and their categories. The script is as follows:

```

INSERT INTO Resources VALUES (1, 'Excavator', 'Heavy Equipment', 1);
INSERT INTO Resources VALUES (2, 'Survey Equipment', 'Technical Tool', 2);
INSERT INTO Resources VALUES (3, 'Safety Gear', 'Safety Equipment', 3);
INSERT INTO Resources VALUES (4, 'Construction Materials', 'Building Material', 4);
INSERT INTO Resources VALUES (5, 'Computer Systems', 'Technical Equipment', 5);
INSERT INTO Resources VALUES (6, 'Transport Vehicles', 'Vehicle', 6);
INSERT INTO Resources VALUES (7, 'Communication Devices', 'Electronics', 7);
INSERT INTO Resources VALUES (8, 'Office Supplies', 'Stationery', 8);
INSERT INTO Resources VALUES (9, 'Testing Equipment', 'Technical Tool', 9);
INSERT INTO Resources VALUES (10, 'Training Materials', 'Educational Resource', 10);
INSERT INTO Resources VALUES (11, 'Power Generators', 'Power Equipment', 11);
INSERT INTO Resources VALUES (12, 'Monitoring Tools', 'Technical Tool', 12);
INSERT INTO Resources VALUES (13, 'First Aid Kits', 'Safety Equipment', 13);
INSERT INTO Resources VALUES (14, 'Documentation Tools', 'Office Equipment', 14);
INSERT INTO Resources VALUES (15, 'Storage Units', 'Infrastructure', 15);
INSERT INTO Resources VALUES (16, 'Quality Control Tools', 'Technical Tool', 16);

```

The script output window shows the results of the insertion task, indicating that 16 rows were inserted successfully.

Figure 22: Resource Table insertion

### 8.2.6 Milestone Table

The screenshot shows the MySQL Workbench interface with a query editor and a script output window. The query editor contains an SQL script for inserting 20 rows into the 'milestone' table. The script details various milestones with their descriptions and dates. The script is as follows:

```

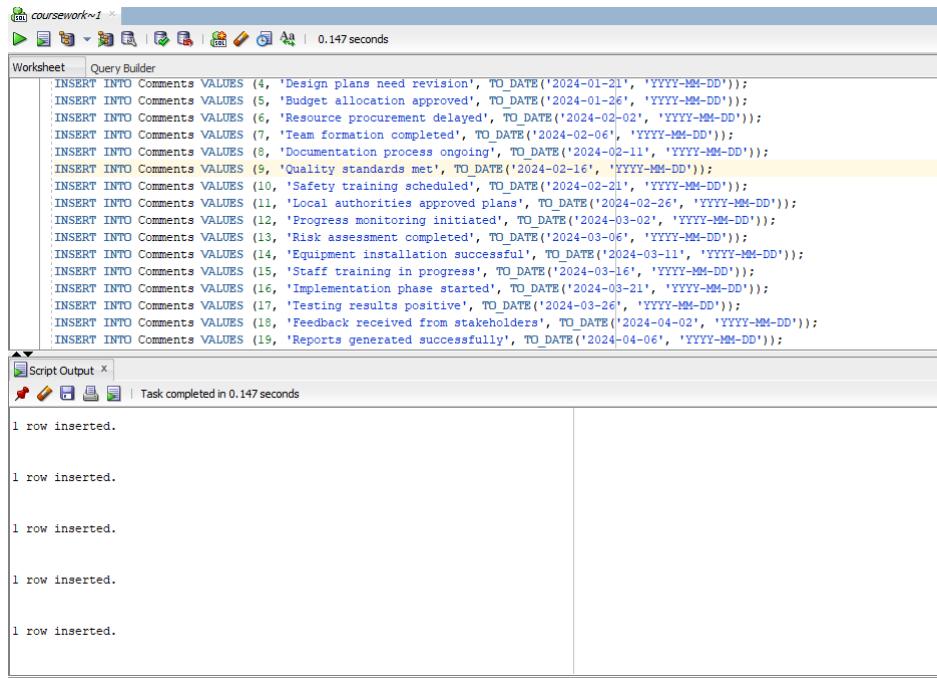
INSERT INTO milestone VALUES (6, 'Resource Acquisition', 'All resources acquired', TO_DATE('2024-06-15', 'YYYY-MM-DD'), 6);
INSERT INTO milestone VALUES (7, 'Team Assembly', 'Project team assembled', TO_DATE('2024-07-15', 'YYYY-MM-DD'), 7);
INSERT INTO milestone VALUES (8, 'Documentation Complete', 'All documents finalized', TO_DATE('2024-08-15', 'YYYY-MM-DD'), 8);
INSERT INTO milestone VALUES (9, 'Quality Certification', 'Quality standards met', TO_DATE('2024-09-15', 'YYYY-MM-DD'), 9);
INSERT INTO milestone VALUES (10, 'Safety Compliance', 'Safety standards achieved', TO_DATE('2024-10-15', 'YYYY-MM-DD'), 10);
INSERT INTO milestone VALUES (11, 'Government Approval', 'Government clearance received', TO_DATE('2024-11-15', 'YYYY-MM-DD'), 11);
INSERT INTO milestone VALUES (12, 'Mid-Project Review', 'Halfway point review', TO_DATE('2024-12-15', 'YYYY-MM-DD'), 12);
INSERT INTO milestone VALUES (13, 'Risk Mitigation', 'Risks properly addressed', TO_DATE('2025-01-15', 'YYYY-MM-DD'), 13);
INSERT INTO milestone VALUES (14, 'System Integration', 'Systems fully integrated', TO_DATE('2025-02-15', 'YYYY-MM-DD'), 14);
INSERT INTO milestone VALUES (15, 'Training Completion', 'All training completed', TO_DATE('2025-03-15', 'YYYY-MM-DD'), 15);
INSERT INTO milestone VALUES (16, 'Implementation Complete', 'Full implementation done', TO_DATE('2025-04-15', 'YYYY-MM-DD'), 16);
INSERT INTO milestone VALUES (17, 'Testing Completion', 'All testing finished', TO_DATE('2025-05-15', 'YYYY-MM-DD'), 17);
INSERT INTO milestone VALUES (18, 'Stakeholder Sign-off', 'Stakeholder approval received', TO_DATE('2025-06-15', 'YYYY-MM-DD'), 18);
INSERT INTO milestone VALUES (19, 'Final Documentation', 'Final reports completed', TO_DATE('2025-07-15', 'YYYY-MM-DD'), 19);
INSERT INTO milestone VALUES (20, 'Project Closure', 'Project successfully closed', TO_DATE('2025-08-15', 'YYYY-MM-DD'), 20);

```

The script output window shows the results of the insertion task, indicating that 20 rows were inserted successfully.

Figure 23: Milestone Table insertion

### 8.2.7 Comment Table



The screenshot shows the MySQL Workbench interface with a query being run against a database named 'coursework~1'. The 'Worksheet' tab contains the SQL code for inserting 19 rows into the 'Comments' table. The 'Script Output' tab shows the results of the execution, indicating that each of the 19 insertions was successful, with a total execution time of 0.147 seconds.

```

INSERT INTO Comments VALUES (4, 'Design plans need revision', TO_DATE('2024-01-21', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (5, 'Budget allocation approved', TO_DATE('2024-01-26', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (6, 'Resource procurement delayed', TO_DATE('2024-02-02', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (7, 'Team formation completed', TO_DATE('2024-02-06', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (8, 'Documentation process ongoing', TO_DATE('2024-02-11', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (9, 'Quality standards met', TO_DATE('2024-02-16', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (10, 'Safety training scheduled', TO_DATE('2024-02-21', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (11, 'Local authorities approved plans', TO_DATE('2024-02-26', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (12, 'Progress monitoring initiated', TO_DATE('2024-03-02', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (13, 'Risk assessment completed', TO_DATE('2024-03-06', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (14, 'Equipment installation successful', TO_DATE('2024-03-11', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (15, 'Staff training in progress', TO_DATE('2024-03-16', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (16, 'Implementation phase started', TO_DATE('2024-03-21', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (17, 'Testing results positive', TO_DATE('2024-03-26', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (18, 'Feedback received from stakeholders', TO_DATE('2024-04-02', 'YYYY-MM-DD'));
INSERT INTO Comments VALUES (19, 'Reports generated successfully', TO_DATE('2024-04-06', 'YYYY-MM-DD'));

```

Script Output | Task completed in 0.147 seconds

1 row inserted.

Figure 24: Comment Table insertion

### 8.2.8 User Project task

The screenshot shows the Oracle SQL Developer interface. The top bar displays the title 'coursework~1' and the status '0.53299999 seconds'. Below the toolbar, the 'Worksheet' tab is selected, showing a query builder window with the following SQL code:

```
INSERT INTO user_task VALUES (15, 15);
INSERT INTO user_task VALUES (16, 16);
INSERT INTO user_task VALUES (17, 17);
INSERT INTO user_task VALUES (18, 18);
INSERT INTO user_task VALUES (19, 19);
INSERT INTO user_task VALUES (20, 20);
INSERT INTO user_task VALUES (1, 2);
INSERT INTO user_task VALUES (2, 3);
INSERT INTO user_task VALUES (3, 4);
INSERT INTO user_task VALUES (4, 5);
INSERT INTO user_task VALUES (5, 6);
INSERT INTO user_task VALUES (6, 7);
INSERT INTO user_task VALUES (7, 8);
INSERT INTO user_task VALUES (8, 9);
INSERT INTO user_task VALUES (9, 10);
INSERT INTO user_task VALUES (10, 11);
```

Below the worksheet, the 'Script Output' tab is selected, showing the results of the execution:

```
1 row inserted.

1 row inserted.

1 row inserted.

1 row inserted.

1 row inserted.
```

Figure 25: user task table insertion

### 8.2.9 User Task Comment

The screenshot shows the MySQL Workbench interface. The top window is titled 'coursework~1' and contains a 'Worksheet' tab with the following SQL code:

```
INSERT INTO user_task_comment VALUES (1, 1, 1);
INSERT INTO user_task_comment VALUES (2, 2, 2);
INSERT INTO user_task_comment VALUES (3, 3, 3);
INSERT INTO user_task_comment VALUES (4, 4, 4);
INSERT INTO user_task_comment VALUES (5, 5, 5);
INSERT INTO user_task_comment VALUES (6, 6, 6);
INSERT INTO user_task_comment VALUES (7, 7, 7);
INSERT INTO user_task_comment VALUES (8, 8, 8);
INSERT INTO user_task_comment VALUES (9, 9, 9);
INSERT INTO user_task_comment VALUES (10, 10, 10);
INSERT INTO user_task_comment VALUES (11, 11, 11);
INSERT INTO user_task_comment VALUES (12, 12, 12);
INSERT INTO user_task_comment VALUES (13, 13, 13);
INSERT INTO user_task_comment VALUES (14, 14, 14);
INSERT INTO user_task_comment VALUES (15, 15, 15);
INSERT INTO user_task_comment VALUES (16, 16, 16);
INSERT INTO user_task_comment VALUES (17, 17, 17);
INSERT INTO user_task_comment VALUES (18, 18, 18);
INSERT INTO user_task_comment VALUES (19, 19, 19);
INSERT INTO user_task_comment VALUES (20, 20, 20);
INSERT INTO user_task_comment VALUES (1, 2, 1);
INSERT INTO user_task_comment VALUES (2, 3, 2);
INSERT INTO user_task_comment VALUES (3, 4, 3);
INSERT INTO user_task_comment VALUES (4, 5, 4);
INSERT INTO user_task_comment VALUES (5, 6, 5);
INSERT INTO user_task_comment VALUES (6, 7, 6);
INSERT INTO user_task_comment VALUES (7, 8, 7);
```

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

```
Task completed in 0.181 seconds
1 row inserted.
1 row inserted.
1 row inserted.
```

Figure 26: User Task Comment table insertion

## 8.3 Select Statements

### 8.3.1 User Table

The screenshot shows a MySQL Workbench interface. In the top-left query editor, the SQL command `select * from users;` is entered. Below it, the 'Query Result' tab is active, displaying the output of the query. The results show 21 rows of data from a 'users' table, with columns: USER\_ID, USER\_NAME, USER\_EMAIL, and PHONE\_NUMBER. The data includes names like Aarav Sharma, Priya Adhikari, Rajesh Thapa, etc., along with their corresponding email addresses and phone numbers.

	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
1	1	Aarav Sharma	aarav.sharma@gmail.com	977-9841234567
2	2	Priya Adhikari	priya.adhikari@gmail.com	977-9851234568
3	3	Rajesh Thapa	rajesh.thapa@gmail.com	977-9861234569
4	4	Sita Bhattarai	sita.bhattarai@gmail.com	977-9871234570
5	5	Bikash Poudel	bikash.poudel@gmail.com	977-9881234571
6	6	Anjali Karki	anjali.karki@gmail.com	977-9891234572
7	7	Dipesh Gurung	dipesh.gurung@gmail.com	977-9841234573
8	8	Sarita Tamang	sarita.tamang@gmail.com	977-9851234574
9	9	Mahesh Shrestha	mahesh.shrestha@gmail.com	977-9861234575
10	10	Nisha Rai	nisha.rai@gmail.com	977-9871234576
11	11	Sunil KC	sunil.kc@gmail.com	977-9881234577
12	12	Sabina Magar	sabina.magar@gmail.com	977-9891234578
13	13	Binod Regmi	binod.regmi@gmail.com	977-9841234579
14	14	Gita Neupane	gita.neupane@gmail.com	977-9851234580
15	15	Prakash Basnet	prakash.basnet@gmail.com	977-9861234581
16	16	Manisha Limbu	manisha.limbu@gmail.com	977-9871234582
17	17	Ramesh Dahal	ramesh.dahal@gmail.com	977-9881234583
18	18	Kabita Oli	kabita.oliv@gmail.com	977-9891234584
19	19	Deepak Chhetri	deepak.chhetri@gmail.com	977-9841234585
20	20	Sunita Pun	sunita.pun@gmail.com	977-9851234586
21	21	Nisha Rai	nisha.rai@gmail.com	977-9871234576

Figure 27: User table select statement

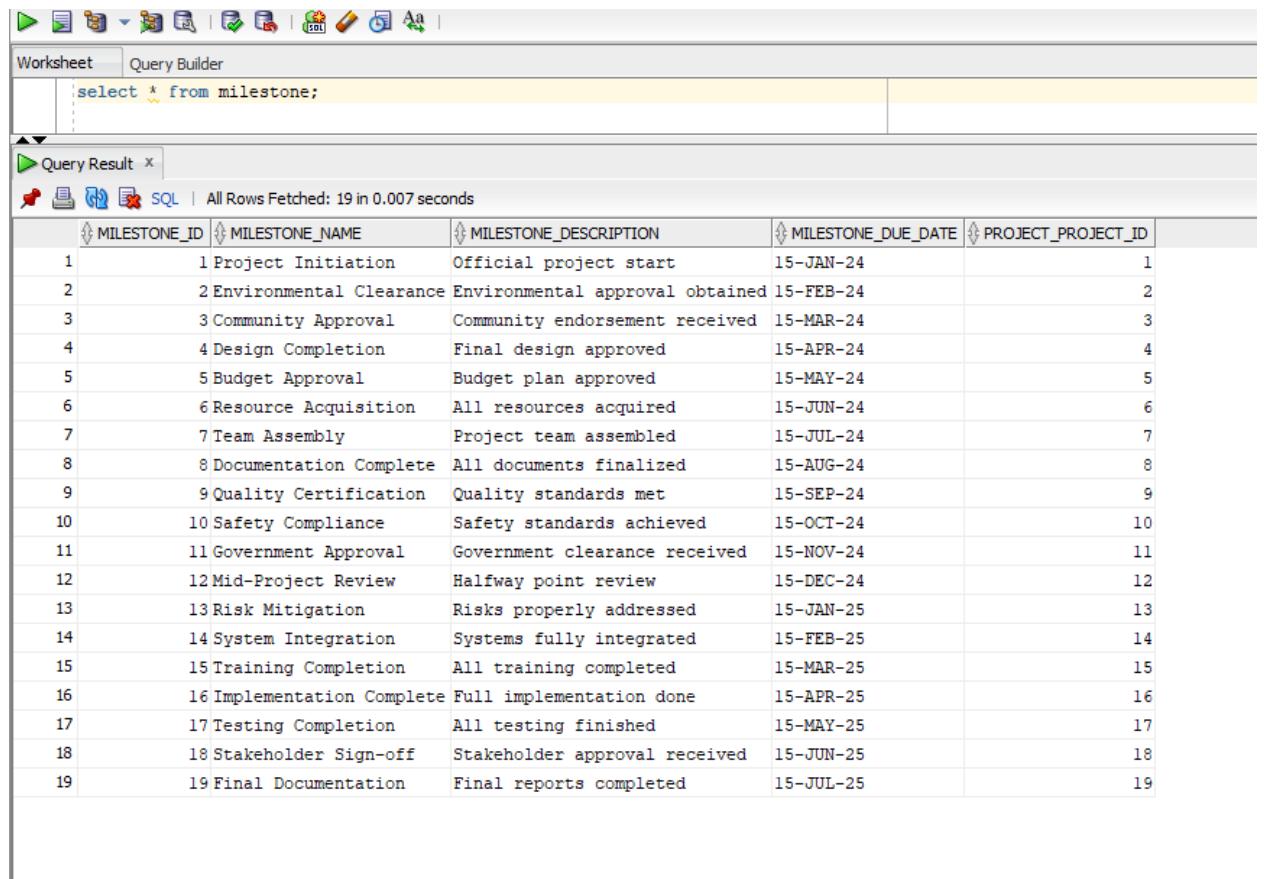
### 8.3.2 Comment Table

The screenshot shows a database interface with a 'Worksheet' tab and a 'Query Builder' tab. The 'Worksheet' tab is active, displaying the SQL query: 'select \* from comments;'. Below the query is a 'Query Result' window titled 'Query Result x'. The result set contains 20 rows of data from the 'comments' table, with columns labeled 'COMMENT\_ID', 'COMMENT\_TEXT', and 'COMMENT\_DATE'. The data shows various project milestones and their dates.

COMMENT_ID	COMMENT_TEXT	COMMENT_DATE
1	1 Site conditions are suitable for development	06-JAN-24
2	2 Environmental impact report completed	11-JAN-24
3	3 Local community showing positive response	16-JAN-24
4	4 Design plans need revision	21-JAN-24
5	5 Budget allocation approved	26-JAN-24
6	6 Resource procurement delayed	02-FEB-24
7	7 Team formation completed	06-FEB-24
8	8 Documentation process ongoing	11-FEB-24
9	9 Quality standards met	16-FEB-24
10	10 Safety training scheduled	21-FEB-24
11	11 Local authorities approved plans	26-FEB-24
12	12 Progress monitoring initiated	02-MAR-24
13	13 Risk assessment completed	06-MAR-24
14	14 Equipment installation successful	11-MAR-24
15	15 Staff training in progress	16-MAR-24
16	16 Implementation phase started	21-MAR-24
17	17 Testing results positive	26-MAR-24
18	18 Feedback received from stakeholders	02-APR-24
19	19 Reports generated successfully	06-APR-24
20	20 ui complete	06-APR-24

Figure 28: comment table select statement

### 8.3.3 Milestone Table



The screenshot shows a database interface with a toolbar at the top, followed by a 'Worksheet' tab and a 'Query Builder' tab. The 'Query Builder' tab is active, displaying the SQL command: 'select \* from milestone;'. Below this is a 'Query Result' tab showing the output of the query. The result set is a table with 19 rows, each representing a milestone with its ID, name, description, due date, and project ID.

	MILESTONE_ID	MILESTONE_NAME	MILESTONE_DESCRIPTION	MILESTONE_DUE_DATE	PROJECT_PROJECT_ID
1	1	Project Initiation	Official project start	15-JAN-24	1
2	2	Environmental Clearance	Environmental approval obtained	15-FEB-24	2
3	3	Community Approval	Community endorsement received	15-MAR-24	3
4	4	Design Completion	Final design approved	15-APR-24	4
5	5	Budget Approval	Budget plan approved	15-MAY-24	5
6	6	Resource Acquisition	All resources acquired	15-JUN-24	6
7	7	Team Assembly	Project team assembled	15-JUL-24	7
8	8	Documentation Complete	All documents finalized	15-AUG-24	8
9	9	Quality Certification	Quality standards met	15-SEP-24	9
10	10	Safety Compliance	Safety standards achieved	15-OCT-24	10
11	11	Government Approval	Government clearance received	15-NOV-24	11
12	12	Mid-Project Review	Halfway point review	15-DEC-24	12
13	13	Risk Mitigation	Risks properly addressed	15-JAN-25	13
14	14	System Integration	Systems fully integrated	15-FEB-25	14
15	15	Training Completion	All training completed	15-MAR-25	15
16	16	Implementation Complete	Full implementation done	15-APR-25	16
17	17	Testing Completion	All testing finished	15-MAY-25	17
18	18	Stakeholder Sign-off	Stakeholder approval received	15-JUN-25	18
19	19	Final Documentation	Final reports completed	15-JUL-25	19

Figure 29: Milestone table select statement

### 8.3.4 Project Table

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab contains the SQL query `select * from project;`. The 'Query Result' tab shows the output of the query, which is a table with columns: PROJECT\_ID, PROJECT\_NAME, START\_DATE, and END\_DATE. The table contains 21 rows of project data.

