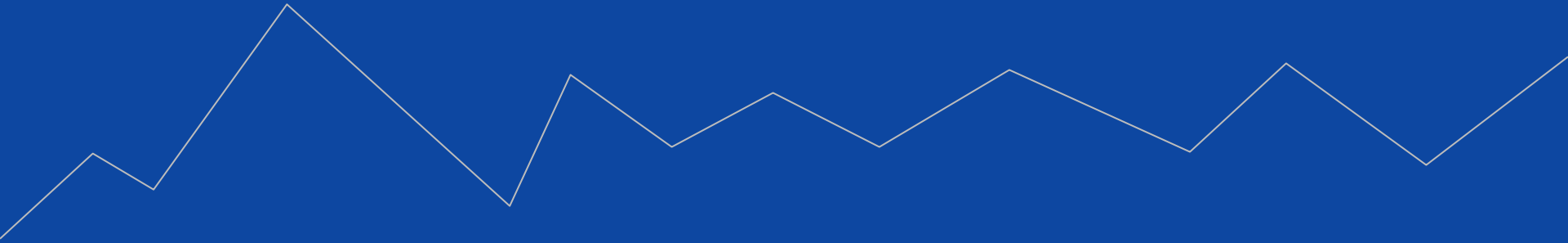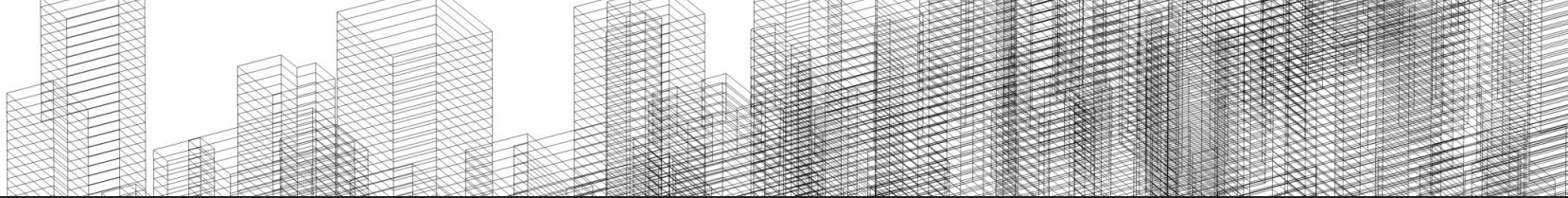# Workout Movement Tracker Application
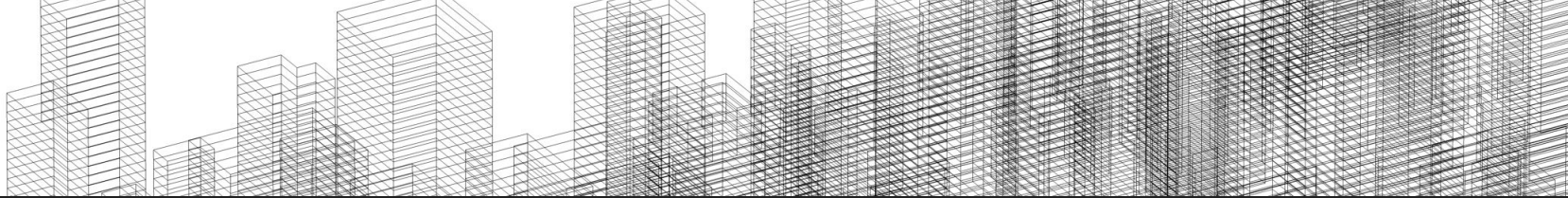
Shreya Boyapati, Ayesha Quadri Syeda, Dat Huynh, Sarthak Patipati

Project Overview

- Fitness and working out
- Analyze user's body type
- Set fitness goals
- Track movement during exercise
- Personal recommendations
- Fitness program
- "Personal trainer"

Purpose of the Project

- Lead a healthier/more active lifestyle
- Businesses:
  - Large gyms
  - Personal training businesses
  - Sportswear companies
- Convenient and affordable way to get "personal training"
- Premium subscription and referral bonuses
- Rate app (goal: 4 stars)

The Scope of the Work

- The work is described as providing a personal trainer/guide service that the users need to pursue their fitness goal.

