PROJECT REPORT

ON

TASK MANAGEMENT SYSTEM

Developed By

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Submitted To

Master of Computer Application

Faculty of Management and Information Science

DHARMSINH DESAI UNIVERSITY

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CODE:

```
import java.sql.*;
import java.util.Scanner;

public class termwork {
   private static final String URL =
"jdbc:mysql://localhost:3306/task_management_system";
   private static final String USER = "root";
   private static final String PASSWORD = "123456";

   public static void main(String[] args) {
      try {
         Connection connection = DriverManager.getConnection(URL,
USER, PASSWORD);
         Statement statement = connection.createStatement();
         Scanner scanner = new Scanner(System.in);

         while (true) {

System.out.println("=====================================
================");
            System.out.println("\t\tTask Management System");

System.out.println("=====================================
================\n");
            System.out.println("1.-> Add Task");
            System.out.println("2.-> View All Tasks");
            System.out.println("3.-> View Task by ID");
            System.out.println("4.-> Update Task");
            System.out.println("5.-> Update Task Progress");
            System.out.println("6.-> Delete Task");
            System.out.println("7.-> Exit");
            System.out.print("\nChoose an option: ");
            int choice = scanner.nextInt();
            scanner.nextLine();

            switch (choice) {
               case 1:
                  addTask(connection, scanner);
                  break;
               case 2:
                  viewAllTasks(statement);
```

```
                    break;
                case 3:
                    viewTaskById(connection, scanner);
                    break;
                case 4:
                    updateTask(connection, scanner);
                    break;
                case 5:
                    updateTaskProgress(connection, scanner);
                    break;
                case 6:
                    deleteTask(connection, scanner);
                    break;
                case 7:
                    System.out.println("Exiting...");
                    connection.close();
                    scanner.close();
                    return;
                default:
                    System.out.println("Invalid choice. Please try again.");
            }
        }

    } catch (SQLException e) {
        e.printStackTrace();
    }
}

    private static void addTask(Connection connection, Scanner
scanner) throws SQLException {
        System.out.println("\n\n\t\tAdd Task");
        System.out.println("----------------------------------------\n");
        System.out.print("Enter task name: ");
        String name = scanner.nextLine();
        System.out.print("Enter task description: ");
        String description = scanner.nextLine();
        System.out.print("Enter task priority: ");
        int priority = scanner.nextInt();
        scanner.nextLine();
        System.out.print("Enter due date (YYYY-MM-DD): ");
        String dueDate = scanner.next();
        System.out.print("Enter assigned to: ");
        String assignedTo = scanner.next();
        System.out.print("Enter task status: ");
        String status = scanner.next();
```

```
        String insertQuery = "INSERT INTO tasks (name, description,
priority, due_date, assigned_to, status, progress) "
                +
                "VALUES (?, ?, ?, ?, ?, ?, 0)";
        PreparedStatement preparedStatement =
connection.prepareStatement(insertQuery);
        preparedStatement.setString(1, name);
        preparedStatement.setString(2, description);
        preparedStatement.setInt(3, priority);
        preparedStatement.setString(4, dueDate);
        preparedStatement.setString(5, assignedTo);
        preparedStatement.setString(6, status);
        preparedStatement.executeUpdate();


System.out.println("==================================
================");
        System.out.println("\tTask added successfully.");

System.out.println("==================================
================");
        System.out.println("\n\n\n");
    }

    private static void viewAllTasks(Statement statement) throws
SQLException {
        System.out.println("\n\n\t\tAll Tasks");
        System.out.println("-----------------------------------------\n");

        ResultSet resultSet = statement.executeQuery("SELECT * FROM
tasks");
        boolean tasksExist = false; // Flag to track if any tasks exist
        while (resultSet.next()) {
            tasksExist = true;
            System.out.println("-----------------------------------------------
");
            System.out.println("Task ID: " + resultSet.getInt("id"));
            System.out.println("Name: " + resultSet.getString("name"));
            System.out.println("Description: " +
resultSet.getString("description"));
            System.out.println("Priority: " + resultSet.getInt("priority"));
            System.out.println("Due Date: " +
resultSet.getDate("due_date"));
```

```
            System.out.println("Assigned To: " +
resultSet.getString("assigned_to"));
            System.out.println("Status: " + resultSet.getString("status"));
            System.out.println("Progress: " + resultSet.getInt("progress") +
"%");
            System.out.println("----------------------------------------------------
");
        }
        if (!tasksExist) {

System.out.println("=====================================
================");
            System.out.println("\tNo tasks available.");

System.out.println("=====================================
================");
            System.out.println("\n\n\n");

        }
    }

    private static void viewTaskById(Connection connection, Scanner
scanner) throws SQLException {
        System.out.println("\n\n\t\tView Task by ID");
        System.out.println("-----------------------------------------\n");

        System.out.print("Enter task ID: ");
        int taskId = scanner.nextInt();
        scanner.nextLine();

        PreparedStatement selectStatement =
connection.prepareStatement("SELECT * FROM tasks WHERE id =
?");
        selectStatement.setInt(1, taskId);
        ResultSet resultSet = selectStatement.executeQuery();

        if (resultSet.next()) {
            System.out.println("----------------------------------------------------
");
            System.out.println("Task ID: " + resultSet.getInt("id"));
            System.out.println("Name: " + resultSet.getString("name"));
            System.out.println("Description: " +
resultSet.getString("description"));
            System.out.println("Priority: " + resultSet.getInt("priority"));
```

```
            System.out.println("Due Date: " +
resultSet.getDate("due_date"));
            System.out.println("Assigned To: " +