	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
1	1	Kathmandu Metro Development	01-JAN-24	31-DEC-25
2	2	Pokhara Smart City Initiative	01-FEB-24	30-JUN-25
3	3	Chitwan Conservation Project	01-MAR-24	30-SEP-25
4	4	Lumbini Heritage Preservation	01-APR-24	31-AUG-25
5	5	Everest Base Camp Infrastructure	01-MAY-24	31-OCT-25
6	6	Bhaktapur Temple Restoration	01-JUN-24	30-NOV-25
7	7	Mustang Wind Power Plant	01-JUL-24	31-DEC-25
8	8	Terai Agriculture Development	01-AUG-24	31-JUL-25
9	9	Pashupatinath Temple Complex	01-SEP-24	31-AUG-25
10	10	Annapurna Conservation	01-OCT-24	30-SEP-25
11	11	Janakpur Development Plan	01-NOV-24	31-OCT-25
12	12	Sagarmatha National Park	01-DEC-24	30-NOV-25
13	13	Butwal Industrial Zone	15-JAN-24	31-DEC-25
14	14	Dharan Water Supply	15-FEB-24	30-JUN-25
15	15	Birgunj Trade Hub	15-MAR-24	31-JUL-25
16	16	Gorkha Heritage Site	15-APR-24	31-AUG-25
17	17	Rara Lake Conservation	15-MAY-24	30-SEP-25
18	18	Ilam Tea Gardens	15-JUN-24	31-OCT-25
19	19	Dolakha Hydro Project	15-JUL-24	30-NOV-25
20	20	Bardiya Wildlife Sanctuary	15-AUG-24	31-DEC-25
21	21	Vietnam Mai project	15-AUG-24	31-DEC-25

Figure 30: Project Table select statements

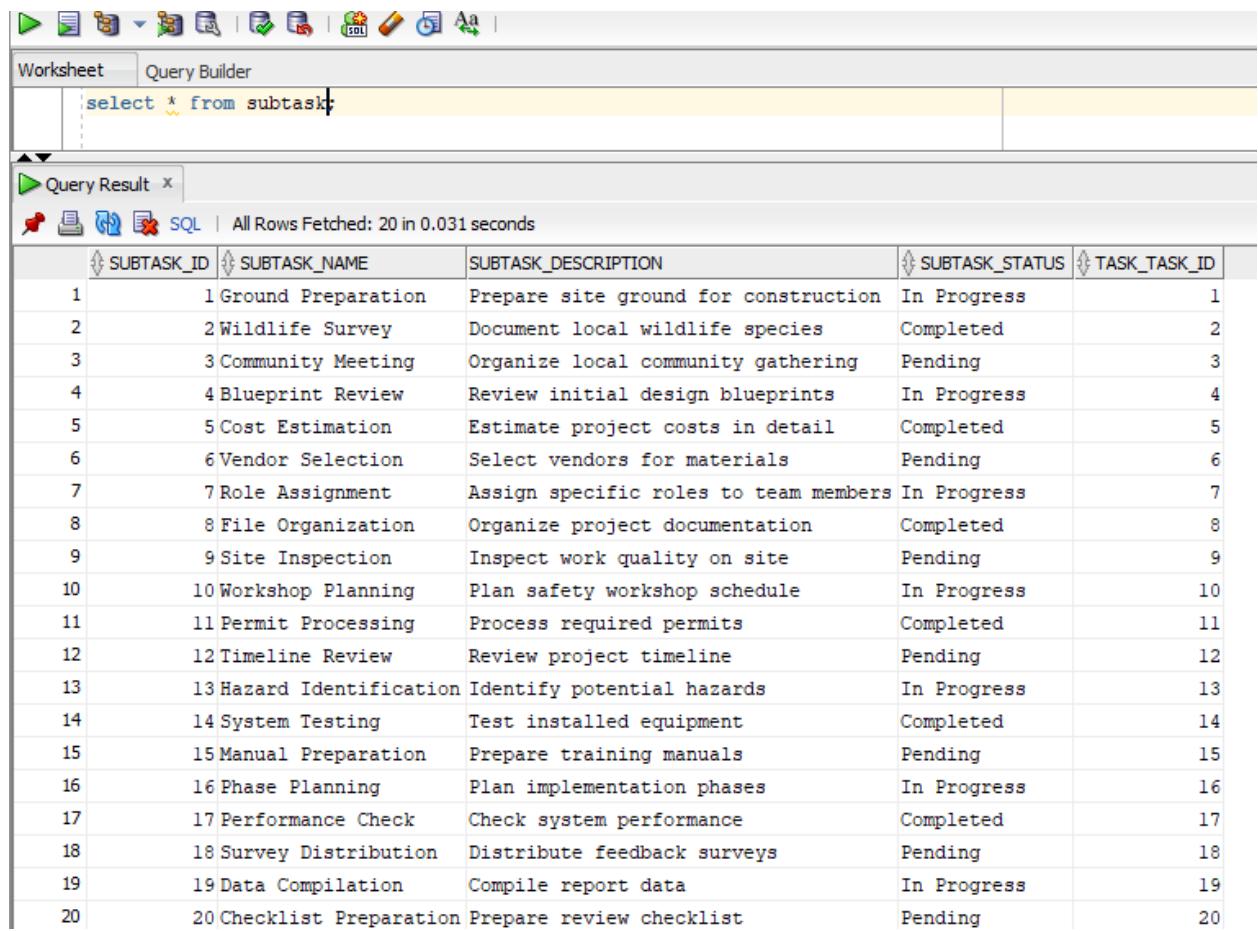
### 8.3.5 Resources Table

The screenshot shows a database interface with two tabs: 'Worksheet' and 'Query Builder'. In the 'Worksheet' tab, the SQL query `select * from resources;` is entered. Below the query, the 'Query Result' tab is active, displaying the output of the query. The result is a table with four columns: RESOURCE\_ID, RESOURCE\_NAME, RESOURCE\_TYPE, and TASK\_TASK\_ID. The table contains 20 rows of data.

RESOURCE_ID	RESOURCE_NAME	RESOURCE_TYPE	TASK_TASK_ID
1	1 Excavator	Heavy Equipment	1
2	2 Survey Equipment	Technical Tool	2
3	3 Safety Gear	Safety Equipment	3
4	4 Construction Materials	Building Material	4
5	5 Computer Systems	Technical Equipment	5
6	6 Transport Vehicles	Vehicle	6
7	7 Communication Devices	Electronics	7
8	8 Office Supplies	Stationery	8
9	9 Testing Equipment	Technical Tool	9
10	10 Training Materials	Educational Resource	10
11	11 Power Generator	Power Equipment	11
12	12 Monitoring Tools	Technical Tool	12
13	13 First Aid Kits	Safety Equipment	13
14	14 Documentation Tools	Office Equipment	14
15	15 Storage Units	Infrastructure	15
16	16 Quality Control Tools	Technical Tool	16
17	17 Networking Equipment	Technical Equipment	17
18	18 Measurement Tools	Technical Tool	18
19	19 Presentation Equipment	Office Equipment	19
20	20 Maintenance Tools	Technical Tool	20

Figure 31: Resource table select statement

### 8.3.6 Subtask

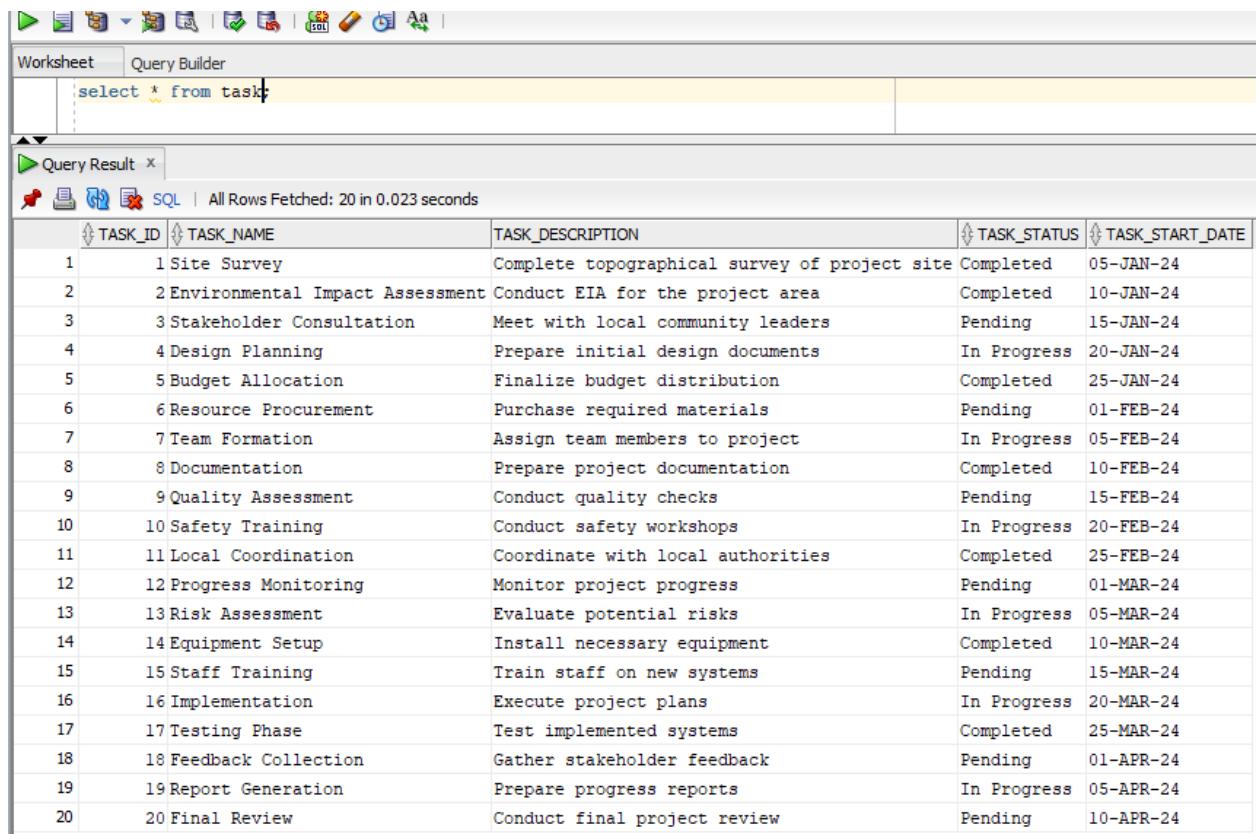


The screenshot shows a database interface with a toolbar at the top and two main panes below. The top pane is titled 'Worksheet' and contains a SQL query: 'select \* from subtask;'. The bottom pane is titled 'Query Result' and displays the results of the query in a grid format. The grid has columns labeled: SUBTASK\_ID, SUBTASK\_NAME, SUBTASK\_DESCRIPTION, SUBTASK\_STATUS, and TASK\_TASK\_ID. The data consists of 20 rows, each representing a subtask with its ID, name, description, status, and associated task ID.

SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
1	1 Ground Preparation	Prepare site ground for construction	In Progress	1
2	2 Wildlife Survey	Document local wildlife species	Completed	2
3	3 Community Meeting	Organize local community gathering	Pending	3
4	4 Blueprint Review	Review initial design blueprints	In Progress	4
5	5 Cost Estimation	Estimate project costs in detail	Completed	5
6	6 Vendor Selection	Select vendors for materials	Pending	6
7	7 Role Assignment	Assign specific roles to team members	In Progress	7
8	8 File Organization	Organize project documentation	Completed	8
9	9 Site Inspection	Inspect work quality on site	Pending	9
10	10 Workshop Planning	Plan safety workshop schedule	In Progress	10
11	11 Permit Processing	Process required permits	Completed	11
12	12 Timeline Review	Review project timeline	Pending	12
13	13 Hazard Identification	Identify potential hazards	In Progress	13
14	14 System Testing	Test installed equipment	Completed	14
15	15 Manual Preparation	Prepare training manuals	Pending	15
16	16 Phase Planning	Plan implementation phases	In Progress	16
17	17 Performance Check	Check system performance	Completed	17
18	18 Survey Distribution	Distribute feedback surveys	Pending	18
19	19 Data Compilation	Compile report data	In Progress	19
20	20 Checklist Preparation	Prepare review checklist	Pending	20

Figure 32: Subtask table select statements

### 8.3.7 Task Table



The screenshot shows a database interface with a toolbar at the top and two main panes below. The top pane is titled 'Worksheet' and contains a SQL query: 'select \* from task;'. The bottom pane is titled 'Query Result' and displays a table with 20 rows of task data. The table has columns: TASK\_ID, TASK\_NAME, TASK\_DESCRIPTION, TASK\_STATUS, and TASK\_START\_DATE.

TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
1	1 Site Survey	Complete topographical survey of project site	Completed	05-JAN-24
2	2 Environmental Impact Assessment	Conduct EIA for the project area	Completed	10-JAN-24
3	3 Stakeholder Consultation	Meet with local community leaders	Pending	15-JAN-24
4	4 Design Planning	Prepare initial design documents	In Progress	20-JAN-24
5	5 Budget Allocation	Finalize budget distribution	Completed	25-JAN-24
6	6 Resource Procurement	Purchase required materials	Pending	01-FEB-24
7	7 Team Formation	Assign team members to project	In Progress	05-FEB-24
8	8 Documentation	Prepare project documentation	Completed	10-FEB-24
9	9 Quality Assessment	Conduct quality checks	Pending	15-FEB-24
10	10 Safety Training	Conduct safety workshops	In Progress	20-FEB-24
11	11 Local Coordination	Coordinate with local authorities	Completed	25-FEB-24
12	12 Progress Monitoring	Monitor project progress	Pending	01-MAR-24
13	13 Risk Assessment	Evaluate potential risks	In Progress	05-MAR-24
14	14 Equipment Setup	Install necessary equipment	Completed	10-MAR-24
15	15 Staff Training	Train staff on new systems	Pending	15-MAR-24
16	16 Implementation	Execute project plans	In Progress	20-MAR-24
17	17 Testing Phase	Test implemented systems	Completed	25-MAR-24
18	18 Feedback Collection	Gather stakeholder feedback	Pending	01-APR-24
19	19 Report Generation	Prepare progress reports	In Progress	05-APR-24
20	20 Final Review	Conduct final project review	Pending	10-APR-24

Figure 33: Task Table select statement

### 8.3.8 User Project Task Table

The screenshot shows the MySQL Workbench interface. The 'Worksheet' tab is active, displaying the SQL query: 'select \* from user\_project\_task;'. Below it, the 'Query Result' tab is active, showing the execution status: 'All Rows Fetched: 30 in 0.028 seconds'. The results are presented in a table with three columns: USERS\_USER\_ID, TASK\_TASK\_ID, and PROJECT\_PROJECT\_ID. The data consists of 30 rows, each mapping a user ID to a task ID and a project ID.

	USERS_USER_ID	TASK_TASK_ID	PROJECT_PROJECT_ID
1	1	1	1
2	1	2	11
3	2	2	1
4	2	3	12
5	3	3	2
6	3	4	13
7	4	4	2
8	4	5	14
9	5	5	3
10	5	6	15
11	6	6	3
12	6	7	16
13	7	7	4
14	7	8	17
15	8	8	4
16	~	~	~

Figure 34: User Project Task Table

### 8.3.9 User Task Comment Table

The screenshot shows the Oracle SQL Developer interface. The top window is titled 'Worksheet' and contains the SQL query: 'select \* from user\_task\_comment;'. Below it is the 'Query Result' window, which displays the table structure and data. The table has three columns: COMMENT\_COMMENT\_ID, USERS\_USER\_ID, and TASK\_TASK\_ID. The data shows 16 rows of comments, each linking a comment ID to a user ID and a task ID.

COMMENT_COMMENT_ID	USERS_USER_ID	TASK_TASK_ID
1	1	1
2	1	1
3	2	2
4	2	2
5	3	3
6	3	3
7	4	4
8	4	4
9	5	5
10	5	5
11	6	6
12	6	6
13	7	7
14	7	7
15	8	8
16	8	8

Figure 35: User Task Comment Table

## 9 Form

### 9.1 Home Page

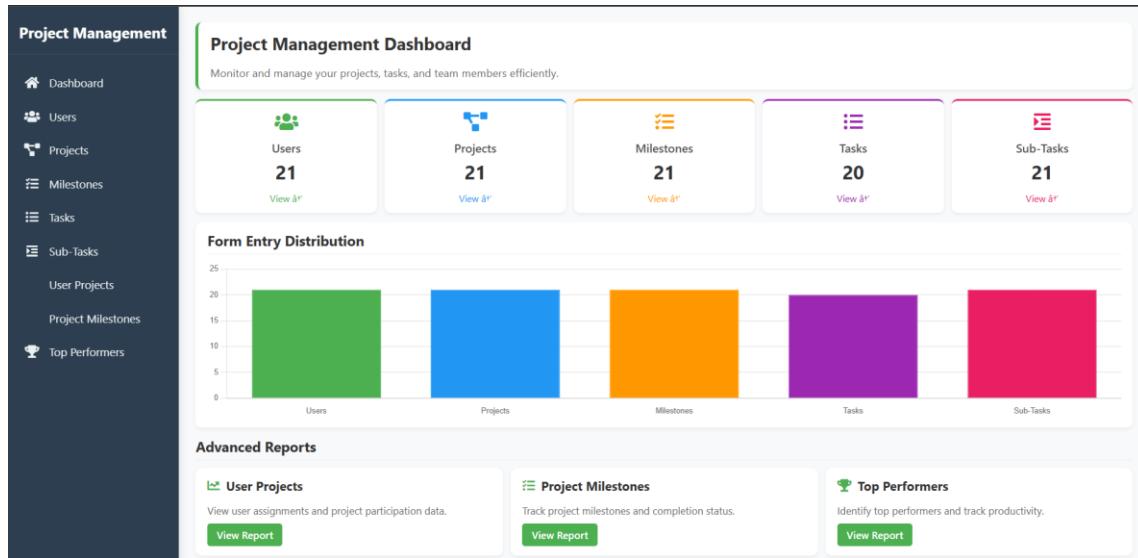


Figure 36: Home Page

### 9.2 Basic Web Forms

#### 9.2.1 Users Page

User Management				
ACTIONS	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<a href="#">Edit</a> <a href="#">Delete</a>	1	Aarav Sharma	aarav.sharma@gmail.com	977-9841234567
<a href="#">Edit</a> <a href="#">Delete</a>	2	Priya Adhikari	priya.adhikari@gmail.com	977-9851234568
<a href="#">Edit</a> <a href="#">Delete</a>	3	Rajesh Thapa	rajesh.thapa@gmail.com	977-9861234569
<a href="#">Edit</a> <a href="#">Delete</a>	4	Sita Bhattarai	sita.bhattarai@gmail.com	977-9871234570
<a href="#">Edit</a> <a href="#">Delete</a>	5	Bikash Poudel	bikash.poudel@gmail.com	977-9881234571
<a href="#">Edit</a> <a href="#">Delete</a>	6	Anjali Karki	anjali.karki@gmail.com	977-9891234572
<a href="#">Edit</a> <a href="#">Delete</a>	7	Dipesh Gurung	dipesh.gurung@gmail.com	977-9841234573
<a href="#">Edit</a> <a href="#">Delete</a>	8	Sarita Tamang	sarita.tamang@gmail.com	977-9851234574
<a href="#">Edit</a> <a href="#">Delete</a>	9	Mahesh Shrestha	mahesh.shrestha@gmail.com	977-9861234575
<a href="#">Edit</a> <a href="#">Delete</a>	10	Nisha Rai	nisha.rai@gmail.com	977-9871234576
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				

Figure 37: User web form

## 9.2.2 Project Page

Project Management				
Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<button>Edit</button> <button>Delete</button>	1	Kathmandu Metro Development	1/1/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	2	Pokhara Smart City Initiative	2/1/2024 12:00:00 AM	6/30/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	3	Chitwan Conservation Project	3/1/2024 12:00:00 AM	9/30/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	4	Lumbini Heritage Preservation	4/1/2024 12:00:00 AM	8/31/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	5	Everest Base Camp Infrastructure	5/1/2024 12:00:00 AM	10/31/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	6	Bhaktapur Temple Restoration	6/1/2024 12:00:00 AM	11/30/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	7	Mustang Wind Power Plant	7/1/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	8	Terai Agriculture Development	8/1/2024 12:00:00 AM	7/31/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	9	Pashupatinath Temple Complex	9/1/2024 12:00:00 AM	8/31/2025 12:00:00 AM
<button>Edit</button> <button>Delete</button>	10	Annapurna Conservation	10/1/2024 12:00:00 AM	9/30/2025 12:00:00 AM

1 2 3

Figure 38: Project web form

## 9.2.3 Task Page

Task Management					
Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<button>Edit</button> <button>Delete</button>	1	Site Survey	Complete topographical survey of project site	Completed	1/5/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	2	Environmental Impact Assessment	Conduct EIA for the project area	Completed	1/10/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	3	Stakeholder Consultation	Meet with local community leaders	Pending	1/15/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	4	Design Planning	Prepare initial design documents	In Progress	1/20/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	5	Budget Allocation	Finalize budget distribution	Completed	1/25/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	6	Resource Procurement	Purchase required materials	Pending	2/1/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	7	Team Formation	Assign team members to project	In Progress	2/5/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	8	Documentation	Prepare project documentation	Completed	2/10/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	9	Quality Assessment	Conduct quality checks	Pending	2/15/2024 12:00:00 AM
<button>Edit</button> <button>Delete</button>	10	Safety Training	Conduct safety workshops	In Progress	2/20/2024 12:00:00 AM

