StrengthHub Project Recap
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Overview
As strength sports grow in popularity, an increasing number of athletes are pursuing virtual coaching to gain a competitive edge. While mobile applications and online platforms exist to track workouts, they are underutilized by athletes, and existing platforms lack the interface to match athletes with coaches. StrengthHub™ captures this market with a platform that connects coaches and athletes seamlessly.

Objectives
The core objective is to create a mobile application which would allow users to track their workout progression in a simple and intuitive manner. Apple Watch® technology will be used as an app supplement. A website will also be built, having basic features and integration with the mobile app. A database will be implemented for use by the web and mobile applications.

Design Approach
iPhone® application development was identified early as a priority, and prototyping for the application was completed using Balsamiq mockups after meeting with both StrengthHub™ sponsors and members of the Penn State powerlifting team to gather input regarding use cases and design. Once a design had been established and iterated upon, the StrengthHub™ iPhone® and Apple Watch® applications were implemented using the Swift 2 programming language. Amazon Web Services (AWS) was used to establish remote computing services, and Parse was used to provide a cloud database framework. Weekly meetings with our sponsors ensured quality software was being delivered on a consistent basis.

Outcome
The results of this project include the building of a web presence for StrengthHub™, the implementation of mobile workout applications for iPhone® and Apple Watch®, and the design of a Parse database to store user and workout data.

The StrengthHub™ experience is centered on our flagship website. Designed utilizing the comprehensive Amazon Web Services suite of web tools, the StrengthHub™ website allows users to establish an athletic profile, create custom strength training plans, and review their progress. Behind-the-scenes, the website also interfaces with our Parse database to track important user and analytic data.

The StrengthHub™ application for iPhone® provides strength athletes with a robust, easy-to-use workout tracking system that lets them record workouts with accompanying video clips, and track their progress by reviewing athletic progress and trends. First-time users are directed through a simple survey to place them in a predefined workout plan right for them, while experienced lifters are encouraged to unlock custom workouts.

Our StrengthHub™ application for Apple Watch® provides a compact and intuitive interface for athletes to quickly view a summary of their workout and input exercise data using the watch’s digital crown. Athletes can use the watch application as a companion to the iPhone® application, or alternatively, leave their phone at home and bring only the watch to the gym.