

PERSONALIZED WORKOUT RECOMMENDATION SYSTEM

A MINI-PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that this project “**PERSONALIZED WORKOUT RECOMMENDATION SYSTEM**” is the bonafide work of “**KAILASH B ($\bar{B}. E$) , KANISHK D ($\bar{B}. E$)**” 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 _____

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ABSTRACT

The Personalized Workout Recommendation System is a smart fitness database application designed to provide customized workout recommendations based on user details such as age, gender, height, weight, and fitness goals. This system integrates Java as the frontend and MySQL as the backend, demonstrating seamless connectivity through JDBC. The application calculates Body Mass Index (BMI), determines the fitness category, and dynamically fetches workouts from the database that match the user's fitness goals. This project aims to promote efficient and personalized fitness planning, leveraging database management principles to solve real-world health and wellness problems.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The Personalized Workout Recommendation System is a database-driven Java application designed to generate customized fitness plans for users. By collecting data such as age, height, weight, and fitness goals, the system calculates the user's BMI and recommends suitable workout plans. It demonstrates how DBMS concepts and Java-MySQL integration can be applied to develop intelligent health-oriented applications.

1.2 SCOPE OF THE WORK

This system helps users identify suitable workouts tailored to their personal goals such as weight loss, muscle gain, endurance, or general fitness. It also showcases real-world database applications, helping students and developers understand CRUD operations and data-driven logic.

1.3 PROBLEM STATEMENT

Most individuals follow generic workout routines without considering their physical parameters and goals. This leads to inefficient or even harmful fitness progress. The project solves this by storing structured user data and recommending goal-based workouts automatically.

1.4 AIM AND OBJECTIVES

- To store and manage user fitness data efficiently.
- To maintain a structured database of workouts categorized by type and difficulty.
- To generate real-time personalized recommendations.
- To demonstrate seamless Java-MySQL connectivity using JDBC.

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	:	Python
Back - End	:	MySql
Language	:	python,SQL

CHAPTER 3

MODULE DESCRIPTION

The project consists of the following modules:

1. User Input Module

Collects details such as name, age, gender, weight, height, and fitness goal.

2. Database Module

Stores user and workout details in MySQL using normalized tables.

3. Recommendation Module

Calculates BMI and retrieves workout plans matching the user's goal.

4. Output Module

Displays personalized workout plans and tips in the console.

CHAPTER 4

SAMPLE CODING

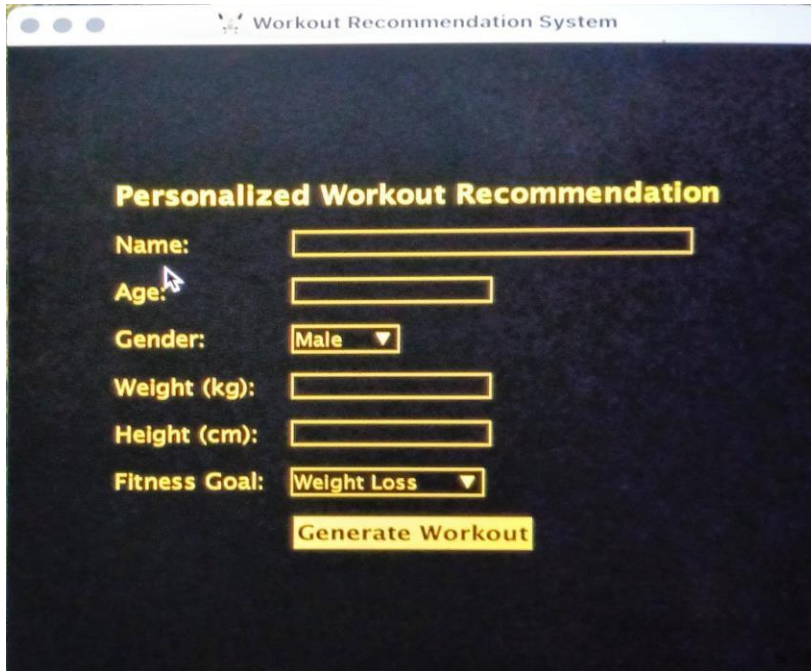
```
import java.sql.*;
public class DBConnection {
    private static final String URL =
"jdbc:mysql://localhost:3306/workoutdb";
    private static final String USER = "root";
    private static final String PASS = "Password";
    public static Connection getConnection() throws SQLException
    {
        return DriverManager.getConnection(URL, USER, PASS);
    }
}

// Main logic for user registration and recommendation
public class MainApp {
    public static void main(String[] args) {
        // Code for reading user input and fetching recommendations
    }
}
```