1 2

Figure 39: Task web form

### 9.2.4 Sub task Page

SubTask Management						
Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID	
<a href="#">Edit</a> <a href="#">Delete</a>	1	Ground Preparation	Prepare site ground for construction	In Progress	1	
<a href="#">Edit</a> <a href="#">Delete</a>	2	Wildlife Survey	Document local wildlife species	Completed	2	
<a href="#">Edit</a> <a href="#">Delete</a>	3	Community Meeting	Organize local community gathering	Pending	3	
<a href="#">Edit</a> <a href="#">Delete</a>	4	Blueprint Review	Review initial design blueprints	In Progress	4	
<a href="#">Edit</a> <a href="#">Delete</a>	5	Cost Estimation	Estimate project costs in detail	Completed	5	
<a href="#">Edit</a> <a href="#">Delete</a>	6	Vendor Selection	Select vendors for materials	Pending	6	
<a href="#">Edit</a> <a href="#">Delete</a>	7	Role Assignment	Assign specific roles to team members	In Progress	7	
<a href="#">Edit</a> <a href="#">Delete</a>	8	File Organization	Organize project documentation	Completed	8	
<a href="#">Edit</a> <a href="#">Delete</a>	9	Site Inspection	Inspect work quality on site	Pending	9	
<a href="#">Edit</a> <a href="#">Delete</a>	10	Workshop Planning	Plan safety workshop schedule	In Progress	10	

Figure 40: Subtask webform

### 9.2.5 Milestone Page

Milestone Management						
Actions	MILESTONE_ID	MILESTONE_NAME	MILESTONE_DESCRIPTION	MILESTONE_DUE_DATE	PROJECT_PROJECT_ID	
<a href="#">Edit</a> <a href="#">Delete</a>	1	Project Initiation	Official project start	1/15/2024 12:00:00 AM	1	
<a href="#">Edit</a> <a href="#">Delete</a>	2	Environmental Clearance	Environmental approval obtained	2/15/2024 12:00:00 AM	2	
<a href="#">Edit</a> <a href="#">Delete</a>	3	Community Approval	Community endorsement received	3/15/2024 12:00:00 AM	3	
<a href="#">Edit</a> <a href="#">Delete</a>	4	Design Completion	Final design approved	4/15/2024 12:00:00 AM	4	
<a href="#">Edit</a> <a href="#">Delete</a>	5	Budget Approval	Budget plan approved	5/15/2024 12:00:00 AM	5	
<a href="#">Edit</a> <a href="#">Delete</a>	6	Resource Acquisition	All resources acquired	6/15/2024 12:00:00 AM	6	
<a href="#">Edit</a> <a href="#">Delete</a>	7	Team Assembly	Project team assembled	7/15/2024 12:00:00 AM	7	
<a href="#">Edit</a> <a href="#">Delete</a>	8	Documentation Complete	All documents finalized	8/15/2024 12:00:00 AM	8	
<a href="#">Edit</a> <a href="#">Delete</a>	9	Quality Certification	Quality standards met	9/15/2024 12:00:00 AM	9	
<a href="#">Edit</a> <a href="#">Delete</a>	10	Safety Compliance	Safety standards achieved	10/15/2024 12:00:00 AM	10	

Figure 41: Milestone page

### 9.3 Complex web Form and Queries

#### 9.3.1 User Project

- **Query**

```
SELECT p.project_id, p.project_name, p.start_date, p.end_date  
FROM project p  
JOIN user_project_task upt ON p.project_id = upt.project_project_id  
JOIN users u ON upt.users_user_id = u.user_id  
WHERE u.user_id =: user_id
```

- **Complex Form**

The screenshot shows a web application interface titled "Complex Form". At the top, there is a dropdown menu containing the text "Aarav Sharma". Below the dropdown is a table with four columns: "PROJECT\_ID", "PROJECT\_NAME", "START\_DATE", and "END\_DATE". The table contains two rows of data:

PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
1	Kathmandu Metro Development	1/1/2024 12:00:00 AM	12/31/2025 12:00:00 AM
11	Janakpur Development Plan	11/1/2024 12:00:00 AM	10/31/2025 12:00:00 AM

Figure 42: Complex form User Project

### 9.3.2 Project Milestone

- **Query**

```
SELECT p.PROJECT_ID, p.PROJECT_NAME, m.MILESTONE_ID,  
m.MILESTONE_NAME, m.MILESTONE_DESCRIPTION,  
m.MILESTONE_DUE_DATE FROM PROJECT p, MILESTONE m WHERE  
p.PROJECT_ID = m.PROJECT_PROJECT_ID AND (p.PROJECT_ID =  
:product)
```

- **Complex Form**

The screenshot shows a user interface for a 'Complex Form 2'. At the top, there is a dropdown menu containing the text 'Pashupatinath Temple Complex'. Below the dropdown is a table with the following data:

PROJECT_ID	PROJECT_NAME	MILESTONE_ID	MILESTONE_NAME	MILESTONE_DESCRIPTION	MILESTONE_DUE_DATE
9	Pashupatinath Temple Complex	9	Quality Certification	Quality standards met	9/15/2024 12:00:00 AM

Figure 43: Complex form User Milestone

### 9.3.3 Top Performer

- **Query**

```
SELECT * FROM (SELECT u.user_id, u.user_name, COUNT(*) AS completed_tasks FROM user_project_task upt JOIN task t ON upt.task_task_id = t.task_id JOIN users u ON upt.users_user_id = u.user_id WHERE t.task_status = 'Completed' AND upt.project_project_id =:project_id GROUP BY u.user_id, u.user_name ORDER BY completed_tasks DESC) top_users WHERE ROWNUM<= 3
```

- **Complex Form**

Top Performers		
<input style="width: 100%; height: 100%; border: none; background-color: #f0f0f0; padding: 5px; margin-bottom: 5px;" type="button" value="Kathmandu Metro Development"/>		
USER_ID	USER_NAME	COMPLETED_TASKS
2	Priya Adhikari	1
1	Aarav Sharma	1

## 10 User Manual

The Dashboard page from where we can navigate to different pages to perform the operations

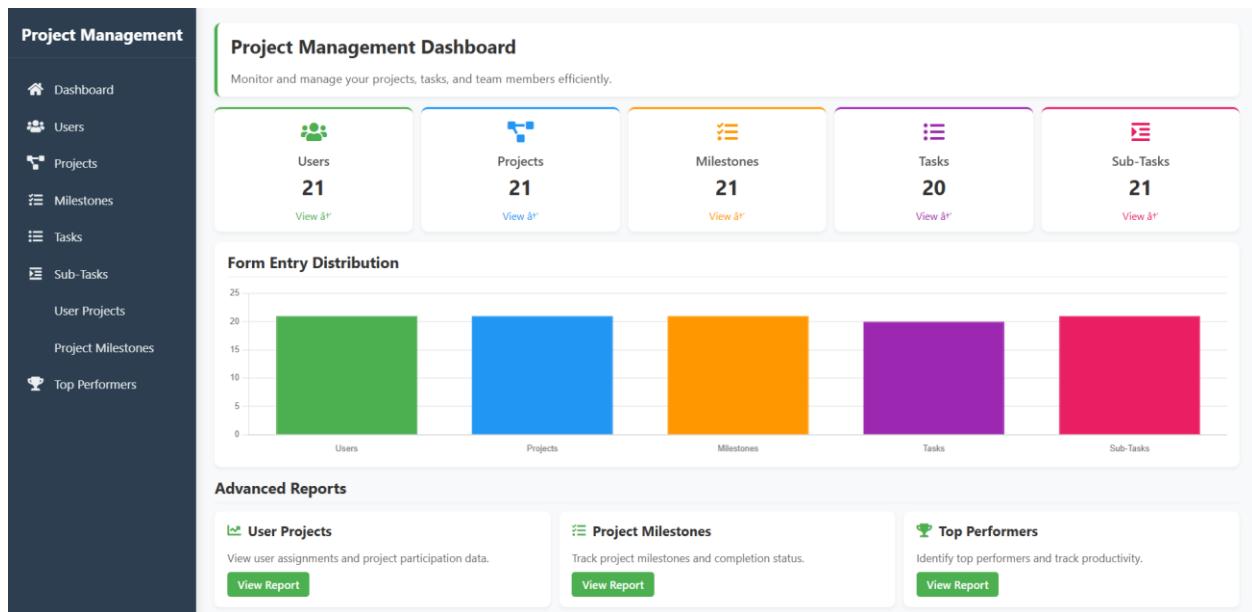


Figure 44: Dashboard

Now when we click on the view all in the Users, we go to the Users Page where we can perform all kinds of Curd Operations

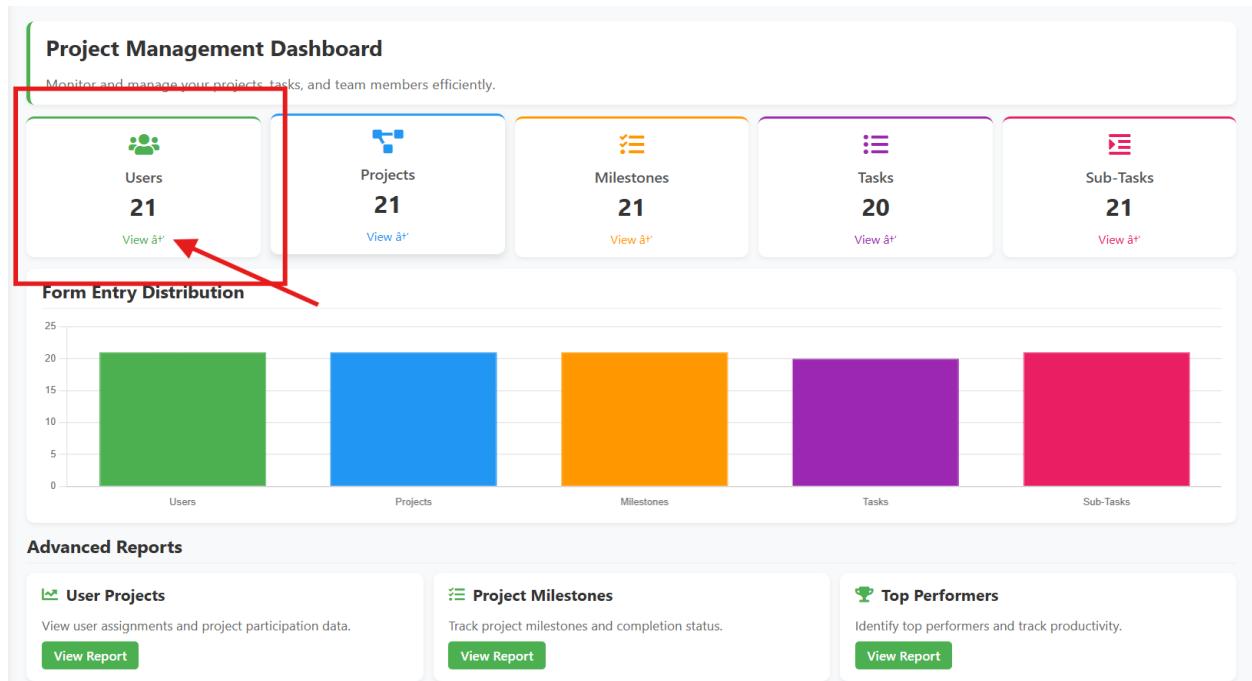


Figure 45: Dashboard to User page

We land on the User page

User Management				
ACTIONS	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<a href="#">Edit</a> <a href="#">Delete</a>	1	Aarav Sharma	aarav.sharma@gmail.com	977-9841234567
<a href="#">Edit</a> <a href="#">Delete</a>	2	Priya Adhikari	priya.adhikari@gmail.com	977-9851234568
<a href="#">Edit</a> <a href="#">Delete</a>	3	Rajesh Thapa	rajesh.thapa@gmail.com	977-9861234569
<a href="#">Edit</a> <a href="#">Delete</a>	4	Sita Bhattarai	sita.bhattarai@gmail.com	977-9871234570
<a href="#">Edit</a> <a href="#">Delete</a>	5	Bikash Poudel	bikash.poudel@gmail.com	977-9881234571
<a href="#">Edit</a> <a href="#">Delete</a>	6	Anjali Karki	anjali.karki@gmail.com	977-9891234572
<a href="#">Edit</a> <a href="#">Delete</a>	7	Dipesh Gurung	dipesh.gurung@gmail.com	977-9841234573
<a href="#">Edit</a> <a href="#">Delete</a>	8	Sarita Tamang	sarita.tamang@gmail.com	977-9851234574
<a href="#">Edit</a> <a href="#">Delete</a>	9	Mahesh Shrestha	mahesh.shrestha@gmail.com	977-9861234575
<a href="#">Edit</a> <a href="#">Delete</a>	10	Nisha Rai	nisha.rai@gmail.com	977-9871234576

1 2 3

[Add New User](#)

Figure 46: User Page

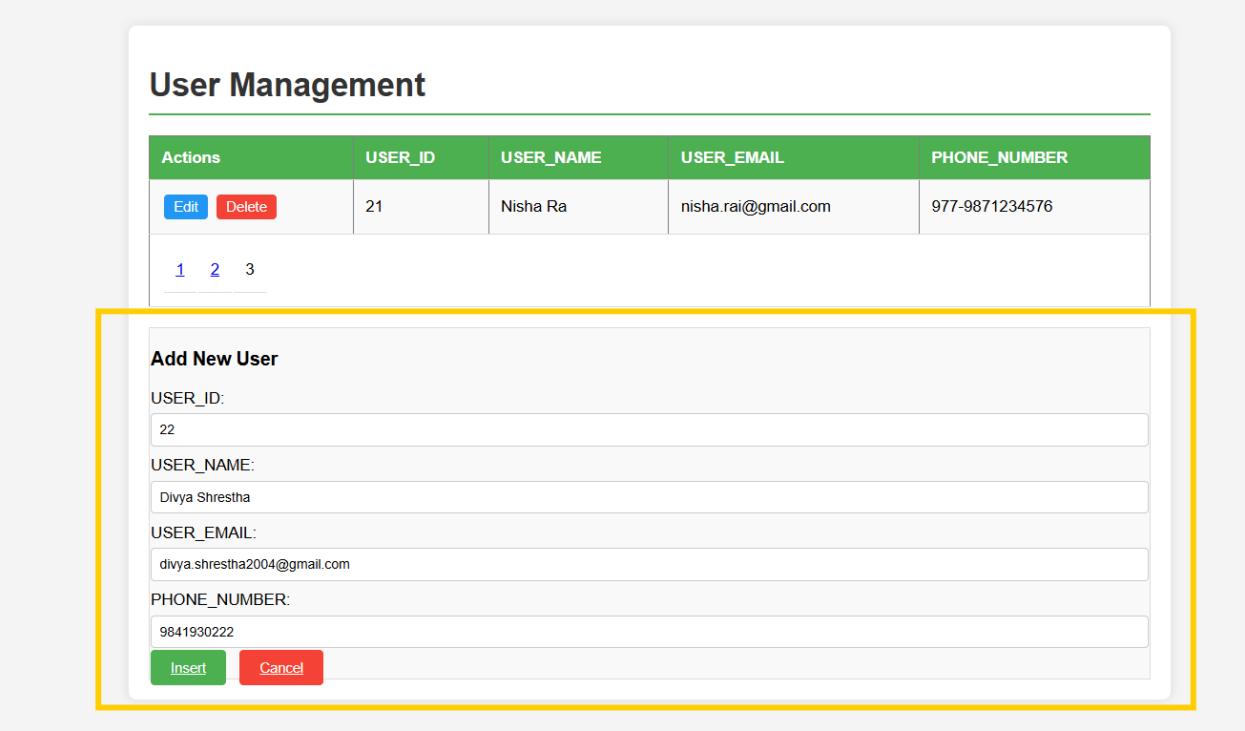
User Management				
ACTIONS	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<a href="#">Edit</a> <a href="#">Delete</a>	1	Aarav Sharma	aarav.sharma@gmail.com	977-9841234567
<a href="#">Edit</a> <a href="#">Delete</a>	2	Priya Adhikari	priya.adhikari@gmail.com	977-9851234568
<a href="#">Edit</a> <a href="#">Delete</a>	3	Rajesh Thapa	rajesh.thapa@gmail.com	977-9861234569
<a href="#">Edit</a> <a href="#">Delete</a>	4	Sita Bhattarai	sita.bhattarai@gmail.com	977-9871234570
<a href="#">Edit</a> <a href="#">Delete</a>	5	Bikash Poudel	bikash.poudel@gmail.com	977-9881234571
<a href="#">Edit</a> <a href="#">Delete</a>	6	Anjali Karki	anjali.karki@gmail.com	977-9891234572
<a href="#">Edit</a> <a href="#">Delete</a>	7	Dipesh Gurung	dipesh.gurung@gmail.com	977-9841234573
<a href="#">Edit</a> <a href="#">Delete</a>	8	Sarita Tamang	sarita.tamang@gmail.com	977-9851234574
<a href="#">Edit</a> <a href="#">Delete</a>	9	Mahesh Shrestha	mahesh.shrestha@gmail.com	977-9861234575
<a href="#">Edit</a> <a href="#">Delete</a>	10	Nisha Rai	nisha.rai@gmail.com	977-9871234576

1 2 3

[Add New User](#)

Figure 47: Add Users

Now add in a user just like this



The screenshot shows a 'User Management' application. At the top, there is a table with columns: Actions, USER\_ID, USER\_NAME, USER\_EMAIL, and PHONE\_NUMBER. A single row is visible with values: Edit, Delete, 21, Nisha Ra, nisha.rai@gmail.com, and 977-9871234576. Below the table are page navigation links (1, 2, 3). A yellow box highlights a modal window titled 'Add New User'. This modal contains four input fields: USER\_ID (22), USER\_NAME (Divya Shrestha), USER\_EMAIL (divya.shrestha2004@gmail.com), and PHONE\_NUMBER (9841930222). It also features two buttons: 'Insert' (green) and 'Cancel' (red).

Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
Edit    Delete	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576

[1](#) [2](#) [3](#)

**Add New User**

USER\_ID:  
22

USER\_NAME:  
Divya Shrestha

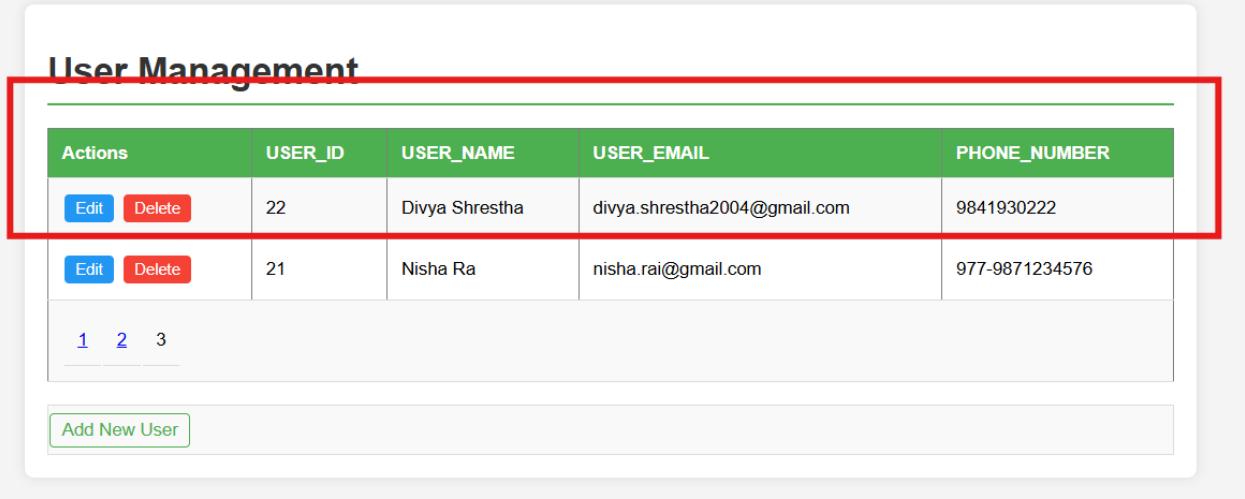
USER\_EMAIL:  
divya.shrestha2004@gmail.com

PHONE\_NUMBER:  
9841930222

**Insert** **Cancel**

Figure 48: Add User

The User is now added



The screenshot shows the same 'User Management' application after a new user has been added. The table now includes a second row with the following data: Edit, Delete, 22, Divya Shrestha, divya.shrestha2004@gmail.com, and 9841930222. The rest of the interface remains the same, including the navigation links below the table and the 'Add New User' button at the bottom.

Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
Edit    Delete	22	Divya Shrestha	divya.shrestha2004@gmail.com	9841930222
Edit    Delete	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576

[1](#) [2](#) [3](#)

**Add New User**

Figure 49: New User added

Update User by Clicking the Edit button

User Management				
Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<button>Update</button> <button>Cancel</button>	22	Divya Shrestha	divya.shrestha2004@gmail.com	977-9841930222
<button>Edit</button> <button>Delete</button>	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New User</a>				

Figure 50: User update

We add 977- in front of the Phone number

User Management				
Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<button>Edit</button> <button>Delete</button>	22	Divya Shrestha	divya.shrestha2004@gmail.com	977-9841930222
<button>Edit</button> <button>Delete</button>	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New User</a>				

Figure 51: Phone Number edited

Now to delete the User

Click on the Delete button and a pop up must appear! click on Ok button

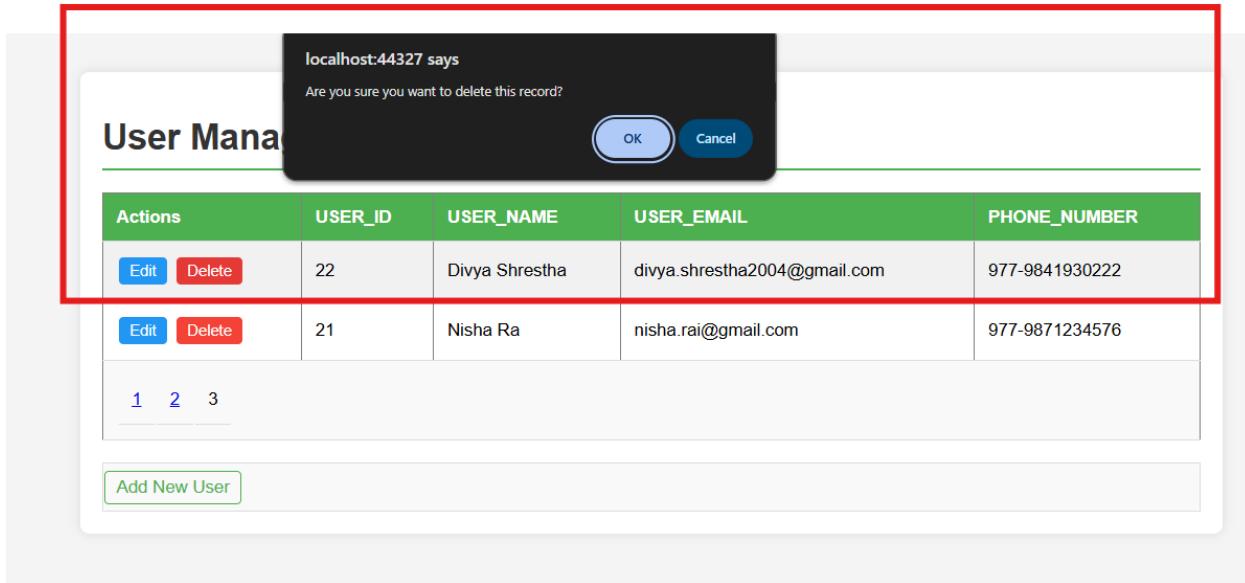


Figure 52: Deleting User

User is deleted Successfully!

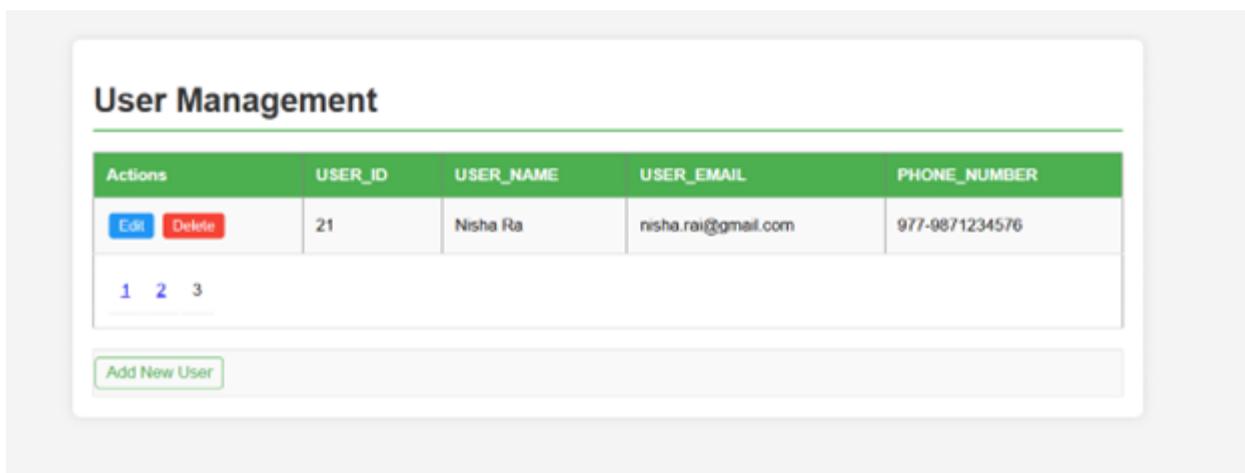


Figure 53: User removed Successfully!

Go back to Dashboard page and now we repeat the same for Projects

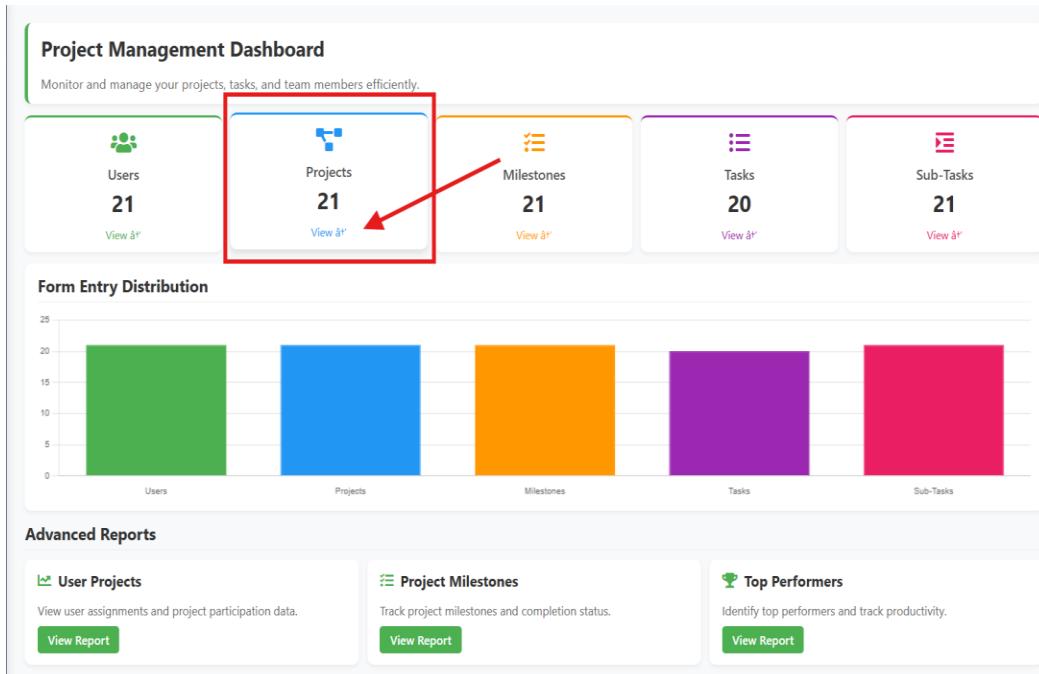


Figure 54: Dashboard to Project

Now add in a user just like this

The interface has a header "Project Management". Below it is a table with columns: Actions, PROJECT\_ID, PROJECT\_NAME, START\_DATE, and END\_DATE. One row is shown:

Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
Edit   Delete	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM

Below the table is a navigation bar with links 1, 2, and 3.

A red box highlights the "Add New Project" section at the bottom:

**Add New Project**

Form fields:

- PROJECT\_ID: 22
- PROJECT\_NAME: Final Sem
- START\_DATE: 05/03/2025
- END\_DATE: 01/06/2025

Buttons: Insert (green), Cancel (red).

Figure 55: Add Project

The Project is Added Successfully!

Project Management				
Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	22	Final Sem	5/3/2025 12:00:00 AM	1/6/2025 12:00:00 AM
1 2 3				
<a href="#">Add New Project</a>				

Figure 56: Project Added

Click on the Edit button to update the project

Project Management				
Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Update</a> <a href="#">Cancel</a>	22	Final Semester	5/3/2025 12:00:00 AM	1/6/2025 12:00:00 AM
1 2 3				
<a href="#">Add New Project</a>				

Figure 57: Edit Project

Project Management				
Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	22	Final Semester	5/3/2025 12:00:00 AM	1/6/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New Project</a>				

Figure 58: Project Edited Successfully!

Now we delete the project, click on the delete button to delete the project

Project Management				
Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	22	Final Semester	5/3/2025 12:00:00 AM	1/6/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New Project</a>				

Figure 59: Delete Project

Project Management				
Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New Project</a>				

Figure 60: Project Deleted Successfully!

Now we do it for the milestone

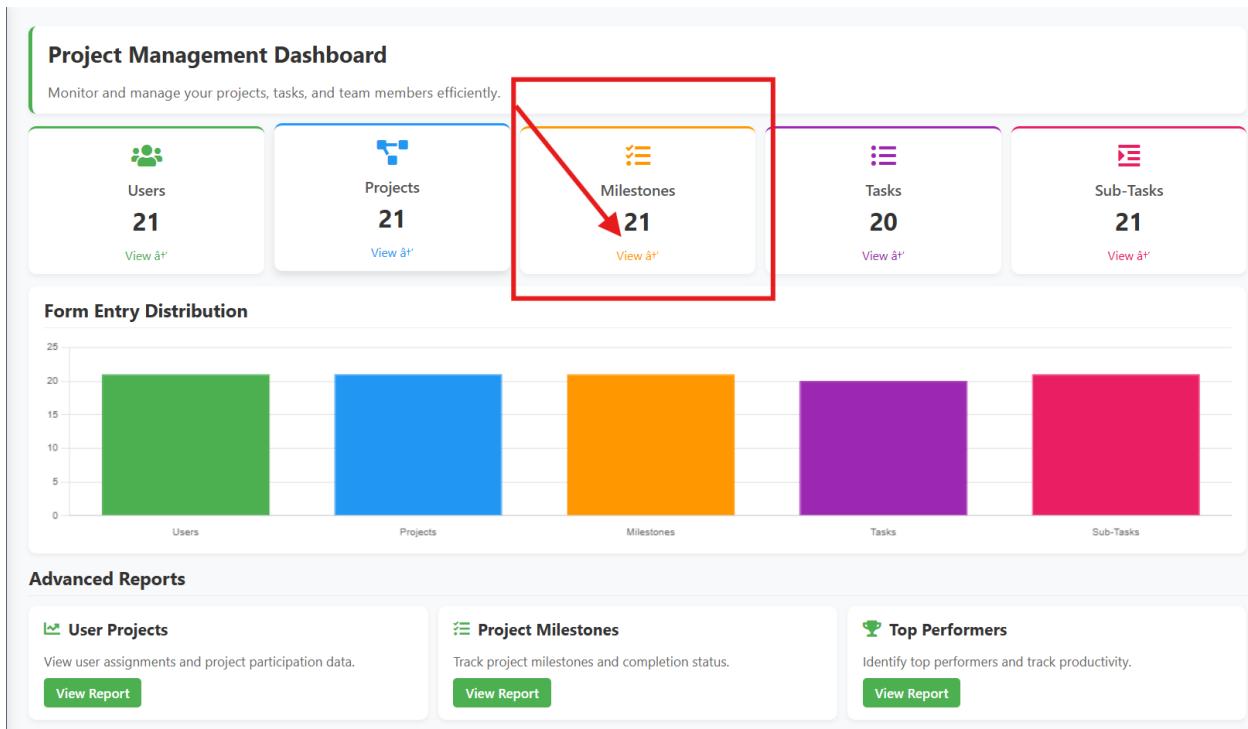


Figure 61: Dashboard-Milestone

Click on the Add Milestone Button to add new Milestone

The "Milestone Management" screen displays a table with columns: Actions, MILESTONE\_ID, MILESTONE\_NAME, MILESTONE\_DESCRIPTION, MILESTONE\_DUE\_DATE, and PROJECT\_PROJECT\_ID. One row is shown with MILESTONE\_ID 21, MILESTONE\_NAME "Testing", MILESTONE\_DESCRIPTION "Risks properly addressed", MILESTONE\_DUE\_DATE "3/15/2025 12:00:00 AM", and PROJECT\_PROJECT\_ID 18. Below the table is a navigation bar with links 1, 2, and 3. A red box highlights the "Add New Milestone" form at the bottom. The form contains fields for MILESTONE\_ID (22), MILESTONE\_NAME (Demonstration), MILESTONE\_DESCRIPTION (Demonstration of project to Investors), MILESTONE\_DUE\_DATE (3/15/2025), and PROJECT\_PROJECT\_ID (Sagarmatha National Park). It includes "Insert" and "Cancel" buttons.

Figure 62: Add new milestone

### New Milestone is added

			Complete			
	17	Testing Completion	All testing finished	5/15/2025 12:00:00 AM	17	
	18	Stakeholder Sign-off	Stakeholder approval received	6/15/2025 12:00:00 AM	18	
	19	Final Documentation	Final reports completed	7/15/2025 12:00:00 AM	19	
	22	Demonstration	Demonstration of project to Investors	3/15/2025 12:00:00 AM	12	
1 2 3						
<a href="#">Add New Milestone</a>						

Figure 63: New Milestone Added

Click on the edit button to edit the milestone

Delete	Update	22	Demonstration	Demonstration of project to	6/1/2025 12:00:00 AM	12
1 2 3						
<a href="#">Add New Milestone</a>						

Figure 64: Edit milestone

### Milestone Edited

Edit	Delete	22	Demonstration	Demonstration of project to Investors	6/1/2025 12:00:00 AM	12
1 2 3						
<a href="#">Add New Milestone</a>						

Figure 65: milestone edited

Click on the Delete button to delete the milestone

A screenshot of a web-based application interface. At the top, there is a navigation bar with the text "Data and Web Development". Below this is a table with data. A modal dialog box is overlaid on the table, centered over the row for milestone 13. The dialog box has a dark background and contains the text "localhost:44327 says" and "Are you sure you want to delete this record?". It features two buttons: "OK" and "Cancel". The table itself has columns for ID (13, 14, 15, 16, 17, 18, 19, 22), Name, Description, Date, and Status. The rows correspond to milestones 13 through 22. Milestone 13 is currently selected. The last row shows page navigation numbers 1, 2, and 3.

	<a href="#">Delete</a>	localhost:44327 says Are you sure you want to delete this record?				
	<a href="#">Edit</a> <a href="#">Delete</a>	13			1/15/2025 12:00:00 AM	13
	<a href="#">Edit</a> <a href="#">Delete</a>	14	System Integration	Systems fully integrated	2/15/2025 12:00:00 AM	14
	<a href="#">Edit</a> <a href="#">Delete</a>	15	Training Completion	All training completed	3/15/2025 12:00:00 AM	15
	<a href="#">Edit</a> <a href="#">Delete</a>	16	Implementation Complete	Full implementation done	4/15/2025 12:00:00 AM	16
	<a href="#">Edit</a> <a href="#">Delete</a>	17	Testing Completion	All testing finished	5/15/2025 12:00:00 AM	17
	<a href="#">Edit</a> <a href="#">Delete</a>	18	Stakeholder Sign-off	Stakeholder approval received	6/15/2025 12:00:00 AM	18
	<a href="#">Edit</a> <a href="#">Delete</a>	19	Final Documentation	Final reports completed	7/15/2025 12:00:00 AM	19
	<a href="#">Edit</a> <a href="#">Delete</a>	22	Demonstration	Demonstration of project to Investors	6/1/2025 12:00:00 AM	12
		1	2	3		

Figure 66: Milestone Deleted

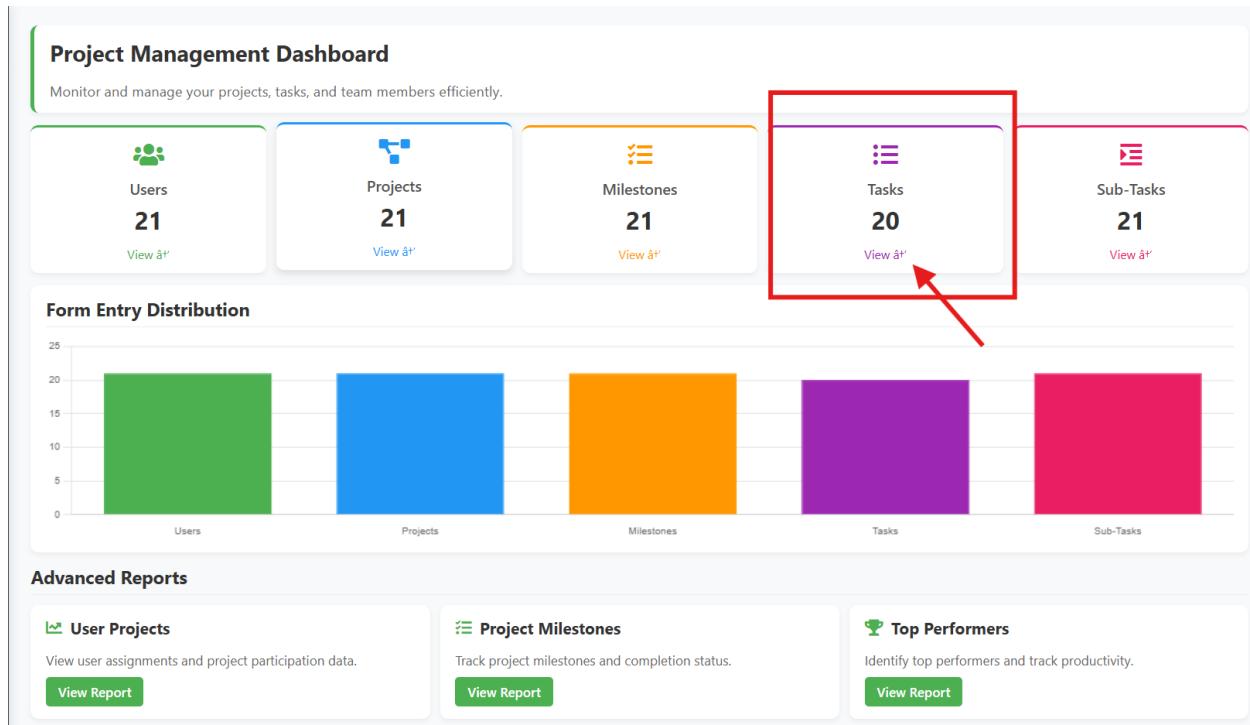


Figure 67: Dashboard Task

Click on add new Task to add task and fill in the details

	Edit	Delete	ID	Name	Description	Status	Start Date
	<a href="#">Edit</a>	<a href="#">Delete</a>	17	Testing Phase	Test implemented systems	Completed	3/25/2024 12:00:00 AM
	<a href="#">Edit</a>	<a href="#">Delete</a>	18	Feedback Collection	Gather stakeholder feedback	Pending	4/1/2024 12:00:00 AM
	<a href="#">Edit</a>	<a href="#">Delete</a>	19	Report Generation	Prepare progress reports	In Progress	4/5/2024 12:00:00 AM
	<a href="#">Edit</a>	<a href="#">Delete</a>	20	Final Review	Conduct final project review	Pending	4/10/2024 12:00:00 AM

1 2 3

**Add New Task**

**TASK\_ID:**

**TASK\_NAME:**

**TASK\_DESCRIPTION:**

**TASK\_STATUS:**

**TASK\_START\_DATE:**

[Insert](#) [Cancel](#)

Figure 68: Add new Task

Task added Successfully!

Task Management					
Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Report Generation	generating report of the final year project	Completed	3/16/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New Task</a>					

Figure 69: Task added successfully

Click on the edit button to edit the task and click on update

Task Management					
Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Update</a> <a href="#">Cancel</a>	21	Report Generation	generating report of the final year project	<input type="text" value="pending"/>	3/16/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New Task</a>					

Figure 70: Updating Task

Task Updated Successfully!

The screenshot shows a "Task Management" application interface. At the top, there is a success message: "Task Updated Successfully!". Below it is a table with the following columns: Actions, TASK\_ID, TASK\_NAME, TASK\_DESCRIPTION, TASK\_STATUS, and TASK\_START\_DATE. A single row is present in the table:

Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Report Generation	generating report of the final year project	pending	3/16/2025 12:00:00 AM

Below the table, there are page navigation links: 1, 2, 3. At the bottom left is a button labeled "Add New Task".

Figure 71: Task Updated Successfully!

Now click on the delete button to delete the task! And click on OK

The screenshot shows a "Task Management" application interface. A confirmation dialog box is overlaid on the page, displaying the message: "localhost:44327 says Are you sure you want to delete this record?". It has two buttons: "OK" and "Cancel". Below the dialog, the table from Figure 71 is visible, showing the same task details. Navigation links 1, 2, 3 and the "Add New Task" button are also present.

