Treasure Hunt App and Engine

PROJECT REPORT

Laszlo Malina
C00157639

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Introduction

This document specifies the treasure hunt app and engine project description, learning outcomes, the review of the project and the acknowledgements.

Description of submitted project

I have successfully created a treasure hunt engine where the user can register, change their password, login and create their treasure hunt that consist of a series of clues. The treasure hunt locations are based on the Google Maps coordinates.

I also created a treasure hunt application that allow users to download treasure hunts created by other users and try to solve them. But before they have an option to do that they need to login.

Description of Conformance to Specification and Design

As of my specification for the project the requirements were the following:

Title: Treasure Hunt Engine and App
Technologies: Android/SQL(cloud)/ HTML5/Google Maps
Description: A treasure hunt consists of a series of clues where finding the solution of the current clue leads to the location of the next clue. Write a web program that allows someone to easily create a treasure hunt based on GPS coordinates gleaned from Google maps.
Also create an Android application that can download a created treasure hunt and allow the user to try and solve it.

I am proud to say that I have successfully completed the assigned task.

Description of learning

Technical

When I started this project I didn't have much knowledge about android applications. When I was working on my research I did find out that working with android studio makes developing for android as simple as can be. When I progressed further with my project I had an exposure to how to use JSON in order to get the results of a query into and android application.

Personal

As a result of the early project presentation I feel that it did help me to gain more confidence when I am giving a presentation and helped me improve my communications skills. Since I had the chance to update the documents between iterations I had the chance to correct my mistakes and improve my writing skills.

Review of Project

Difficulties

During the project's life I didn't have too many problems but here are the few I did encounter.

When I was using Joomla as my frontend for the web engine I tried to take advantages of its features. One of them was the register/login function. Before the end of the first iteration I encountered an error that made the function unable to work. It tried to solve my problem but unfortunately I could not. I decided to leave Joomla behind and move to CSS as far as the styling goes and then just build my pages with HTML5 and JavaScript as the result of this I did provide my own register login functions.

A really big issue I had was with the mobile application was that when I was returning the data from the database to the downloading and solving treasure hunts functions. When I started working on these functions I wanted to return all the treasure hunt information to the current activity. Using JSON I was able to get the first record that was a match. The problem was that I could not come back to this activity. I tried multiple methods but wasn't successful because the JSON encoding failed and I could not fix it. The way that I managed to overcome my problem was that I introduced a class between the download hunt and the solving hunt which would do all the processing. Then when I solve a clue I can call that class to process and get the next clue.

Starting again

If I would start again I would change the order of this that I would work on. I would set up my database then populate it with sample data. Then start working on the mobile app first rather then the web client. I would work more on the documents as I progress with the project. I would organize timing to not to spend as much time working on just the project.

Giving Advice

If I was to give advice to someone who is going to start a similar application in the future I would tell them to focus on the research. Try to investigate most of the possible connection options between the web client, the database and the mobile app. Returning information from the database is trickier than just inserting into. And take careful interest in handling and processing the data that will be displayed on the screen.

Technologies

I do believe I made the right choices when I picked my technologies. The use of Android Studio was almost a completely new experience and it is a nice tool to work with. The Google Maps JavaScript API did show me new things when working on the map but overall wasn't difficult to use. My other technologies I did know about a lot and that influenced my choices but I am not regretting my decision.

Acknowledgements

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