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CS-360-R4872
6-3 Assignment: SensorManager
4/10/2024

Explain the purpose of SensorManager. Describe the purpose of SensorManager by comparing your reading and your experience during the creation and testing process. Identify 2–3 specific uses for SensorManager and discuss the context in which these apply.

From my readings and the information in the module resources, the built in SensorManager is necessary to interact with the various sensors built into Android. This is an important part of Android as it allows developers to interact with the real world. Some uses may include gaming using accelerometers, or navigation using the GPS sensor.

A few specific examples include:

Motion Detection

Using sensors like the accelerometer and gyroscope, an application can detect device movement and respond on-screen. This can be useful in gaming where a player may prefer steering a vehicle by tilting the device, in measurement apps that use the gyroscope to determine if the device is level, or in fitness apps that track physical activity.

Environmental

There are various environmental sensors available in the SensorManager package. These can measure conditions such as temperature, pressure (what I demonstrated in my simple app) and even humidity. Now, most Android devices don't have these built into the device, but some obscure devices might. These could be useful in smart home applications that respond to the sensors by turning on the heat when it gets too cold in the house, or turning on the dehumidifier when the relative humidity goes too high.

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Navigation

Using orientation sensors like the magnetometer and GPS sensor, apps can offer navigation options. I use them all the time when I go hiking. My compass app uses them to show me the devices orientation based on the Earth's magnetic field and the GPS keeps track of my location even when I am not connected to the internet.