# Project Outline

## Project Name: Cool Compass

### Project Description

This project will consist of a mobile application that allows the user to read their heading, set bearings, and orient their position using their phone’s location relative to point that they set or as an azimuth for land navigation. It will have a traditional look of a compass, with due north visible, as well as a heading they can set manually.

### Problem Addressing

I am developing an app to assist individuals that need handheld navigation utilizing a compass that can be accessed from their electronic device to assist in running, hiking, GPS navigation, and will also assist in counting steps and pacing for land navigation. This app would be a must have for individuals navigating unfamiliar terrain and could help in the event of signal loss to help track point of origin and frequent destinations for starters.

### Platform

This application that is in development will be able to support Android mobile devices utilizing Android 25 (Nougat 7.1).

### Front/Back-end support

The application user interface will be the front end as a visual interaction with the phone and sensors for navigation. The back end will consist of java code utilizing the phones’ sensors to display the information to the user.

### Functionality

Using the sensors native to the android device, user will be able to orient to their surrounding using the natural top of the phone’s (in portrait mode) as a heading. The application user interface will consist of a common compass face, heading, bearing, and cardinal direction notation. Further development will consist of a step or pace counter, and offline pre-loading navigation should signal become intermittent or depreciated.

### Design

The design will consist of the compass image being displayed at the center of the users screen. There will be a box at the top of the compass that will show a heading. The step counter will be on the bottom left of the screen. User may be able to change the compass design and set waypoints to move towards.

#### Wireframes

