Criterion A: Planning

Defining the Problem

My client is the management of my local climbing gym. This gym prides itself on creating an environment for challenging oneself and growth. To further this initiative, my client wants an application that can help climbers better understand and record their respective climbing journeys. Currently, there are few effective digital solutions for tracking climbing workouts. This is because each climbing gym is unique and provides different walls or facilities for training. Furthermore, this issue is exacerbated by the routine changing of the climbing routes— at the start of every month, my local climbing gym is 'resets' so that all of its curated climbs are brand new for members to tackle. This means there is no simple way of recording the same set of workouts for the long term, as the set of exercises is constantly changing. This leaves climbers with no efficient ways to store their workouts or progress, making it more difficult to identify areas of weakness. The gym does not want to leave behind members who cannot afford professional training and thus wants an accessible solution to assist all members in self-learning and improvement.

A solution to this problem would have to be customized to my local climbing gym specifically and be intuitive to update with the monthly changing of routes. Thus, I decided to build a mobile workout tracker app specific to my local climbing gym that incentivizes users to tailor their training, as requested by the gym (see Appendix 1). This application will help gym members record their development and identify areas for improvement. Users will be able to scroll through summaries of their past workouts and find their time spent in the gym.

Rationale for Proposed Solution

To create this product, I will use Swift and a MySQL database. Using Swift will be beneficial in creating an accessible and user-friendly graphical user interface that can be used by any climber who would likely only have access to their mobile device. The front-end interface will help users begin a workout, starting a stopwatch and giving users the ability to add which exercise they are doing or climb they are starting. Users will be able to input data about the number of repetitions, attempts, sets, and more for each of their selected drills.

MySQL will be used to create a database to store information about the current rotation of climbing walls. This will include information like difficulty, location, key concepts practiced, and other physical identifiers of a specific climb. This database will allow employees to edit the information if needed, accommodating for the monthly change of the walls. MySQL will also help users store the information about their workouts for the aforementioned categories of data. The Swift front-end will interact with and retrieve information from the database to integrate the climbing walls and the associated data with a user's workout.

Word Count: 476

Stating Success Criteria

1. Program will allow staff and administrators to create ‘climbs’ and label them with their important criteria (grade, type, color, etc.) 2. Program will update with new climbs added by administrators
3. Program allows a user to ‘start a workout’, starting a timer and allowing users to pick exercises and climbs 4. User is able to delete climbs which were accidentally selected
5. Program allows the user to end workout, saving all of the climbs and exercises done are saved to today’s workout. If the workout is empty, the workout will be canceled with no data saved. 6. User is directed to a ‘workout summary’ page where the user is able to share the workout information.
7. User is able to adjust preferences
8. User receives suggested workout on login