“Raspberry pi course”

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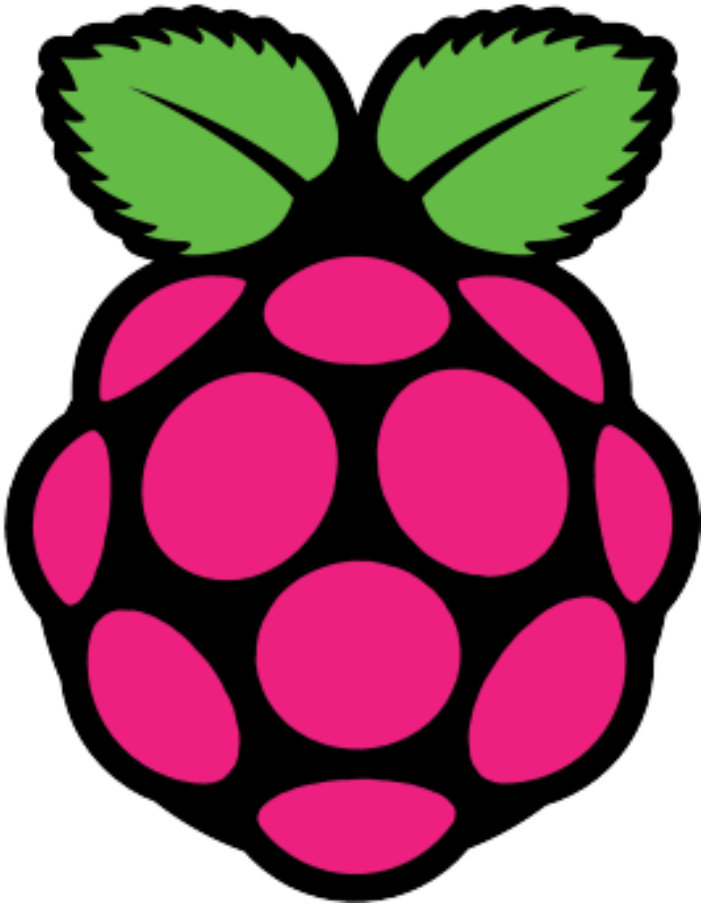

SESSION NO.“6”

- IR SENSOR
- DHT SENSOR
- LDR RESISTOR

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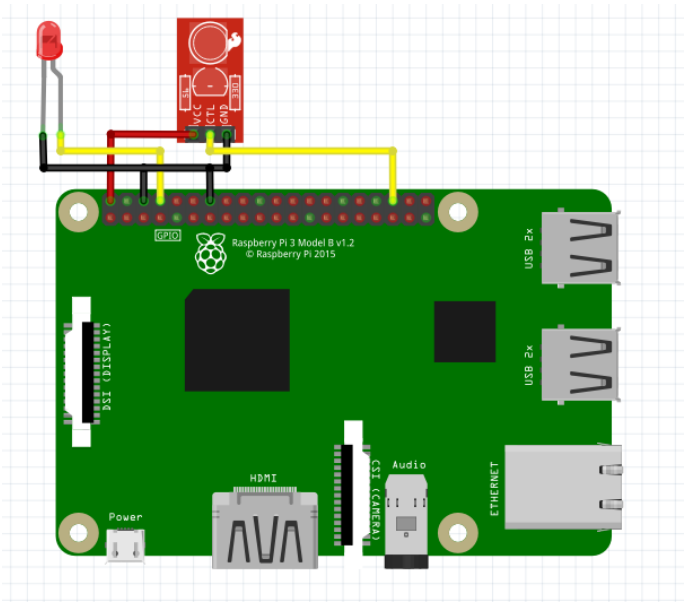
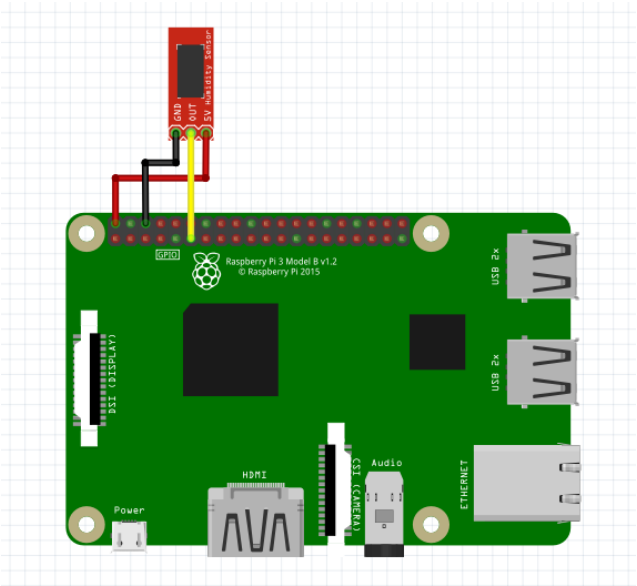
IR SENSOR



