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Team 02

CSC 431 – Introduction to Software Engineering

April 28th, 2022

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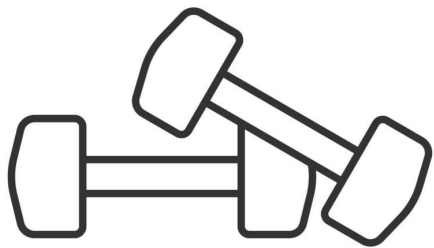
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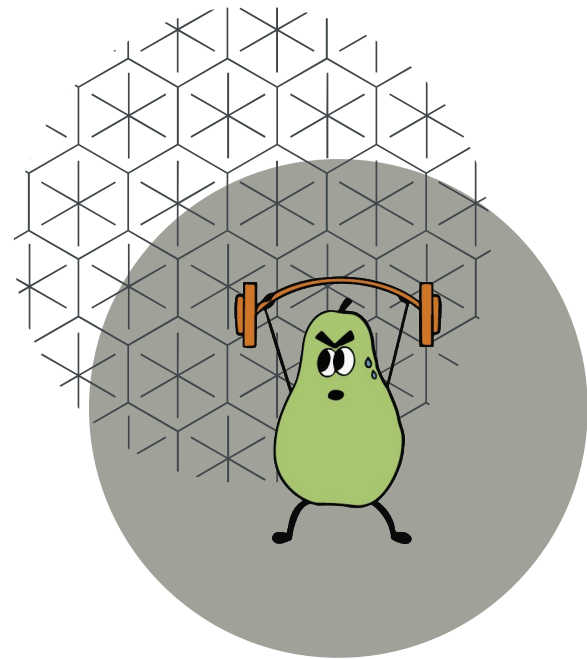
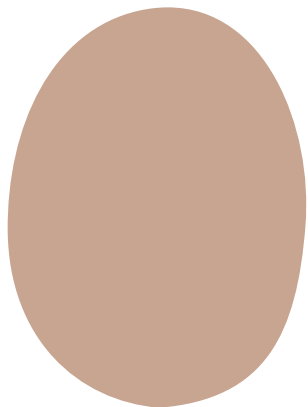
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01

Recap



Mobile Workout App

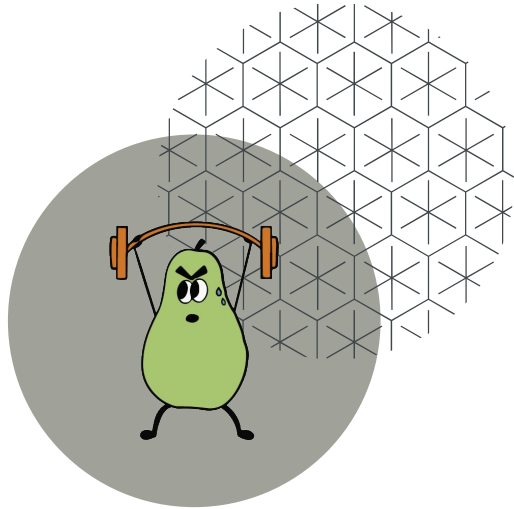
- Customized workout plans
- Connect gym buddies
- Connect to nearby gyms
- Progress Tracking
- Target age group : 18 – 40

College students & Young professionals



02

System Overview

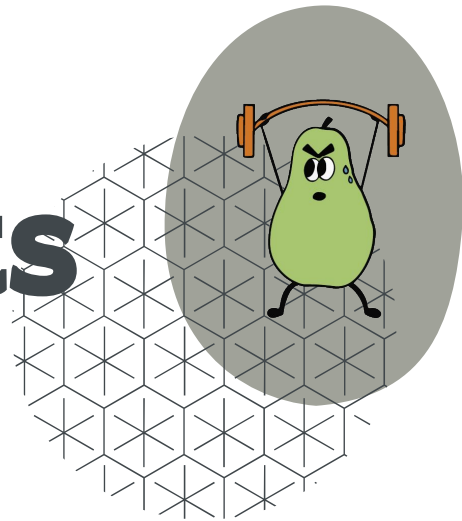


System Overview

- System Main Functions:
 - Creating customized workout plans
 - Designing diet plans
 - based on the fitness goals
 - Connecting persons on the app to each other (gym buddies)
 - based on fitness goals and location
 - Recommending suitable gym locations
 - based on available equipment and proximity

