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Final Project

**1. Project Description:**

The intention of this app is to be a yoga app. The app will offer different poses, the app will tell the user what to do with their phone and how to hold it during a pose. During the pose, the phone will use the accelerometer to determine how much the user has moved and calculate a score based on the movement calculated by the phone. The app will also provide information on the pose and how it benefits you as well as having workout plans that help target different parts of the area. Scores can be shared between friends internally through the app or across social media (although I personally would never want to share my workout routines publically, seems lame but to each there own but that's why I would have an internal social networking so it can be private but public to people who want to be more social).

**3. Requirements Document**

Functionality: Performing a pose

**Nonfunctional Requirements:**

1. Operational Requirements

1.1. The app should run on any mobile device

1.2. The app will need to run with either wifi or data connection

1.3. The app will send scores to server

1.4. The device must have an accelerometer

2. Performance Requirements

2.1. Phone will calculate a score based on the movement detected by the accelerometer

3. Security Requirements

3.1. Unless designated, scores will be personal

3.1. Only a user can change how scores will be posted

**Functional Requirements:**

1. Select a pose

1.1. User must go through menu and select a pose

1.2. User must select time length

1.3. User can end a pose at any moment if needed

2. Sharing Scores

2.1. User must set privacy settings before posting a score

2.2. Can be done automatically when a new personal best is performed or done manually

**4. Use Cases**

-Make an account

-Customize account

-Delete account

-Perform a pose

-Cancel pose

-Upload scores

-Check scores/feed

**a.**

Use Case Name: Perform a Pose ID: 1 Importance: High

Primary Actor: User Use Case Type: Detailed, Essential

Stakeholders and Interest:

User- Wants to perform a pose

Brief Description: This use case describes how a user would go about selecting and performing a pose for this app

Trigger: User wants to perform a yoga pose

Type: External

Relationships:

Association: User, Servers

Include: Friends of User (If desired for scores)

Extend:

Generalization:

Normal Flow of Events:

1. User will look through available poses and select a pose

2. The device will go through servers to get the video

3. Device will instruct user how to hold their phone

4. User will hold their phone while the timer ticks down

Use can also end the pose at any time

5. After the pose has ended, User will be prompted to select a different pose or try again

If a new high score is detected, the device will ask the user if it wants to be posted if their settings are set to that

If a new high score is detected and the user has set their device to automatically post new high scores, the device will

High scores are saved to an external server

Alternate/Exceptional Flows:

2a. User is not connected to wifi or wireless signal

**7. Data Management**

I think the best type of database to use is a client server relationship based on a SQL database. I believe having client server relationship would be best in order to lower the amount of memory required to download the app because the audio and video files for the yoga poses would get quite large. Having all the information on a server will also help display the scores on the newsfeed. I don't think this app will really take advantage the benefits a NoSQL provides and I think the system will overall benefit with the structured and object based databases.

**8. Unique Steps or Nuances**

I think major concern with deploying this app is the different versions of accelerometer that would be present in different devices. It wouldn’t surprise me if it took some to fully work out any miscalculations across different versions of accelerometers. Also due to privacy issues (shout out to Facebook) there would have to be extra precautions to ensure people's privacy before deploying and refine the policy so people understand.