- The work generates recommendations and feedback for exercise and nutrition guides based on the user's performance and goal.
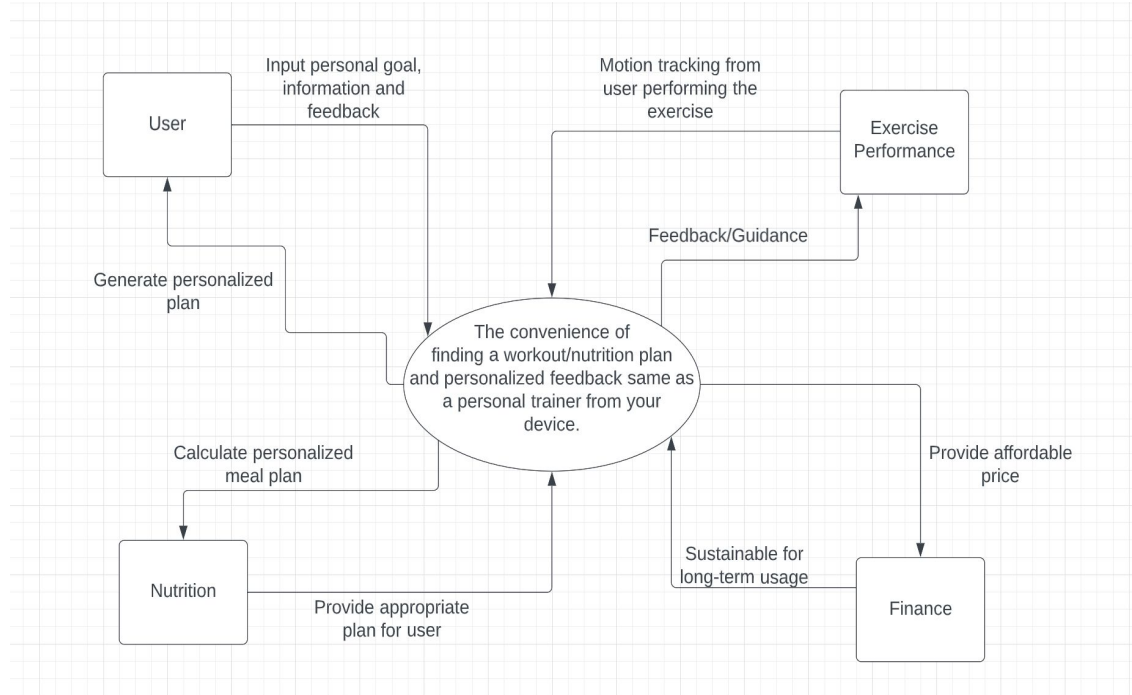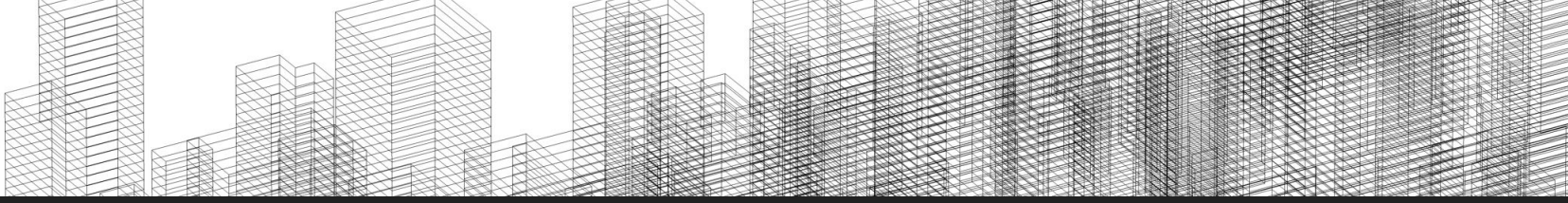

Figure 1. Context of Work (The application interact with different environments)

Stakeholders

- **Client**: Fitness Industry
- **Customer**: Fitness Centers, Physical Trainers/Coaches, Independent Exercisers
- **Hands-on Users**: Beginner Exercisers, Experienced Exercisers, Expert Exercisers
- **Maintenance Users and Service Technicians**: Original Developers
- **Other Stakeholders**: Fitness Experts, Technology Experts
- **User Participation**: Requires thorough participation throughout the development process
- **Priorities**: Beginner Exercisers (**primary**), Experienced Exercisers (**secondary**), Expert Exercisers (**unimportant**)
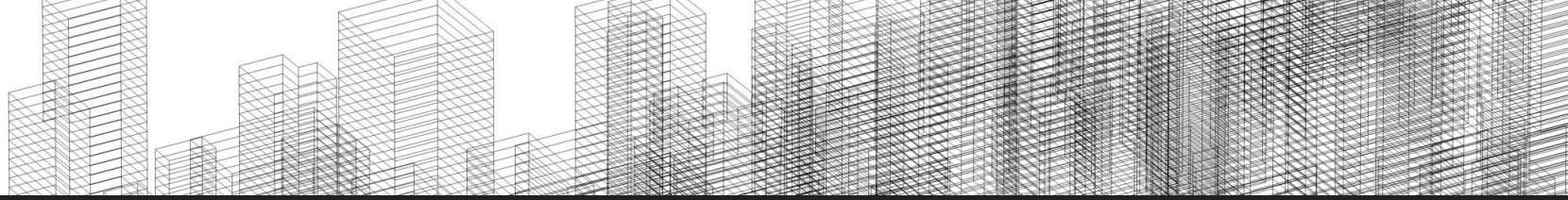
The Scope of Product

- Provide a convenience and affordable "personal trainer" application that can guide the users throughout their fitness journey.

