**PT MANAGER PROJECT BREAKDOWN/TASKS**

**CODING** - The app will be written using Java programming language and Android Studio will be used as the IDE.

**DATABASE** - MySQL has been chosen as the backend database which is industry standard, and we are all familiar using it. A PHP server will be setup along with PHP script files to allow communication between Android Studio and the database.

For this project the MySQL database will reside on a localhost server. In the real world, the database would reside on a remote server.

We aim to use a Restful API (or similar) to connect to the PHP server and database from Android Studio.

**Feature List (BASIC)**

**1. Client and trainer login/registration** (User Profile/account creation)

**2. Profile** - Search, display, edit

**3. Calendar** - Showing list of events

**4. Programs** - Created by trainers for clients, containing workout exercises to achieve a specific goal over a number of days

**5. Classes** – Fitness classes created by trainers which can be booked by clients.

**6. Payments** - Simulated payment system for clients to pay for classes and subscriptions

**7. Chat** - Single or group messaging (public or private)

**8. Notifications** - Showing recent activity

**Feature List (DETAILED)**

1. **Login & Registration features**

Separate login screens for clients and trainers. New user registration screen.

* Standard username and password fields. Will consider username and password constraints to improve security.
* Passwords will be stored securely using SHA2 256bit or better encryption.
* Any constraints must be shown on screen to assist the user when choosing a password.
* The Login screen will have a Register option to allow a user to create a new user profile/account.
* The users account type will determine which features a user can access.
* A trainer will have extra fields to store their certifications and specialities.
* A username will be setup for system administrators so that all features are accessible for testing and admin/audit purposes to allow full use of the system without having to go into the backend database.
* Perhaps as a future enhancement - add two factor authentication to verify the user by sending an authorisation prompt on their mobile phone.

**Database requirements:**

* Clients and Trainers tables to hold all user details (such as username, password, first name, surname, display name, date of birth, phone no, email, address including country, personal webpage URL, profile picture link, role, notes)

Certifications field (a list of certifications), Specialities field (a list of specialities)

**2. Profile Feature**

A screen showing the currents user’s profile/account.

An option to edit a user’s own profile.

An option to search for another profile to display based on filter criteria.

**3. Calendar feature**

A screen with a calendar showing the user’s events/classes and available/unavailable times

Trainers and clients can add various personal events.

Booked classes are shown on the calendar.

**4. Programs Feature**

A screen showing a list of programs with a search option - Enter filter criteria to display a list of matching programs (program name, duration, trainer etc). Selecting a program displays the program information.

Trainers can create a new program based on the program name, duration, and other useful information. They can also amend or delete their own programs.

Clients and trainers can view all program days and exercise/workout events.

Trainers can create an event and add it to a particular day.

**Database Requirements:**

* Programs table (linked to a trainer) - containing a list of programs created by a trainer.
* Program events table – (linked to a program) to store each day of the program and its exercise/workout events.
* Exercise/workouts table (containing a list of all selectable exercises/workouts)

**5. Classes Feature**

A screen showing a list of bookable classes with a search option – Enter filter criteria to display a list of matching classes (class name, duration, trainer etc). Selecting a class displays class information.

Trainers can create a new class schedule based on start and end dates plus timeslots.

Trainers can view and cancel any of their scheduled timeslots.

Clients can view and book a scheduled timeslot if the maximum occupancy hasn’t been reached.

Clients can view and cancel any of their booked classes.

**6. Payments Feature**

A screen showing a history of payments received/made, outstanding payments.

Option to make a payment which allows a user to enter card details.

Payment can be made for individual classes or subscriptions.

Simulated payment system for this project

**7. Chat/Messaging Feature**

A screen showing individual and group chats with an option to create and send messages.

Accessed via menu and icon at the top of the screen.

Search chat option to display a list of matching group chats.

An option for group chat owners to amend group chat details/members or delete.

Created group chats are added to a list which can be sorted alphabetically or by newest first.

After selecting a group chat room, a list of messages are displayed with a box underneath to enter a new message. The messages can be sorted alphabetically or by most recent first.

A user has the option to delete any of their messages but all will be logged to monitor abuse etc.

A notification is sent to all active members when there is a new message to read.

**Database Requirements:**

A table to hold a list of all group and individual chat messages.

A table to hold a log of all messages.

**8. Notifications Feature**

A screen showing a list of recent activity.

Accessed via menu and icon at the top of the screen.

**Database Requirements:**

Monitors and reports changes to database tables for clients and trainers