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**CS-360**

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**Week 6: SensorManager**

As it says on the Android Developer’s site the *SensorManager* lets you access a device’s sensor. Using the SENSOR\_SERVICE argument an app can make use of the sensor suite available on the device. The devices available will be dependent on the phone but could be from the following types: motion sensors, position sensors, barometers, photometers, thermometers, geomagnetic, etc.

To get the available sensors the device can be logged using the *getSensorList* method. For example:

*List<Sensor> deviceSensors = mSensorManager.getSensorList(Sensor.TYPE\_ALL);*

*for (Sensor sensor : deviceSensors) {*

*Log.d(TAG, "Sensor: " + sensor.getName() + " - " + sensor.getType());*

*}*

Once the sensors are identified, the orientation, for example, the app can use it to provide interesting and useful content to the user. Using the compass as an example, as events are fired (*onSensorChanged*) the angle between magnetic North and the phone’s orientation can be returned to the user in a *TextView*.

A similar activity could be done for determining a user’s elevation by tapping into the barometric sensor and converting pressure into a height measurement. Or, maybe, change your app’s theme app if the photometer shows low light.

Lastly, the *SensorManager* allows a developer to control the frequency of the callback (called delay). There are 5 levels of control: normal, game, UI, and fastest. One might us normal for screen orientation changes but need a faster update frequency for games (use game) or as fast as possible (use fastest).