

FITNESS AND DIET TRACKER

A MINI-PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project “FITNESS AND DIET TRACKER” is the Bonafide work of “**KISHORE KUMAR T, KRITHIK D**” who carried out the project work under my supervision.

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This mini project report is submitted for the viva voce examination to be held on

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

In today's fast-paced world, maintaining a healthy lifestyle has become increasingly challenging. Although several fitness and diet applications are available globally, many do not cater to the specific needs of local users or provide an efficient data management system. To address this issue, our project introduces a **Fitness and Diet Tracker**, a database-driven application designed to help users monitor their daily diet and physical activities effectively. The main objective of this project is to assist users in maintaining a balanced diet by recording their meals, tracking calorie intake, and logging workout routines. The system stores and organizes user data, allowing easy retrieval and analysis to generate insights into their health progress. By offering a simple and efficient interface, this system encourages users to develop healthy habits and achieve their fitness goals in a structured manner.

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1. KISHORE KUMAR T

2. KRITHIK D

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The project helps users to record their daily diet activities and maintain organized information for easy access. The necessary details about meals and calorie intake will be stored and displayed according to user entries. Users can view their recorded data conveniently whenever required for personal reference and tracking.

1.2 SCOPE OF THE WORK

The Fitness and Diet Tracker will help users record and maintain their daily diet activities in an organized manner. It allows users to store information about their meals and calorie intake for easy reference. The system provides simple access and usability for a wide range of users.

1.3 PROBLEM STATEMENT

The need for the project arises as many existing fitness and diet applications are developed by large international companies and require premium access or complex features. Such systems are not easily accessible to all users, especially those seeking a simple platform to record and view their daily diet activities.

1.4 AIM AND OBJECTIVES OF THE PROJECT

The main objective of this project is to allow users to record and view their daily diet activities in a simple and organized manner. This system helps to maintain the details of meals and calorie intake entered by the user. This will allow users to track their eating habits conveniently and consistently.

CHAPTER 2

SYSTEM SPECIFICATIONS

2.1 HARDWARE SPECIFICATIONS

Processor	:	Intel i5
Memory Size	:	8GB (Minimum)
HDD	:	1 TB (Minimum)

2.2 SOFTWARE SPECIFICATIONS

Operating System	:	WINDOWS 10
Front - End	:	HTML, CSS, JS
Back - End	:	ORACLE 11g
Language	:	JAVA, SQL

CHAPTER 3

MODULE DESCRIPTION

This application consists of three modules. When the program runs, it will display the main interface that allows the user to log in and access different features of the system. The description of the modules is as follows:

1. User Login Module

When the person who interacts tries to log in as a user, he/she will be prompted to enter the username and password. Once successfully logged in, the user can access the system to record and view diet-related data.

2. Data Entry Module

This module allows the user to enter their daily diet details such as meal type, food items, and calorie intake. The entered data will be stored in the database and can be accessed anytime for reference.

3. Table Records Display Module

This module displays all the stored diet records in a tabular format. The user can easily view and verify the entered details, ensuring that their daily food intake information is properly maintained and organized.

CHAPTER 4

SAMPLE CODING

Sample 1: Database Connectivity with Java (JDBC)

```
import java.sql.*;  
  
public class OracleConnect {  
  
    public static void main(String[] args) {  
  
        // Update your DB details  
  
        String url = "jdbc:oracle:thin:@localhost:1521:xe";  
  
        String username = "system";  
  
        String password = "rec";  
  
  
        try {  
  
            // Step 1: Load the driver  
  
            Class.forName("oracle.jdbc.driver.OracleDriver");  
  
            // Step 2: Connect to DB  
  
            Connection con = DriverManager.getConnection(url, username, password);  
  
            System.out.println(" Connected to Oracle successfully!");  
  
  
            // Step 3: Close connection  
  
            con.close();  
  
        } catch (Exception e) {
```

```

        e.printStackTrace();

    }

}

}

```

Sample 2: Login Handler

```

static class LoginHandler implements HttpHandler {

    public void handle(HttpExchange ex) throws IOException {
        if (!"POST".equalsIgnoreCase(ex.getRequestMethod())) {
            respond(ex, 405, "Method Not Allowed");
            return;
        }

        try {
            Map<String, String> f = parseForm(ex.getRequestBody());
            String username = f.getOrDefault("username", "");
            String password = f.getOrDefault("password", "");

            try (Connection c = DBConnection.getConnection()) {
                PreparedStatement ps = c.prepareStatement(
                    "SELECT user_id FROM users WHERE username=? AND password=?");
                ps.setString(1, username);
                ps.setString(2, password);

                ResultSet rs = ps.executeQuery();
                if (rs.next())
                    respond(ex, 200, "SUCCESS:" + rs.getInt(1));
                else
                    respond(ex, 200, "FAIL");

            } catch (SQLException e) {
                respond(ex, 500, "DB_ERROR: " + e.getMessage());
            }
        }
    }
}