Figure 72: Task Deleted Successfully

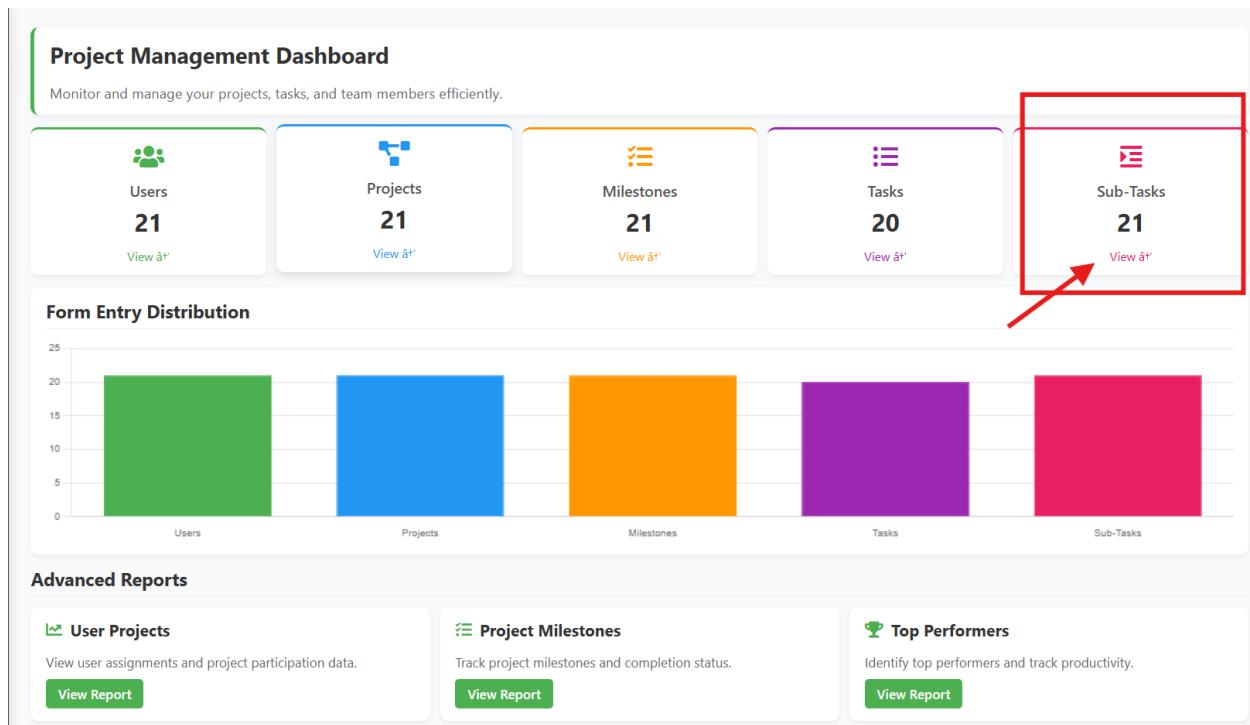


Figure 73: Dashboard to Subtask

Click on add Sub Task to add new Subtask

**Add New SubTask**

SUBTASK\_ID:

SUBTASK\_NAME:

SUBTASK\_DESCRIPTION:

SUBTASK\_STATUS:

TASK\_TASK\_ID:

**Buttons:** [Insert](#) | [Cancel](#)

Figure 74: Add new Subtask

Click on the Edit button to edit Subtask

**SubTask Management**

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Collect Data	Collecting Data	In Progress	1

1 2 3

[Add New SubTask](#)

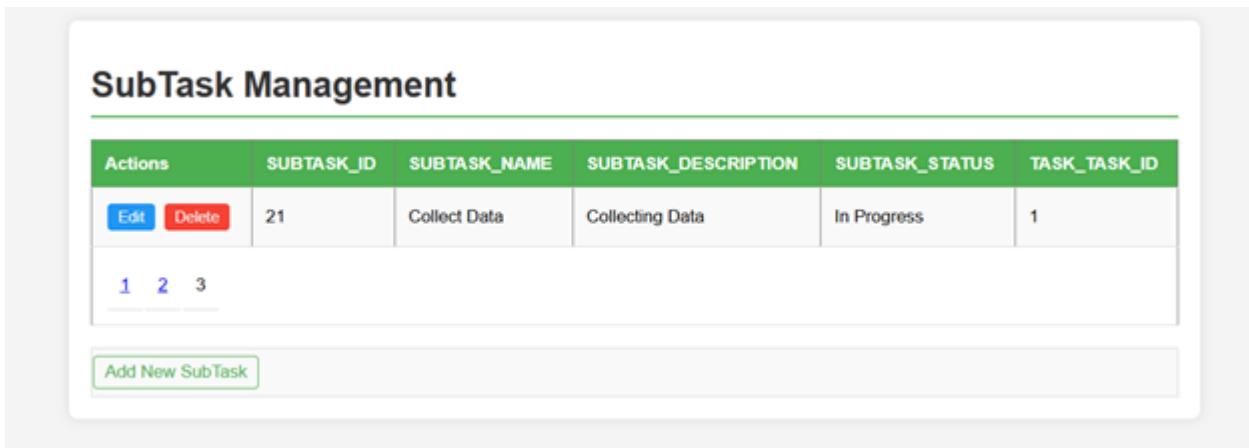


Figure 75: Edit Subtask

Click on update to update it!

**SubTask Management**

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Update</a> <a href="#">Cancel</a>	21	Collect Data	Collecting Data	Complete	1

1 2 3

[Add New SubTask](#)

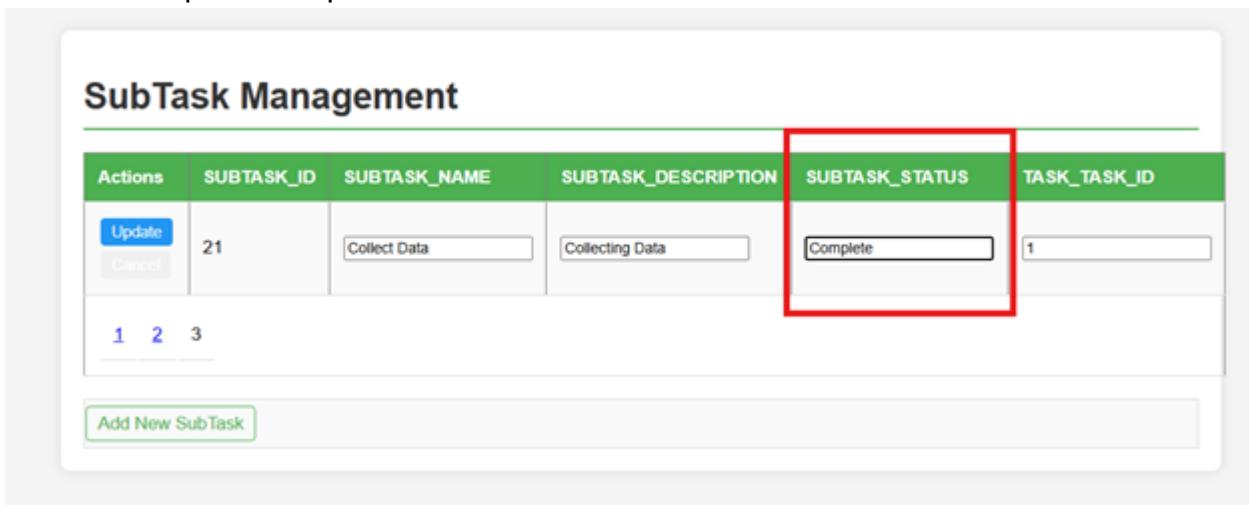
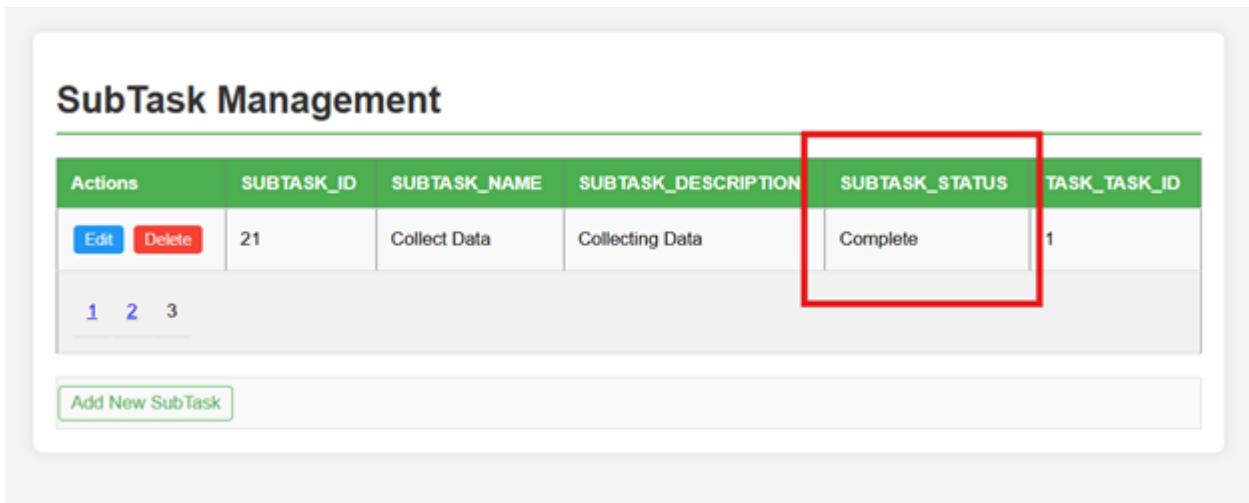


Figure 76: Edit Subtask

Task Edited Successfully!



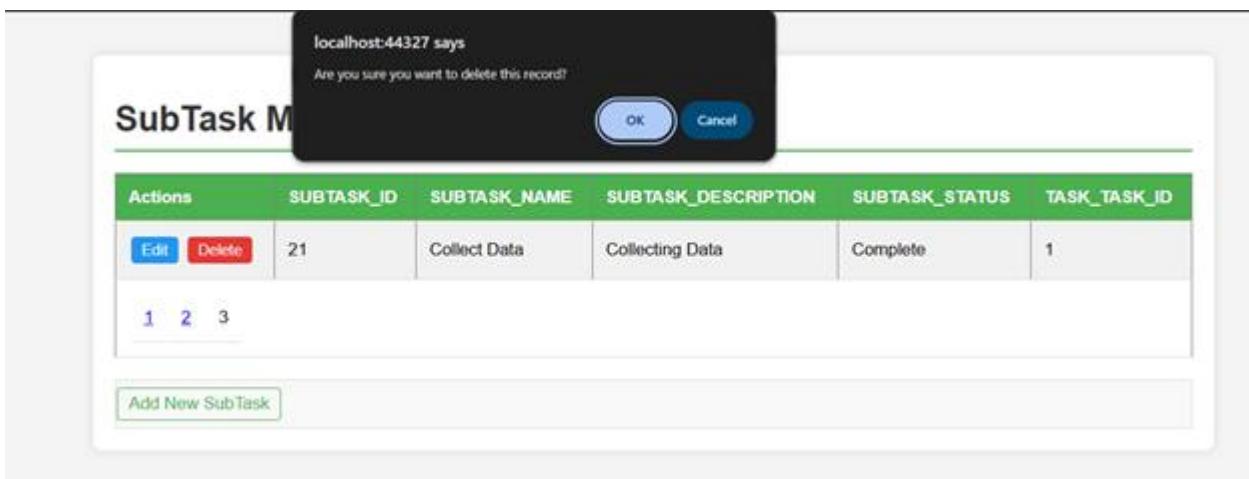
The screenshot shows a web-based SubTask Management application. At the top, a success message "Task Edited Successfully!" is displayed. Below it is a table titled "SubTask Management". The table has columns: Actions, SUBTASK\_ID, SUBTASK\_NAME, SUBTASK\_DESCRIPTION, SUBTASK\_STATUS, and TASK\_TASK\_ID. A row in the table is highlighted with a red border around the "SUBTASK\_STATUS" cell, which contains the value "Complete". Below the table, there are navigation links (1, 2, 3) and a button labeled "Add New SubTask".

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Collect Data	Collecting Data	Complete	1
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					

Add New SubTask

Figure 77: Subtask edited Successfully!

Now click on the Delete Button then press ok to delete the Subtask



The screenshot shows the same SubTask Management application. A modal dialog box is open, displaying a confirmation message from "localhost:44327 says": "Are you sure you want to delete this record?". The dialog has two buttons: "OK" and "Cancel". The background table remains the same, showing the subtask with ID 21 and status "Complete".

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Collect Data	Collecting Data	Complete	1
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					

Add New SubTask

Figure 78: Subtask Deleted Successfully!

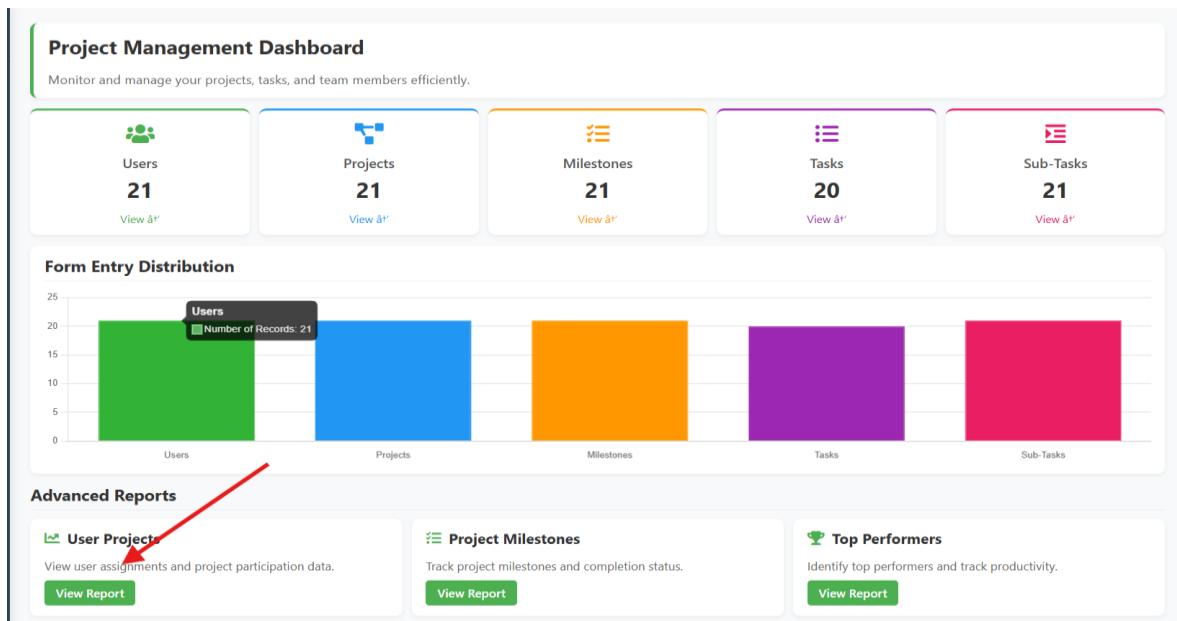


Figure 79: Dashboard User Project

Now Click on any of the User from the Project to show their Projects

**Complex Form**

A dropdown menu on the left lists users: Aarav Sharma, Priya Adhikari, Rajesh Thapa, Sita Chhetri, Bikash Poudel, Anjali Karki, Dipesh Gurung, Santa Tamang, Mahesh Shrestha, Nisha Rai, Sunil KC, Sabina Magar, Bindu Regmi, Gita Neupane, Prakash Basnet, Manisha Limbu, Ramesh Dahal, Kabita Oli, Deepak Chhetri, Sunita Pun. The item "Bikash Poudel" is highlighted with a red box and a red arrow points to it from the text above.

NAME	START_DATE	END_DATE
Chitwan Development	1/1/2024 12:00:00 AM	12/31/2025 12:00:00 AM
Development Plan	11/1/2024 12:00:00 AM	10/31/2025 12:00:00 AM

Figure 80: Select User from the dropdown

**Complex Form**

A dropdown menu on the left lists users: Bikash Poudel. The item "Bikash Poudel" is selected and highlighted with a red box.

PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
3	Chitwan Conservation Project	3/1/2024 12:00:00 AM	9/30/2025 12:00:00 AM
15	Birgunj Trade Hub	3/15/2024 12:00:00 AM	7/31/2025 12:00:00 AM

Figure 81: Project of the specific User

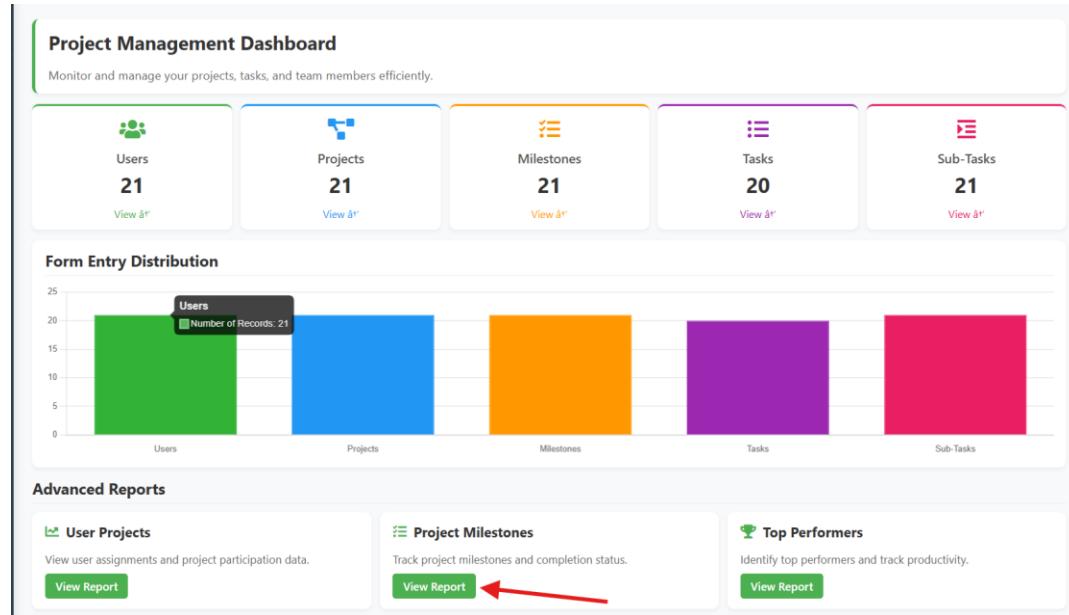


Figure 82: Dashboard to Project Milestone

Select the project from the dropdown and list of projects will be displayed

**Complex Form 2**

A dropdown menu listing various project names:

- Bardiya Wildlife Sanctuary
- Kathmandu Metro Development
- Pokhara Smart City Initiative
- Chitwan Conservation Project
- Lumbini Heritage Preservation
- Everest Base Camp Infrastructure
- Bhaktapur Temple Restoration
- Mustang Wind Power Plant
- Tera Agriculture Development
- Pashupatinath Temple Complex
- Annapurna Conservation
- Janakpur Development Plan
- Sagarmatha National Park
- Butwal Industrial Zone
- Dharan Water Supply
- Birgunj Trade Hub
- Gorkha Heritage Site
- Rara Lake Conservation
- Iam Tea Gardens** (highlighted in blue)
- Dolakha Hydro Project
- Bardiya Wildlife Sanctuary

Figure 83: Project Milestone Dropdown

**Complex Form 2**

PROJECT_ID	PROJECT_NAME	MILESTONE_ID	MILESTONE_NAME	MILESTONE_DESCRIPTION	MILESTONE_DUE_DATE
18	Iam Tea Gardens	18	Stakeholder Sign-off	Stakeholder approval received	6/15/2025 12:00:00 AM
18	Iam Tea Gardens	20	Testing Completion	Risks properly addressed	3/15/2025 12:00:00 AM
18	Iam Tea Gardens	21	Testing	Risks properly addressed	3/15/2025 12:00:00 AM

