List of Experiments (Internet of Things)

Basic

1. Familiarization with Arduino/Raspberry Pi and perform necessary software installation.
2. To interface LED/Buzzer with Arduino/Raspberry Pi and write a program to turn ON LED for 1 sec after every 2 seconds.
3. To interface Push button/Digital sensor with Arduino/Raspberry Pi and write a program to turn ON LED when push button is pressed or at sensor detection.
4. To interface Temperature sensor with Arduino/Raspberry Pi and write a program to print temperature value in Serial monitor.
5. To interface Bluetooth module with Arduino/Raspberry Pi and write a program to control LED using Smartphone.
6. To interface IR sensor with Arduino/Raspberry Pi and write a program to print digital values in Serial monitor.
7. To interface Ultrasonic sensor with Arduino/Raspberry Pi and write a program to print distance values in Serial monitor.
8. To interface Servo motor with Arduino/Raspberry Pi and write a program to rotate Servo motor at certain angle.
9. To interface LCD display with Arduino/Raspberry Pi and write a program to display sensor values or custom messages on LCD.
10. To interface RFID reader with Arduino/Raspberry Pi and write a program to print RFID tag data in Serial monitor.

Advance

1. To interface Wi-Fi module ESP8266 with Arduino/Raspberry Pi and write a program to upload temperature sensor data to Thing-Speak IoT platform and display it on a web page.
2. To interface GSM module SIMCOM900 with Arduino/Raspberry Pi and write a program to send an SMS alert when a motion sensor detects an intruder.
3. To interface Wi-Fi module ESP8266 with Arduino/Raspberry Pi and write a program to control a servo motor using Blynk app on your smartphone.
4. To interface GSM module SIMCOM900 with Arduino/Raspberry Pi and write a program to make a call to a predefined number when a button is pressed.