```

```

        } catch (Exception e) { respond(ex,500,"SERVER_ERROR: " +
e.getMessage()); }

    }

}

```

Sample 3: Save User Details

```

static class SaveUserHandler implements HttpHandler {

    public void handle(HttpExchange ex) throws IOException {
        if (!"POST".equalsIgnoreCase(ex.getRequestMethod())) {
            respond(ex,405,"Method Not Allowed"); return; }

        try {
            Map<String,String> f = parseForm(ex.getRequestBody());

            String username = f.get("username");

            String password = f.get("password");

            String gender = f.getOrDefault("gender","");
            int age = parseIntSafe(f.get("age"));

            double weight = parseDoubleSafe(f.get("weight"));

            double height = parseDoubleSafe(f.get("height"));

            String goal = f.getOrDefault("goal","");
            try (Connection c = DBConnection.getConnection()) {
                PreparedStatement ps = c.prepareStatement(
                    "INSERT INTO users (user_id, username, password, gender, age,
weight, height, goal) " +

```

```

"VALUES ((SELECT NVL(MAX(user_id),0)+1 FROM users), ?, ?, ?, ?, ?)");

ps.setString(1, username);

ps.setString(2, password);

ps.setString(3, gender);

ps.setInt(4, age);

ps.setDouble(5, weight);

ps.setDouble(6, height);

ps.setString(7, goal);

ps.executeUpdate();

```

```

PreparedStatement ps2 = c.prepareStatement("SELECT user_id FROM
users WHERE username=?");

ps2.setString(1, username);

ResultSet rs = ps2.executeQuery();

if (rs.next()) respond(ex,200,"SUCCESS:" + rs.getInt(1));

else respond(ex,500,"CREATE_FAILED");

} catch (SQLException e) { respond(ex,500,"DB_ERROR: " +
e.getMessage()); }

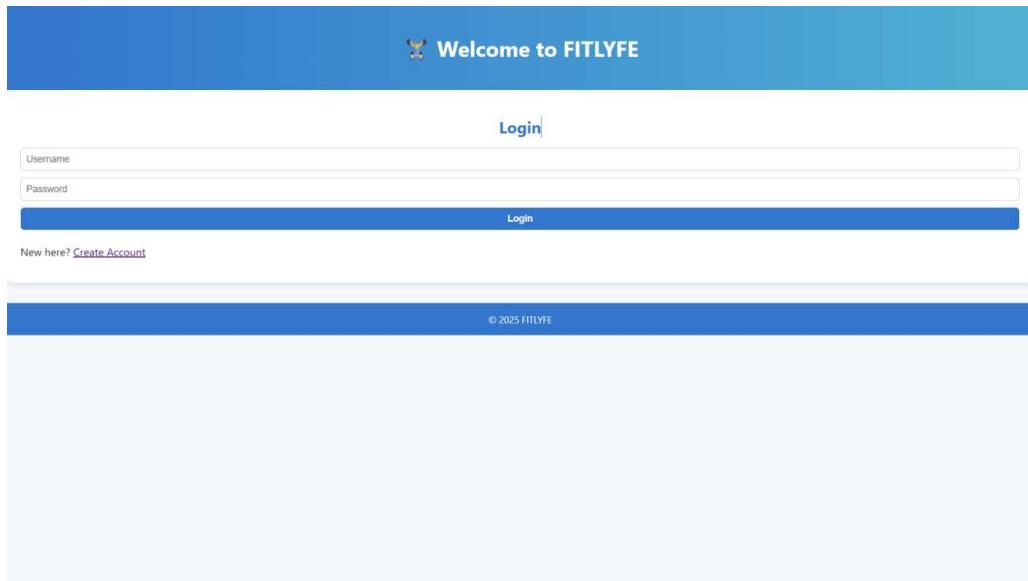
} catch (Exception e) { respond(ex,500,"SERVER_ERROR: " +
e.getMessage()); }

}
}

