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Q) Use buzzer, 4 switches & Arduino to construct a circuit on tinkercad. You have to produce different tone on each button.

```
int buzzer = 13;
const int switch1 = 12;
const int switch2 = 11;
const int switch3 = 10;
const int switch4 = 9;
int switchState = 0;

void setup(){

  pinMode(buzzer, OUTPUT);

}

void loop(){

  if(switchState = digitalRead(switch1) == HIGH){

    tone(buzzer,700,100);
    delay(100);
    tone(buzzer,100,100);
    switchState == LOW;

  }

  else if(switchState = digitalRead(switch2) == HIGH){

    tone(buzzer,800,100);
```

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```
   delay(100);
   tone(buzzer,200,100);
   switchState == LOW;

 }

 else if(switchState = digitalRead(switch3) == HIGH){

   tone(buzzer,900,100);
   delay(100);
   tone(buzzer,300,100);
   switchState == LOW;

 }

 else if(switchState = digitalRead(switch4) == HIGH){

   tone(buzzer,1000,100);
   delay(100);
   tone(buzzer,400,100);
   switchState == LOW;

 }

}
```

Q1) What are the 3 modes of ESP8266-01?

ANSWER:

- Access Point (AP): The Wi-Fi module acts as a Wi-Fi network in Access Point allowing other devices to connect to it.

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- Station (STA): The ESP-01 can connect to an AP (Access Point) such as the Wi-Fi network from your house in STA mode. This allows any device connected to that network to communicate with the module.

- Both: ESP-01 acts as an AP as well as STA mode in this mode.

Q2) Write 5 AT commands & their description of ESP8266?

ANSWER:

- AT - Tests the AT start up i.e. if the AT System is working correctly or not. If the AT start up is successful, then the response is OK.

- AT+CIPSTATUS - Information about the connection.

- AT+CIPCLOSE - Close TCP or UDP connection.

- AT+RST - This command can be used to restart (reset) the ESP8266 Wi-Fi Module.

- AT+CIPAP - Set the IP address of ESP8266 soft AP.

Q3) Write applications where you can use ESP8266?

ANSWER:

- Internet of things (IOT).

- Home Automation.

- Wi-Fi controlled robot.

- Smart devices.