Lab 2 – RocStar Prototype Specifications

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1. Introduction

The customer, the Roc Solid Foundation (RSF), has commissioned Team Orange to create an application, RocStar, to help them make their company more efficient through technology. The Roc Solid Foundation is a charity organization (Roc Solid Foundation, n.d.) that provides comfort and assistance to families whose children are suffering from cancer and the children suffering from cancer. RSF does this by doing build projects and supporting the families of children who are suffering. RocStar will facilitate communication and scheduling between RSF staff, RSF volunteers, the families of children suffering from cancer, and the hospital staff who refer families to RSF.

The Roc Solid Foundation faces many hurdles when performing their philanthropic duties. RSF is currently using email and fax machines for hospital staff to communicate and transmit referrals. The staff at RSF has to manually input referrals into NeonCRM. NeonCRM is a customer relationship management (CRM) system designed to help coordinate items with charities. There are no automated reminders for events or notifications for families who may need RSF’s assistance.

There are many ways RocStar intends to solve the problems RSF has. Providing a mobile support solution via an Android and Apple application will allow RSF to facilitate communication with all those involved with RSF operations. The application will be integrated with NeonCRM so that referrals will automatically be entered. RocStar will incorporate an alert/notification system so RSF staff will be alerted to new referrals and events. The app will
help RSF organize events. It will also include digital forms and signatures so forms have the option to be filled out on the app.

1.1 Purpose

The purpose of RocStar is to give RSF a stable platform to effectively organize their activities. RocStar will be an app to help RSF automatically update records from hospitals and track ready bags. The app will allow RSF to manage build projects. RocStar will organize communications RSF has with its affiliates. RocStar will also be designed to make things easier on the families with children suffering from cancer. RocStar will assist RSF in their philanthropic duties.

1.2 Scope

RocStar has many goals assist RSF. RocStar would be used to make RSF operations better in terms of communication and coordination. RocStar will provide live notifications so users will star up-to-date on what is going on. RocStar will function to promote RSF.

RocStar will utilize a push notification system to keep users up-to-date on what is going on with RSF. When a new family is put into the system by the hospital staff a notification will be pushed to users with a RSF staff account. When a new project is created; a notification will be pushed out to users with the volunteer or team leader account type in the local area so they can sign up for the project. A notification will remind users with a family account type when there is an upcoming build project.

RocStar will connect families to a personalized page. This will allow families to find resources that can better help them cope with the stress of the situation. There will be an entertainment section for families for long waits at a hospital.
1.3 Definitions, Acronyms, and Abbreviations

**Apache2 Web Server**: Software for hosting the web server

**API (Application Programming Interface)**: A set of rules and specifications that software programs follow to communicate with each other. Running head: LAB 2 - ROCSTAR

**CRM (Customer Relationship Management) software**: This type of software consolidates customer information and documents into a single database so business users can more easily access and manage it.

**CSS (Cascading Style Sheets)**: Language for formatting content displayed on a web page

**Firebase**: Modular web-based tools designed for use in building software applications

**HIPPA (Health Insurance and Portability Act of 1996)**: United States Act that provides data security for medical information

**HTML (HyperText Markup Language)**: Language for web development

**MySQL**: An open-source relational database management system

**NeonCRM**: CRM software used by Roc Solid Foundation

**PHP**: Server scripting language

**RSF**: Roc Solid Foundation

1.4 References


1.5 Overview

This document provides specifications on the goals and architecture of the app, RocStar. It establishes the purpose of the project and its intended functionality. In this document, there is
an introduction that will describe the overall intentions of RocStar. The description section will elaborate on the internal functions of the app. The third section, titled specific requirements, will elaborate on the requirements RSF has put forwards as well and wants and wishes for the app.

2. Description

RocStar will be a mobile web app designed to operate on Android, iOS, and the web. Users will login to the app and then be directed to account specific pages depending on their user level. A calendar will be provided to each user. RSF staff will be able to push notifications to users. Notifications will go to RSF staff when new referrals are submitted.

2.1 Prototype Architecture Description

RocStar is comprised of three major components, the web interface, iOS application interface, and Android application interface. The web app will be available online via a web browser. Users will be able to download the RocStar app for their Apple and Android devices from the Apple App Store and Google Play Store respectively.

RocStar users will have access to the app through the web interface, iOS application interface, or Android application interface. The interface will connect to the backend services in order to organize and get requested information. The backend services will be linked to NeonCRM and the database. RocStar will push notifications from the backend services to different users. This process is indicated in Figure 1.
Team Orange will use React-Native to program the web app UI (functional on iOS and Android devices as well). Php scripts will be used in conjunction with JavaScript to link the UI with the backend services and backend services with the database and NeonCRM. Firebase services will be used to send notifications from the backend to users.

2.2 Prototype Functional Description

The prototype will use all the user account types and can demonstrate the interaction with other accounts. New users will be able to create an account which information is stored in the database. Once a new user creates an account the account can be assigned an account type by RSF staff but the default account type will be the family member account.
Once a user has logged in there will be an activity that includes a menu bar at the bottom of the screen so the user can select new activities. The default activity that the user will experience when they log on is a home page. Figure 2 demonstrates the general user functions available to all users. All accounts will have access to a calendar page which will allow users to see build projects relevant to them. All users will have links to profile settings, donate pages, and the store. All users will have access to any waivers specific to their user type which will automatically be filed with NeonCRM.

Figure 2 The general activity flow users will experience will utilizing RocStar

Family member users will have access to a family page. There will be various activities that lead to an entertainment section. Volunteer users will have access to a build project activity which includes a check list for each project and various projects the user is assigned to. The team leader user will have the same access as the volunteer but can add volunteers to projects
and edit projects. The team leader and the volunteer will use the app flow described in Figure 3. The RSF staff user will have access to administrative functions including modifying user account types. The RSF staff user will be able to modify user accounts and view waivers for people. RSF staff accounts will also receive notifications when a hospital staff account sends a new referral form. The RSF staff user will be able to view hospital status including the number of ready bags the hospital currently has. The RSF staff user will be able to push notifications to remind other users of various events based on either their user account type or by user name.

The figure 4 demonstrates how the RSF staff user can interact with the app. The hospital staff user type will have access to referral forms and can keep an inventory of current ready bags for each individual hospital. The referral forms may be filled out and sent to RSF via RocStar.

Figure 5 demonstrates the functions that hospital staff users will have access to.

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**Figure 3** The activity flow volunteer and team leader users will experience when using RocStar
Figure 4 The activity flow RSF staff users will experience when using RocStar

Figure 5 The activity flow hospital staff users will experience when using RocStar
2.3 Extended Interfaces

RocStar will require users to adhere to standards when operating our app. It will require either an internet browser to access that adheres to W3C standards, an Android device running Android version 5.0 or above, or an iOS devices running iOS version 8.0 or above. These functional requirements insure that the app runs proficiently on the prescribed devices.

The RocStar prototype 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.

The interfaces written will be written in HTML, PHP, CSS, Java, and Swift. PHP will be using the Laravel framework. MySQL will be used to create the database for RocStar. HTTP will allow access to RocStar via a web browser. TCP/IP allows access to the web server across IEEE 802.x. iOS and Android wrapper applications will allow users to interface with RocStar.