03

System Components



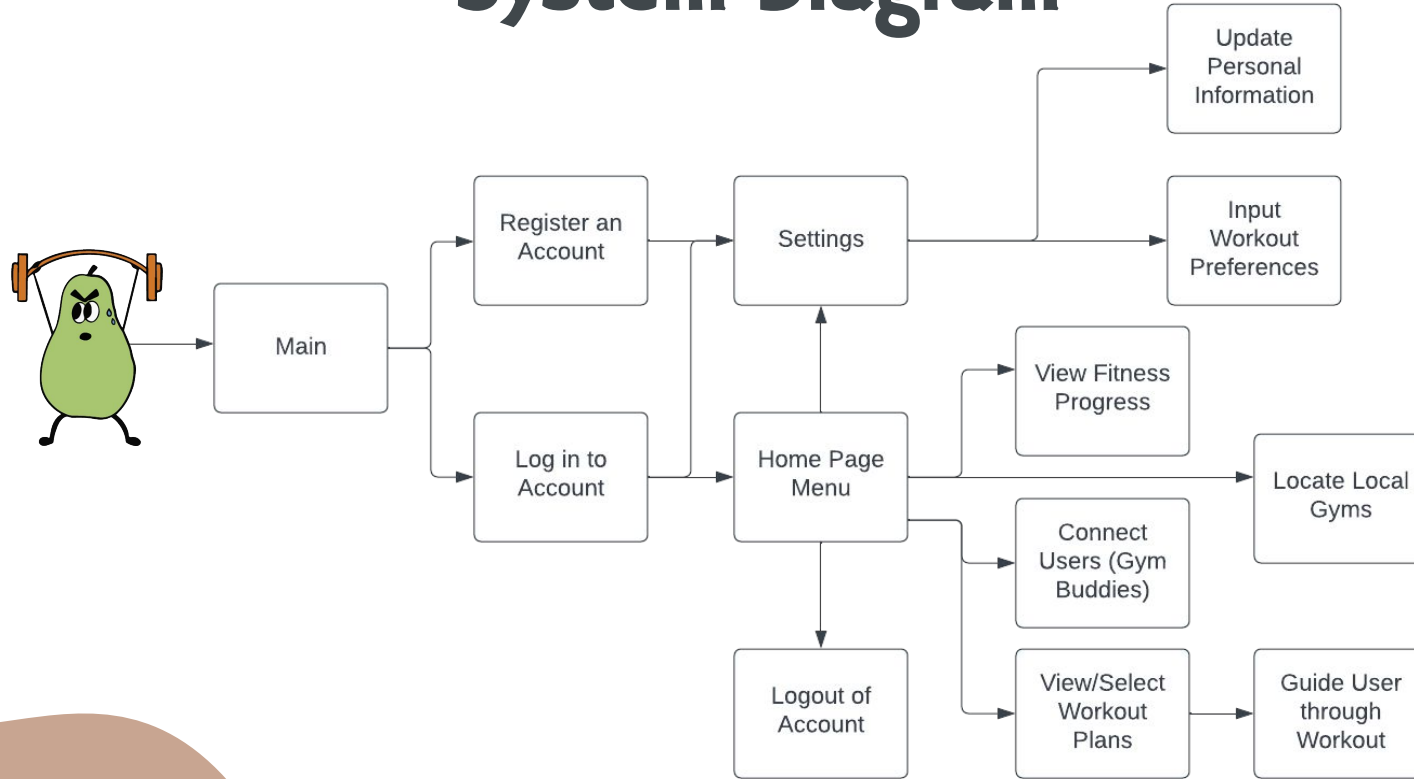
System Composition



- The system will be composed of:
 - the user
 - the mobile application (hosted through github),
 - the database (hosted on cloud)
 - the neural network (stored on the app's home device)
- Software as a Service (SaaS) Architecture model will be used

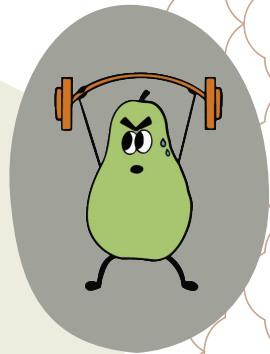


System Diagram



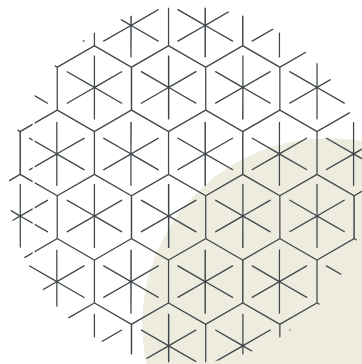
04

Actors



Actors

- **Gym-Goer**
 - Human User Actor
 - Primary Actor
- **Time**
 - System Clock
 - Track user workout schedules
 - Shared Calendar
- **Database Administrator**
 - External System
 - Secondary Actor
 - Workout Database

