FitQuest AR

-FitQuest AR helps you on your fitness journey with a helpful AR gym buddy, bringing the gym experience to wherever you are-

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Features

- As a user I will have to…
    - Make an account so that I can log into the app
    - Set up my account by describing my body type and my goals
    - Use my phone to see the AR gym buddy through the phone camera
- As a user I want to …
    - Be able to see the AR gym body perform the exercises I have chosen
    - Be able to track my workout
    - Be able to see a history of the workouts I have completed
- As a user I will have to choose between:
    - Which exercise I want to see being demonstrated by the gym buddy
    - Which type of workouts I want to do (options: cardio, calisthenics, low intensity)
    - How long the exercise should go on for

Screens

- Welcome page (with button to login / sign up)
- Login / Signup page
- Set up your profile page
- Home page (a suggestive image and a menu with "browse through exercises", "my profile" and "Logout" buttons)
- Browse through exercises page
- History of workouts page
- Workout page
- Gym buddy page (the page which leads you to open your camera and see the AR gym buddy come to life)

Components

Our app has one main AR feature (the model), the bulk of the app consisting in the implementations of the other features, creating the logic and designing the UI.

3D

➔ AR buddy (modeled by ourselves using Blender and various tutorials)

Animations

➔ Animations for the AR gym buddy, representing all the exercises we want it to be able to perform (https://www.mixamo.com/#/)

Graphics & 2D

➔ UI (self-designed)

Modules

We have to decide whether the app will have a server (connected to a database) which runs on our computer and handles the users and stores their workout and progress, or if we can store these using the phone storage. If the second possibility (using phone storage) is feasible, there is no need for a classic Login / Authentication module, since we only use the user information to get their workouts / progress from the database.

➔ Login / Authentication module (optional, as explained above)
➔ AR module (which provides the AR gym buddy)

Possible extensions

➔ Integrate a small AI component which, based on your profile (your body type, goals and history of completed workouts) designs a workout for you, choosing from the exercises available in the app
➔ Customizing the avatar by changing the color of the clothes / adding accessories
➔ Rate the workout according to the perceived difficulty; if you do the workout again, you rate the difficulty again, thus seeing if you progressed (meaning that the difficulty gets lower)

Journey Map

```
                              ┌─────────┐
                              │  Start  │◄──────────────┐
                              └────┬────┘               │
                                   │                    │
                                   ▼                    │
                          ┌──────────────┐      ┌──────────────┐
                          │ Login / Sign │      │   Logout     │
                          │      Up      │      │              │
                          └──────┬───────┘      └──────────────┘
                                 │                     ▲
        ┌────────────┐  ┌────────────┐  ┌────────────┐│  ┌────────────┐      ┌────────────┐
        │View Workout│◄─┤ My profile │◄─┤ Home Page  ├┘  │  Tap on an │      │Watch the AR│
        │  history   ├─►│            ├─►│            │◄─►│exercise and├◄────►│   Buddy    │
        └────────────┘  └─────┬──────┘  └──────┬─────┘   │    view    │      │demonstrate │
                              │                │         │description │      │the exercise│
                              ▼                ▼         └─────┬──────┘      └────────────┘
                       ┌────────────┐   ┌──────────┐   New     ▲
                       │Customize   │   │  Choose  ├─►◇New or◇  │
                       │your profile│   │ workout  │  ◇existing?◇  ┌────────────┐
                       └────────────┘   └──────────┘   ◇      ◇  │Add exercise│
                                                        │        │ to workout │
                                                   Existing      └─────┬──────┘
                                                        │              ▲
                                                        ▼              │
                                                ┌────────────┐
                                                │Select      │
                                                │workout from│
                                                │existing    │
                                                │list        │
                                                └─────┬──────┘
                                                      │
                                                      ▼
                                                ┌────────────┐
                                                │Start Workout│◄──────┘
                                                └─────┬──────┘
                                                      │
                                                      ▼
                                                ┌────────────┐
                                                │Workout:    │
                                                │Watch AR gym│
                                                │buddy do the│
                                                │exercises   │
                                                │with you    │
                                                └─────┬──────┘
                                                      │
                                                      ▼
                                                ┌────────────┐
                                                │Finish      │
                                                │Workout     │
                                                └────────────┘
```