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Treasure Hunt

Project Plan

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# Introduction

Treasure Hunt is an interactive application that can be used to create and play interactive tours, competitive games and treasure hunts in any town or city.

Users can use the website to create their own custom travel routes or treasure hunts, and use the Android application to capture photos or mark GPS coordinates. Hunts made by creators can be played by other users.

The hunts work like the following: creators/users take photos at specific locations using their phone that can then be used in hunts. These photos are stored, as well as the GPS location of where the photos was taken. Creators can then use the website to see any photos of locations in the area they selected. They can choose a selection of these to set up a hunt. These hunts may span larger distances, or perhaps be confined to smaller locations: i.e. a park.

Users can select a hunt on the app. The app will then give some options on how to do the hunt. *It might be possible to select whether locations should be shown in sequence or all at once, as well as possible multiplayer options.* Then the hunt starts. The user gets to see the photo linked to a GPS location and has to try to find that place. Then the user needs to go there and take a selfie with the location clearly visible. *This photo can then be used for a possible social part of the app, proving that they have completed the hunt for that location.* A hunt can consist of one or multiple locations. Hunts may be performed by walking, cycling, or driving, as long as done safely.

# Requirements

Table 1 below lists some of the requirements for this project. The requirements are currently provisional and might be expanded/changed in the future.

Table 1 - Requirements

|  |  |
| --- | --- |
| **Req.**  **No** | **Req. Name: Description** |
| 1 | **Mobile application:** Building the mobile application that contains the user interface and connects to the cloud. Estimated time: 80 hours |
| 2 | **Database:** constructing the database containing user information, set locations and user photos.  Estimated time: 20 hours |
| 3 | **Website:** Building the frontend of the website for users to log in and create their interactive maps.  Estimated time: 60 hours |
| 4 | **Cloud setup:** Using the selected cloud toolset to process and store information sent from the mobile the application, and provide the backend to the website.  Estimated time: 30 hours |
| 5 | **Account creation and login:** implementing account creation and login in the interface and database.  Estimated time: 10 hours |
| 6 | **GPS utilization:** using the GPS in combination with a map provider for the app and website.  Estimated time: 20 hours |
| 7 | **Security:** the app should protect the information of the user, including their current GPS location.  Estimated time: 10 hours |

# Design and Implementation

We currently plan to use Google Cloud tools to implement the cloud functionality.