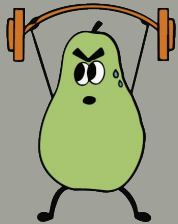




05

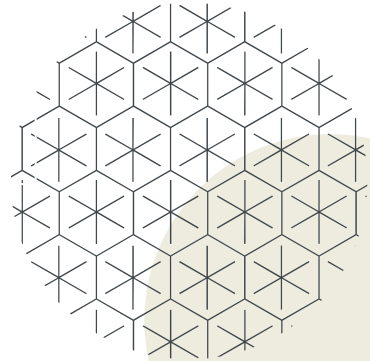


Archîecture



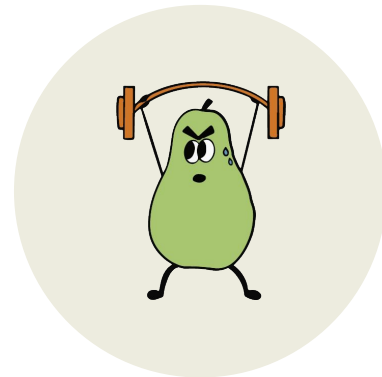
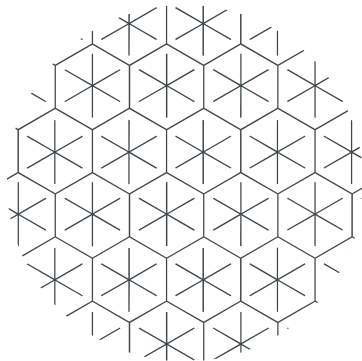
4-Layer Pattern

- Presentation Layer (UI Layer)
- Application Layer (Service Layer)
- Business Logic Layer (Domain Layer)
- Data Access Layer (Persistence Layer)



06

Design Patterns



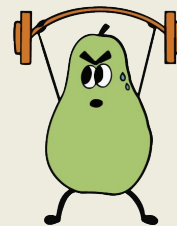
Factory Pattern

- Creational pattern
- Promotes loose-coupling
- Creates objects without without having to specify the exact class of the object
- Allows the sub-classes to choose the type of objects to create
 - **Abstract class:** Workout
 - **Concrete classes:** Weightlifting, Cardio, Yoga, etc.

07

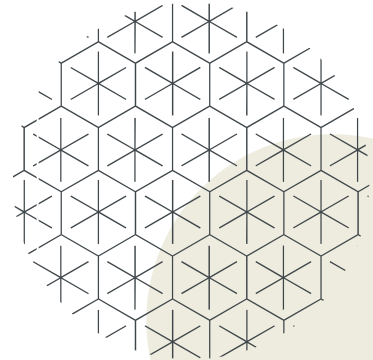


Frameworks



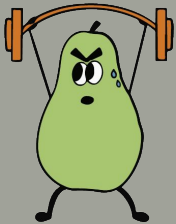
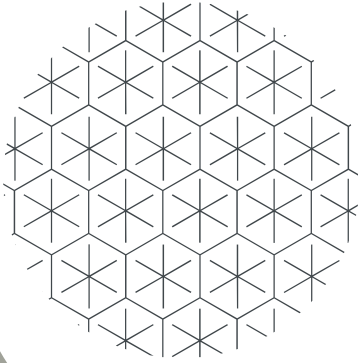
Framework

- Frameworks: HTML, CSS and Java
- App Deployment: Amazon lightsail
- Backend Framework: Node.js
- Frontend Framework: React Native Js