CHAPTER 5

SCREENSHOTS

Figure 5.1 – Introduction Page



The screenshot shows a web browser window titled "Workout Recommendation System". The page has a dark blue background with yellow text and input fields. The title "Personalized Workout Recommendation" is at the top. Below it are labels for "Name:", "Age:", "Gender:", "Weight (kg):", "Height (cm):", and "Fitness Goal:". Each label is followed by an input field. The "Gender" dropdown menu is set to "Male" and the "Fitness Goal" dropdown menu is set to "Weight Loss". A yellow "Generate Workout" button is at the bottom.

Personalized Workout Recommendation

Name:

Age:

Gender:

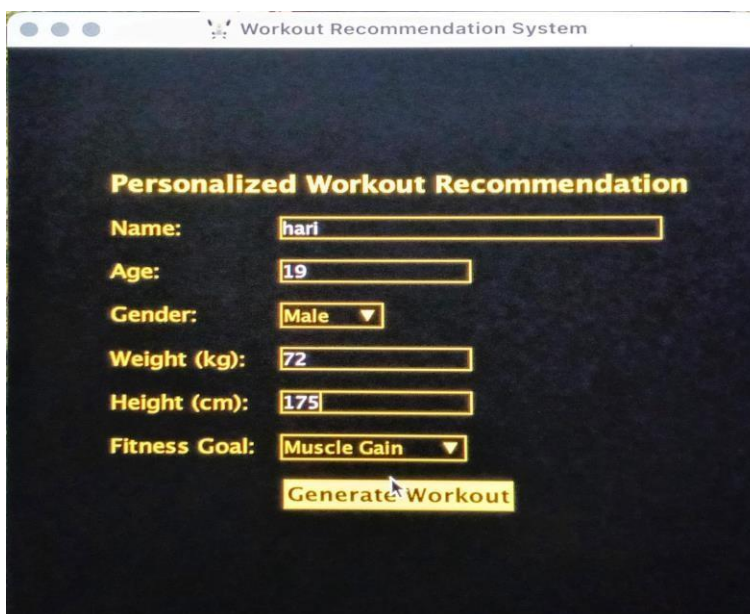
Weight (kg):

Height (cm):

Fitness Goal:

Generate Workout

Figure 5.2 – User Registration Page



The screenshot shows the same web browser window as Figure 5.1, but with the input fields filled out. The "Name" field contains "hari", the "Age" field contains "19", the "Weight (kg)" field contains "72", and the "Height (cm)" field contains "175". The "Gender" dropdown menu is still set to "Male" and the "Fitness Goal" dropdown menu is now set to "Muscle Gain". The "Generate Workout" button is still at the bottom.

Personalized Workout Recommendation

Name:

Age:

Gender:

Weight (kg):

Height (cm):

Fitness Goal:

