EE 629 – IoT using Raspberry Pi

Lesson 2 – Exercises –

1. **Lab A: Serial:** Did serial loopback testing using minicom
2. **Lab B: SPI and I2C:**

1. Connected the SPI MOSI and MISO pins (the 10th and 11th pins from the left of the bottom row) using one DuPont female-to-female jump wire, and used the spidev\_test.c file to configure the device setting, then used the MOSI to send the data and received the same data in MISO. Verified all the results in SSH Terminal

2. Connected I2C devices (ADXL345 and BMP180) using four DuPont female-to-female jump wires with 3V3, GND, SDA, and SCL, install i2c-tools, and found that I2C addresses 53 has been used to connect the ADXL345 with raspberry pi on SSH Terminal

**3.Lab C: Fritzing :** Installed Fritzing application and followed the steps to make the connections in virtual environment

**4.** **Lab D: GPIO and LED:**

**5. Lab E: 1-Wire:**

**6. Lab F: USB Webcam:**