Lab 1 – RocStar Product Description

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Introduction

Our customer, the Roc Solid Foundation (RSF), has chosen our App, 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, including the children themselves. 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 has too few automated forms of interaction with families, their staff and volunteers, and the hospital staff. 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. 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 communicate better with all those involved. 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 could be filled out on the app.
2 Product Description

The product, RocStar, will be an app, available on Android, iOS, and as a website, designed to assist RSF in functioning as efficiently as possible. The RocStar will provide forms, checklists, and documents for all relevant parties. The goal of our app is that it will be easy enough to use so that it will be intuitive and anyone with experience using a smart phone should not need any instructions on how to use the app properly. The integration with NeonCRM will handle automatically updating records held by RSF in order to make sure that as much labor as possible is focused on helping people and not on busy work. The app will also host a communication system that will allow RSF to communicate with staff, hospitals, and families. It will allow staff to organize events times, dates, and notifications.

2.1 Key Product Features and Capabilities

Our product is a website application, Android application, and iOS application. This application, known as RocStar, will help RSF achieve its goals. RocStar will provide availability to different features dependent on who is using the app.

RocStar will have a communication system built into the app. This will come in multiple forms. Families will have access to online forums so they can support other families and give their stories to give inspiration to other families to help them in their struggle with childhood cancer. Everyone will have access to an instant message system that will allow people to communicate in real time so they can better communicate with each other. There will be an alert notification system built into the app so that new referrals can be addressed as soon as possible. The notification system will also alert staff and volunteers of new projects.
RocStar will help coordinate the efforts of RSF during build projects. The app will allow RSF staff and team leaders access to the project map portion of our program which will allow them to create and edit projects. This will allow a project creator to send alerts to volunteers so they can sign up for the project.

RocStar will automatically enter a referred family’s information into NeonCRM. NeonCRM is a customer relation management system designed for use by non-profit charity organizations to help organize information and better assist organizations like RSF in their philanthropic work. Our app will use APIs provided by NeonCRM to automatically enter information filled out on forms to be entered into the database NeonCRM maintains.

2.2 Major Components (Hardware/Software)

RocStar will be accessed by users using either an Apple device, Android device, or through the website. Once accessed they will be given information from servers based on the level of access granted to them by administrators.

The major hardware components that are needed to operate the app is an SQL database server and a web server. The web server will be there to host the website version of the application. The SQL database server will house personal information such as contact information, name, access level (user type) and other relevant data.

The iOS version of the application will be programmed with Swift (Apple inc, 2017) while the Android version of the application will be programmed with Java and XML using the Android Studio IDE(“Android studio the official IDE for Android,” n.d.). Swift is the programming language use to make Apple apps. This will allow us to create the wrapper that
will access the website automatically allowing users to automatically login to their account from the Apple or Android Device.

RocStar will use LAMP (Linux, Apache, MySQL, PHP) to manage data provided by users. This will give RocStar a very efficient system to store and protect user information entered in the app.

3 Identification of Case Study

RocStar is being specifically designed for use by the Roc Solid Foundation. The goal of RocStar is to provide RSF a stable, easy to use, and efficient app that will allow the RSF team to focus all their efforts on making life more enjoyable for the people they help.

RSF has stated that they have issues with communication and coordination. Their communication efforts are limited to the usual means of contacting people via email, text message, and phone calls. Coordination efforts are also constrained to emailing or faxing forms back and forth and then manually inputting the form information into NeonCRM. Coordination is also limited in how projects are done. All project information has to be transmitted by email. The figure below describes RSF’s current process flow.
The process described above cause RSF to be less efficient than is ultimately possible. RSF has to devote more resources into updating NeonCRM. More time is spent managing projects than is necessary by RSF staff and team leaders. Multiple emails to different groups may cause confusion because different groups are getting the wrong information or team members may be left out of a group email and not get the information at all.

The intended users of RocStar all have different needs which will be addressed in our app. There are five different user types that our app will help. These users are RSF staff, volunteers, team leaders, hospital staff, and the individual members of a family with a child suffering from cancer. The RSF staff need to have full access and control of all data and events.
created by RSF. Volunteers need to have access to waivers, projects, and fundraising tools. Team leaders must be able to coordinate projects and have access to the same things volunteers have access to. Hospital staff needs an efficient way to keep track of ready bags and offer and submit forms to RSF. The family members need support from other families and RSF and need access to ways to reduce burdens on the family.

4 RocStar Product Prototype Description

The prototype for RocStar is intended to be a nearly complete product that RSF has commissioned us to create. The only difference between the prototype and the product will be the inclusion of a test user type which will be able to on the fly modify the user level in order to quickly test out different aspects of the program and we will be using our own database server to store information. After launch RSF will need to have their own database server.

