**Expt 4(DC Motor)**

**Code Arduino:**

intmotorPin=9;

void setup(){

pinMode(motorPin,OUTPUT);

Serial.begin(9600);

While(!Serial);

Serial.println(“Speed 0 to 255”);

}

void loop(){

if(Serial.available()){  
int speed =Serial.parseInt();

if(speed>=0&&speed<=255){

analogWrite(motorPin,speed);

}  
}  
}

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int DCMOTOR=13;

intdelayT=1000;

void setup(){

//put your main code here ,to run repeatedly;

digitalWrite(DCMOTOR,HIGH);

delay(delayT);

digitalWrite(LEDpin,LOW);

delay(delayT); }

**Code with RPi: (DC Motor)**

import RPi.GPIO as GPIO # Importing RPi library to use the GPIO pins

import time

EN1 = 25 # Initializing the GPIO pin 25 for the enable 1

IN1 = 26 # Initializing the GPIO pin 26 for input 1 of the motor driver

IN2 = 27 # Initializing the GPIO pin 27 for input 2 of the motor driver

GPIO.setmode(GPIO.BCM) # We are using the BCM pin numbering

GPIO.setup(EN1,GPIO.OUT) ## Declaring as EN1 output pin

GPIO.setup(IN1,GPIO.OUT) ## Declaring as IN1 output pin

GPIO.setup(IN2, GPIO.OUT) ## Declaring as IN2 output pin

#clear GPIOs

def destroy():

GPIO.output(25, False)

GPIO.output(26, False)

GPIO.output(27, False)

GPIO.cleanup()

def Clockwise():

GPIO.output(25, True)

GPIO.output(26, True)

GPIO.output(27, False)

def AntiClockwise():

GPIO.output(25, True)

GPIO.output(26, False)

GPIO.output(27, True)

def Stop():

GPIO.output(25, False)

GPIO.output(26, False)

GPIO.output(27, False)

if \_\_name\_\_ == '\_\_main\_\_': # Program start from here

try:

while True: # Loop will run forever

Clockwise()

time.sleep(2)

Stop()

time.sleep(1)

AntiClockwise()

time.sleep(2)

Stop()

time.sleep(1)

# If keyboard Interrupt (CTRL-C) is pressed

except KeyboardInterrupt:

destroy()