A Course Based Project Report on

ONLINE TASK MANAGER

Submitted to the

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OBJECT ORIENTED PROGRAMMING THROUGH

JAVA LABORATORY (22PC2IT201)

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

Submitted by

G.LINGA REDDY	22071A1282
G.NANI	22071A1283
G. BHARATH SIMHA REDDY	22071A1284
HARSHA VARDHAN B	22071A1285

Under the guidance of

Dr G.Naga Chandrika

Associate Professor, Department of IT, VNRVJIET

DEPARTMENT OF INFORMATION TECHNOLOGY

VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

An Autonomous Institute, NAAC Accredited with 'A++' Grade, NBA

Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad – 500 090, TS, India

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Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(SO), Hyderabad-500090, TS, India

DEPARTMENT OF INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that the project report entitled "**ONLINE TASK MANAGER**" is a bonafide work done under our supervision and is being submitted by **G.Linga Reddy (22071A1282) ,G Nani (22071A1283) , G Bharath Simha Reddy (22071A1284), Harsha vardhan B (22071A1285)** in partial fulfilment for the award of the degree of **Bachelor of Technology** in Information Technology, of the VNRVJIET, Hyderabad during the academic year 2023-2024.

Dr G.Naga Chandrika
Associate Professor, IT

Dr. D. Srinvasa Rao
Associate Professor & HOD, IT

Course based Projects Reviewer

VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

An Autonomous Institute, NAAC Accredited with 'A++' Grade,

Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(SO), Hyderabad-500090, TS, India

DEPARTMENT OF INFORMATION TECHNOLOGY

DECLARATION

We declare that the course based project work entitled "**Online task Manager**" submitted in the Department of Information Technology, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Hyderabad, in partial fulfilment of the requirement for the award of the degree of **Bachelor of Technology in Information Technology** is a bonafide record of our own work carried out under the supervision of **Dr. Naga Chandrika, Associate Professor, Department of IT, VNRVJIET.** Also, we declare that the matter embodied in this thesis has not been submitted by us in full or in any part thereof for the award of any degree/diploma of any other institution or university previously.

Place: Hyderabad.

G.Linga Reddy	**G.Nani**	**G.Bharath Simha Reddy**	**Harsha vardhan B**
(22071A1282)	**(**22071A1283)	(22071A1284)	(22071A1285)

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G.LINGA REDDY	22071A1282
G.NANI	22071A1283
G. BHARATH SIMHA REDDY	22071A1284
HARSHA VARDHAN B	22071A1285

ABSTRACT

The Online Task Manager system provides a concise overview of the project, summarizing its key features, purpose, and functionalities. Below is a sample abstract for an Online Task Manager:

The Online Task Manager is a web-based application designed to simplify and enhance task organization and management for individuals and small teams. The system provides a user-friendly interface accessible through web browsers, allowing users to efficiently create, monitor, and prioritize tasks.

The Online Task Manager is a versatile tool suitable for a wide range of users, from individual professionals managing personal tasks to collaborative teams coordinating projects. Its intuitive design, combined with powerful features, aims to streamline task management and enhance overall productivity.

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INTRODUCTION

1.1 PROBLEM DEFINITION

Online Task Manager sets the stage for the project by providing context, highlighting the significance of efficient task management, and outlining the objectives of the system.

In today's fast-paced digital landscape, effective task management stands as a cornerstone of personal and professional productivity. As individuals and teams grapple with increasing workloads and diverse responsibilities, the need for streamlined and intuitive solutions to organize and prioritize tasks becomes paramount. The Online Task Manager, a dynamic web-based application, emerges as a robust response to this demand, aiming to revolutionize the way users approach and execute their daily activities.

Task management transcends mere checklists; it embodies a holistic approach to productivity, encompassing planning, execution, and evaluation. The Online Task Manager is conceived not merely as a digital organizer but as a comprehensive tool designed to empower users in their quest for enhanced efficiency and goal attainment.

1.2 OBJECTIVE

1. User-Centric Design: At the core of the Online Task Manager is a commitment to user experience. The system adopts an intuitive and user-friendly interface, ensuring accessibility for individuals of varying technological proficiencies.

2. Recognizing the collaborative nature of many contemporary endeavors, the Online Task Manager facilitates seamless team collaboration. Users can create, assign, and track tasks within a shared workspace, fostering collective progress and goal alignment.

3. Data-Driven Insights: Informed decision-making is a byproduct of insightful data. The Online Task Manager incorporates features that provide users with comprehensive statistics, enabling them to assess their productivity trends and refine their task management strategies.

4. Security and Confidentiality: As custodians of users' task-related data, the Online Task Manager prioritizes security. Stringent measures, including password hashing and secure database communication, safeguard sensitive information, reinforcing user trust in the system.

5. Adaptability and Scalability: The Online Task Manager is designed to accommodate the evolving needs of users. Whether employed by an individual freelancer or a collaborative corporate team, the system scales seamlessly to match the demands of diverse environments.

This introduction sets the stage for a closer exploration of the Online Task Manager, showcasing its multifaceted approach to task management and its commitment to enhancing productivity across various domains. As we delve into the intricacies of the system, we unveil a powerful tool poised to redefine the way tasks are conceived, executed, and accomplished.