resultSet.getString("assigned_to"));
            System.out.println("Status: " + resultSet.getString("status"));
            System.out.println("Progress: " + resultSet.getInt("progress") +
"%");
            System.out.println("----------------------------------------------------
");
        } else {

System.out.println("=====================================
================\n");
            System.out.println("\tTask with ID " + taskId + " not found.");

System.out.println("=====================================
================");
            System.out.println("\n\n\n");
        }
    }

    private static void updateTask(Connection connection, Scanner
scanner) throws SQLException {
        System.out.println("\n\n\t\tUpdate Task");
        System.out.println("-----------------------------------------\n");

        System.out.print("Enter task ID to update: ");
        int taskId = scanner.nextInt();
        scanner.nextLine();

        PreparedStatement selectStatement =
connection.prepareStatement("SELECT * FROM tasks WHERE id =
?");
        selectStatement.setInt(1, taskId);
        ResultSet resultSet = selectStatement.executeQuery();

        if (resultSet.next()) {
            System.out.println("Current Task Details:");
            System.out.println("Name: " + resultSet.getString("name"));
            System.out.println("Description: " +
resultSet.getString("description"));
            System.out.println("Priority: " + resultSet.getInt("priority"));
            System.out.println("Due Date: " +
resultSet.getDate("due_date"));
```

```
            System.out.println("Assigned To: " +
resultSet.getString("assigned_to"));
            System.out.println("Status: " + resultSet.getString("status"));
            System.out.println("Progress: " + resultSet.getInt("progress") +
"%");

            System.out.println("Enter new task details (excluding
progress):");
            System.out.print("Enter task name: ");
            String name = scanner.nextLine();
            System.out.print("Enter task description: ");
            String description = scanner.nextLine();
            System.out.print("Enter task priority: ");
            int priority = scanner.nextInt();
            scanner.nextLine();
            System.out.print("Enter due date (YYYY-MM-DD): ");
            String dueDate = scanner.next();
            System.out.print("Enter assigned to: ");
            String assignedTo = scanner.next();
            System.out.print("Enter task status: ");
            String status = scanner.next();

            PreparedStatement updateStatement =
connection.prepareStatement(
                  "UPDATE tasks SET name = ?, description = ?, priority = ?,
due_date = ?, assigned_to = ?, status = ? WHERE id = ?");
            updateStatement.setString(1, name);
            updateStatement.setString(2, description);
            updateStatement.setInt(3, priority);
            updateStatement.setString(4, dueDate);
            updateStatement.setString(5, assignedTo);
            updateStatement.setString(6, status);
            updateStatement.setInt(7, taskId);
            updateStatement.executeUpdate();


System.out.println("=================================================
================\n");
            System.out.println("\tTask details updated successfully.");

System.out.println("=================================================
================");
            System.out.println("\n\n\n");

      } else {
```

```
System.out.println("=====================================
================\n");
        System.out.println("\tTask with ID " + taskId + " not found.");

System.out.println("=====================================
================");
        System.out.println("\n\n\n");

    }
  }
  private static void updateTaskProgress(Connection connection,
Scanner scanner) throws SQLException {
    System.out.println("\n\n\t\tUpdate Task Progress");
    System.out.println("----------------------------------------\n");

    System.out.print("Enter task ID to update progress: ");
    int taskId = scanner.nextInt();
    scanner.nextLine();

    PreparedStatement selectStatement =
connection.prepareStatement("SELECT progress FROM tasks WHERE
id = ?");
    selectStatement.setInt(1, taskId);
    ResultSet resultSet = selectStatement.executeQuery();

    if (resultSet.next()) {
      int currentProgress = resultSet.getInt("progress");
      System.out.println("Current Progress: " + currentProgress +
"%");

      int newProgress;
      do {
        System.out.print("Enter new progress percentage (0-100):
");
        newProgress = scanner.nextInt();
        scanner.nextLine();
        if (newProgress < 0 || newProgress > 100) {
          System.out.println("Please enter a valid progress
percentage (0-100).");
        }
      } while (newProgress < 0 || newProgress > 100);
```

```
            PreparedStatement updateStatement =
connection.prepareStatement(
                    "UPDATE tasks SET progress = ? WHERE id = ?");
            updateStatement.setInt(1, newProgress);
            updateStatement.setInt(2, taskId);
            updateStatement.executeUpdate();


System.out.println("=====================================
================\n");
            System.out.println("\tProgress updated successfully.");

System.out.println("=====================================
================");
            System.out.println("\n\n\n");

        } else {

System.out.println("=====================================
================\n");
            System.out.println("\tTask with ID " + taskId + " not found.");

System.out.println("=====================================
================");
            System.out.println("\n\n\n");

        }
    }

    private static void deleteTask(Connection connection, Scanner
scanner) throws SQLException {
        System.out.println("\n\n\t\tDelete Task");
        System.out.println("----------------------------------------\n");

        System.out.print("Enter task ID to delete: ");
        int taskId = scanner.nextInt();
        scanner.nextLine();

        PreparedStatement deleteStatement =
connection.prepareStatement("DELETE FROM tasks WHERE id = ?");
        deleteStatement.setInt(1, taskId);
        int rowsAffected = deleteStatement.executeUpdate();
        if (rowsAffected > 0) {
```

```
System.out.println("=======================================
================\n");
        System.out.println("\tTask with ID " + taskId + " deleted
successfully.");

System.out.println("=======================================
================");
        System.out.println("\n\n\n");

      } else {

System.out.println("=======================================
================\n");
        System.out.println("\tTask with ID " + taskId + " not found.");
System.out.println("=======================================
================");
        System.out.println("\n\n\n");

      }
   }
}
```

