**Basic Components Required:-**

1. Screw Driver Set
2. Multimeter
3. Black Tape
4. Cutter
5. Plas Tool
6. Bread Board
7. Jumper Wires
8. 2x18650 Battery and Holder
9. 3mm LED
10. Switch
11. Hot Glue Gun
12. Soldering Iron(Not Necessary)

**1..**[**Obstacle Avoiding Robot using Arduino and Ultrasonic Sensor**](https://circuitdigest.com/microcontroller-projects/arduino-obstacle-avoding-robot)**:-**

### **Components Required:--**

1. Arduino Uno
2. HC-SR04 Ultrasonic Sensor
3. Servo Motor
4. LM298N Motor Driver Module
5. 5V DC Motors X 4
6. 9v Battery and Battery connector
7. Wheels X 4
8. Robot Car Chassis
9. Jumper Wires

**2..Bluetooth Controlled Robot using Arduino**

### **Components Required:--**

1. Arduino Uno or NANO (any version)
2. HC-05 Bluetooth Module
3. LM298N Motor Driver Module
4. 5V DC Motors X 4
5. 9v Battery and Battery connector
6. Wheels X 4
7. Jumper Wires
8. Robot Car Chassis
9. Android Phone
10. Bluetooth Controller App

**3..Arduino Line Follower Robot**

### **Components Required:--**

1. Arduino Uno or NANO (any version)
2. HC-05 Bluetooth Module
3. LM298N or L293D Motor Driver Module
4. IR Sensor Module X 2
5. 5V DC Motors X 4
6. 9v Battery and Battery connector
7. Black Tape(Electrical Insulation Tape)
8. Wheels X 4
9. Jumper Wires
10. Robot Chassis

# 4.. Basic motion detection and tracking with Python and OpenCV

Componants Required:-

1. Raspberry Pi 3, Mod B+,  with WiFi and BLE
2. 7inch Capacitive Touch Screen supports 1024x600 high resolution
3. 16GB Class 10 SD Card pre-loaded with Raspibian and Touch Display Drivers
4. Plastic Enclosure Case for Raspberry Pi
5. Respberry Pi 5MP Camera Board Module and Camera Holder/Case
6. HDMI Cable
7. 5V USB Power Adapter
8. USB to MicroUSB Cable
9. Network Patch Cable

# 5.. Access Control System using RFID, Fingerprint Sensor, Python in Raspberry Pi

Componants Required:-

1. Raspberry Pi - 4750.00
2. HDMI Cable - 350.00
3. Micro HDMI Cable - 240.00
4. RFID Card Module - 200.00
5. Pi Camera - 500.00
6. RFID Card Reader with Tag - 800.00
7. 16x2 LCD with I2C - 350.00
8. Memory Card - 475.00
9. Fingerprint Sensor - 950.00
10. 12v Electric Door Lock - 500.00
11. LAN Splitter/Connector - 100.00
12. Total - 9215.00
13. Raspberry Pi
14. HDMI Cable
15. Micro HDMI Cable
16. RFID Card Module
17. Pi Camera
18. RFID Card Reader wit Tag(RFID-RC522)
19. 16x2 LCD with I2C
20. Memory Card
21. Fingerprint Sensor(R307)
22. 12v Electric Door Lock
23. LAN Spliter/Connector

# 6.. Drone Project All Parts

Componants Required:-

1. FS-CT6B(Transmitter + Receiver)
2. Flight Controller K.K.2.1.5
3. MPU6050(Accelerometer + Gyro)
4. 4x1400 A2212 Motors
5. 5xSimonk 30A ESC
6. 4xMotor Drone Frame
7. 4x1045 Propeller
8. 2200mAh LiOn Battery + Charger
9. Multimeter
10. Breadboard