

## Section 1:

- Project Description – The Padawan IOS App project is a project aimed to develop an IOS application called Padawan. I have no previous experience creating an app or using tools such as Xcode or the Swift programming language.
  - Purpose – The purpose of the project is to learn how to develop a functioning IOS application using a MacBook with the Xcode developer app and Swift programming language.
  - Benefit - The Padawan app will allow users interested in learning and users interested in teaching to connect with one another. This is not just a discussion or help page, but the expectation is for the mentor to be available via text, phone, and video conference, to help the Padawan complete the activity. The activity types are wide ranging from home maintenance, auto repair, gardening, instrument and tool use, to hobbies and sports such as rock climbing, kayaking, sailing, and mountain biking. The benefit for the learner is that they learn how to perform or participate in a new activity with the guidance of an experienced mentor, along with trying an activity with loaned equipment to see if they enjoy it before making an expensive financial investment. Whereas, the benefit for the mentor is that they can share knowledge and increase participation in activities they are passionate about while helping others. Mentors also have the ability to offer equipment use that helps bridge the gap for a Padawan's entry into an expensive activity.
  - Origination – The idea for this app came to me when on vacation at the beach this summer as I watched kite surfers and was interested in giving it a try. I looked into the equipment cost which started at around \$1500 and then lessons/rentals which started at \$700. This wasn't an option for me during this particular vacation and the sport presented a high startup/entry cost, which I just couldn't validate. I may never feel that spending \$700 to see if I like an activity is justifiable and thought what if I knew someone that had the equipment and was willing to teach me and let me give it a try. The idea grew from there as I myself have performed many home and car repairs saving myself thousands of dollars just by watching YouTube videos, which gave me the confidence to perform the task myself. I also have taken up kayaking, mountain biking, hiking, paintball, and carpentry over the last several years and often found that getting started can be the most challenging obstacle when getting in to a new activity. Once I developed some experience with those tasks I enjoyed sharing and showing my friends and family when they were interested. I have a friend that now also mountain bikes and kayaks with me whom started by borrowing my equipment and me showing them the ropes. I wasn't very proficient at the time but could still share what I had learned and provide guidance especially related to safety. The benefit is that I now have a friend that

is always willing to go kayaking and riding with me. I thought wouldn't it be great to provide a forum for others to do the same.

- Outcomes – Working IOS application called Padawan and supporting database
- Features – Padawan will allow its users to create a profile page, search for topics, collaborate with other users, make posts and reply to posts, add pictures and videos, and rate other users.
- Deliverables - Working IOS application (Padawan) that can be accessed locally using the Xcode simulator and on IOS mobile devices in which the app is installed.
- Usage – Padawan will be utilized by individuals whom are interested in learning or teaching a new skill, but for this project will only be utilized by myself and my family members via IOS devices.
- Opportunity – Provide a forum for users to connect as both learners and mentors in which an individual can post interest in learning a new activity and a mentor can reply to the post to offer verifying levels of instruction, support, and guidance.
- Target Audience
  - Individuals (Padawan's) who are interested in learning a new skill, craft, sport, hobby, etc.
  - Individuals (Mentor) who are interested in teaching others a new skill, craft, sport, hobby, etc.
- Programming Language – Swift
- Posting Location – App installed on local MacBook and IOS devices and source code placed on GitHub

## **Section 2:**

- Project Objective – Develop a functioning Padawan IOS application utilizing Xcode and Swift per the timeframe allotted for the senior project.
- Functions
  - Database storage
    - User profile information
    - User posts

- Activity subjects
  - Padawan and mentor ratings
- Application Activity
  - create user profile
  - create Padawan post
  - create Mentor post
  - reply to Padawan post
  - reply to Mentor post
  - rate Padawan
  - rate Mentor
  - review completed activities
- Process Flow
  - New user – open app, create user profile, update database
  - New Padawan post – open app, sign in, select learn, create Padawan post, update database with post, display in application
  - New Mentor post – open app, sign in, select Mentor, select search criteria if applicable, pull learner posts from database, review posts in application, reply to post, update mentor reply in database, display in application
  - Padawan reply – open app, sign in, select my learner posts, pull my learner posts from database, review posts in application, reply to mentor post, update Padawan reply in database, display in application
  - Mentor reply – open app, sign in, select my mentor posts, pull my mentor posts from database, review posts in application, reply to mentor post, update Mentor reply in database, display in application
  - Mark activity complete Padawan- open app, sign in, select my learner posts, pull my learner posts from database, review post in application, select mark complete in application, push mark complete flag to database record, review mentor in application, provide mentor rating in application, update user mentor rating in database, display updated user rating on learner post.
  - Mark activity complete Mentor - open app, sign in, select my mentor posts, pull my mentor posts from database, review post in application, select mark complete in application, push mark complete flag to database record, review Padawan in application, provide Padawan rating in application, update user Padawan rating in database, display updated user rating on mentor post.
  - Review completed activities – open app, sign in, select completed activities, pull completed activities from database, review completed activities in app.
- Learning Objectives