The objectives of RocStar will be achieved by creating user types. The test user type will act like any user type the user selects. The RSF administrator will have overall control of RocStar. The RSF staff will be delegated quite a few controls where a few administrators would be in effective. The volunteer user type will be given tools to help volunteers better assist RSF in their goals. The team leader will be able to create and edit projects and also has volunteer level access. The hospital staff is a type of user who will send forms and keep track of ready bags. The family member user type will have access to the app that will help them communicate with RSF and be given functions that will ease their burdens.

There will be necessary risk management when working on our app. Primarily issues with completion of the app will use Agile development procedures to ensure that the work is completed smoothly(Beck et al., 2001). Rapid prototyping procedures will include user input to
ensure the application is what the customer is looking for. One of the most important hurdles RocStar will face is information security in making sure our system doesn’t expose user personal information to those not authorized to have it. RocStar needs to make sure only administrators have access to changing user types and ensure that each user only has access to information that was intended by RocStar. RocStar must be fully compatible with both iOS and Android devices.

Simulating the use of RocStar will be a simple endeavor using multiple test users set to simulate different user levels. RocStar will be able to demonstrate its ability to do everything it is said to have capabilities to do by accessing each of these users simultaneously during a demonstration and show RSF that the program functions correctly. The demonstration would use the project flow chart to demonstrate how each user interacts with different events occurring. Due to the nature of RocStar the simulation of the prototype can be done anywhere a Wi-Fi signal or mobile internet is present.

4.1 Prototype Architecture (Hardware/Software)

The Prototype architecture will consist of an application on an Android or iOS device. Swift will be used to program the iOS application version of RocStar while the Android app will be programmed with the Android Studio IDE, using java and xml. These programs will be created on personal computers and kept synced on github.com. (GitHub, 2017) These programs will both operate like a browser but enabling a user to instantly log into their user profile on RocStar. The prototype will use a ODUCS virtual machine to host the website and the database to store data. The ODUCS will be a simulate the real world website and database that RSF would use to integrate with this app.
4.2 Prototype Features and Capabilities

The RocStar prototype will have many user profiles to demonstrate the practicality of the application. The test user type will act like any user type the user selects. The RSF administrator will have access to edit data in app as well as editing the user type of any user in the system. The RSF staff user type will have the most access to information on the storage system allowing them to view projects, create and edit projects, create and edit the event calendar, view hospitals associated with RSF including ready bag inventory, view volunteer and family profiles, send customizable notifications, and view documents. The volunteer user type will be able to view projects, use fundraising tools, submit a volunteer waiver, view the volunteer manual, view the project profile including an interactive project checklist, and edit and view their profile. The team leader is a sub type user of the volunteer user which has additional access to create and edit projects. The hospital staff is a type of user who will have access to inventory of ready bags, referral request status, and electronic referrals. The family member user type will have access to the family forum, a personalized family page, entertainment, and coupons. The prototype will allow new users to create an account and either a tester user or administrator account to assign the new user account a user type as defined above.

The prototype will be able function fully. This includes actual integration with NeonCRM (not simulated). The prototype will simulate database storage, an event calendar, and communication accessible by all users. The process flow for RSF after our application is implemented should follow figure 2.
Figure 2 Future Process flow
4.3 Prototype Development Challenges

In creating RocStar, team Orange faces difficult challenges. Particularly team Orange has little to no experience integrating with NeonCRM. Team Orange has no experience developing iOS applications. One team member with experience with Android Studio and that team member’s experience is quite limited. These difficulties will be assuaged due to the numerous how to guides the internet has to offer; for example a YouTube video by deveolopes (deveolpes, 2015) teaches users how to make a basic Android app. Using these online guides team Orange will have no issues creating RocStar.

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Glossary

**Android Device:** Any electronic device which uses an Android operating system

**Android Studio:** An IDE used to program apps designed for Android devices

**Apache:** Apache HTTP server is a webserver software

**API:** Acronym for Application Programming Interface

**App:** An application

**Apple Device:** Any electronic device which uses an iOS

**CRM:** Acronym for customer relation management

**iOS:** A mobile operating system made by Apple for use with iPhone, iPad, and iPod

**Java:** An object orientated programming language

**LAMP:** Acronym for Linux Apache MySQL PHP

**MySQL:** Open source multi-user database management system

**NeonCRM:** A crm system designed to help coordinate items with charities

**PHP:** A server side scripting language

**RSF:** Acronym for Roc Solid Foundations

**Swift:** A programming language used to make apps for iOS devices

**XML:** Markup language used to make a set of rules for displaying information
References


