

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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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.getDefault("username","");

            String password = f.getDefault("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.getDefault("gender","");

            int age = parseIntSafe(f.get("age"));

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

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

            String goal = f.getDefault("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()); }
```

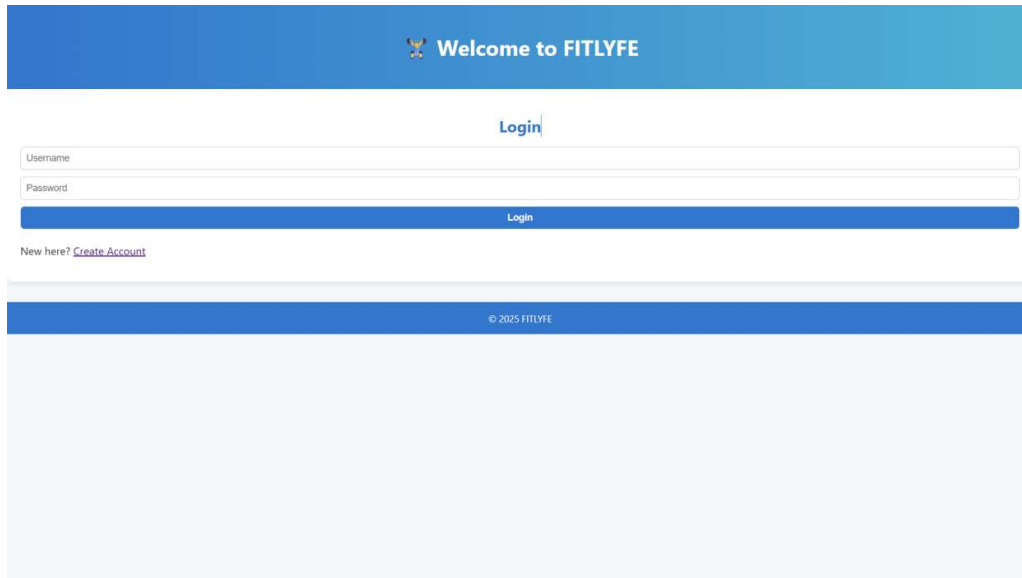
```
    } catch (Exception e) { respond(ex,500,"SERVER_ERROR: " +  
e.getMessage()); }
```