- Ability to utilize Xcode IDE to develop a working application for IOS mobile devices.
- Ability to utilize Swift programming language to develop a functioning IOS application
- Apply knowledge learned from previous courses into while completing the senior project

### **Section 3:**

- Decision Criteria
  - I decided to develop an IOS application for this project as I have not yet developed any type of application and thought it would be rewarding and beneficial to learn how to develop apps.
  - Once I decided on the Padawan App the decisions to be made include both the functionality and visual aesthetics of the application.
  - Functionality
    - Notifications – how and when users should be notified after receiving a reply to a post
    - In app direct private communication – should the application permit users to direct message each other, or connect via a video conference, audio call
    - Solicitation – should the application allow mentors to charge for their services
    - Database – which database should be utilized
  - Functionality Weight (measured on a 0 through 5 scale)
    - Notification - 4
    - In app direct private communication - 2
    - Solicitation - 5
    - Database - 5
  - Visual Aesthetics

- Logo – what logo will be utilized for the application
- Color scheme – what color scheme will be utilized
- Font type – what font type will be utilized
- White space – how much white space will be used
- Simply design – should the user be overwhelmed with information or should the application remain clear direct and to the point
- Visual Aesthetics Weight (measured on a 0 through 5 scale)
  - Logo - 3
  - Color scheme - 3
  - Font type - 4
  - White space - 4
  - Simple design - 5

#### **Section 4:**

- Alternatives
  - Functionality
    - Buy/Sell/Trade products – allow users to have a classified section permitting them to exchange products
    - Monetary exchange – allow users to charge for mentor services
  - Visual Aesthetics
    - Menu location – where will the main menu be located
    - Profile picture – should profile pictures be utilized

#### **Section 5:**

- Analyzing Alternatives
  - Functionality
    - Buy/Sell/Trade products – The intention of this application is to bring the student and mentor together while removing as many barriers as

possible. Adding a forum similar to Craig's List would negatively impact the culture of the application and it is the creator's belief that the purchasing of these products would occur outside of the application via direct communication.

- Monetary exchange – Once again the intention of this application is to bring learners to new activities while removing barriers such as financial constraints, which includes paying for mentorship and equipment. The monetary exchange does not coincide with the mission or this application.
- Visual Aesthetics
  - Menu location – The menu location is of critical importance as it correlates to the simplicity and overall aesthetics and functionality of the application.
  - Profile picture – The user of profile picture may aid the design of the application as users expect to see a profile picture, which would keep the design simply and standardized

## **Section 6:**

- Alternative Selection
  - Functionality
    - Buy/Sell/Trade products – not selected
    - Monetary exchange – not selected
  - Visual Aesthetics
    - Menu location – selected due to the menu being a key piece of any application or web page, especially when factoring this application is for mobile devices of differing screen sizes. Maintaining a simple and functional design is a top priority.
    - Profile picture – not selected in order to limit bias between Padawan's and mentors and to prevent the site from being used for dating purposes.

## **Section 7:**

- Implementing the alternative

- The menu location will be implemented via a hamburger menu in the top right or left of the display. The menu will expand when selected. This functionality will be displayed on each screen.

## **Section 8:**

- Evaluating the decision effectiveness
  - The decision to not add functionality to buy/sell/trade and allow monetary exchange on the application was made with the intention of keeping the application guided towards providing easy accessibility the Padawan's and gathering only like-minded mentors whom are passionate about their activities and teaching/helping others. While this is an honorable intention not adding these functions runs the risk eliminating corporate partners and soliciting opposition from paid services providers of content, goods, and services.
  - The decision to add the menu was easy and obvious as ease of use is a top priority.
  - Deciding to not utilize the profile picture was a tough decision as the benefits include making the users feel connected on a personal level and placing a face to the name of a user that you will be communicating with. However, I have personally seen how sites and applications intended for one thing end up being utilized as a dating or hookup app. I don't want people offering to mentor somebody in an effort to obtain their phone number or spend time with them because they find them attractive. The point of this application is to bring people together whom have a shared interest in an activity.