Figure 84: Project milestones

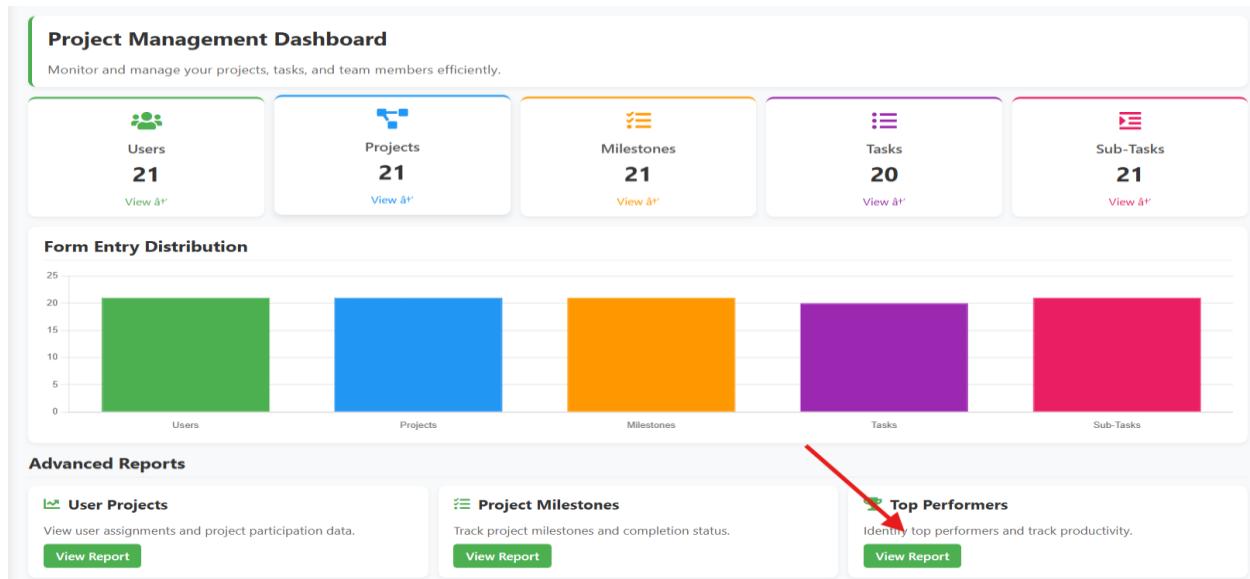


Figure 85: Dashboard Top performer

Select the Project from the dropdown to see the top performer of the project

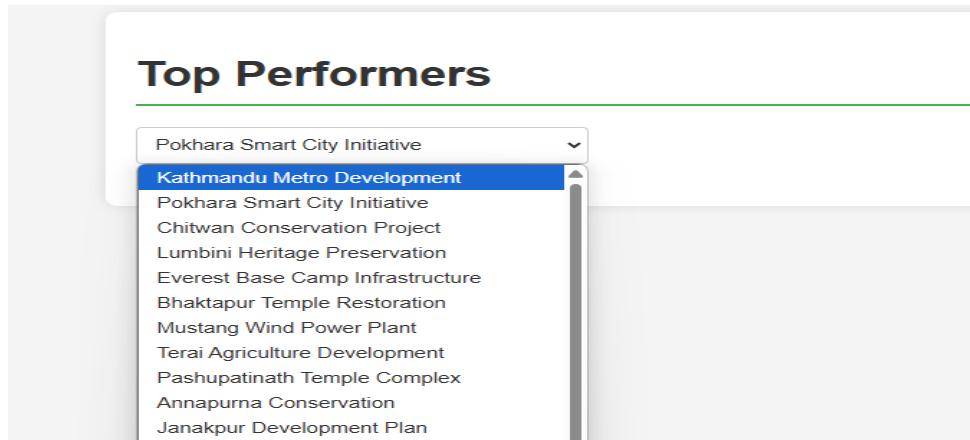


Figure 86: Project Dropdown

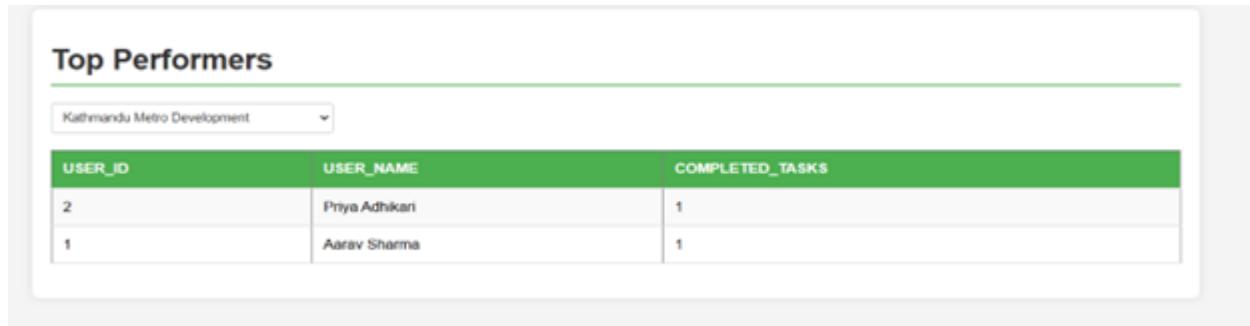


Figure 87: Projects Top performers

## 11 Testing

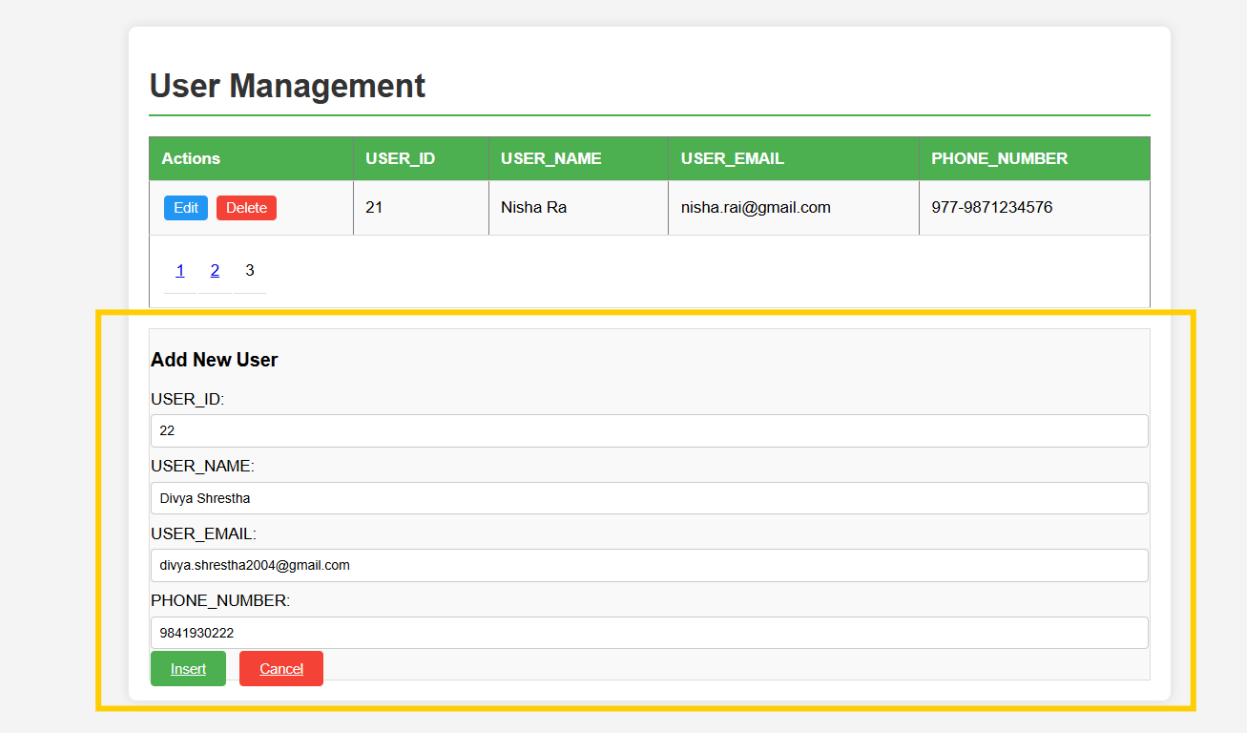
### 11.1 Basic Web Forms

#### 11.1.1 User Web Form

Test no.	1
Objective	CURD Operation on User Form
Action	<ul style="list-style-type: none"> <li>i) Creating a new User           <ul style="list-style-type: none"> <li>➤ Click on “Add New User”</li> <li>➤ Fill in the values               <ul style="list-style-type: none"> <li>○ USER_ID = 22</li> <li>○ USER_NAME = Divya Shrestha</li> <li>○ USER_EMAIL = <a href="mailto:divya.shrestha2004@gmail.com">divya.shrestha2004@gmail.com</a></li> <li>○ PHONE_NUMBER = 9841930222</li> </ul> </li> <li>➤ Click on insert</li> </ul> </li> <li>ii) Reading new User           <ul style="list-style-type: none"> <li>➤ Refresh the page</li> </ul> </li> <li>iii) Updating User           <ul style="list-style-type: none"> <li>➤ Click on the “edit” button</li> <li>➤ Change PHONE_NUMBER = 977-9841930222</li> <li>➤ Click on Enter button of the keyboard</li> </ul> </li> <li>iv) Deleting the user           <ul style="list-style-type: none"> <li>➤ Click on Delete “button” of the specific User</li> <li>➤ A pop up will appear, click on “Ok”</li> </ul> </li> </ul>
Expected Result	CURD operation should be done successfully!
Actual Result	CURD operation was done successfully!
Conclusion	Test was Successful!

Table 10: Test Case 1: User Webform

## Add new User



The screenshot shows a 'User Management' page with a table listing users. A yellow box highlights the 'Add New User' form.

Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<a href="#">Edit</a> <a href="#">Delete</a>	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576

1 2 3

**Add New User**

USER\_ID:  
22

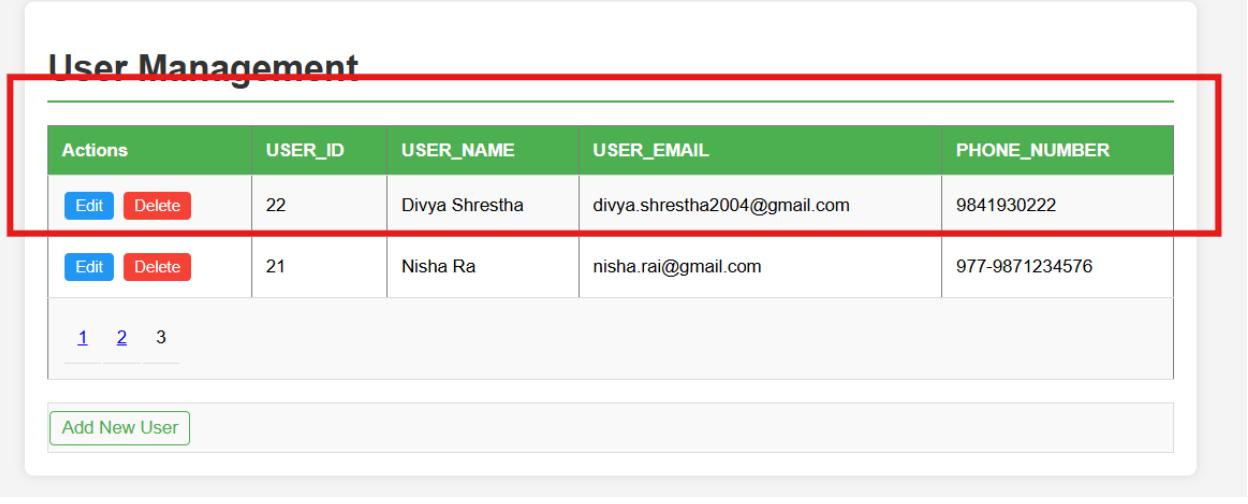
USER\_NAME:  
Divya Shrestha

USER\_EMAIL:  
divya.shrestha2004@gmail.com

PHONE\_NUMBER:  
9841930222

[Insert](#) [Cancel](#)

Figure 88: Add User Test



The screenshot shows the 'User Management' page after a user has been added. A red box highlights the newly added row.

Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<a href="#">Edit</a> <a href="#">Delete</a>	22	Divya Shrestha	divya.shrestha2004@gmail.com	9841930222
<a href="#">Edit</a> <a href="#">Delete</a>	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576

1 2 3

[Add New User](#)

Figure 89: User added

**Edit User**

**User Management**

Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE_NUMBER
<a href="#">Update</a> <a href="#">Cancel</a>	22	Divya Shrestha	divya.shrestha2004@gmail.com	977-9841930222
<a href="#">Edit</a> <a href="#">Delete</a>	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New User</a>				

Figure 90: Edit User

**User Management**

Actions	USER_ID	USER_NAME	USER_EMAIL	PHONE NUMBER
<a href="#">Edit</a> <a href="#">Delete</a>	22	Divya Shrestha	divya.shrestha2004@gmail.com	977-9841930222
<a href="#">Edit</a> <a href="#">Delete</a>	21	Nisha Ra	nisha.rai@gmail.com	977-9871234576
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				
<a href="#">Add New User</a>				

Figure 91: User Edited

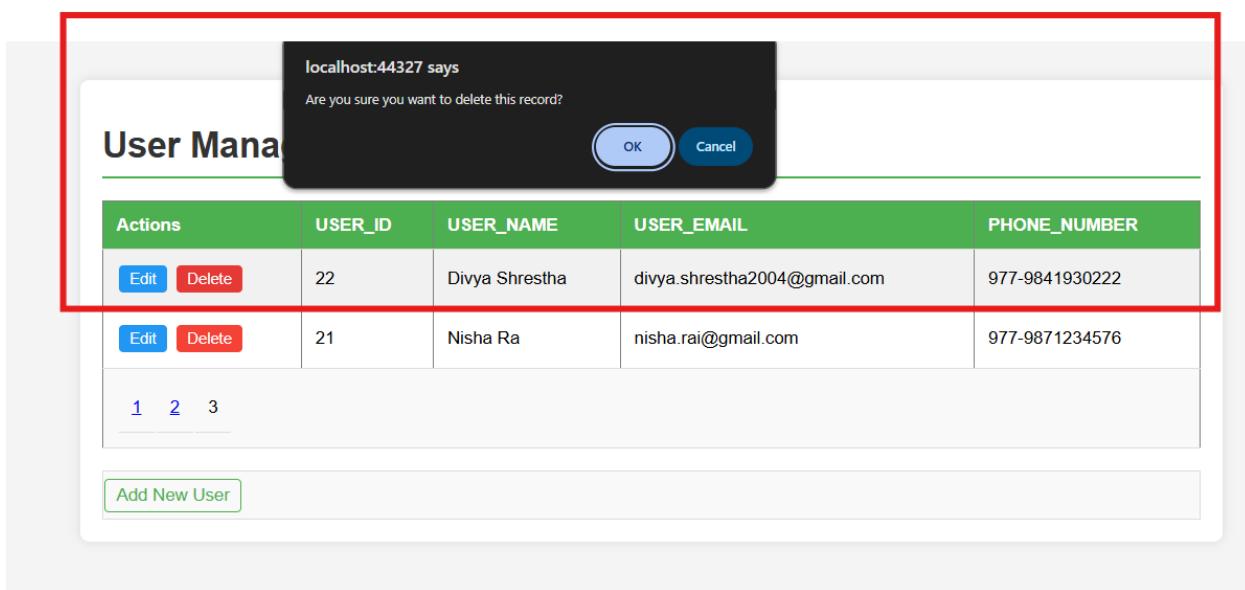
**Delete User**

Figure 92: Delete User

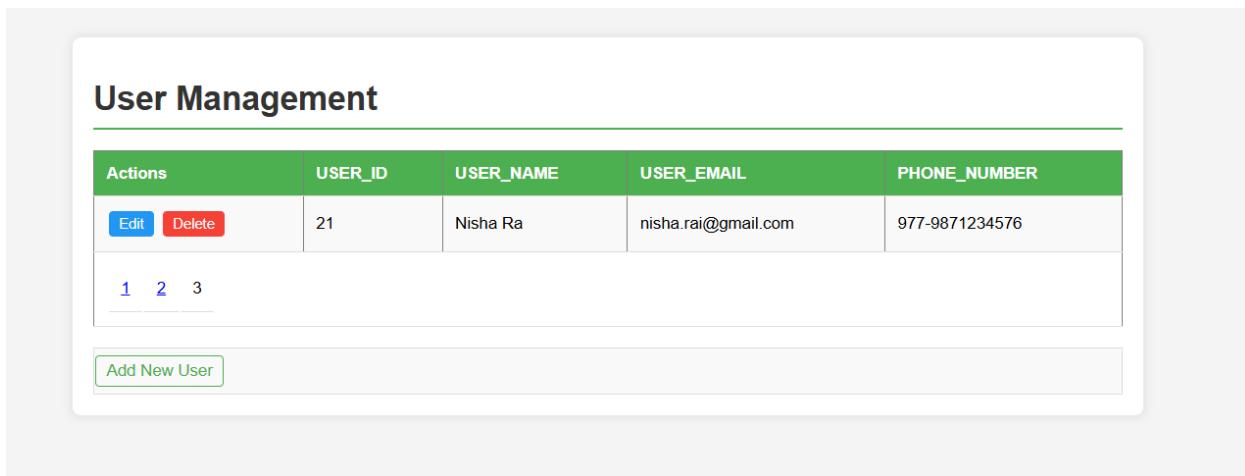


Figure 93: User Deleted

### 11.1.2 Project Web Form

Test no.	2
Objective	CURD Operation on Project Form
Action	<p>v) Creating a new User</p> <ul style="list-style-type: none"> <li>➤ Click on “Add New Project”</li> <li>➤ Fill in the values           <ul style="list-style-type: none"> <li>○ PROJECT_ID = 22</li> <li>○ PROJECT_NAME = Final Sem</li> <li>○ START_DATE = 2025/03/05</li> <li>○ START_DATE = 2025/06/01</li> </ul> </li> <li>➤ Click on insert</li> </ul> <p>vi) Reading new Project Page</p> <ul style="list-style-type: none"> <li>➤ Refresh the page</li> </ul> <p>vii) Updating Project</p> <ul style="list-style-type: none"> <li>➤ Click on the “edit” button</li> <li>➤ Change PROJECT_NAME = Final Semester</li> <li>➤ Click on Enter button of the keyboard</li> </ul> <p>viii) Deleting the Project</p> <ul style="list-style-type: none"> <li>➤ Click on Delete “button” of the specific Project</li> <li>➤ A pop up will appear, click on “Ok”</li> </ul>
Expected Result	CURD operation should be done successfully!
Actual Result	CURD operation was done successfully!
Conclusion	Test was Successful!

Table 11: Test Case 2: Project Webform

## Add new Project

**Project Management**

Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				

**Add New Project**

PROJECT_ID:	22
PROJECT_NAME:	Final Sem
START_DATE:	05/03/2025
END_DATE:	01/06/2025
<a href="#">Insert</a>	<a href="#">Cancel</a>

Figure 94: Add new Project

**Project Management**

Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	22	Final Sem	5/3/2025 12:00:00 AM	1/6/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>				

[Add New Project](#)

Figure 95: Project added Successfully

## Edit Project

**Project Management**

Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Update</a> <a href="#">Cancel</a>	22	<input type="text" value="Final Semester"/>	<input type="text" value="5/3/2025 12:00:00 AM"/>	<input type="text" value="1/6/2025 12:00:00 AM"/>

1 2 3

[Add New Project](#)

Figure 96: Edit Project

**Project Management**

Actions	PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Mai project	8/15/2024 12:00:00 AM	12/31/2025 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	22	Final Semester	5/3/2025 12:00:00 AM	1/6/2025 12:00:00 AM

1 2 3

[Add New Project](#)

Figure 97: Project Edited Successfully!

## Delete Project

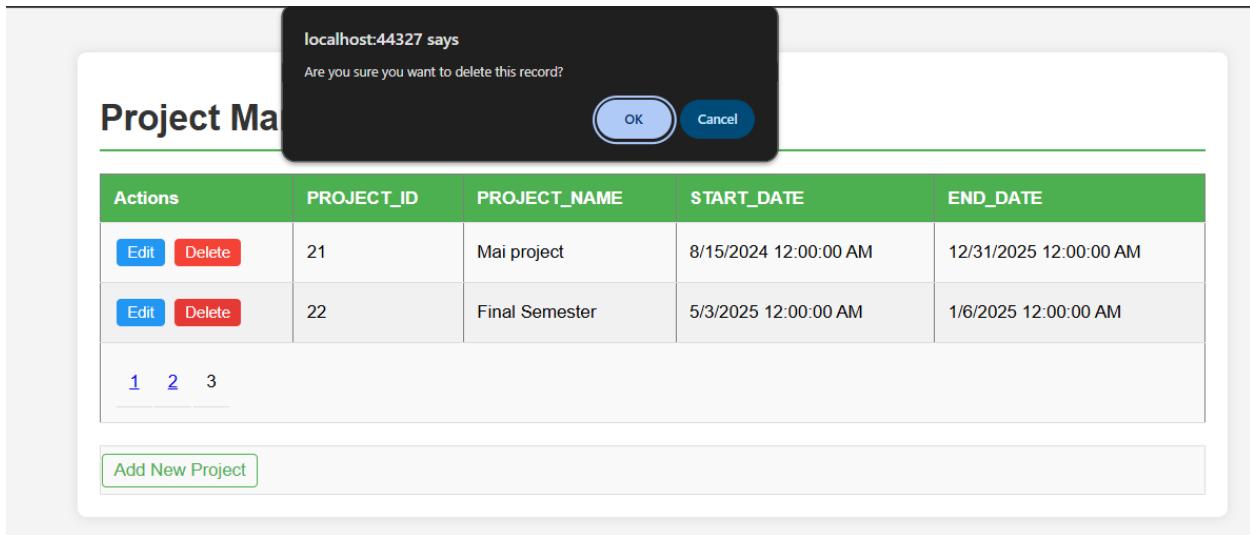


Figure 98: Delete Project

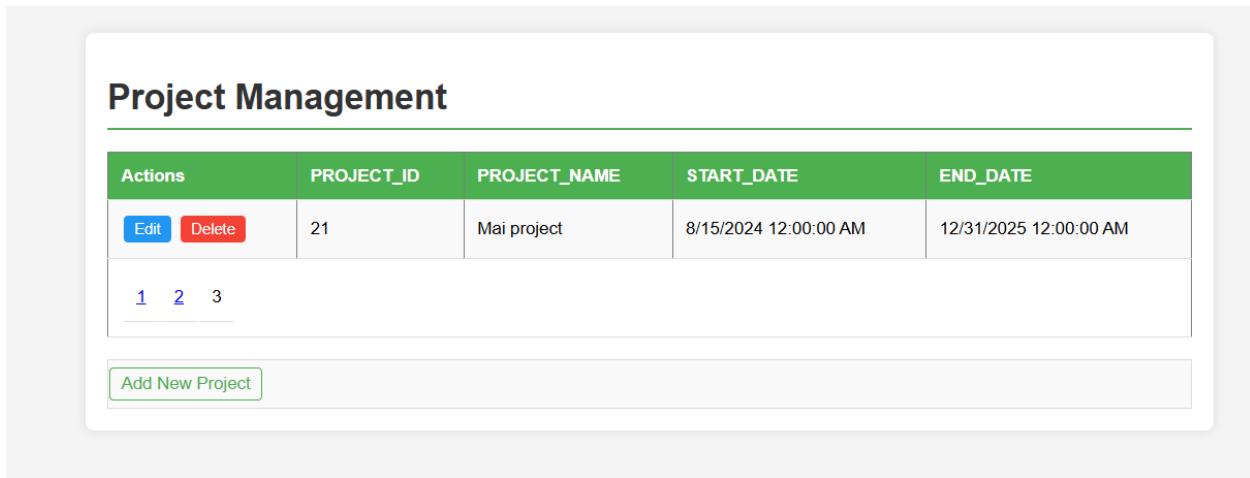


Figure 99: Project Deleted Successfully!

