Alex Schwartz - Project 2 Milestone 1

For project 2, I am recreating and improving my campus way finder application in android. Now, users will be able to search any building on CU's campus. The building's relative direction and distance will be dynamically displayed with location and compass data.

My app is geared towards first-time visitors of CU's campus or people needing to find unfamiliar buildings at CU.

Yes, many similar way finder apps exist, but almost none hare searchable functionality. My app will be specifically geared towards CU's campus and will have a more straightforward UI than most way finder apps.

The haversine formula will be needed to calculate relative heading and distance from two global coordinates.

Haversine formula:	$a = \sin^2(\Delta\varphi/2) + \cos\varphi_1 \cdot \cos\varphi_2 \cdot \sin^2(\Delta\lambda/2)$
	$c = 2 \cdot \text{atan2}(\sqrt{a}, \sqrt{(1-a)})$
	$d = R \cdot c$
where	φ *is latitude,* λ *is longitude,* R *is earth's radius (mean radius = 6,371km);* *note that angles need to be in radians to pass to trig functions!*

Below is a screenshot of my prototype, built in android studio.