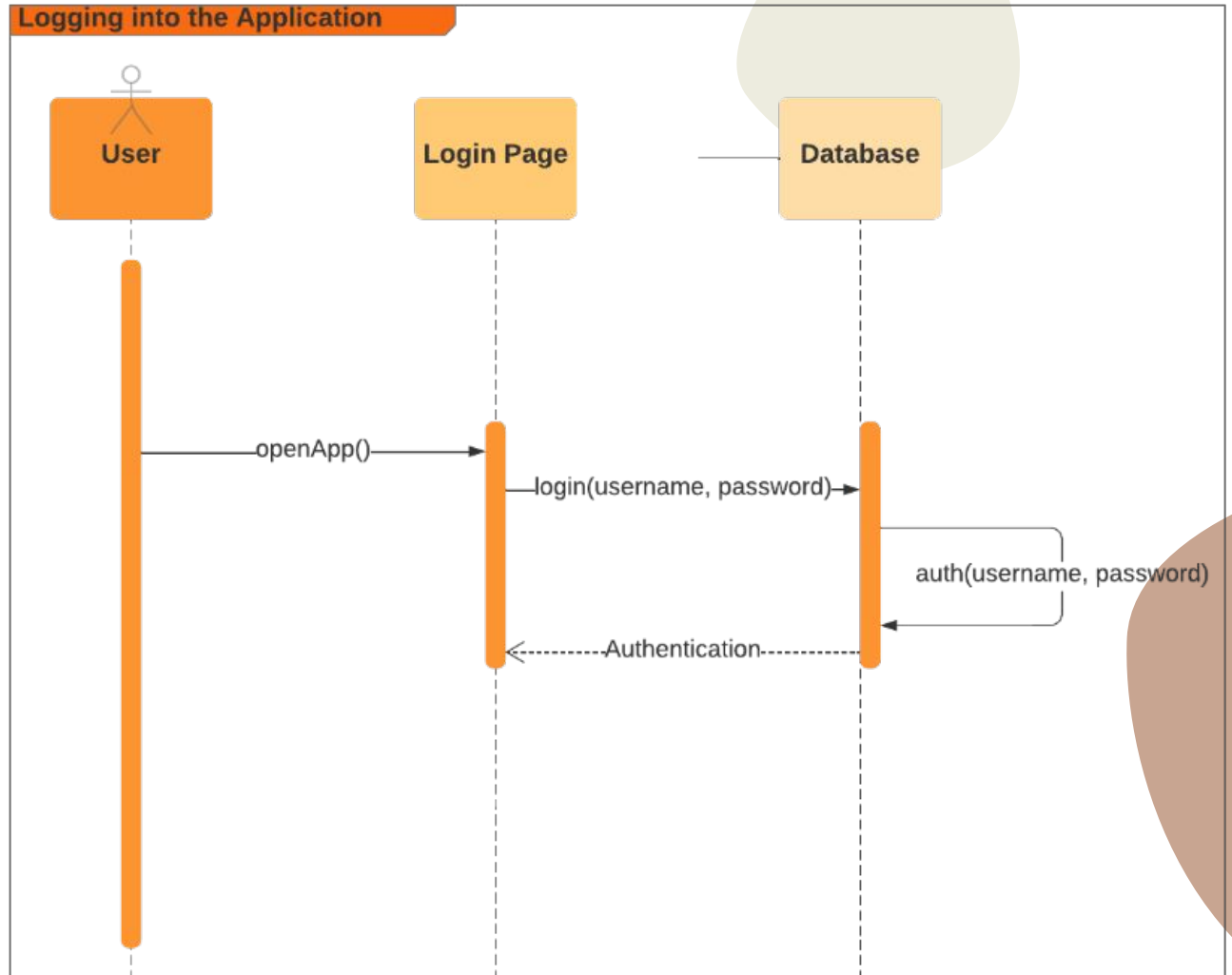


08

Sequence Diagrams

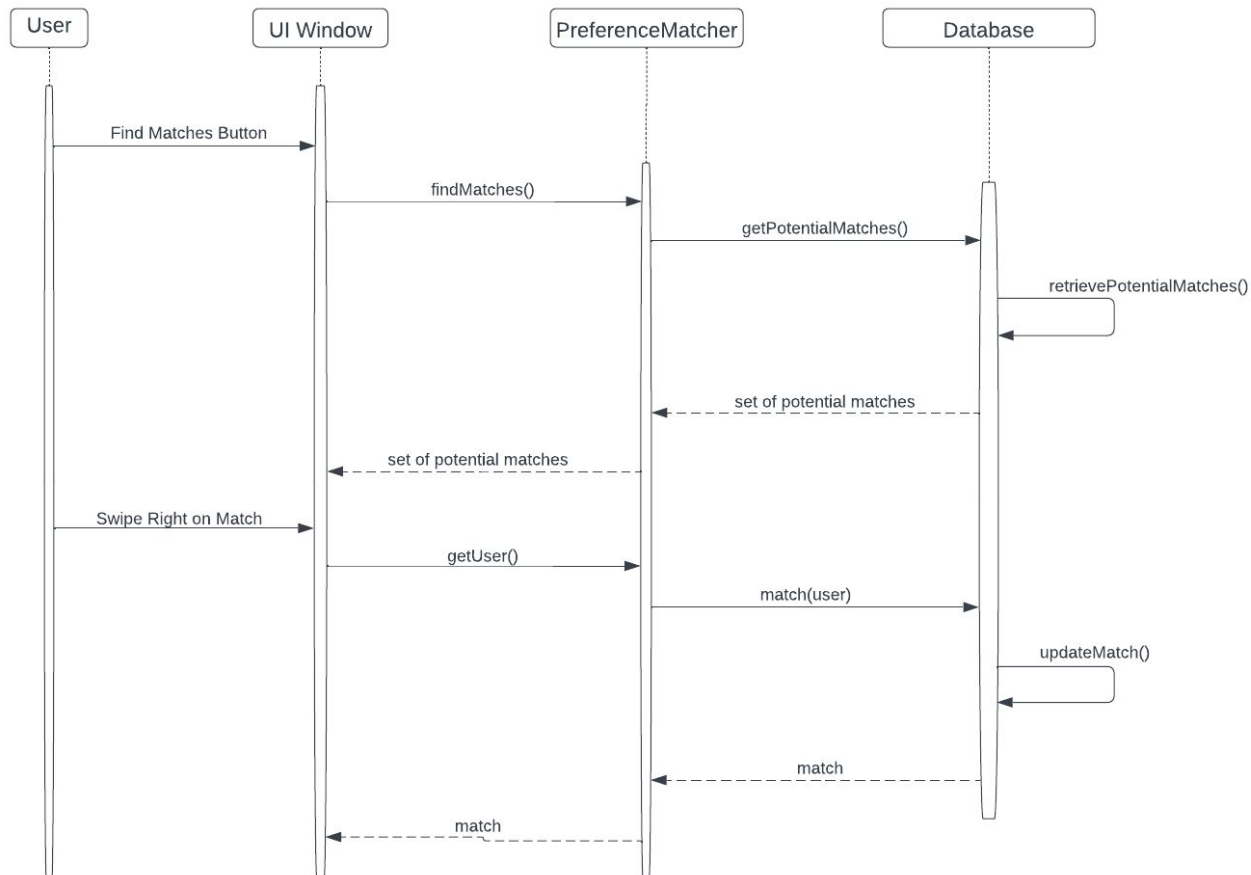


