**CS 360 Module Six Assignment**

The SensorManager class allows the user to access a device’s sensors. Android device sensors are separated into three different categories: motion sensors, positions sensors, and environmental sensors (Zybooks). Some of the sensors that an Android device contains are accelerometers, gyroscopes, gravity sensors, magnetometers, barometers, thermometers and more (Zybooks). All these sensors are designed to read how the device responds to certain conditions, while Sensor Manager allows access to these readings.

After reading the Zybooks chapters on Sensor Manager and its associated framework, I’ve learned more about how each sensor works and is accessed during development. By implementing the “onSensorChanged” method I was able to display the values from the accelerometer within the virtual device. This allowed me to output the values from the accelerometer to the screen and update them as the device’s orientation was changed. To confirm through testing that the app was accurately responding to these sensor changes, I accessed the virtual devices extended settings and adjusted the accelerometer sensor to visualize the changes in real-time.

One specific use for the Sensor Manager class would be to measure a person’s movements, such as counting the number of steps or measuring how far they’ve walked. I use this feature through apps like Google Fit, for when I am exercising outdoors. Another use is measuring the barometric pressure for GPS purposes, or even alerting individuals for significant atmospheric pressure changes like an approaching storm.

zyBooks. (2024). Using the Barometer Sensor. In CS-360-11264.202451-1 (Chapter 4, Section 11). Retrieved from <https://learn.zybooks.com/zybook/CS-360-11264.202451-1/chapter/4/section/11>

Android Developers. (n.d.). SensorManager. In Android Developers. Retrieved from <https://developer.android.com/reference/android/hardware/SensorManager>