Command:

javac termwork.java

java -cp C:\Users\nikhi\OneDrive\Desktop\Termwork\mysql-connector-j-8.3.0.jar termwork.java

OUTPUT

```
=======================================================
                Task Management System
=======================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option:
```

Add Task:

```
=======================================================
                Task Management System
=======================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option: 1


                Add Task
-------------------------------------------

Enter task name: Learn Node.Js
Enter task description: Learn MVC
Enter task priority: 1
Enter due date (YYYY-MM-DD): 2024/05/02
Enter assigned to: Nikhil Lathiya
Enter task status:
=======================================================
        Task added successfully.
=======================================================
```

View All Task:

```
==========================================================
                Task Management System
==========================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option: 2


                All Tasks
----------------------------------------


----------------------------------------------------
Task ID: 5
Name: Make frontend for Website
Description: ABCD
Priority: 1
Due Date: 2024-04-28
Assigned To: Abhishek
Status: Borisaniya
Progress: 0%
----------------------------------------------------
----------------------------------------------------
Task ID: 6
Name: Java Assignment 2
Description: 2,3,5 questiona re pending
Priority: 1
Due Date: 2024-05-01
Assigned To: Nikhil
Status: lathiya
Progress: 0%
----------------------------------------------------
----------------------------------------------------
Task ID: 7
Name: python project
Description: snake game
Priority: 2
Due Date: 2024-05-04
Assigned To: Abhishek
Status: 0
```