EXAMPLE CODE :

```
import RPi.GPIO as GPIO

import time

sensor_input = 16

GPIO.setmode(GPIO.BCM)

GPIO.setwarnings(False)

GPIO.setup(16,GPIO.IN)

GPIO.setup(14,GPIO.OUT)

while True:

x = GPIO.input(sensor_input)

print("IR SIGNAL : ",x)

if x == 1 :

print ("led on")

GPIO.output(14,GPIO.HIGH)

else:

print ("led off")

GPIO.output(14,GPIO.LOW)
```

DHT SENSOR



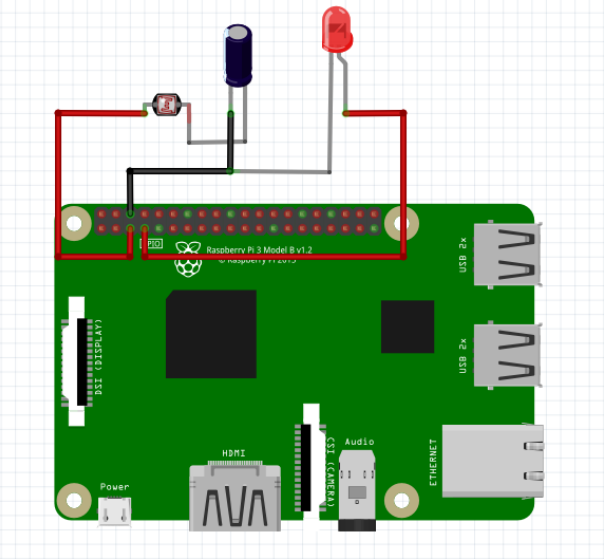
THE FIRST & EASIEST WAY

1. sudo apt-get update
2. sudo apt-get install build-essential python-dev
3. git clone https://github.com/adafruit/Adafruit_Python_DHT.git
4. cd Adafruit_Python_DHT
5. sudo python setup.py install
6. sudo python3 setup.py install
7. cd examples
8. python AdafruitDHT.py 11 17 (11 represents the type of the sensor & 17 represents the pin connection)

THE SECOND WAY USING EXAMPLE CODE :

```
import sys

import Adafruit_DHT

import time

while True:

humidity, temperature = Adafruit_DHT.read_retry(11, 14)

print 'Temp: {0:0.1f} C  Humidity: {1:0.1f} %'.format(temperature, humidity)

time.sleep(1)
```

LDR RESISTOR



EXAMPLE CODE :

```
import RPi.GPIO as GPIO

import time

GPIO.setmode(GPIO.BOARD)

delayt = .1

value = 0 # this variable will be used to store the ldr value

ldr = 7 #ldr is connected with pin number 7

led = 11 #led is connected with pin number 11

GPIO.setup(led, GPIO.OUT) # as led is an output device so that's why we set it to output.

GPIO.output(led, False) # keep led off by default

def rc_time (ldr):

count = 0


#Output on the pin for

GPIO.setup(ldr, GPIO.OUT)

GPIO.output(ldr, False)

time.sleep(delayt)


#Change the pin back to input
```

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

#Count until the pin goes high
while (GPIO.input(ldr) == 0):
count += 1

return count


#Catch when script is interrupted, cleanup correctly
try:
# Main loop
while True:
print("Ldr Value:")
value = rc_time(ldr)
print(value)
if ( value <= 10000 ):
print("Lights are ON")
GPIO.output(led, True)
if (value > 10000):
print("Lights are OFF")
GPIO.output(led, False)
except KeyboardInterrupt:
pass
finally:
GPIO.cleanup()
```

With my best wishes:

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