```

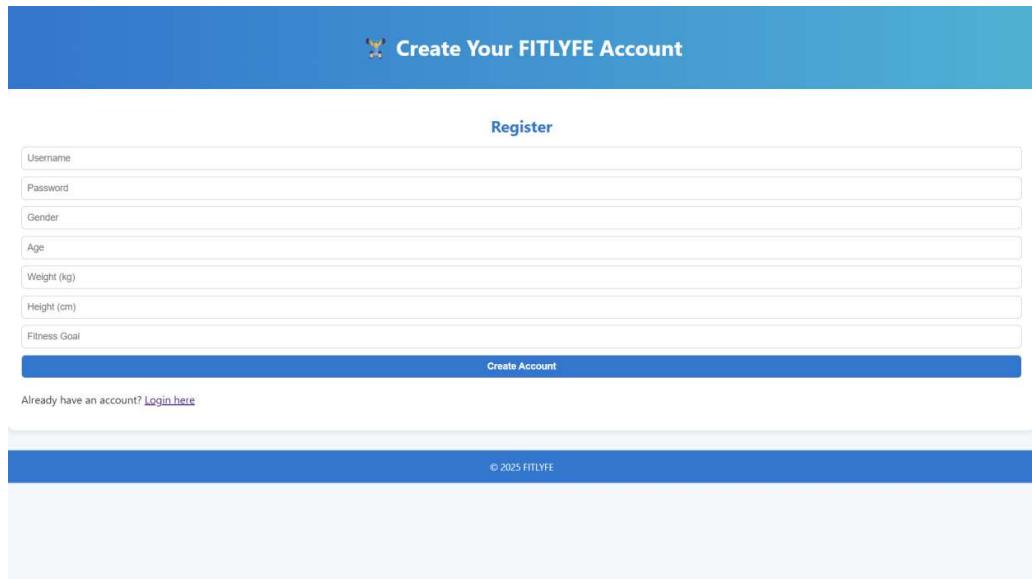
CHAPTER 5

SCREEN SHOTS



The screenshot shows the FITLYFE login page. At the top, a blue header bar displays the text "Welcome to FITLYFE" next to a small yellow and white logo. Below the header is a white form area containing two input fields: "Username" and "Password". To the right of the "Password" field is a "Login" button with white text. At the bottom left of the form area, there is a link "New here? [Create Account](#)". The footer of the page features a blue bar with the copyright text "© 2025 FITLYFE".

Fig 5.1 Login page



The screenshot shows the FITLYFE account creation page. A blue header bar at the top displays the text "Create Your FITLYFE Account" next to a small yellow and white logo. Below the header is a white form area containing several input fields: "Username", "Password", "Gender", "Age", "Weight (kg)", "Height (cm)", and "Fitness Goal". To the right of the "Fitness Goal" field is a "Create Account" button with white text. At the bottom left of the form area, there is a link "Already have an account? [Login here](#)". The footer of the page features a blue bar with the copyright text "© 2025 FITLYFE".

Fig 5.2 Create Account

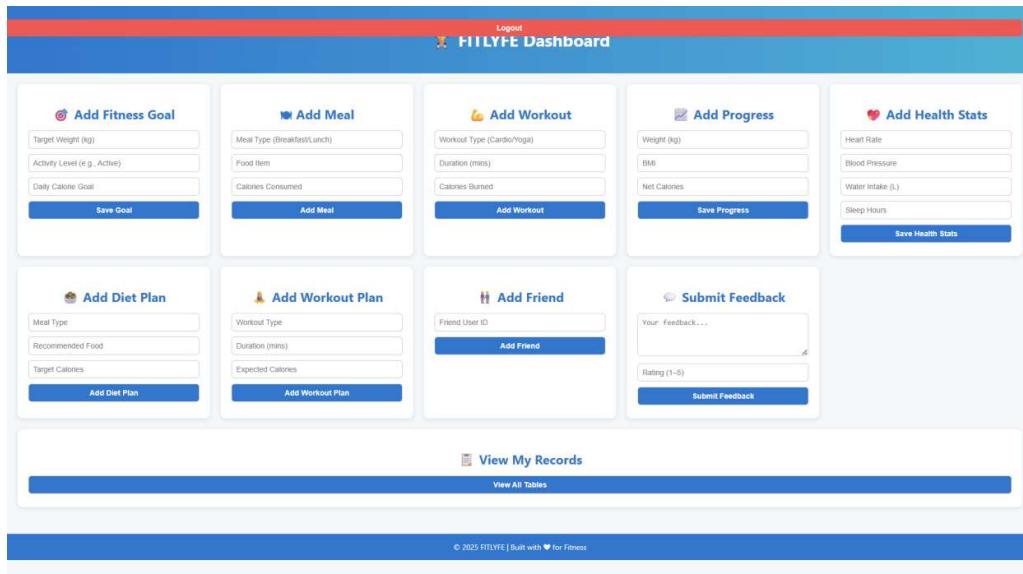


Fig 5.3 Interface

View My Records				
My Records				
FEEDBACK				
user_id	feedback_text	rating	feedback_date	
23	Excellent tracking and clean UI.	4	2025-11-02 12:20:19	
WORKOUT PLAN				
user_id	workout_type	duration	expected_calories	
23	Strength Training	60	500	
HEALTH STATS				
user_id	record_date	heart_rate	blood_pressure	water_intake
23	2025-11-03 09:03:20	75	110	5
user_id	sleep_hours			
23	8			
WORKOUTS				
user_id	workout_date	workout_type	duration	calories_burned
23	2025-11-03 09:31:09	Cardio	30	1000
FITNESS GOALS				
user_id	target_weight	activity_level	calorie_goal	
23	75	Active	1000	
PROGRESS				
user_id	progress_date	weight	bmi	net_calories
23	2025-11-02 12:18:42	80	24.7	3000
DIET PLAN				
user_id	meal_type	recommended_food	target_calories	
23	Lunch	Grilled Chicken	600	
MEALS				
user_id	meal_date	meal_type	food_item	calories_consumed
23	2025-11-03 09:30:54	Breakfast	Dosa	400
FRIENDS				
user_id	friend_user_id	since		
23	2	2025-11-02 12:20:07		

