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Sensor Manager

The Sensor manager is a function within android apps that allows the sensors present in the mobile devices to be read by the app. These sensors, which include tools like an accelerometer and a gyroscope, allow the user to measure various aspects of the world around them using their own speed, the pull of gravity, and a variety of other naturally occurring phenomena, including the earth’s magnetic field. The sensor manager can be used to allow the phone to use motion controls for certain video games, play an augmented reality game, find your location on a map, or track the distance you have travelled on a bike ride. Every one of these can be useful for several reasons, but I used it in my app to track the number of steps a person has taken.

By measuring whenever the phone shakes, the app can tell that the person has taken a step. Each step can then be counted and input into a database, which can be accessed by the app later to track how many steps the person has taken over many days. This is then converted into an easy to view graph that the user may look at to see their progress, view how many days they have been walking for, how many steps they have taken in total, and of course look at the exact date those steps were taken on. Where I struggled most with was determining what method to use for measuring the data. Rotating the phone would not work as it does not typically happen when you are walking, but shaking made sense since the natural up and down movement of your body impacts the phone in a way where it would be considered a “shaking” movement.