Assignment No. 13

**Title:-** Write a program using piezo element & use it to play a tune after someone knows.

**Objectives:-** Understanding working principles of Buttons & Buzzers

**Hardware :-** Arduino, Button, Buzzer, etc.

**Software :-** Arduino IDE

**Apparatus :-** Arduino Uno board, micro-IoT sensor actuator board, power adaptor.

**Interface:-**

Peripheral	Arduino Pin
piezo element	A1

**Procedure:-**

Step1: connect the Arduino board to the Micro-IoT sensor board using the FRC cable provided with the board.

Step2: Connect the power supply adaptor & power on the circuit.

Step3:- Open Arduino IDE & create a new sketch (program) using the above pins.

Step4:- In the Arduino IDE go to tools port & select the appropriate com port.

Step5:- In arduino () to compile & download the code into the Arduino UNO. when

successfully downloaded the code will start running
steps: Tap on piezo element & tune.

Theory:-

- Arduino UNO or similar board element & tune
- Piezo Buzzer - One
- LED - One
- 220 ohm Resistor - One
- 10k ohm Resistor - One
- Push Button - One
- Breadboard - one
- Jumper wires - few
- Push buttons are the basic 'on', 'off' switch button.

Observations:-

- You can use the piezo element for that input sensing & tune generator.
- In this experiment the user will tap the sensor & read the input values & once a certain threshold is pass and can start generating a tune from the piezo element.

```
int sensor Reading = 0;
void setup ()
{
    pinmode (buzzer, INPUT);
}
    void loop()
    {
    sensor Reading = analog Read (knock sensor);
    pin mode (buzzer, OUTPUT)
    tone (buzzer, 261);
    delay (200);
    no Tone (buzzer);
    delay (200);
    no Tone (buzzer);
    delay (200);
    no Tone (buzzer);
    }
    delay (100);
}
```

Conclusion :-

Execute a program using piezo element & use it to play a tune after someone knowks.