- Generate a personalized plan based on the user's goal and information.

- Tracks the user movements to provide guidance.

- Avoid injuries from exercising incorrectly.

- Constructs appropriate meal plans based on the user's goal and information.

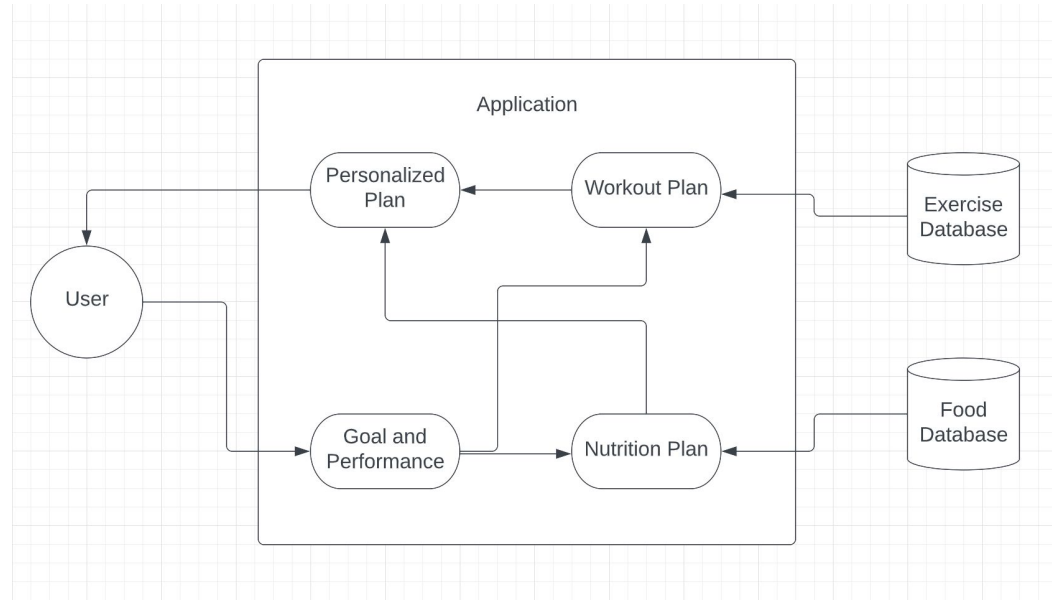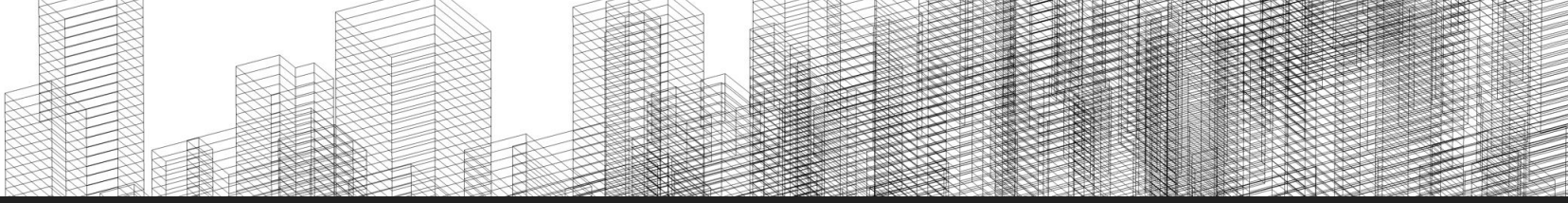- Analyze user progression to update the user's plan.