Logging Into the App

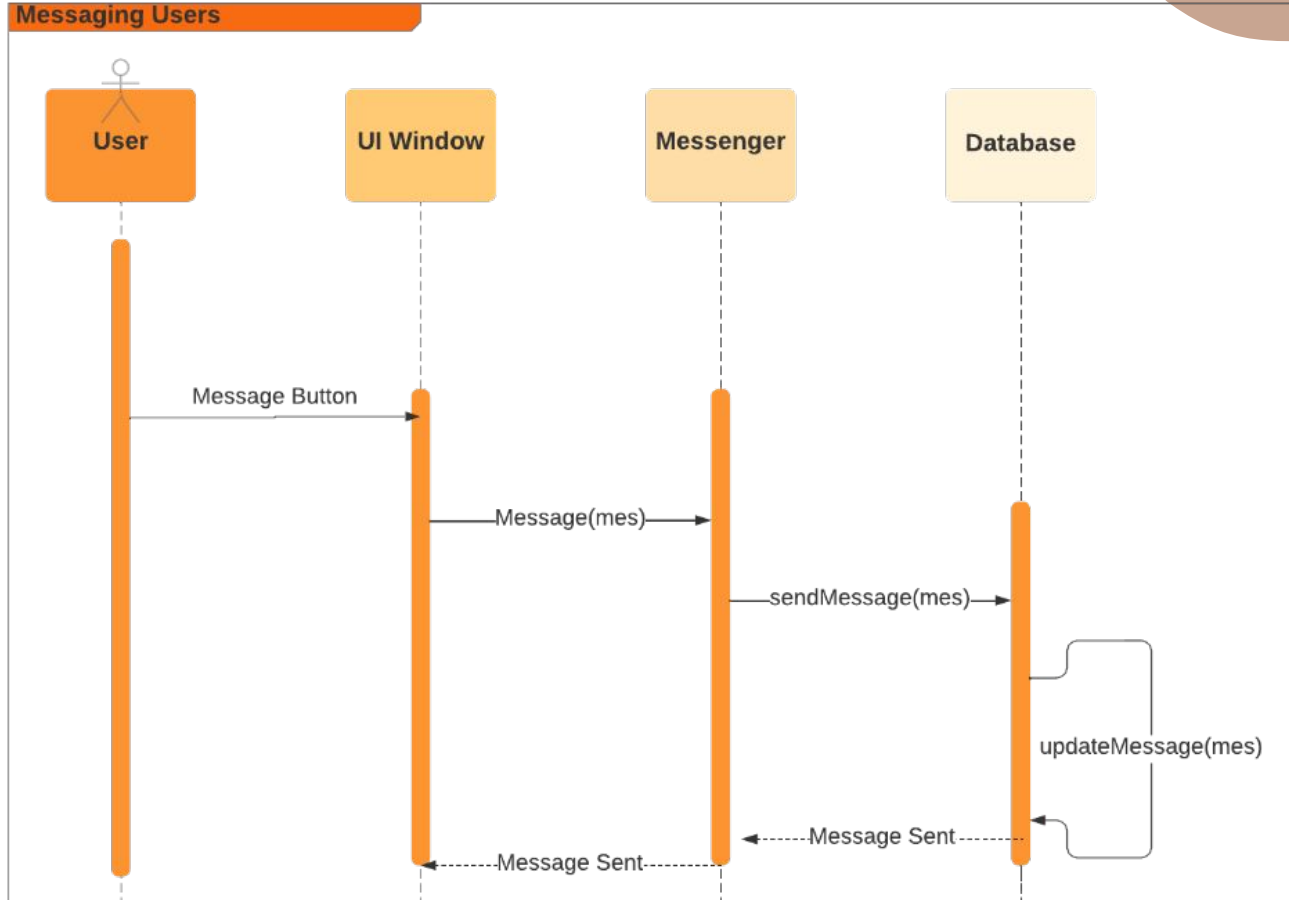


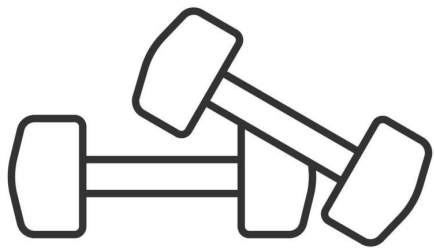


