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Q) Create a motion detector using PIR, Buzzer, Led and LCD. Turn on the LED and buzzer when the motion is detected and display motion detected message on LCD. Also you have to display a counter of 10sec in the start of the program on LCD and then display "Sensor is Ready".

```
#include <LiquidCrystal.h>

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);


int led = 13;

const int buzzer = 7;

int sensor = 6;

int state = LOW;

int val = 0;


void setup()

{


  pinMode(led, OUTPUT);

  pinMode(buzzer, OUTPUT);

  pinMode(sensor, INPUT);


  lcd.setCursor(0,0);

  lcd.print("Ali Salman");

  delay(2000);

  lcd.clear();

  lcd.setCursor(0,0);

  lcd.print("63758");

  delay(2000);


  for(int i = 1; i <= 10; i++)
```

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```
 {


 lcd.clear();
 lcd.print(i);


 delay(1000);



 if (i == 10)
 {


   lcd.clear();
   lcd.print("Sensor Is Ready!");
   delay(1000);
   lcd.clear();


 }


}


void loop()
{


 val = digitalRead(sensor);
 if (val == HIGH)
 {


 digitalWrite(led,HIGH);
```

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```
 delay(100);
 tone(buzzer, 1000);
 delay(1000);

 if (state == LOW)
 {

 lcd.clear();
 lcd.print("Motion detected!");
 delay(1200);
 state = HIGH;

 }

 }

 else
 {

 digitalWrite(led,LOW);
 delay(100);
 noTone(buzzer);
 delay(1000);

 if (state == HIGH)
 {

 lcd.clear();
 lcd.print("Motion stopped!");
 state = LOW;
```

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```
 }

}

}
```

Q1) What is meant by PIR, what type of sensor is PIR?

ANSWER:

PIR means Passive Infrared Sensor. It is an electronic sensor which is used to measure infrared light radiating from objects.

Q2) Detection range of PIR?

ANSWER:

The range of PIR sensor is up to 10 to 30 meters depending on segment mirrors.

Q3) Name some applications where PIR Sensor can be used

ANSWER:

- Security Alarm.
- Door Bell.
- Indoor and Outdoor Lights.