```
    }
```

```
}
```

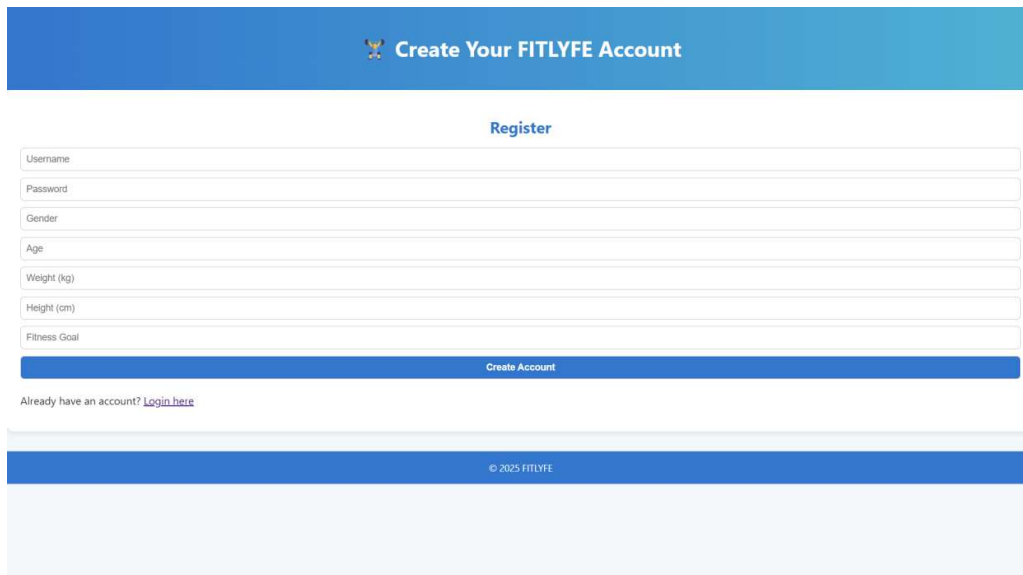
CHAPTER 5

SCREEN SHOTS



The screenshot shows the login interface for FITLYFE. At the top, a blue header bar contains a small icon and the text "Welcome to FITLYFE". Below this, the word "Login" is centered. The form consists of two input fields: "Username" and "Password". A blue "Login" button is positioned below the password field. A link "New here? [Create Account](#)" is located below the login button. The footer area is light blue and contains the copyright notice "© 2025 FITLYFE".

Fig 5.1 Login page



The screenshot shows the registration interface for FITLYFE. At the top, a blue header bar contains a small icon and the text "Create Your FITLYFE Account". Below this, the word "Register" is centered. The form includes several input fields: "Username", "Password", "Gender", "Age", "Weight (kg)", "Height (cm)", and "Fitness Goal". A blue "Create Account" button is located below the "Fitness Goal" field. A link "Already have an account? [Login here](#)" is positioned below the registration button. The footer area is light blue and displays the copyright notice "© 2025 FITLYFE".

Fig 5.2 Create Account

Logout

FITLYFE Dashboard

Add Fitness Goal

Target Weight (kg)

Activity Level (e.g., Active)

Daily Calorie Goal

Save Goal

Add Meal

Meal Type (Breakfast/Lunch)

Food Item

Calories Consumed

Add Meal

Add Workout

Workout Type (Cardio/Yoga)

Duration (mins)

Calories Burned

Add Workout

Add Progress

Weight (kg)

BMI

Net Calories

Save Progress

Add Health Stats

Heart Rate

Blood Pressure

Water Intake (L)

Sleep Hours

Save Health Stats

Add Diet Plan

Meal Type

Recommended Food

Target Calories

Add Diet Plan

Add Workout Plan

Workout Type

Duration (mins)

Expected Calories

Add Workout Plan

Add Friend

Friend User ID

Add Friend

Submit Feedback

Your Feedback...

Rating (1-5)

Submit Feedback

View My Records

View All Tables

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Fig 5.3 Interface

View My Records

View All Tables

My Records

| user_id | feedback_text | rating | feedback_date |
|---------|---------------------------------|--------|---------------------|
| 23 | Excellent tracking and clean UI | 4 | 2025-11-02 12:20:19 |

| user_id | workout_type | duration | expected_calories |
|---------|-------------------|----------|-------------------|
| 23 | Strength Training | 60 | 500 |

| user_id | record_date | heart_rate | blood_pressure | water_intake | sleep_hours |
|---------|---------------------|------------|----------------|--------------|-------------|
| 23 | 2025-11-03 09:03:20 | 75 | 110 | 5 | 8 |

| user_id | workout_date | workout_type | duration | calories_burned |
|---------|---------------------|--------------|----------|-----------------|
| 23 | 2025-11-03 09:31:09 | Cardio | 30 | 1000 |

| user_id | target_weight | activity_level | calorie_goal |
|---------|---------------|----------------|--------------|
| 23 | 75 | Active | 1000 |

| user_id | progress_date | weight | bmi | net_calories |
|---------|---------------------|--------|------|--------------|
| 23 | 2025-11-02 12:18:42 | 80 | 24.7 | 3000 |

| user_id | meal_type | recommended_food | target_calories |
|---------|-----------|------------------|-----------------|
| 23 | Lunch | Grilled Chicken | 600 |

| user_id | friend_user_id | since |
|---------|----------------|---------------------|
| 23 | 2 | 2025-11-02 12:20:07 |

| user_id | meal_date | meal_type | food_item | calories_consumed |
|---------|---------------------|-----------|-----------|-------------------|
| 23 | 2025-11-03 09:30:34 | Breakfast | Dosa | 400 |

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Fig 5.4 Customer’s Details

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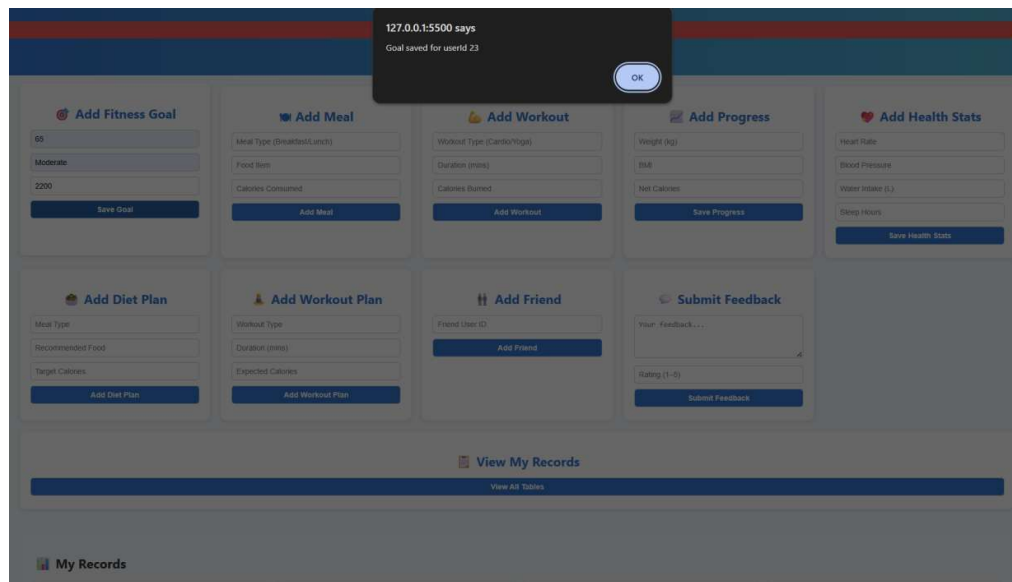


Fig 5.5 Update Customer's Details

View My Records

View All Tables

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 | sleep_hours |
| 23 | 2025-11-03 09:03:20 | 75 | 110 | 5 | 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 | 65 | Moderate | 2200 |

| PROGRESS | | | |
|----------|---------------------|--------|--------------|
| user_id | progress_date | weight | net_calories |
| 23 | 2025-11-02 12:18:42 | 80 | 247 |

| DIET PLAN | | | |
|-----------|-----------|------------------|-----------------|
| user_id | meal_type | recommended_food | target_calories |
| 23 | Lunch | Grilled Chicken | 600 |

| FRIENDS | | |
|---------|----------------|---------------------|
| user_id | friend_user_id | since |
| 23 | 2 | 2025-11-02 12:20:07 |

| MEALS | | | | |
|---------|---------------------|-----------|-----------|-------------------|
| user_id | meal_date | meal_type | food_item | calories_consumed |
| 23 | 2025-11-03 09:30:54 | Breakfast | Dosa | 400 |

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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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