Match Users



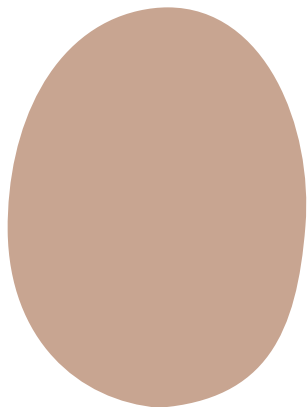
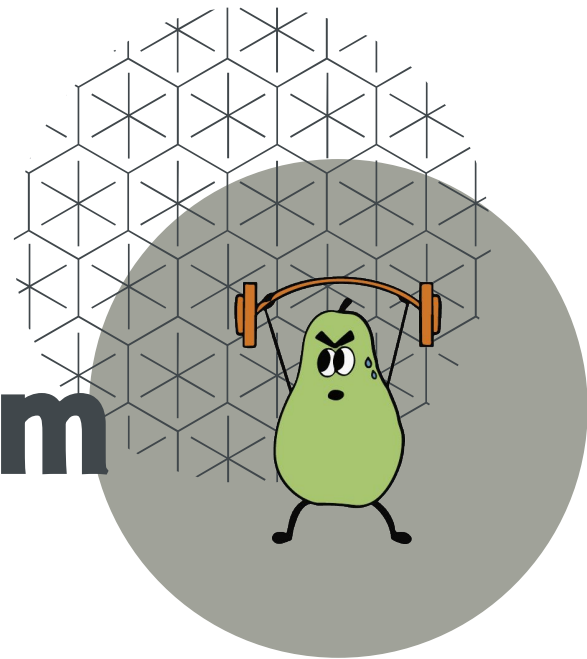
Message Users