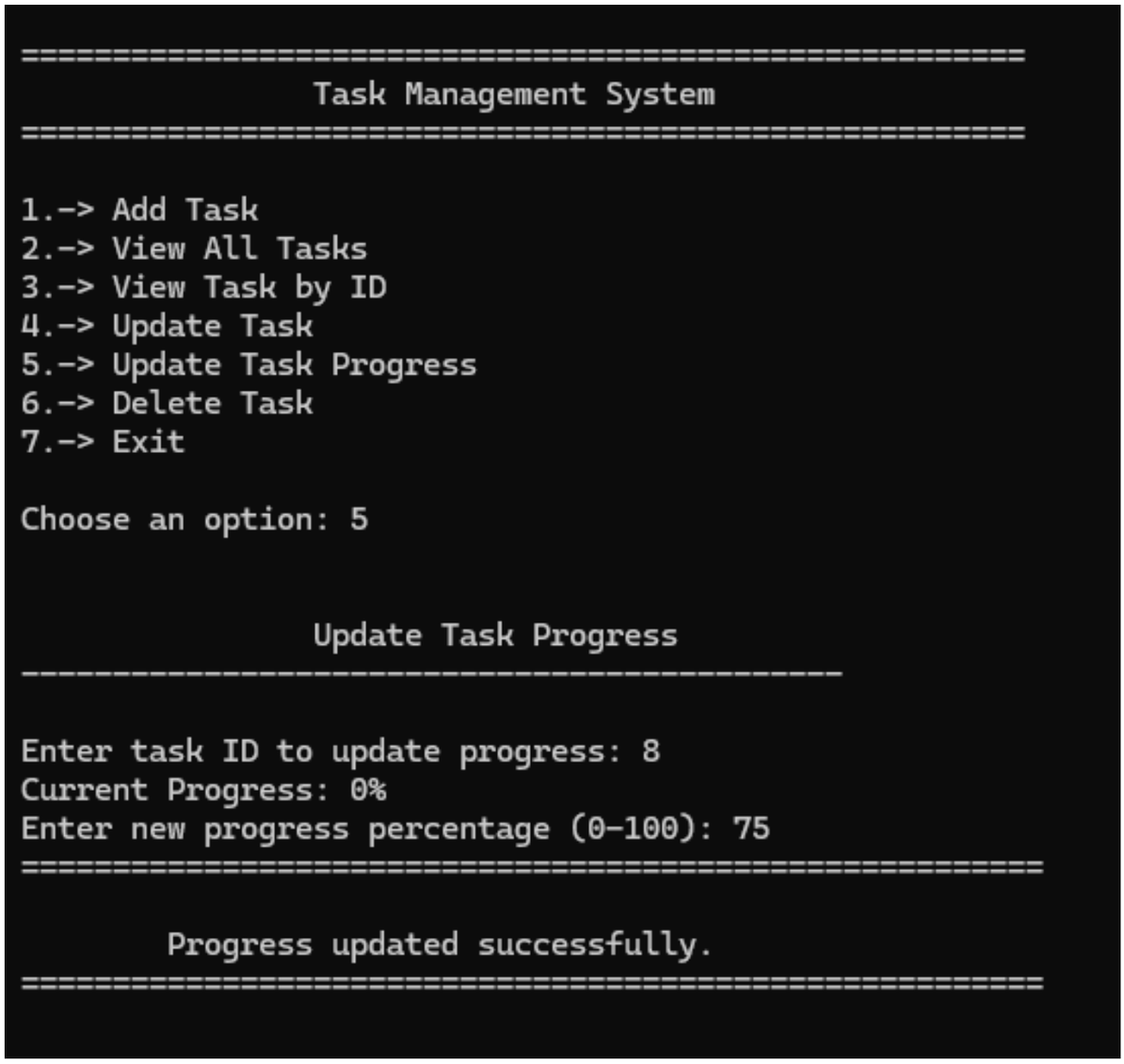
View Task by Id:

```
==========================================================
                Task Management System
==========================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option: 3


                View Task by ID
----------------------------------------

Enter task ID: 7
----------------------------------------------------------
Task ID: 7
Name: python project
Description: snake game
Priority: 2
Due Date: 2024-05-04
Assigned To: Abhishek
Status: 0
Progress: 70%
----------------------------------------------------------
```

Update Task:

```
                Task Management System
==================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option: 4


                Update Task
------------------------------------------

Enter task ID to update: 8
Current Task Details:
Name: learn react js
Description: learn hooks and props
Priority: 1
Due Date: 2024-05-01
Assigned To: Nikhil
Status: Lathiya
Progress: 0%
Enter new task details (excluding progress):
Enter task name: Learn React Development
Enter task description: learn to make diffrent component
Enter task priority: 2
Enter due date (YYYY-MM-DD): 2024/06/01
Enter assigned to: Abhishek
Enter task status: 0
==================================================

        Task details updated successfully.
==================================================
```

Update Task Process:



Delete Task:

```
=====================================================
                Task Management System
=====================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option: 6


                Delete Task
-----------------------------------------

Enter task ID to delete: 5
=====================================================

        Task with ID 5 deleted successfully.
=====================================================
```

Exit:

```
=====================================================
                Task Management System
=====================================================

1.-> Add Task
2.-> View All Tasks
3.-> View Task by ID
4.-> Update Task
5.-> Update Task Progress
6.-> Delete Task
7.-> Exit

Choose an option: 7
Exiting...
```