### 11.1.3 Milestone Webform

Test no.	3
Objective	CURD Operation on Milestone Form
Action	ix) Creating a new Milestone ➤ Click on “Add New Milestone” ➤ Fill in the values <ul style="list-style-type: none"> <li>○ MILESTONE_ID = 22</li> <li>○ MILESTONE_NAME = Demonstration</li> <li>○ MILESTONE_DESCRIPTION = Demonstration of project to Investors</li> <li>○ MILESTONE_DUE_DATE = 2025/03/15</li> <li>○ PROJECT_PROJECT_ID = Sagarmatha National Park</li> </ul> ➤ Click on insert x) Reading new Project Page ➤ Refresh the page xi) Updating Milestone ➤ Click on the “edit” button ➤ Change MILESTONE_DUE_DATE = 2025/06/01 ➤ Click on Enter button of the keyboard xii) Deleting the Milestone ➤ Click on Delete “button” of the specific Milestone ➤ A pop up will appear, click on “Ok”
Expected Result	CURD operation should be done successfully!
Actual Result	CURD operation was done successfully!
Conclusion	Test was Successful!

Table 12: Milestone table

## Add Milestone

**Milestone Management**

Actions	MILESTONE_ID	MILESTONE_NAME	MILESTONE_DESCRIPTION	MILESTONE_DUE_DATE	PROJECT_PROJECT_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Testing	Risks properly addressed	3/15/2025 12:00:00 AM	18
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					

**Add New Milestone**

MILESTONE\_ID:  
22

MILESTONE\_NAME:  
Demonstration

MILESTONE\_DESCRIPTION:  
Demonstration of project to Investors

MILESTONE\_DUE\_DATE:  
3/15/2025

PROJECT\_PROJECT\_ID:  
Sagarmatha National Park

[Insert](#)   [Cancel](#)

Figure 100: Add new milestone

<a href="#">Delete</a>		Complete				
<a href="#">Edit</a> <a href="#">Delete</a>	17	Testing Completion	All testing finished	5/15/2025 12:00:00 AM	17	
<a href="#">Edit</a> <a href="#">Delete</a>	18	Stakeholder Sign-off	Stakeholder approval received	6/15/2025 12:00:00 AM	18	
<a href="#">Edit</a> <a href="#">Delete</a>	19	Final Documentation	Final reports completed	7/15/2025 12:00:00 AM	19	
<a href="#">Edit</a> <a href="#">Delete</a>	22	Demonstration	Demonstration of project to Investors	3/15/2025 12:00:00 AM	12	
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>						
<a href="#">Add New Milestone</a>						

Figure 101: Milestone added successfully

## Edit Milestone

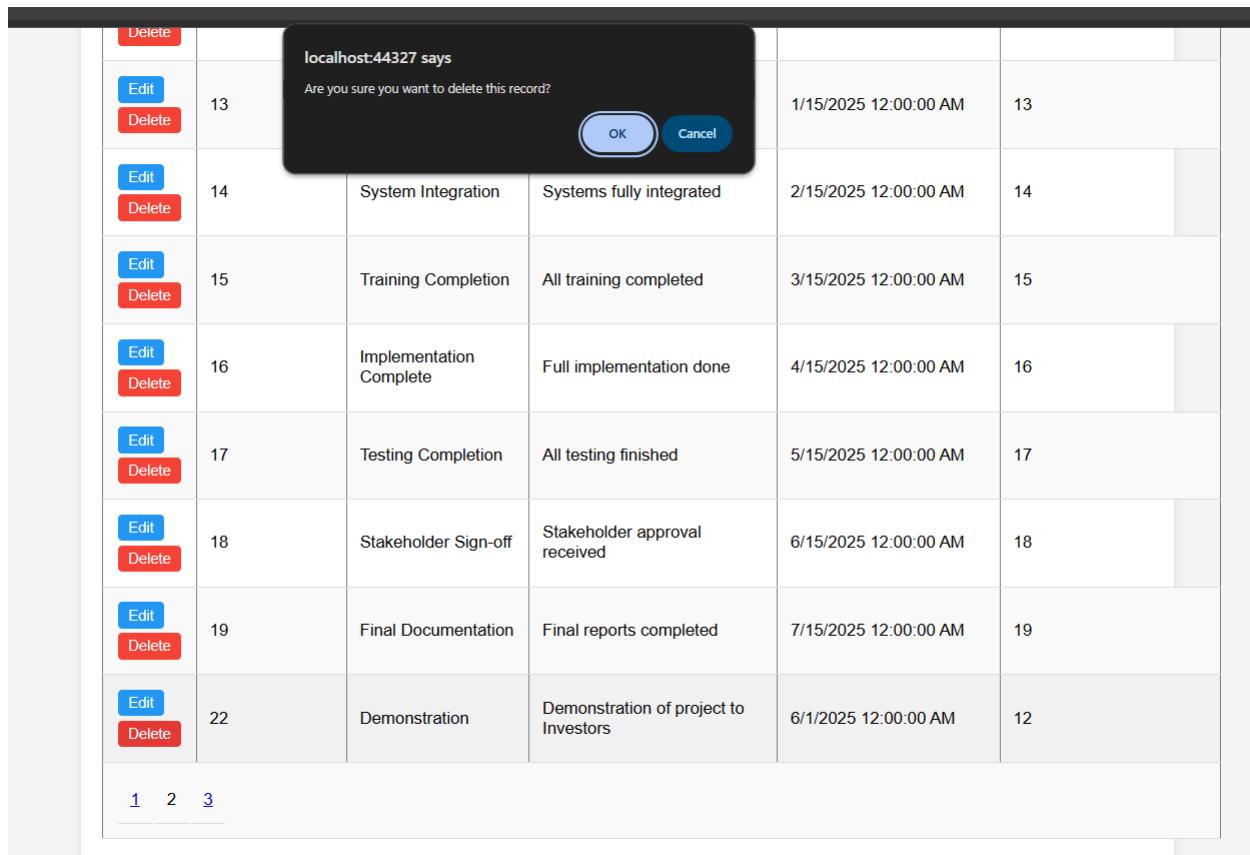
<a href="#">Delete</a>					
<a href="#">Update</a> <a href="#">Cancel</a>	22	Demonstration	Demonstration of project to	6/1/2025 12:00:00 AM	12
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New Milestone</a>					

Figure 102: Editing Milestone

<a href="#">Edit</a> <a href="#">Delete</a>	22	Demonstration	Demonstration of project to Investors	6/1/2025 12:00:00 AM	12
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New Milestone</a>					

Figure 103: Edited successfully!

## Delete Milestone

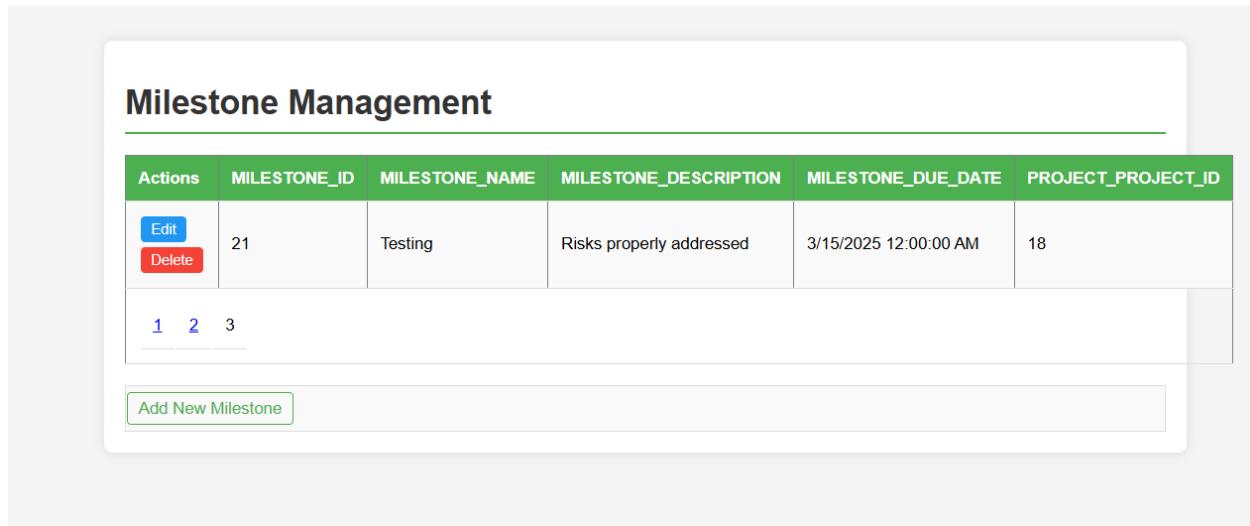


A screenshot of a web-based application interface for managing milestones. The main area displays a table of milestones with columns: ID, Name, Description, Due Date, and Project ID. Each row includes edit and delete buttons. A modal dialog box is overlaid on the page, centered over the second row (ID 13). The dialog has a dark background with white text and says "localhost:44327 says" followed by "Are you sure you want to delete this record?". It contains two buttons: "OK" and "Cancel".

	<a href="#">Delete</a>	13			1/15/2025 12:00:00 AM	13
	<a href="#">Edit</a> <a href="#">Delete</a>	14	System Integration	Systems fully integrated	2/15/2025 12:00:00 AM	14
	<a href="#">Edit</a> <a href="#">Delete</a>	15	Training Completion	All training completed	3/15/2025 12:00:00 AM	15
	<a href="#">Edit</a> <a href="#">Delete</a>	16	Implementation Complete	Full implementation done	4/15/2025 12:00:00 AM	16
	<a href="#">Edit</a> <a href="#">Delete</a>	17	Testing Completion	All testing finished	5/15/2025 12:00:00 AM	17
	<a href="#">Edit</a> <a href="#">Delete</a>	18	Stakeholder Sign-off	Stakeholder approval received	6/15/2025 12:00:00 AM	18
	<a href="#">Edit</a> <a href="#">Delete</a>	19	Final Documentation	Final reports completed	7/15/2025 12:00:00 AM	19
	<a href="#">Edit</a> <a href="#">Delete</a>	22	Demonstration	Demonstration of project to Investors	6/1/2025 12:00:00 AM	12

[1](#) [2](#) [3](#)

Figure 104: Delete User



A screenshot of a web-based application interface titled "Milestone Management". It shows a table with columns: Actions, MILESTONE\_ID, MILESTONE\_NAME, MILESTONE\_DESCRIPTION, MILESTONE\_DUE\_DATE, and PROJECT\_PROJECT\_ID. The table contains one row with ID 21, Name Testing, Description Risks properly addressed, Due Date 3/15/2025 12:00:00 AM, and Project ID 18. Below the table is a navigation bar with links 1, 2, and 3. At the bottom of the page is a green button labeled "Add New Milestone".

Figure 105: User Deleted Successfully!

#### 11.1.4 Task Webform

Test no.	4
Objective	CURD Operation on Task Form
Action	<p>xiii) Creating a new Task</p> <ul style="list-style-type: none"> <li>➤ Click on “Add New Milestone”</li> <li>➤ Fill in the values           <ul style="list-style-type: none"> <li>○ TASK_ID = 22</li> <li>○ TASK_NAME = Demonstration</li> <li>○ TASK_DESCRIPTION = Generating report for final year project!</li> <li>○ TASK_STATUS = Completed</li> <li>○ TASK_START_DATE = 2025/03/16</li> </ul> </li> <li>➤ Click on insert</li> </ul> <p>xiv) Reading new Task Page</p> <ul style="list-style-type: none"> <li>➤ Refresh the page</li> </ul> <p>xv) Updating Task</p> <ul style="list-style-type: none"> <li>➤ Click on the “edit” button</li> <li>➤ Change TASK_STATUS = pending</li> <li>➤ Click on Enter button of the keyboard</li> </ul> <p>xvi) Deleting the Task</p> <ul style="list-style-type: none"> <li>➤ Click on Delete “button” of the specific Task</li> <li>➤ A pop up will appear, click on “Ok”</li> </ul>
Expected Result	CURD operation should be done successfully!
Actual Result	CURD operation was done successfully!
Conclusion	Test was Successful!

Table 13: Test 4: Task Webform

**ADD task**

<a href="#">Edit</a>	<a href="#">Delete</a>	17	Testing Phase	Test implemented systems	Completed	3/25/2024 12:00:00 AM
<a href="#">Edit</a>	<a href="#">Delete</a>	18	Feedback Collection	Gather stakeholder feedback	Pending	4/1/2024 12:00:00 AM
<a href="#">Edit</a>	<a href="#">Delete</a>	19	Report Generation	Prepare progress reports	In Progress	4/5/2024 12:00:00 AM
<a href="#">Edit</a>	<a href="#">Delete</a>	20	Final Review	Conduct final project review	Pending	4/10/2024 12:00:00 AM

1    2    3

**Add New Task**

TASK\_ID:  
21

TASK\_NAME:  
Report Generation

TASK\_DESCRIPTION:  
generating report of the final year project

TASK\_STATUS:  
Completed

TASK\_START\_DATE:  
3/16/2025

[Insert](#)    [Cancel](#)

Figure 106: Add Task

**Task Management**

Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Report Generation	generating report of the final year project	Completed	3/16/2025 12:00:00 AM

1    2    3

[Add New Task](#)

Figure 107: Task added successfully!

## Edit Task

**Task Management**

Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Update</a> <a href="#">Cancel</a>	21	Report Generation	generating report of the final year project	pending	3/16/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New Task</a>					

Figure 108: Edit Task

**Task Management**

Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	21	Report Generation	generating report of the final year project	pending	3/16/2025 12:00:00 AM
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New Task</a>					

Figure 109: Task edited successfully!

## Delete Task

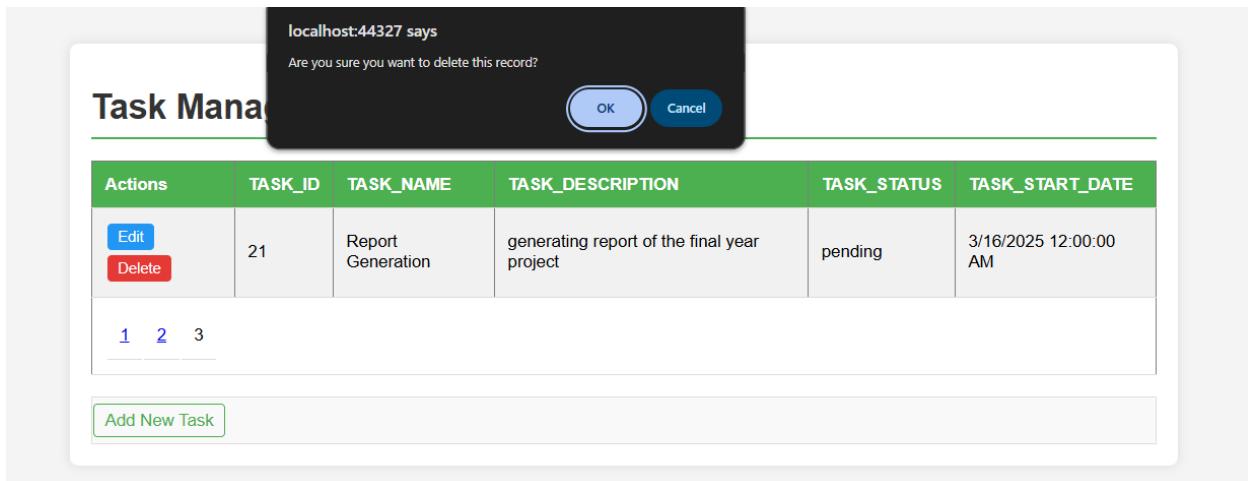


Figure 110: Delete Task

Task Management					
Actions	TASK_ID	TASK_NAME	TASK_DESCRIPTION	TASK_STATUS	TASK_START_DATE
<a href="#">Edit</a> <a href="#">Delete</a>	11	Local Coordination	Coordinate with local authorities	Completed	2/25/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	12	Progress Monitoring	Monitor project progress	Pending	3/1/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	13	Risk Assessment	Evaluate potential risks	In Progress	3/5/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	14	Equipment Setup	Install necessary equipment	Completed	3/10/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	15	Staff Training	Train staff on new systems	Pending	3/15/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	16	Implementation	Execute project plans	In Progress	3/20/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	17	Testing Phase	Test implemented systems	Completed	3/25/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	18	Feedback Collection	Gather stakeholder feedback	Pending	4/1/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	19	Report Generation	Prepare progress reports	In Progress	4/5/2024 12:00:00 AM
<a href="#">Edit</a> <a href="#">Delete</a>	20	Final Review	Conduct final project review	Pending	4/10/2024 12:00:00 AM

Below the table, there is a page navigation section with links '1' (highlighted in blue) and '2'. At the bottom of the page is a green button labeled 'Add New Task'.

Figure 111: Task deleted Successfully!

### 11.1.5 Sub Task Webform

Test no.	4
Objective	CURD Operation on Sub Task Form
Action	<p>xvii) Creating a new Sub Task</p> <ul style="list-style-type: none"> <li>➤ Click on “Add New Sub Task”</li> <li>➤ Fill in the values           <ul style="list-style-type: none"> <li>○ SUBTASK_ID = 21</li> <li>○ SUBTASK_NAME = Collect Data</li> <li>○ TASK_DESCRIPTION = Collecting data</li> <li>○ TASK_STATUS = In progress</li> <li>○ TASK_TASK_ID = Site Survey</li> </ul> </li> <li>➤ Click on insert</li> </ul> <p>xviii) Reading new Sub Task Page</p> <ul style="list-style-type: none"> <li>➤ Refresh the page</li> </ul> <p>xix) Updating Subtask</p> <ul style="list-style-type: none"> <li>➤ Click on the “edit” button</li> <li>➤ Change SUBTASK_STATUS = Completed</li> <li>➤ Click on Enter button of the keyboard</li> </ul> <p>xx) Deleting the Subtask</p> <ul style="list-style-type: none"> <li>➤ Click on Delete “button” of the specific Subtask</li> <li>➤ A pop up will appear, click on “Ok”</li> </ul>
Expected Result	CURD operation should be done successfully!
Actual Result	CURD operation was done successfully!
Conclusion	Test was Successful!

Table 14: Test Case 4: Subtask Webform

## Add Subtask

**Add New SubTask**

SUBTASK\_ID:  
21

SUBTASK\_NAME:  
Collect Data

SUBTASK\_DESCRIPTION:  
Collecting Data

SUBTASK\_STATUS:  
In Progress

TASK\_TASK\_ID:  
Site Survey

**Insert** **Cancel**

Table 15: Adding Subtask

**SubTask Management**

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Collect Data	Collecting Data	In Progress	1

1 2 3

**Add New SubTask**

Table 16: Subtask added successfully!

## Edit Subtask

**SubTask Management**

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Update</a> <a href="#">Cancel</a>	21	Collect Data	Collecting Data	Complete	1
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New SubTask</a>					

Table 17: Edit Subtask

**SubTask Management**

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Collect Data	Collecting Data	Complete	1
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New SubTask</a>					

Table 18: Subtask Updated

### Delete Subtask

The screenshot shows a web-based application interface for managing subtasks. A modal dialog box is centered over the main content, asking for confirmation to delete a record. The dialog contains the text "localhost:44327 says" and "Are you sure you want to delete this record?". It has two buttons: "OK" and "Cancel".

The main content area is titled "SubTask M" and displays a table of subtask data. The table has columns: Actions, SUBTASK\_ID, SUBTASK\_NAME, SUBTASK\_DESCRIPTION, SUBTASK\_STATUS, and TASK\_TASK\_ID. One row is visible, showing:

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	Collect Data	Collecting Data	Complete	1

Below the table, there are three numbered links: 1, 2, and 3. At the bottom of the page is a button labeled "Add New SubTask".

Table 19: Delete Subtask

## 11.2 Complex Form

### 11.2.1 Complex Form 1

Test no	1
Objective	To test the User Project complex form functionality for viewing projects associated with a specific user
Actions	<ul style="list-style-type: none"> <li>➤ Search for “Bikash Poudel” in dropdown list.</li> <li>➤ Tap on the Specific user.</li> </ul>
Expected Results	Should display all the projects Bikash Poudel was assigned!
Actual Result	All projects associated to Bikash Poudel was displayed
Conclusion	Test Successful!

Table 20: Test Case 1: Complex form 1

The screenshot shows a "Complex Form" interface. On the left, there is a dropdown menu listing names: Aarav Sharma, Priya Adhikari, Rajesh Thapa, Site Director, Bikash Poudel, Anil Karki, Dipesh Gurung, Sanita Tamang, Mahesh Shrestha, Nisha Rai, Sunil KC, Sabina Magar, Bindu Regmi, Gita Neupane, Prakash Basnet, Manisha Limbu, Ramesh Dahal, Kabita Oli, Deepak Chhetri, Sunita Pun. The name "Bikash Poudel" is highlighted with a blue background and a red rectangular box around it. To the right of the dropdown is a table with three columns: NAME, START\_DATE, and END\_DATE. It contains two rows of project data:

NAME	START_DATE	END_DATE
Chitwan Development	1/1/2024 12:00:00 AM	12/31/2025 12:00:00 AM
Birgunj Development Plan	11/1/2024 12:00:00 AM	10/31/2025 12:00:00 AM

Figure 112: Search of specific user

The screenshot shows a "Complex Form" interface. On the left, there is a dropdown menu with the name "Bikash Poudel" selected. To the right is a table with four columns: PROJECT\_ID, PROJECT\_NAME, START\_DATE, and END\_DATE. It contains two rows of project data:

PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE
3	Chitwan Conservation Project	3/1/2024 12:00:00 AM	9/30/2025 12:00:00 AM
15	Birgunj Trade Hub	3/15/2024 12:00:00 AM	7/31/2025 12:00:00 AM

Figure 113: Result of specific user

### 11.2.2 Complex Form 2

Test no	2
Objective	To test the Project Milestone complex form functionality for viewing milestones associated with a specific project
Actions	<ul style="list-style-type: none"> <li>➤ Search for “Ilam Tea Garden” in dropdown list.</li> <li>➤ Tap on the Specific Project.</li> </ul>
Expected Results	Should display all the Milestone of project “Ilam Tea Garden”.
Actual Result	All Milestone of the project was displayed.
Conclusion	Test Successful!

