6-3 Assignment: Sensor Manager

CS 360 Mobile Architect and Programming

Nicholle Caudy

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The purpose of SensorManager is to allow the developer to access the device’s sensors to handle sensor events and register sensor detectors. SensorManager in Android apps manage sensors and calls sensor event listeners to adjust their state based on user conditions. Not all devices have the same available sensors but using the getSystemService(Sensor\_Service) allows developers to make use of the available sensors. The app I created uses the accelerometer sensor to detect and then display the Z, Y, and Z value changes as the user’s device is in motion. This is accomplished using the onSensorChanged(sensorEvent) argument to detect the event and present the updated values to the user in a TextView. The accelerometer sensor can also be used for counting steps or tracking physical activity.

SensorManager can access and use the light sensor on devices to measure atmospheric light levels. The most common use is to adjust the screen’s brightness automatically depending on the light surrounding the user at the time the application is in use. This can prevent eye strain and preserve battery life. In my experience this option can be disabled if the user prefers to control their screen brightness. The light sensor can also be used with the picture application, adjusting the light to allow for better pictures to be taken.

SensorManager can access and use the magnetometer sensor by providing data with accuracy and precision to monitor three-dimensional movement and positioning of the device. This can help a user with navigation by determining their direction and location. Google Maps uses the magnetometer sensor for example.