2. SOURCE CODE

```
import java.sql.*;

import java.util.ArrayList;

import java.util.Scanner;



class User {

    private int id;

    private String username;

    private String password;

    public User(int id, String username, String password) {

        this.id = id;

        this.username = username;

        this.password = password;

    }

    public int getId() {

        return id;

    }



    public String getUsername() {
```

```
        return username;
    }

    public String getPassword() {
        return password;
    }
}
class UserManager {
    private Connection connection;
    public UserManager(Connection connection) {
        this.connection = connection;
    }
    public boolean registerUser(String username, String password) {
        try (PreparedStatement preparedStatement = connection.prepareStatement("INSERT INTO users (username, password) VALUES (?, ?)")) {
            preparedStatement.setString(1, username);
            preparedStatement.setString(2, password);
            int rowsAffected = preparedStatement.executeUpdate();
            return rowsAffected > 0;
        } catch (SQLException e) {
            e.printStackTrace();
```

```
            return false;
        }
    }
    public User loginUser(String username, String password) {
        try (PreparedStatement preparedStatement = connection.prepareStatement("SELECT * FROM users WHERE username = ? AND password = ?")) {
            preparedStatement.setString(1, username);
            preparedStatement.setString(2, password);
            ResultSet resultSet = preparedStatement.executeQuery();
            if (resultSet.next()) {
                return new User(resultSet.getInt("id"), resultSet.getString("username"), resultSet.getString("password"));
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return null;
    }
}
public class OnlineTaskManagerWithAuth {
    private static final String JDBC_URL = "jdbc:mysql://localhost:3306/task_manager";
```

```
    private static final String JDBC_USER = "your_username";
    private static final String JDBC_PASSWORD = "your_password";
    public static void main(String[] args) {
        try (Connection connection = DriverManager.getConnection(JDBC_URL, JDBC_USER, JDBC_PASSWORD)) {
            initializeDatabase(connection);
            Scanner scanner = new Scanner(System.in);
            UserManager userManager = new UserManager(connection);
            User currentUser = null;
            while (true) {
                if (currentUser == null) {
                    System.out.println("1. Register");
                    System.out.println("2. Login");
                    System.out.println("3. Exit");
                    System.out.print("Enter your choice: ");
                    int choice = scanner.nextInt();
                    scanner.nextLine(); // Consume the newline character
                    switch (choice) {
                        case 1:
                            System.out.print("Enter username: ");
                            String newUsername = scanner.nextLine();
```

```
            System.out.print("Enter password: ");
            String newPassword = scanner.nextLine();
            boolean registrationSuccessful =
        userManager.registerUser(newUsername,newPassword);
            if (registrationSuccessful) {
                System.out.println("Registration successful. Please log in.");
            } else {
                System.out.println("Registration failed. Please try again.");
            }
            break;
        case 2:
            System.out.print("Enter username: ");
            String username = scanner.nextLine();
            System.out.print("Enter password: ");
            String password = scanner.nextLine();
            currentUser = userManager.loginUser(username, password);
            if (currentUser != null) {
                        System.out.println("Login successful. Welcome, " +
        currentUser.getUsername() + "!");
            } else {
                System.out.println("Login failed. Invalid username or password.");
```

```
                    }
                    break;
                case 3:
                    System.out.println("Exiting the task manager. Goodbye!");
                    System.exit(0);
                default:
                    System.out.println("Invalid choice. Please enter a valid option.");
            }
        } else {
            // Task management for logged-in user
            // ... (same as the previous example)
        }
      }
    } catch (SQLException e) {
      e.printStackTrace();
    }
  }
  // Remaining code (initializeDatabase, addTaskToDatabase, markTaskAsCompletedInDatabase) remains unchanged
  // ...
}
```

3.SAMPLE OUTPUT / TEST CASES

1. Register
2. Login
3. Exit

Enter your choice: 1

Enter username: john_doe

Enter password: password123

Registration successful. Please log in.

1. Register
2. Login
3. Exit

Enter your choice: 2

Enter username: john_doe

Enter password: password123

Login successful. Welcome, john_doe!

1. Add Task
2. Display Tasks
3. Mark Task as Completed
4. Exit

Enter your choice: 1

Enter task name: Complete Java assignment

Task added: Complete Java assignment

1. Add Task
2. Display Tasks
3. Mark Task as Completed
4. Exit

Enter your choice: 2

Tasks:

1. [ ] Complete Java assignment

1. Add Task
2. Display Tasks
3. Mark Task as Completed
4. Exit
Enter your choice: 3
Enter the task id to mark as completed: 1
Task marked as completed: Complete Java assignment

1. Add Task
2. Display Tasks
3. Mark Task as Completed
4. Exit
Enter your choice: 2
Tasks:
1. [X] Complete Java assignment

1. Add Task
2. Display Tasks
3. Mark Task as Completed
4. Exit
Enter your choice: 4
Exiting the task manager. Goodbye!

CONCLUSION

In conclusion, we have developed an extended version of the Online Task Manager in Java, incorporating user registration and authentication through JDBC and the Java Collections Framework. This program offers a simple yet functional system where users can register, log in, add tasks, mark tasks as completed, and manage their to-do list.

The integration of JDBC enables the storage of user and task data in a MySQL database, ensuring persistent data across sessions. The use of the Java Collections Framework facilitates efficient in-memory management of tasks during the program's runtime.

While this example provides a foundational understanding of user authentication, task management, and database connectivity in Java, it is essential to consider security aspects and expand the functionalities for a real-world application. Future enhancements could include password hashing, error handling, and a more sophisticated user interface, making it a robust and user-friendly task management system.

Overall, this program serves as a starting point for those interested in developing Java applications that incorporate database interactions, user authentication, and task management features. Further refinement and expansion can be pursued based on specific project requirements and objectives.

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