Figure 2 - Scenario Diagram

Mandated Constraints

- **Solution Constraints**: Mobile application, Available on App Store/Play Store, Motion Detector
- **Implementation**: Mobile devices with iOS and Android OS, Device Camera
- **Partner/Collaborative Applications**: Microsoft Excel, Device Camera
- **Off-the-Shelf Software**: Device Camera, Camera application
- **Anticipated Workplace Environment**: Indoor (Gym or Home), Outdoor (Beach, Backyard etc.)
- **Schedule Constraints**: Ideally released at the beginning of the year
- **Budget Constraints**: None, since most of the technologies are readily available in the market. The programmers/developers are the biggest resources
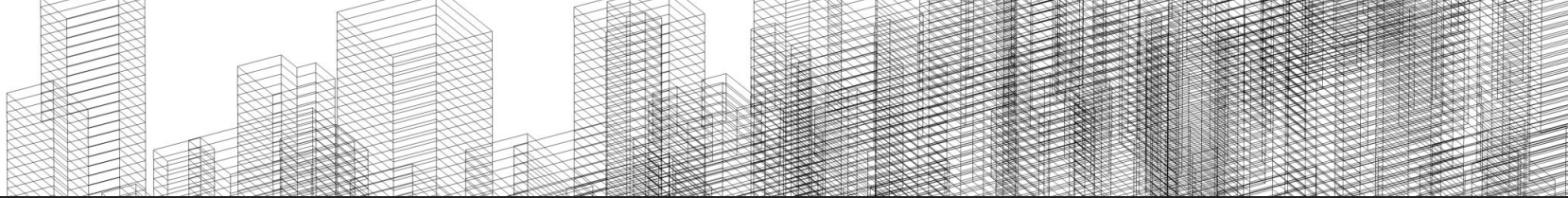
Information to be Collected

- **Name:** The name of the account holder.
- **Weight:** Weight of the product user.
- **Height:** The product user's height in feet followed by inches.
- **Workout Plan:** The workout plan chosen by the product user.
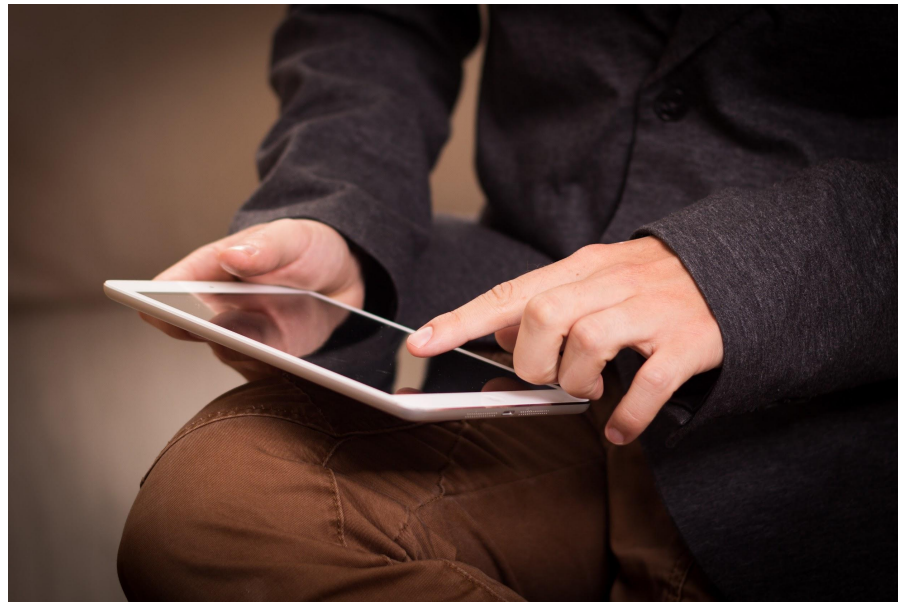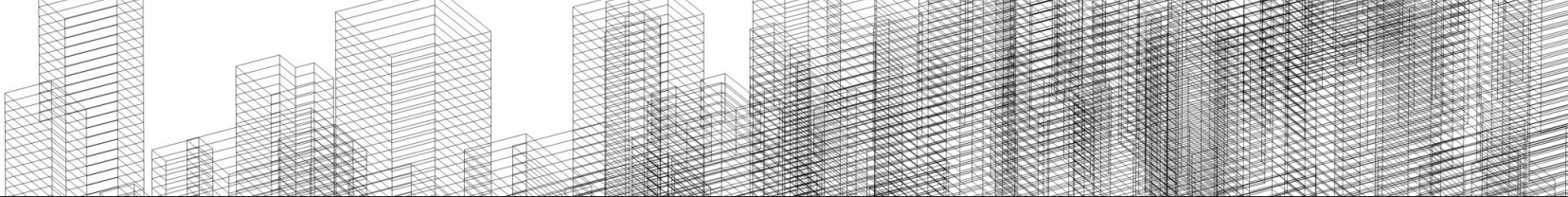
Relevant Facts and Assumptions

- In Accordance with the law...
    - Safety measures must be taken to protect private user data.
    - Policies regarding personal data will be made available.
    - Parents of underage users are allowed to make changes to the personal information of the user.
- Assumptions
    - Scanning camera is available.
    - None of the government policies and law have changed in the duration of the production.
    - The business might expand to training of any routines that require a specific posture
        - Dancing.

Thank You

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Questions?