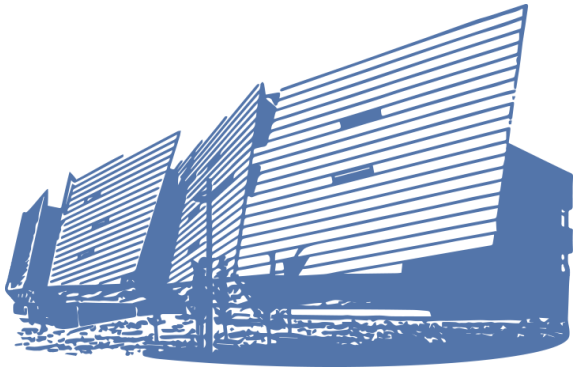

Galway Mayo Institute of Technology, Dublin Rd Campus

BSc Project

Software Testing Project

Tomas O'Malley (G00361128)

47197 – Software Testing
Bachelor of Science in Computing in Software Development
Department of Computer Science

May 2, 2020

Contents

Chapter 1

Introduction

Chapter 2

Objectives and Tasks

2.0.1 Objectives

An objective

2.0.2 Tasks

A Task

Chapter 3

Scope

Scope

Chapter 4

Testing Strategy

4.0.1 Unit Testing

A unit Test

4.0.2 System and Integration Testing

A System and integration test

4.0.3 Performance and Stress Testing

A Performance and stress test

4.0.4 User Acceptance Testing

An User Acceptance Testing

4.0.5 Batch Testing

A Batch Test

4.0.6 Automated Regression Testing

An Automated Regression Testing

4.0.7 Beta Testing

Some Beta Testing

Chapter 5

Test Schedule

A test Schedule

Chapter 6

Control Procedures

Control Procedures

Chapter 7

Features to Be Tested

Some Features to Be Tested

Chapter 8

Features Not to Be Tested

Some Features Not to Be Tested

Chapter 9

Resources-Roles and Responsibilities

The Resources and Roles - Responsibilities

Chapter 10

Schedules

The Schedules

Chapter 11

Risks and Assumptions

The Risks/Assumptions

Chapter 12

Tools

The Tools

Chapter 13

References

13.0.1 Framework

After a couple of meeting and weighing the positives and negatives of other systems such as Android Studio Java/Http we came to the conclusion we would need a strong framework to develop with.All the options we discussed had either one of the two flaws 1. Web Based - Using a JSF framework , building with Java/HTML was a aimed at web development or 2.Non-Hybrid - Environments such as Android Studio only supported creating Mobile Applications for the Android ecosystem.

React Native is a JavaScript framework for writing real, natively rendering mobile applications for iOS and Android. ... React Native also exposes JavaScript interfaces for platform APIs, so your React Native apps can access platform features like the phone camera, or the user's location.

JavaScript is a text-based programming language used both on the client-side and server-side that allows you to make web pages interactive.Incorporating JavaScript improves the user experience of the web page by converting it from a static page into an interactive one. To recap, JavaScript adds behavior to web pages.

13.0.2 Database Connection

From day one it was obvious we would need some sort of database system such as SQL or No SQL to handle or data but it was unsure for the platform to use .SQL has always been the normal technology used until the new Object-Orientated Database model was deployed.After researching online and Discussing with our allocated project supervisor we came to the conclusion for this project using the MongoDb NoSQL Database System would be ideal.

MongoDB is a document-oriented database which stores data in JSON-like documents with dynamic schema. It means you can store your records without worrying about the data structure such as the number of fields or types of fields to store values.

13.0.3 API'S

An application program interface (API) is a set of routines, protocols, and tools for building software applications. Basically, an API specifies how software components should interact. Additionally, APIs are used when programming graphical user interface (GUI) components.

React native supports many rich apis fro creating applications such to access systems alert system , camera-roll memory and so on.We required so may of accessing memory and we decided to implement the Google Fire-base database System.We will incorporate firebase to save our users comments submitted to the forum

Firebase is a mobile and web application development platform developed by Firebase, Inc. in 2011, then acquired by Google in 2014. As of March 2020, the Firebase platform has 19 products, which are used by more than 1.5 million apps.

Another popular API we will use is the React native Calendar API sourced via Github.com .This API makes it a breeze to add a calendar system .

13.0.4 Web vs Mobile

The whole objective or learning outcome of this team project is to develop I piece of software .In our previous modules such as Mobile Applications Development(Semester 3) We created a UWP mobile application and in Data Centric Web Applications(Semester 5) We developed a web Application.We have never developed a hybrid Mobile Application in this semester(6).Mobile Applications are now the most way people interact with their smartphones.Developing a Hybrid Application will also be an extremely beneficial project to showcase at a software job interview.

One of the main the largest strengths of React Native is how flexible of a platform. I plan to host this application as a website too using a free host platform such as GitHub Pages.By providing a mobile/web version of this application I hope to create a larger target audience for my app.

13.0.5 Start up Guide

We used a very detailed set up guide from tutorial link which i will reference in the References page.Underneath is the install process.

1. Install Software's : Node.JS + npm
2. Open a command Prompt on Windows
3. Enter 'npm install -g create-react-native-app' and wait to install
4. Enter 'npm install -g create-react-native-app' and wait to install
5. Enter npm install -g react-native-cli and wait to install
6. Enter expo Start and the application will begin