Table 21: Test Case 2: Complex form 2

The screenshot shows a dropdown menu with the title "Complex Form 2" at the top. The menu lists various project names, and the option "Ilam Tea Gardens" is highlighted with a blue selection bar.

Project Name
Bardia Wildlife Sanctuary
Kathmandu Metro Development
Pokhara Smart City Initiative
Chitwan Conservation Project
Lumbini Heritage Preservation
Everest Base Camp Infrastructure
Bhaktapur Temple Restoration
Mustang Wind Power Plant
Terai Agriculture Development
Pashupatinath Temple Complex
Annapurna Conservation
Janakpur Development Plan
Sagarmatha National Park
Butwal Industrial Zone
Dharan Water Supply
Birgunj Trade Hub
Gorkha Heritage Site
Rara Lake Conservation
<b>Ilam Tea Gardens</b>
Dolakha Hydro Project
Bardia Wildlife Sanctuary

Table 22: Search for specific project

Complex Form 2					
<input type="text" value="Ilam Tea Gardens"/> <span style="float: right;">▼</span>					
PROJECT_ID	PROJECT_NAME	MILESTONE_ID	MILESTONE_NAME	MILESTONE_DESCRIPTION	MILESTONE_DUE_DATE
18	Ilam Tea Gardens	18	Stakeholder Sign-off	Stakeholder approval received	6/15/2025 12:00:00 AM
18	Ilam Tea Gardens	20	Testing Completion	Risks properly addressed	3/15/2025 12:00:00 AM
18	Ilam Tea Gardens	21	Testing	Risks properly addressed	3/15/2025 12:00:00 AM

Table 23: Milestone for specific project

### 11.2.3 Complex form 3

Test no	3
Objective	To show the top performer of the task completed according to the project!
Actions	<ul style="list-style-type: none"> <li>➤ Search for “Kathmandu Metropolitan Development” in dropdown list.</li> <li>➤ Tap on the Specific Project.</li> </ul>
Expected Results	Should display all the Performers of project “Kathmandu Metropolitan Development”.
Actual Result	Top performer of the project was displayed.
Conclusion	Test Successful!

Table 24: Complex Form: Test 3

The screenshot shows a dropdown menu with the following options:

- Pokhara Smart City Initiative
- Kathmandu Metro Development** (highlighted in blue)
- Pokhara Smart City Initiative
- Chitwan Conservation Project
- Lumbini Heritage Preservation
- Everest Base Camp Infrastructure
- Bhaktapur Temple Restoration
- Mustang Wind Power Plant
- Terai Agriculture Development
- Pashupatinath Temple Complex
- Annapurna Conservation
- Janakpur Development Plan

Figure 114: Search for specific project

USER_ID	USER_NAME	COMPLETED_TASKS
2	Priya Adhikari	1
1	Aarav Sharma	1

Figure 115: Top performer

## 11.3 Error Testing

### 11.3.1 Adding Subtask Error

Test no.	1
Objective	Fix while adding Task in Subtask
Action	<p>xxi) Creating a new Sub Task</p> <ul style="list-style-type: none"> <li>➤ Click on “Add New Sub Task”</li> <li>➤ Fill in the values           <ul style="list-style-type: none"> <li>○ SUBTASK_ID = 21</li> <li>○ SUBTASK_NAME = Test</li> <li>○ TASK_DESCRIPTION = Test</li> <li>○ TASK_STATUS = Test</li> <li>○ TASK_TASK_ID = 21</li> </ul> </li> </ul> <p>xxii) Click on edit Form View</p> <p>xxiii) Add a new dropdown and data source in insert edit template</p> <p>xxiv) Configure the Data source to Task and select Task name and Task id</p> <p>xxv) Bound the Dropdown to the Data source.</p>
Expected Result	CURD operation should be done successfully!
Actual Result	CURD operation was done successfully!
Conclusion	Test was Successful!

Table 25: Subtask error

Error:

SUBTASK\_ID:

SUBTASK\_NAME:

SUBTASK\_DESCRIPTION:

SUBTASK\_STATUS:

TASK\_TASK\_ID:

[Insert](#) [Cancel](#)

Figure 116: Adding Subtask

Server Error in '/' Application.

**ORA-02291: integrity constraint (COURSEWORK\_MILESTONE\_DIVYA.SUBTASK\_TASK\_FK) violated - parent key not found**

Description: An unhandled exception occurred during the execution of the current web request. Please review the stack trace for more information about the error and where it originated in the code.

Exception Details: System.Data.OracleClient.OracleException: ORA-02291: integrity constraint (COURSEWORK\_MILESTONE\_DIVYA.SUBTASK\_TASK\_FK) violated - parent key not found

Source Error:

An unhandled exception was generated during the execution of the current web request. Information regarding the origin and location of the exception can be identified using the exception stack trace below.

Stack Trace:

```
[OracleException (0x80131938): ORA-02291: integrity constraint (COURSEWORK_MILESTONE_DIVYA.SUBTASK_TASK_FK) violated - parent key not found
]
System.Data.OracleClient.OracleConnection.CheckError(OciErrorHandle errorHandle, Int32 rc) +484
System.Data.OracleClient.OracleCommand.Execute(OciStatementHandle statementHandle, CommandBehavior behavior, Boolean needRowid, OciRowidDescriptor& rowidDescriptor, ArrayList resultParameterOrdinals) +1878
System.Data.OracleClient.OracleCommand.ExecuteNonQueryInternal(Boolean needRowid, OciRowidDescriptor& rowidDescriptor) +678
System.Data.OracleClient.OracleCommand.ExecuteNonQuery() +146
System.Web.UI.WebControls.SqlDataSourceView.ExecuteDbCommand(DbCommand command, DataSourceOperation operation) +582
System.Web.UI.DataSourceView.Insert(IDictionary values, DataSourceViewOperationCallback callback) +167
System.Web.UI.WebControls.FormView.HandleInsert(String commandArg, Boolean causesValidation) +497
System.Web.UI.WebControls.FormView.HandleEvent(EventArgs e, Boolean causesValidation, String validationGroup) +706
System.Web.UI.Control.RaiseBubbleEvent(Object source, EventArgs args) +58
System.Web.UI.WebControls.FormViewRow.OnBubbleEvent(Object source, EventArgs e) +132
System.Web.UI.Control.RaiseBubbleEvent(Object source, EventArgs args) +58
System.Web.UI.Page.ProcessRequestMain(Boolean includeStagesBeforeAsyncPoint, Boolean includeStagesAfterAsyncPoint) +1959
```

Version Information: Microsoft .NET Framework Version 4.0.30319; ASP.NET Version 4.8.9282.0

Figure 117: Subtask id error

Fixing Error:

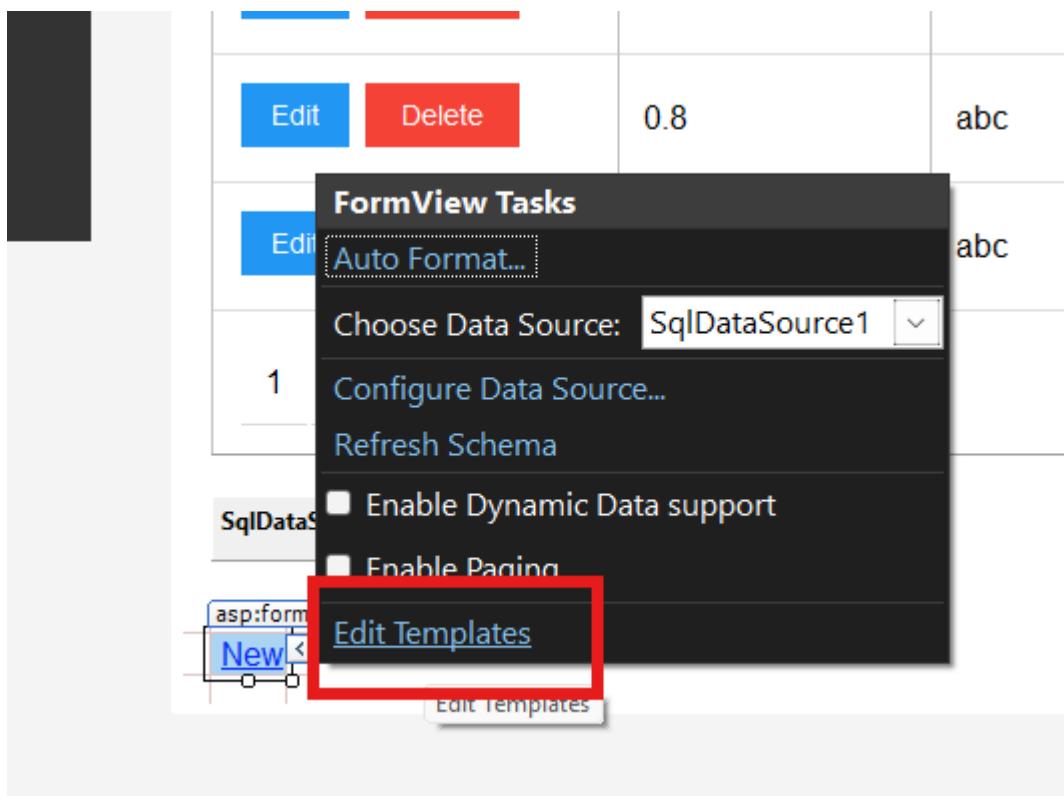
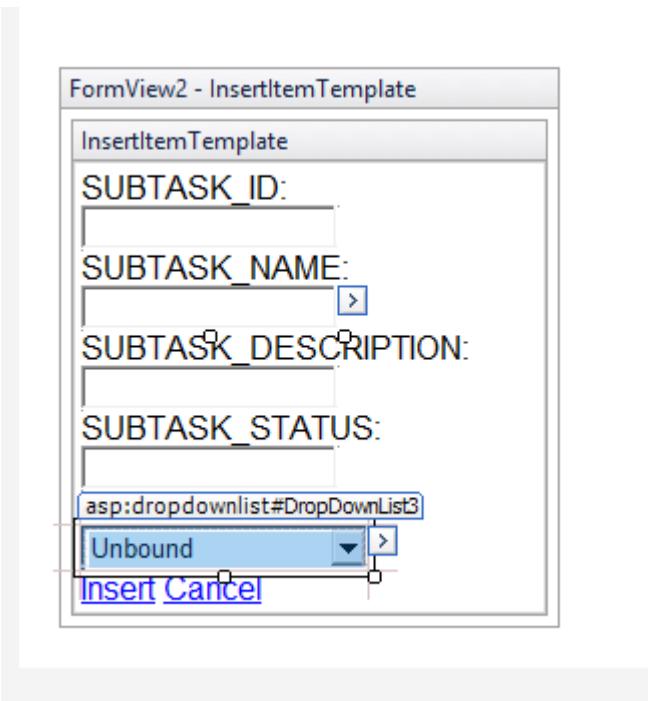


Figure 118: Edit Template



FormView2 - InsertItemTemplate

InsertItemTemplate

SUBTASK\_ID:

SUBTASK\_NAME:

SUBTASK\_DESCRIPTION:

SUBTASK\_STATUS:

TASK\_TASK\_ID:

asp:sqlDataSource#SqlDataSource4

SqlDataSource - SqlDataSource4

Insert Cancel

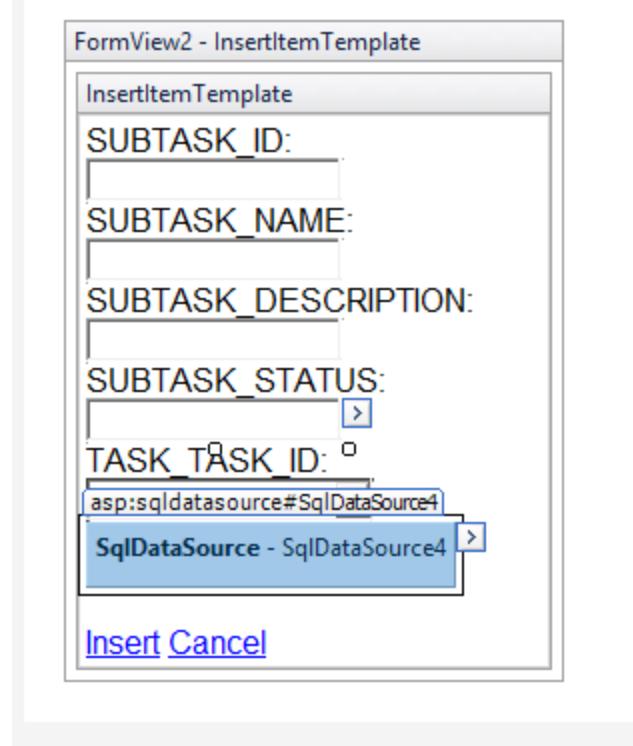


Figure 119: Add a data source of Task

Select a data source:

SqlDataSource4

Select a data field to display in the DropDownList:

TASK\_NAME

Select a data field for the value of the DropDownList:

TASK\_ID

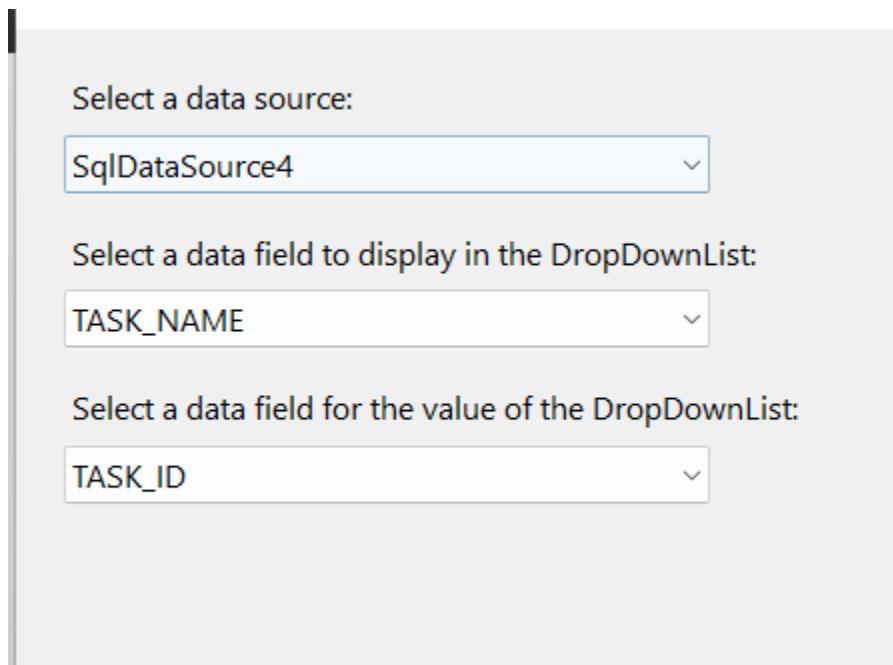


Figure 120: Bind tasked to the dropdown

**Add New SubTask**

SUBTASK\_ID:  
21

SUBTASK\_NAME:  
twst

SUBTASK\_DESCRIPTION:  
test

SUBTASK\_STATUS:  
Completed

TASK\_TASK\_ID:  
Testing Phase

**Insert** **Cancel**

*Figure 121: Adding subtask after fixing*

**SubTask Management**

Actions	SUBTASK_ID	SUBTASK_NAME	SUBTASK_DESCRIPTION	SUBTASK_STATUS	TASK_TASK_ID
<a href="#">Edit</a> <a href="#">Delete</a>	21	twst	test	Completed	17
<a href="#">1</a> <a href="#">2</a> <a href="#">3</a>					
<a href="#">Add New SubTask</a>					

*Figure 122: Error 1 fixed*

## 12 Further Discussion

### 12.1 Tools and Technology

- ASP.NET – For developing the web-based database application
- C# Primary backend programming language.
- Oracle SQL Developer Data Modeler – Used for designing and modelling the database schema
- Oracle SQL Developer – For database management and execution of SQL queries.
- Microsoft Visual Studio – Integrated Development Environment (IDE) for coding and debugging the application.
- Microsoft Word – For documentation and report preparation.

## 13 Conclusion

The project required creating a web-based database application through combination of ASP.NET Complete and C programming language with Oracle SQL Developer technology. The project task involved creating an Entity-Relationship Diagram (ERD) alongside normalization steps and system development for controlling project task management efficiently. Hands-on work delivered practical abilities to model databases and perform SQL queries in addition to building entire web applications.

The project results proved that standardized database planning systems lead to better data security and integrity as well as system performance in actual business implementations. The opportunity to work with ASP.NET alongside C enabled us to discover important aspects of current web application creation methods. Our education has refined our capacity to create software properly while resolving problems effectively and handling databases proficiently which readies us for future workplace requirements in the field.

## 14 Bibliography

- Mckee, A. (2001, January). *Research Gate* . Retrieved from ResearchGate website :  
[https://www.researchgate.net/publication/27470712\\_Textual\\_Analysis\\_A\\_Beginner's\\_Guide](https://www.researchgate.net/publication/27470712_Textual_Analysis_A_Beginner's_Guide)
- Ramez Elmasri, S. B. (2024, December 23). *pearson*. Retrieved from pearson web site:  
<https://www.pearson.com/en-us/subject-catalog/p/fundamentals-of-database-systems/P200000003546/9780137502523>
- Ramez Elmasri, S. B. (2024, December 23). *pearson*. Retrieved from pearson web site:  
<https://www.pearson.com/en-us/subject-catalog/p/fundamentals-of-database-systems/P200000003546/9780137502523>

## 15 Appendix

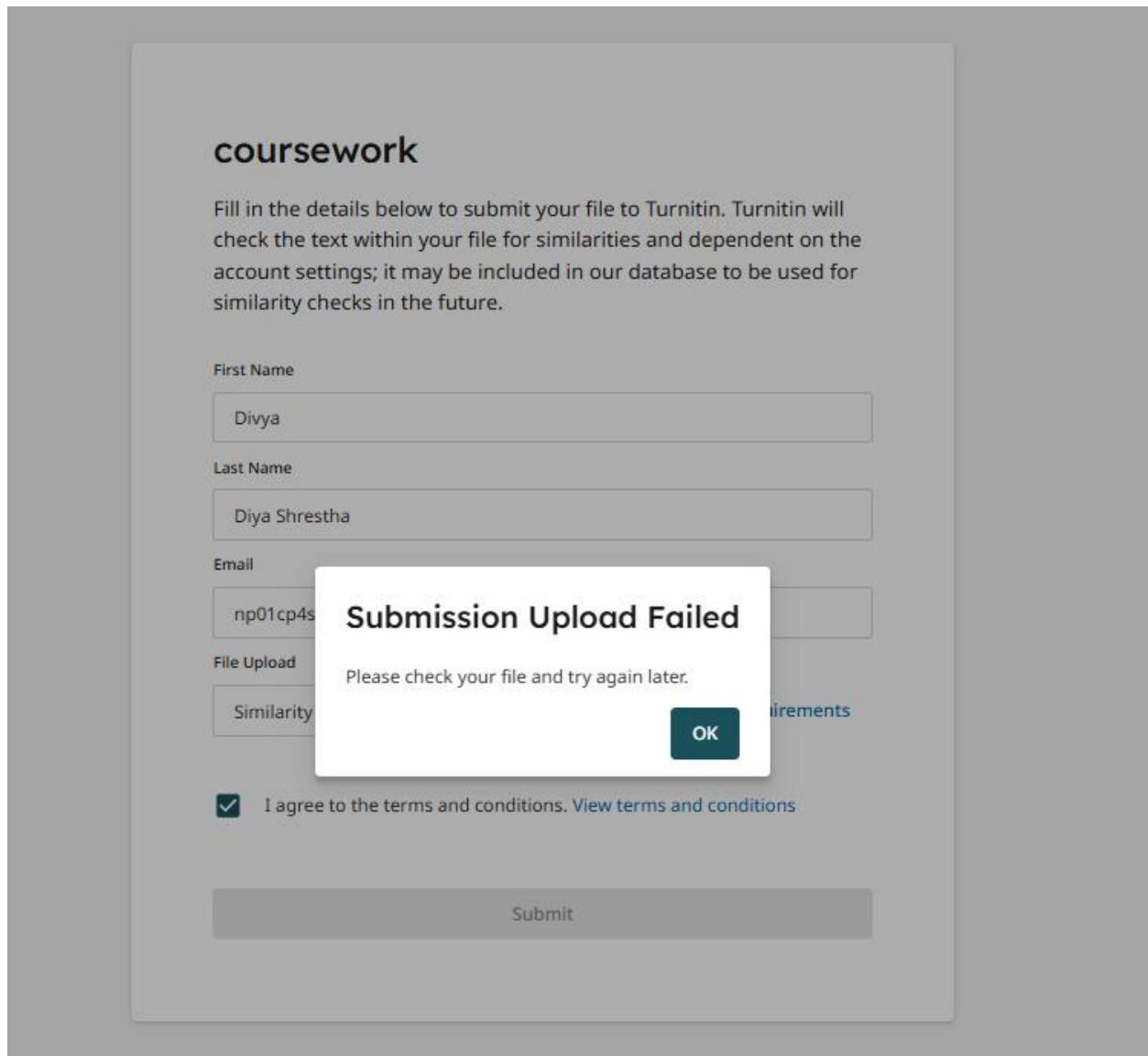


Figure 123: Turnitin Submission Fail