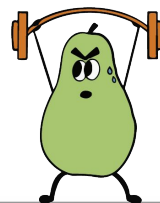
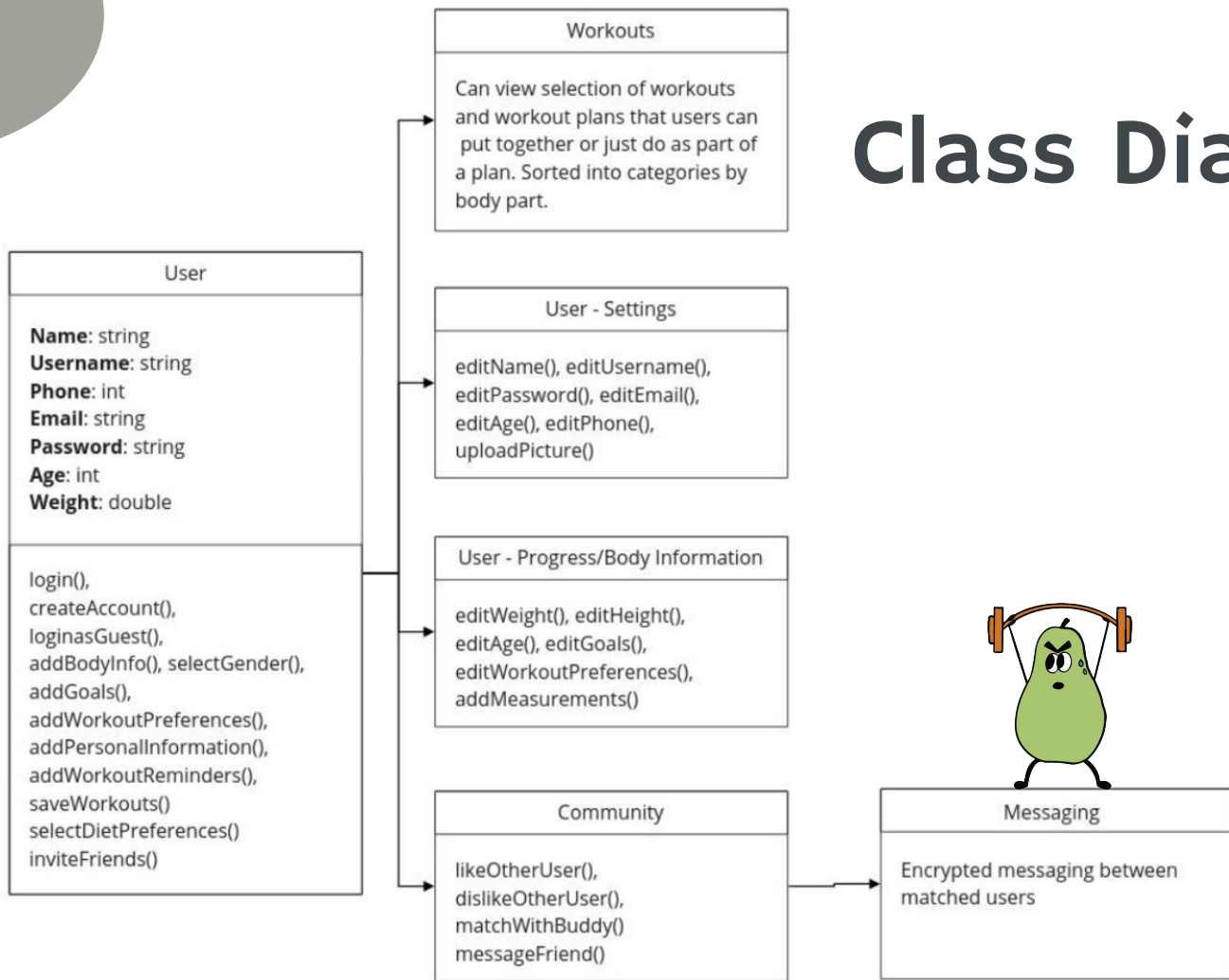


09

Class Diagram



Class Diagram





Login

username

password

go

or

Continue with Facebook

Continue with Google

Continue with Apple

New here?

Create Account



Account Information

What is your email?

Password

Repeat Password

Back

Next



Skip

Select types of workouts you enjoy



Workout Tracking



Today



Streak



5,456 steps



My Plans



Dance Workout



Cardio

Recent Workouts

You have no recent workouts



Statistics



Body Measurements

Feed

You have no friends yet





GitHub link:

<https://github.com/ngocdiepvul/CSC43I-Team-2>

Questions?

