Experiment-1.4

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AIM:

Program to interface the Arduino/Raspberry Pi with LED and blinking application.

Objective:

1. Learn about interfacing.

2. Learn about IoT programming.
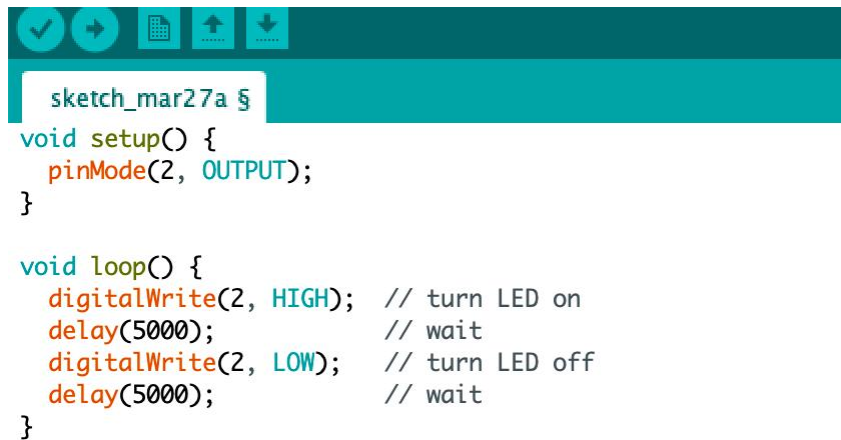
Components Required:

Following are the required components to simulate this experiment:

- 1 × Breadboard
- 1 × Arduino Uno R3
- 1 × LED
- 2 × Jumper

Procedure:

Step 1:   Take your Arduino board and connect 2 separate jumper wires on pin 2 and pin 13 respectively.
Step 2:   Take your led and connect your positive end of led to the jumper wire connected to pin 2.
Step 3:   Similarly, connect the other end of the led to pin 13's jumper wire.
Step 4:   Now write a code in your Arduino IDE for blinking of light. Fig 1 down below demonstrates the code
in   the   IDE.

```
sketch_mar27a §
void setup() {
  pinMode(2, OUTPUT);
}

void loop() {
  digitalWrite(2, HIGH);  // turn LED on
  delay(5000);            // wait
  digitalWrite(2, LOW);   // turn LED off
  delay(5000);            // wait
}
```

Fig. 1

Step 5:   Now connect your Arduino board to your pc via USB jack and in your Arduino IDE, select your board and click on upload.

Step 6:   Note the observations and output.

Output:

Following is the outcome of the experiment of blinking led, with a delay of 5 secs. Fig 2 depicts the LED on state, whereas Fig 3 depicts the Led off state.
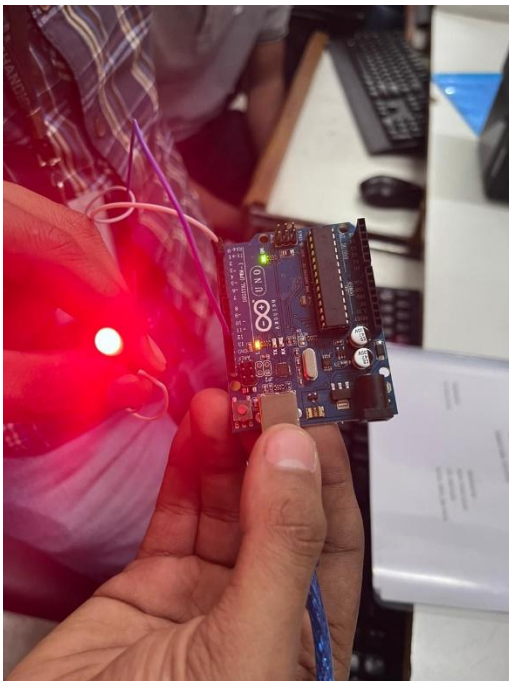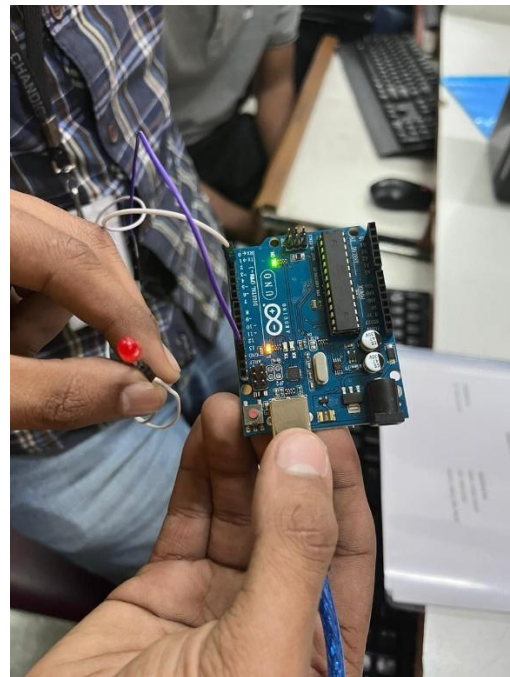

Fig. 2

Fig. 3