Fig 5.4 Customer's Details

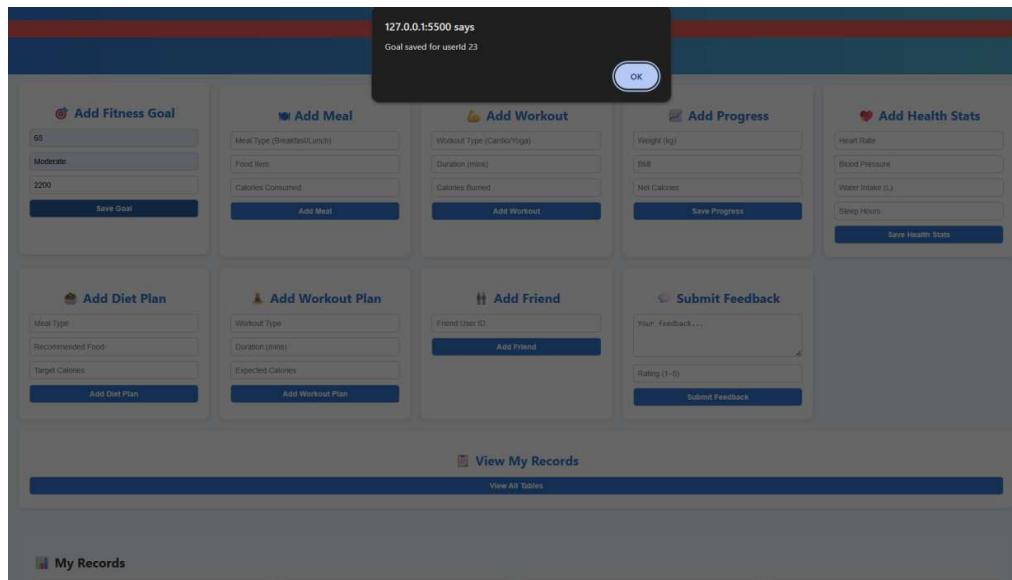


Fig 5.5 Update Customer's Details

The "My Records" section displays the following tables:

- FEEDBACK:** Shows a single record for user_id 23 with feedback text "Excellent tracking and clean UI.", rating 4, and timestamp 2025-11-02 12:20:19.
- WORKOUT PLAN:** Shows a single record for user_id 23 with workout type "Strength Training", duration 60, and expected calories 500.
- HEALTH STATS:** Shows a single record for user_id 23 with record date 2025-11-03 09:03:20, heart rate 75, blood pressure 110, water intake 5, and sleep hours 8.
- WORKOUTS:** Shows a single record for user_id 23 with workout date 2025-11-03 09:31:09, workout type "Cardio", duration 30, and calories burned 1000.
- FITNESS GOALS:** Shows a circled row for user_id 23 with target weight 65, activity level "Moderate", and calorie goal 2200.
- PROGRESS:** Shows a single record for user_id 23 with progress date 2025-11-02 12:10:42, weight 80, BMI 24.7, and net calories 3000.
- DIET PLAN:** Shows a single record for user_id 23 with meal type "Lunch" and recommended food "Grilled Chicken".
- MEALS:** Shows a single record for user_id 23 with meal date 2025-11-03 09:30:54, meal type "Breakfast", food item "Dosa", and calories consumed 400.
- FRIENDS:** Shows a single record for user_id 23 with friend user ID 2 and timestamp 2025-11-02 12:20:07.

At the bottom, a footer bar reads "© 2025 FITIFY | Built with ❤️ for Fitness".

Fig 5.6 Updated Customer Details

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

The **FITLYFE** Fitness and Diet Tracking System effectively integrates HTML, CSS, JavaScript, Java, and Oracle Database to help users manage their health goals. It allows users to register, log in, set fitness goals, record meals, workouts, progress, and view health statistics through an interactive dashboard. The system promotes healthy living through data-driven insights.

In the future, **FITLYFE** can be enhanced with mobile app support, AI-based diet and workout recommendations, real-time charts, wearable device integration, and cloud deployment. These improvements would make it more accessible, intelligent, and user-friendly, evolving into a complete digital fitness companion.

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