# Chosen Project:

**What To Do Around Here:** Build an app that lets people find out what interesting tourism sites and activities are nearby when travelling. Your application should adjust dynamically to the user's location. Provide as much information as possible, but make sure it's easy to read, navigate and understand.

# Functional Requirements:

## The User Shall:

* Select what they are looking for (attraction, restaurants, accommodation).
* Select individual results from a List to obtain more information about a selected place.
* Select “Show on Map”, to see their current location and the place they selected.

## The System Shall:

* Have a splash screen that shows load progress.
* Use GPS polling to regularly check the user’s location.
* Query Google Places API to obtain information on nearby places including: - Attractions, Dining, and Accommodation.
* Organise the data obtained from Google Places to be displayed to the user in an organised, easy to read way. Specifically create a list of Object Place. This contains Name, Address, Image URL, Latitude, Longitude, Description, and a list of enums ECategory.
* Provide a map that displays the user’s location and the location of the place they have queried.

## Device:

* Have a target SDK of 18.
* Aimed at smartphone sized devices with GPS and internet capabilities.
* Android Device.

# App Interaction

When first turned on the user will see a splash loading screen. This screen will remain until a GPS reading is found, and data is grabbed from Google Places.

Once data has loaded the user will be directed to the application “attractions” screen. This screen displays a nav bar at the top, and a list of nearby attractions.

The nav bar consists of [‘Attractions’, ‘Dining’, ‘Accommodation’].

Clicking on a nav bar category will bring up a list of places that fall under that category.

The nav bar will be available on every screen so the user can quickly jump back to a list view

The list contains the name of the place and a small image.

Clicking on a place in the list will bring up a new “details” screen, that provides the place name, address, picture, description, and an option to “show on map”. This option will bring up a google map with the user’s current location, and the location of the place chosen.

On the map screen the user will be able to navigate back to the details section via button press.

# Alternate Design

The app has the same splash loading screen as described above.

After splash screen the user is presented with a list view of all nearby places ordered by distance.

The list has a small image of the place and the place name. Clicking any place in the list will take the user to the description screen as described above.

The user has the option to switch from list view to map view. The map view shows a google map with the users current location and markers of nearby places. The marker has a tag above with the place name. Clicking a marker will take the user to the description screen described above.

The user is able to filter the places shown on the list or map view by pulling out a drawer from the left side of the screen. The drawer is a list of filters [“Attractions”, “Dining”, “Accommodation”, “All”].

Clicking on any of the filters will change the list and map views to include only what the user has selected.

# Web Services To Be Used:

Google Places:   
<https://maps.googleapis.com/maps/api/place/textsearch/json?location=-45.8787605,170.5027976&radius=1000&type=attraction&key=AIzaSyBOm2SY3mY9Awm8qmxoIMWT236M3bGZB8k>

Google Places Photo Request

https://maps.googleapis.com/maps/api/place/photo?maxwidth=400&photoreference=CmRYAAAAothen52YGXmPJ62fDAFI-epjehXicGJ0cd1\_1dQWQPihpL-AT\_LjmiokECnE7e1anpR08IeIAjMyQHIKfHO0-3eRGQgtPNWh3LoB1cdSensxIbPLSWE\_Uy30QOY9EsuDEhBLjsks\_ABjE5FFdAwMQpZmGhQZs-Y\_hSlADLotPCF4uu2jyYCbKw&key=AIzaSyBOm2SY3mY9Awm8qmxoIMWT236M3bGZB8k

Google Maps API

# On Board Hardware

GPS Chip

Internet Connectivity