Generate Workout

Figure 5.3 – Recommendation Output

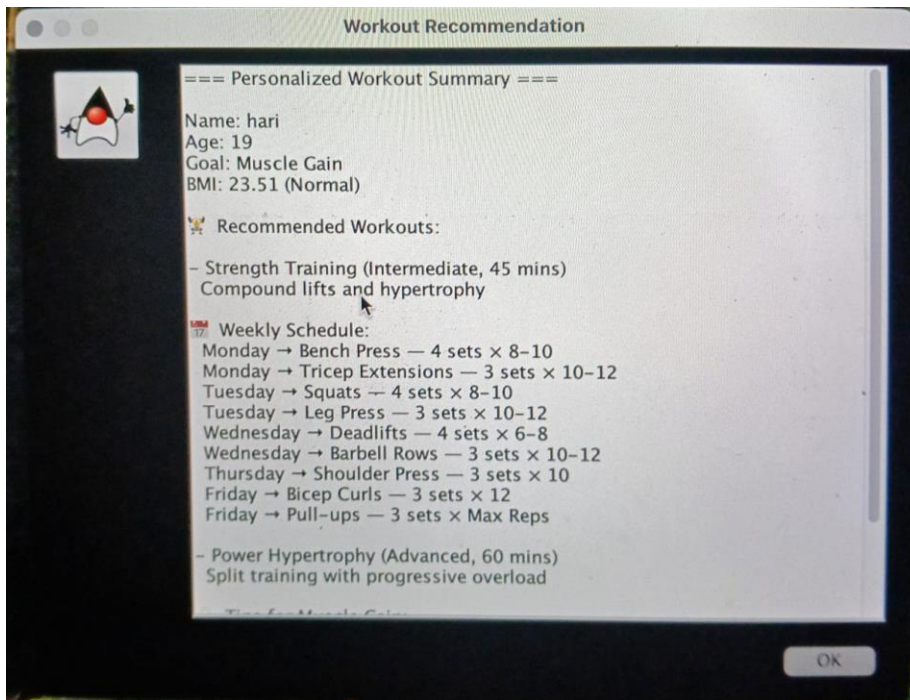
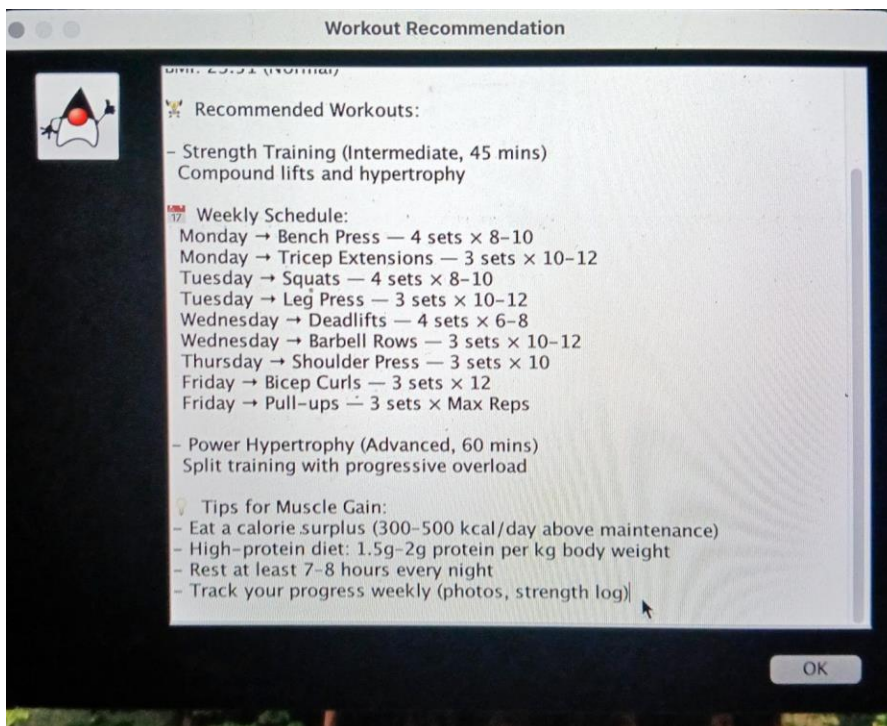


Figure 5.4 – Recommendation Output



CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

This project successfully demonstrates the application of DBMS in developing a smart fitness recommendation system. By using Java and MySQL, it provides a simple yet powerful way to manage fitness data and generate personalized workout suggestions. In the future, this system can be enhanced to include diet planning, AI-based adaptive recommendations, and user progress tracking.

REFERENCES

1. <https://www.w3schools.com/sql/>
2. <https://www.tutorialspoint.com/sqlite/index.htm>
3. <https://www.wikipedia.org/>
4. <https://www.learnpython.org/>
5. <https://www.codecademy.com/learn/learn-python>