

SMART FITNESS PLANNER

TEAM 2

CPT-200 - System Analysis and Design

PROJECT IDEA

Our idea is a fitness focused web application designed to help users reach their health goals through personalized workout routines. We identified a common issue: many people struggle to stay consistent with exercise, especially when routines are not adjusted to their time, fitness level, or goals. Our web app addresses this by offering a simple and motivating experience that adapts to each user's availability, activity preference, and desired progress speed. The goal is to make staying active feel achievable and personalized, encouraging long term habit building.

SYSTEM COMPONENTS

1. User Authentication

(Login/Sign-up)

2. Onboarding Questionnaire

(User Data Input)

3. Routine Generator

(Logic for assigning workouts)

4. Dashboard

(Workout of the Day, Streaks, Summary)

5. Calendar

(View upcoming workouts)

6. Statistics

(Progress tracking and analytics)

7. Profile Settings

(User data/preferences management)

CUTTING - EDGE TECHNOLOGY

- We're planning to integrate Artificial Intelligence to personalize workout routines based on user inputs.
- Responsive Design: Mobile first approach with adaptability to desktop.
- Modern tech stack like HTML/CSS/JS frontend, backend with Python, and database with SQL.

PROJECT PROPOSAL

TEAM 2

CPT-200 - System Analysis and Design

1. INTRODUCTION

Our idea is to help people reach their fitness goals with a mobile web application that can give users a variety of workouts and fitness activities to follow.

2. CLIENT OPERATIONS

People will input any fitness-related information, such as their goals, weight, fitness status, and other factors. Our engine will generate a list of different workouts that suit their needs.

3. EXECUTIVE SUMMARY

One of the biggest challenges in today's world is maintaining good health. Many people find it hard to stay active due to busy lifestyles, lack of access to resources like gyms or equipment, and other social or personal barriers. Our application is designed to help anyone achieve their fitness goals by offering personalized workout routines adjusted to each user's needs, making fitness more accessible and easier to integrate into everyday life.

COST SUMMARY

| | |
|----------|-----|
| Budget | 900 |
| Design | 500 |
| AI | 200 |
| Features | 200 |

TERMS AND CONDITIONS

I acknowledge that I take full responsibility for using this application, which is designed for users who do not have any medical conditions. The developers take no responsibility for any medical incidents or emergencies that could occur when using this app.

CONTACT

Jordan Moore

Project Manager
jm267037@my.stchas.edu
314-599-2882

Tomas Castaño

Project Developer
tc285904@my.stchas.edu
314-387-3220

Manuela Palacios

Project Developer
mp272593@my.stchas.edu
314-262-0608

STATEMENT OF WORK

TEAM 2

CPT-200 - System Analysis and Design

INTRODUCTION

Maintaining a consistent fitness routine can be overwhelming, especially for students and young adults managing busy schedules. The Smart Fitness Planner is a web-based application that acts as a virtual fitness assistant. It generates custom workout routines based on user-selected goals such as losing weight, gaining muscle, or toning. By collecting key information about the user's fitness level, availability, and preferences, the app delivers a personalized workout plan that evolves with the user. The app encourages structure, motivation, and healthier lifestyle habits without the need for a personal trainer.

SCOPE OF WORK

The Smart Fitness Planner will include:

- A homepage and clear navigation
- A secure user authentication system (login/signup)
- A required Terms and Conditions agreement
- An onboarding questionnaire to gather user goals, preferences, and availability
- A routine generator that builds weekly workout plans using custom Python logic
- A dashboard that shows today's workout and progress streak
- A calendar view of upcoming workouts
- A statistics section that tracks weekly completion
- A profile settings page to update preferences
- A fully responsive layout (mobile, tablet, desktop)

This project is web-only and will not include native mobile app functionality.

PERIOD OF PERFORMANCE

Team 2 was formed specifically to start and complete the capstone project named Smart Fitness Planner for the summer semester of 2025. The performance period started on June 08, 2025 and the project will close after the final presentation is finished on August 01, 2025

PLACE OF PERFORMANCE

- All team members work remotely on personal computers running Windows 10 or higher
- Weekly meetings occur on Tuesdays at 9:00 PM and Fridays at 2:00 PM
- Communication is handled via WhatsApp, in-class time, and Zoom sessions
- All development and documentation are maintained in the team's shared GitHub repository

WORK REQUIREMENTS

1. Each team member must have:

- A working computer and internet connection
- GitHub Desktop, Python 3, Flask, PostgreSQL/SQLite
- A code editor like VS Code

2. All team members are required to:

- Participate in backend, frontend, and database development
- Follow a consistent commit/push workflow on GitHub
- Use custom conditional logic for workout generation (no external AI engines)
- Include filters and safeguards to avoid unsafe workout plans

3. A Terms & Conditions page will be implemented requiring user agreement before app access:

- “By using this app, I confirm I do not have any medical conditions that may be worsened by physical activity. I understand the Smart Fitness Planner provides general routines and does not replace medical or professional advice. The developers are not liable for any injuries or health issues that occur from use of this app.”

SCHEDULE/MILESTONES

1. Form the team to begin the project (06/08/2025 - 06/11/2025): Team formed and GitHub repo created.
2. Finish Phase 1 and turn it in (06/10/2025 - 06/23/2025): Completion of Phase 1: Project plan, team roles, scope, tools.
3. Finish Phase 2 and turn it in (06/24/2025 - 07/07/2025): Completion of Phase 2: Frontend layout, user login system, T&C.
4. Finish Phase 3 and turn it in (07/08/2025 - 07/21/2025): Completion of Phase 3: Backend logic for workout generator, database setup.
5. Finish Phase 4 and turn it in (07/22/2025 - 07/28/2025): Completion of Phase 4: Testing, filtering, responsive design.
6. Complete the project (07/28/2025 - 08/01/2025): Final version of the project stored in GitHub, final video uploaded.
7. Present project (07/29/2025 - 08/01/2025): Final team presentation (video), peer evaluations, project closeout.

ACCEPTANCE CRITERIA

- Code is committed, tested, and functional for each phase
- All team members contribute and review code before submission
- The Project Manager (Jordan) ensures all files are organized and documented
- The application must:
 - Generate plans based on user input
 - Include safeguards for safety
 - Be fully usable on mobile and desktop devices

OTHER REQUIREMENTS

- All team members must attend scheduled meetings and communicate delays or issues
- Major blockers should be reported immediately so the team can solve them together
- The app must:
 - Use custom conditional logic to generate workouts
 - Require acceptance of the Terms & Conditions
 - Be fully responsive across screen sizes

PLANNED FUTURE WORK

- Create the web structure and navigation
- Build the user registration and login system
- Implement the onboarding questionnaire
- Set up the database to store user data
- Develop the workout generation logic
- Design the main pages: Dashboard, Calendar, Statistics, Profile
- Add basic statistics and progress tracking
- Explore AI integration using conditional logic
- Test and improve the user experience