









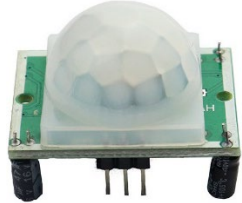
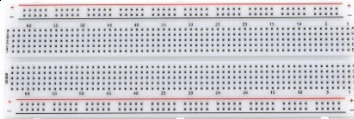

LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)

| SL NO | Name of the Component | Specification | Quantity | Components Picture |
|-------|---|---------------|----------|---|
| 1 | Raspberry Pi Pico (with cable USB A to Micro B) with soldered Head | | 1 |  |
| 2 | Resistor | 220ohm, 0.25W | 5 |  |
| | | 330ohm, 0.25W | 10 | |
| | | 470ohm, 0.25W | 5 | |
| | | 2.2K, 0.25W | 5 | |
| | | 4.7K, 0.25W | 5 | |
| | | 10K, 0.25W | 10 | |
| | | 1K, 0.25W | 2 | |
| 3 | Trimmer Potentiometer | 10k | 1 |  |
| 4 | Potentiometer | 10k | 1 |  |




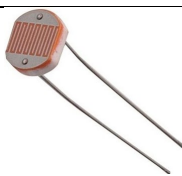



LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)






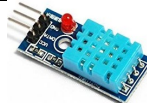



| | | | | |
|---|---------------------------------|------------------------------|----|---|
| 5 | LED | RED 3mm diameter, generic | 10 |  |
| | | BLUE 3mm diameter, generic | 6 | |
| | | YELLOW 3mm diameter, generic | 6 | |
| 6 | RGB LED (4 terminal) | Common Cathode | 2 |  |
| 7 | PIR sensor | HC-SR501 | 1 |  |
| 8 | Breadboard | 840 tie points | 1 |  |
| 9 | Jumper wires(different colours) | Male to Male | 30 |  |

LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)




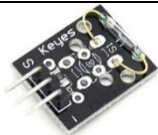



| | | | | |
|----|---|----------------|----|---|
| | | Male to Female | 30 |  |
| 10 | Electromagnetic Buzzer (Active Buzzer, small) | 5V | 1 |  |
| 11 | Piezo Buzzer (Active, Big) | | 1 |  |
| 12 | LDR (Photoresistor) | 5mm | 2 |  |
| 13 | Push Button Tactile Switch | 6x6x5 mm | 10 |  |

LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)

| | | | | |
|----|---|-----------------------|---|---|
| 14 | Micro Servo Motor | SG90 | 1 |  |
| 15 | Joystick Module | | 1 |  |
| 16 | 0.96-inch I2C OLED display(ssd 1306) | 128 x 64 | 1 |  |
| 17 | Dual shaft BO motor with wheel | 200 rpm | 1 |  |
| 18 | Diode | 1N4148 | 1 |  |
| 19 | Temperature and Humidity Sensor Module | DHT11 module | 1 |  |
| 20 | I2C 16×2 LCD Display for Arduino with Presoldered Male Header Pins | 16×2 (HD44780 LCD) | 1 |  |



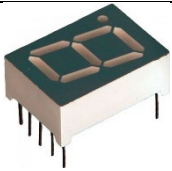
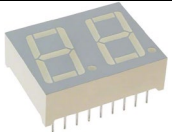





LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)

| | | | | |
|----|--|---------------|---|---|
| 21 | I2C Module for 16x2 (1602) Character LCD with Presoldered Male Header Pins | | 1 |  |
| 22 | Ultrasonic Sensor (4pin) | HC-SR04 | 1 |  |
| 23 | 20 Pins Male Berg Strip Connector Header Pin | 40Pins | 1 |  |
| 24 | KY-021 mini magnetic reed switch module | | 1 |  |
| 25 | KY-034 7-colour flashing LED module | 3 pins | 1 |  |
| 26 | Simple thin magnet | 12 x 2 magnet | 1 |  |
| 27 | Transistor (NPN) | BC 108 | 2 |  |
| | | 2N2222 | 2 | |
| | | BC 548 | 2 | |






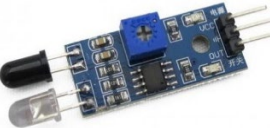

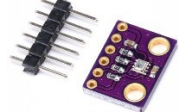
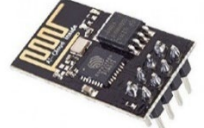
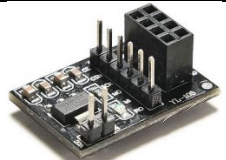

LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)

| | | | | |
|----|--|------------|---|---|
| 28 | 7 Segment Display - Common Cathode - 0.56 inch - Standard Size | | 1 |  |
| 29 | 2 digit 7 segment display module (Common Cathode) | DC56-11EWA | 2 |  |
| 30 | Analog Temperature Sensor | TMP36 | 2 |  |
| 31 | 5v relay module | | 1 |  |
| 32 | KY-013 Analog Temperature Sensor Module | KY-013 | 1 |  |
| 33 | Digital Multimeter | | 1 |  |
| 34 | L298 2A Dual Motor Driver Module with PWM Control | 2A | 1 |  |





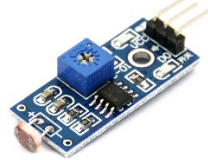

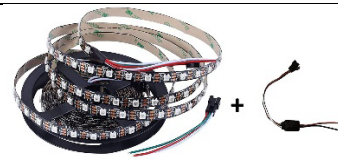
LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)

| | | | | |
|----|---|---------------------------------|---|---|
| 35 | 9V alkaline Battery with snap connector | | 1 |  |
| 36 | Infra-Red (IR) Sensor Module | | 1 |  |
| 37 | IRL540 type MOSFET switch. | N-Channel | 1 |  |
| 38 | BMP280 Barometric Pressure and Altitude Sensor I2C/SPI Module | | 1 |  |
| 39 | ESP-01 ESP8266 Serial WIFI Transceiver Module | | 1 |  |
| 40 | 3.3V Adapter Board for 24L01 Wireless Module | ESP-01 breadboard adapter | 1 |  |
| 41 | HC-05 Bluetooth Module | | 1 |  |





LIST OF COMPONENTS REQUIRED FOR IOT PROJECTS USING PYTHON (CSE 4110)

| | | | | |
|----|---|--|---|---|
| 42 | Photo resistor Module | | 1 |  |
| 43 | Infrared IR Wireless Remote Transmitter and receiver Control Module | | 1 |  |
| 44 | ws2812b 5v LED Strip Individually Addressable 60 Pixels/m Non Waterproof + Controller (1/2 Meter 30 LEDs) | | 1 |  |

