

# Proposal Document

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*Project Name* - A short, creative, and marketable title capturing the key idea.

Serendipity: A better way to explore the world around you, on or offline.

Inspiration for this project came from HCDE 2015 Capstone Project "Journey." Information for "Journey" can be found here: <http://hcde.uw.edu/files/imgs/capstone/2015/Capstone-MS-14-team-journey.pdf>.

## *What is the Project?*

Overall Problem and Approach: When traveling abroad, it can be difficult to explore your surroundings without the use of cell and data connection. In addition, there currently isn't an app that provides travel information that is flexible for the traveler that wants the freedom to explore without the need to stick to a strict itinerary.

Our Specific Focus: We want to provide the tools - like offline maps, popular attractions, and time schedules - to help everyday travelers explore the city of their choice on their own pace.

## *What are your Deliverables?*

We plan delivering a functioning app that works for the Seattle area and has the potential for working globally in urban environments. We will make digital mockups and perform usability testing in order to fully develop our app. The following is a list of main features and functionalities our app will provide:

1. Exploratory Map View:
  - a. Display on a map various attractions such as markets, food, hotels, museums, etc.
  - b. Filter points on the map by type (museum, food, etc.)
    - i. One such filter will be "Recommended", in which we will show various recommended points of interest across multiple categories.
  - c. Set "Home" location to hostel, in order to always provide navigation back.
  - d. Choose a set of points of interest to download for an upcoming journey.
2. Current Journey View:
  - a. This view will display all selected points of interest in the current journey.
  - b. Easily add or remove points of interest.
  - c. Choose a point of interest from this view (or from the offline map) to navigate there.
3. Offline Map View:
  - a. Shows downloaded map data with selected points of interest.
  - b. When a point of interest is selected, the traveller can choose to navigate via walking, driving, or public transit, and the app will overlay routing and current GPS data on top of the map view to guide the traveller where they need to go.
  - c. The offline map view will contain bonus points of interest that the app downloaded that the user did not explicitly select, but may be interested in once they are out and about.
  - d. There will be a Wi-Fi filter that shows nearby Wi-Fi hotspots if the traveller wants more data.

Out of Scope for this project includes:

- Anything that isn't provided by the Google Maps, Google Places, and Google Directions API will be a limitation. For example, the app may not be as useful in some locations if Google data is sparse.
- Offline functionality will be simulated initially. If we find the problem to not be difficult, we will add it at the end of the quarter.

We plan to also produce the additional required deliverables for this class: presentations, website, poster, and demo video.

*What are your Milestones?*

1. Milestone 1 (April 28)
  - a. Android App Development (basic):
    - i. Basic integration with Google Places API and Google Maps API. We will pull nearby points of interest and display them on a map.
    - ii. Allow the users to select and remove points of interest to their current journey view.
  - b. Digital Mockups of the interface for the remaining features.
    - i. Filtering for online Map view
    - ii. Selecting different types of navigation options.
    - iii. Navigation view.
  - c. Heuristic evaluations of digital mockups.
  - d. Milestone 1 Presentation Update
2. Milestone 2 (May 12)
  - a. Android App (finishing touches):
    - i. Filters by type of point of interest.
    - ii. Wi-Fi hotspot filter.
    - iii. Set home feature.
    - iv. Add extra data to the journey that may be interesting but the user didn't explicitly select
    - v. (Depending on time and difficulty) integrate offline option of app
  - b. Usability testing of new features on application.
  - c. Milestone 2 Presentation Update
3. Milestone 3 (May 26)
  - a. Android App Development (intermediate):
    - i. Finish basic navigation features - uses Google Directions API. The app should now be able to navigate a user from any two selected points with walking, driving, and public transit options.
  - b. Usability testing of navigation features on application.
  - c. Presentation material:
    - i. Finished website.
    - ii. Final Poster.
    - iii. App demo video.
  - d. Final Presentation and Poster Session

*How will we know you are making progress and on track in your project?*

By completing the following items of each milestone's deadline will demonstrate our progress through the project.

*What are your success criteria, major risks, and risk mitigation plans?*

We would consider our project our success if we were able to get a moderately working app, using Wi-Fi and data connection, which allows the user to use the majority of the features we proposed.

Some major risks include successfully leveraging the 3 APIs (Google Maps, Google Places, and Google Directions) for our app in the time constraint of this quarter. Since we ambitiously plan to deliver a functioning app, we need to effectively communicate with each other and prioritize the deliverables so that we make the best use of our time.