**SE 300 Project Proposal**

**Project Name:** Eagle-Exchange

**Project Team:** Team 2, Eagle Exchange, Brian Barker, Jared Burns, Sebastian Osick, Isabella Barange Garzon.

**Problem Statement:**

When students have items on campus that they want to buy, sell or trade, where can they do that with other students only? There is no website exclusively for students of Embry-Riddle to buy, sell, or trade items with one another. If a student were to list an item on Facebook Marketplace, eBay, or a similar website they would have to deal with strangers off campus that may not be trustworthy. Students helping other students is much safer for our campus and peers than meeting random strangers from the internet. Looking around the internet and Embry-Riddle Snapchat stories, students are always posting properties they have available for rent. How are they supposed to know who is renting their place and if they are even a Riddle student? There is no safe, reliable, or convenient way for exclusive students from Embry-Riddle to buy, sell, or trade any items or properties. A website or application that would help solve this problem will help build a stronger and safer campus community.

**Stakeholders:**

Juan Ortiz Couder (Primary)

Keith Garfield (Primary)

Embry-Riddle students (Primary)

Embry Riddle faculty and staff (Primary)

Embry-Riddle administration (Secondary)

**Proposed Solution:**

Our team’s solution to these problems is Eagle-Exchange, an app for buying, selling, and listing items exclusively for Embry-Riddle students and staff. After verifying their student or faculty identity, users of the app will be able to create a basic user profile and create listings for items they are looking to sell or trade, and interested individuals can message the seller about the listing. The users will be able to list items or housing options, set prices and descriptions for each listing, and add pictures for the listing. Once the listing is no longer available, the creator of the listing can remove the listing from the app.

Currently, the app will be exclusively for the Daytona Beach Embry-Riddle campus and will not support Worldwide or Prescott students and staff. In addition, international or external exchanges will not be supported, and third-party payment options will not be supported.

**Proposed method to solve the problem:**

The initial approach to establishing the “Eagle Exchange," is through the development of a website application that will eventually transition towards an android mobile app. The current design of the software product includes a frontend structure of a single page application interface where the user can interact with current listings on the exchange and chat with fellow users to discuss items. To support these features the front end will be hosted on a Node.js server to send HTML requests and JSON file to the backend of the product.

The backend will consist of authenticating user profiles, authorizing user actions, and utilizing data to provide beneficial results for users. To support the requests from the frontend, the backend will utilize SQL databases such as MySQL and NoSQL databases such as MongoDb in order to respond to frontend actions. The two distinct types of databases are required to support listings on the exchange and the chat feature within the application. The backend will be hosted on a separate server Node.js during development. The initial approach towards data segregation is with a physical separation where there is a database for each client in order to provide a more secure product for users on the “Eagle Exchange.”

The initial languages that the product may include are HTML, CSS, Python, JavaScript, and Ruby. The initial databases that the product may include are MySQL and MongoDb to support the features of the application.