2 General Description

2.1 Prototype Architecture Description

The RocStar mobile application prototype is comprised of the following major components:

- Web interface - RocStar will be available on the web in a web browser
- iOS application interface - RocStar will be available on the Apple App Store
- Android application interface - RocStar will be available on the Google Play Store

- Account Creation
  - Five distinct user account types: hospital staff, family members, volunteers, Roc Solid Foundation staff, and team leaders/volunteer coordinators

- User Profile and Profile Settings
  - A web interface for users to create their profile, edit their profile, and display information relevant to their account type

- Child Referral
  - A digital form that hospital staff completes to suggest Roc Solid Foundation’s help for a child battling cancer

- Project Creation
  - A digital form that Roc Solid Foundation staff completes to initiate the process of a build project, a room remodel, or an iPad project for a child

- Family Website
  - An online community for families with children who are battling cancer to provide support to each other

- Push Notifications
  - Available to Roc Solid Foundation staff when a new child is referred by a hospital
  - Available to Roc Solid Foundation volunteers when a new project is created
2.2 Prototype Functional Description

- **Update User Profile**
  - Online form that allows a user to update his or her user profile information after he or she has authenticated in the RocStar application
  - Form is pre-loaded with their account information from the database

- **User Account Database**
  - Online storage of the relevant information pertaining to the users of the RocStar application

- **Child Referral**
  - Online form that allows hospital staff to recommend that Roc Solid Foundation help a child who is battling cancer

- **Order New ReadyBags**
  - An online form that hospital staff completes in order to have Roc Solid Foundation send them more ReadyBags

- **Push Notifications**
  - Notification algorithm to display relevant information to the appropriate user when an event takes place

- **Family Websites**
  - An online community in which families of children battling childhood cancer can communicate with each other for inspiration

- **Volunteer Checklists**
  - Online forms with the necessary supplies for each build project that update in real time

- **Events Calendar**
  - Online calendar for volunteers and Roc Solid staff to view the upcoming events pertaining to the organization
2.3 External Interfaces

- RocStar will require an internet browser that adheres to the W3C standards, or an Android device running Android version 5.0 or above, or an iOS device running iOS version 8.0 or above.

2.3.1 Hardware Interfaces

- RocStar will be hosted on an Old Dominion University virtual machine.
- The Apache web server and the relational database will connect with RocStar through Laravel programs and integrate with NeonCRM to facilitate a working prototype application.

2.3.2 Software Interfaces

- MySQL database.
- Interface written in HTML, PHP, CSS, Java, and Swift.
- PHP uses the Laravel framework.

2.3.3 User Interfaces

- Desktop or laptop computer with a web browser installed.
- Android device.
- iOS device.

2.3.4 Communications Protocols and Interfaces

- Hypertext Transfer Protocol (HTTP) allows access to RocStar via a web browser.
- Transfer Control Protocol and Internet Protocol (TCP/IP) allows access to the web server across IEEE 802.x.
- Android wrapper application facilitates user interaction with RocStar through an application environment.
- iOS wrapper application facilitates user interaction with RocStar through an application environment.