ENGG200/300/600 Major Project Software/Comms information

You are provided with:
An Arduino Uno + ethernet shield + bluetooth BLE 4.0 module for the control server
An Arduino Mega + bluetooth BLE 4.0 module for the robot control system

You are provided with an I2C LCD display that you can use for debugging of your system.

You goal is to develop the software and communications system to allow your robot to collect the desired number of each can and place those cans into the delivery basket. You will need to design a control system that presents a web page which allows the user to select the required number of each type of can to collect and to commence collection.

Example Code Collection
A collection of possibly useful code is provided. More can be found on the internet if you look for it. The code provided is:

ENGG200_Web_Demo	Demonstration web server. Provides pages from memory.
ENGG200_bluetooth_Mega	Bidirectional communications with the BLE module on the Arduino Mega.
ENGG200_bluetooth_Uno	Bidirectional communications with the BLE module on the Arduino Uno (This is different to the Mega, as it uses the software serial library, as the Uno only has one hardware serial port).
ENGG200_i2c_Demo	Demonstration using the I2C LCD display.
ENGG200_Motor_Controller	Demonstration of code to control a motor controller. One side changes slowly between full forward and full reverse, the other side jumps between full forward, stop, and full reverse.

There are also libraries available which will help with some activities. Using the standard libraries will reduce development time, and decrease the amount of debugging required.

Specifications:

Arduino Uno	https://store.arduino.cc/usa/arduino-uno-rev3
Ethernet Shield	https://core-electronics.com.au/w5100-ethernet-sd-card-shield-arduino-compatible.html
Arduino Mega	https://store.arduino.cc/usa/arduino-mega-2560-rev3
Bluetooth Module	https://www.jaycar.com.au/arduino-compatible-bluetooth-v4-0-ble-module/p/XC4382