**Course Code: CE450**

**Lab 04**

**PREPARED BY**

**Khandoker Samiul Hoque**

**Student Id: 19837**

**Github Url:** <https://github.com/KhandokerSamiulHoque/EE450LAB-4.git>

NOTE: video is in this github link , I uploaded over there. However sometimes when we try to copy and paste it from raspberry pi os linux to our real windows sometimes it creates problem in indentation please kindly look over that thing professor , however I have crosschecked several times to make things right.

1.

import RPi.GPIO as GPIO

import time

BeepPin = 38 # Pin 38

def setup():

GPIO.setmode(GPIO.BOARD) # Use physical pin numbering

GPIO.setup(BeepPin, GPIO.OUT) # Set BeepPin as output

GPIO.output(BeepPin, GPIO.HIGH) # Turn off the beep initially

def loop():

try:

while True:

GPIO.output(BeepPin, GPIO.LOW) # Turn on the buzzer

time.sleep(0.1) # 0.1s delay

GPIO.output(BeepPin, GPIO.HIGH) # Turn off the buzzer

time.sleep(0.1)

except KeyboardInterrupt: # When Ctrl+C is pressed, the program will exit the loop

destroy()

def destroy():

GPIO.output(BeepPin, GPIO.HIGH) # Turn off the beep

GPIO.cleanup() # Clean up GPIO resources

print('Press Ctrl+C to end the program...')

setup()

try:

loop()

except KeyboardInterrupt:

destroy()

2.

import RPi.GPIO as GPIO

import time

BeepPin = 38

LedPin = 40

def setup():

    GPIO.setmode(GPIO.BOARD)

    GPIO.setup(BeepPin, GPIO.OUT)

    GPIO.setup(LedPin, GPIO.OUT)

    GPIO.output(BeepPin, GPIO.HIGH)

    GPIO.output(LedPin, GPIO.LOW)

def loop():

    try:

        while True:

            GPIO.output(BeepPin, GPIO.LOW)

            GPIO.output(LedPin, GPIO.HIGH)

            time.sleep(0.1)

            GPIO.output(BeepPin, GPIO.HIGH)

            GPIO.output(LedPin, GPIO.LOW)

            time.sleep(0.2)

    except KeyboardInterrupt:

        destroy()

def destroy():

    GPIO.output(BeepPin, GPIO.HIGH)

    GPIO.output(LedPin, GPIO.LOW)

    GPIO.cleanup()

print('Press Ctrl+C to end the program...')

setup()

try:

    loop()

except KeyboardInterrupt:

    destroy()