Course Project

Due Tuesday Nov. 29, 2016

University of Windsor,

Electrical and Computer Department **Fall 2016**

0688590–RFID Technology and Smart Sensors **Dr. R. Rashidzadeh**

Project Description:

Bluetooth Low Energy (BLE) technology is designed to reduced power consumption and cost while maintaining a communication range comparable to the conventional Bluetooth technology. BLE is one of the main technologies developed for smart sensor networks and expected to play a major role in the realization of Internet of Things (IoT) where billions of smarts sensors will be deployed. The main advantage of the BLE technology compared to the other low energy solutions such as ZigBee is the smartphone support for BLE sensors. As a result, BLE sensors can be connected directly to smartphones without any extra hardware while using ZigBee sensors require a custom gateway. In this project, students will develop a multiplatform application using Visual Studio Tools for Apache Cordova to communicate with Texas Instrument sensortag.

The application has to be able to:
1-Scan BLE sensors and present the received signal strength from adjacent BLE sensors.
2-Connect to a selected BLE sensor and present the light intensity.
3- Play an audio and send a tweet when the light intensity falls below a certain threshold.
4- Support a menu bar to set the threshold value for the light intensity.

Report

Your project report is expected to be a scientific report and expected to cover the following section:

Title, Abstract, Introduction, Methods, Results, Discussion