

```
#Raspberry Pi Libraries

import RPi.GPIO as GPIO #GPIO library

import time #library for sleep

import board

import digitalio

import adafruit_character_lcd.character_lcd as characterlcd

#set mode as BCM

GPIO.setmode(GPIO.BCM)

# Modify this if you have a different sized character LCD

lcd_columns = 16

lcd_rows = 2

# Raspberry Pi Pin Config:

lcd_rs = digitalio.DigitalInOut(board.D5)

lcd_en = digitalio.DigitalInOut(board.D6)

lcd_d4 = digitalio.DigitalInOut(board.D12)

lcd_d5 = digitalio.DigitalInOut(board.D13)

lcd_d6 = digitalio.DigitalInOut(board.D16)

lcd_d7 = digitalio.DigitalInOut(board.D17)

# Initialise the lcd class

lcd = characterlcd.Character_LCD_Mono(

    lcd_rs, lcd_en, lcd_d4, lcd_d5, lcd_d6, lcd_d7, lcd_columns, lcd_rows)

#set pins

PIR = 21
```

```
BUZ = 22
```

```
#setup pins at output
```

```
GPIO.setup(PIR, GPIO.IN)
```

```
GPIO.setup(BUZ, GPIO.OUT)
```

```
if __name__ == '__main__':
```

```
    try:
```

```
        while True:
```

```
            PIR_State = GPIO.input(PIR)
```

```
            if (PIR_State == True):
```

```
                print ("Motion Detected")
```

```
                lcd.clear()
```

```
                lcd.message = "Motion Detected"
```

```
                GPIO.output (BUZ, GPIO.HIGH)
```

```
                time.sleep(0.5)
```

```
                GPIO.output (BUZ, GPIO.LOW)
```

```
                time.sleep(0.5)
```

```
            else:
```

```
                lcd.clear()
```

```
                lcd.message = "NO Motion"
```

```
                print ("No Motion")
```

```
                time.sleep(0.5)
```

```
except KeyboardInterrupt:
```

```
    GPIO.cleanup()
```

