CamJam EduKit – Sensors (Written for IDLE 3)

Start:

1. Setup and assemble the Raspberry Pi (RPi) environment:
    a. Connect RPi to a monitor, keyboard and mouse
    b. Power up the RPi module
    c. Observe the start-up script
2. Login and enter password
3. Open the LXTerminal and enter `sudo idle3`
4. Click on **File** and **Open New Window**
5. Click on **File** and **Save As** and name it `2-LEDBuzz.py`

Coding:

1. Import libraries

```
Import RPI.GPIO as GPIO          #import GPIO library
Import time                      #import time library
```

2. Type in the following code

```
GPIO.setmode(GPIO.BCM)           # Each pin on the Pi has several
                                 #different names, so you need to
                                 #tell the program which naming
                                 #convention is to be used

GPIO.setwarnings(False)          #This tells Python not to print
                                 #GPIO warning messages to the screen

GPIO.setup(18, GPIO.OUT)         # These three lines are telling the
GPIO.setup(24, GPIO.OUT)         #Python interpreter that pins 18, 24 and
GPIO.setup(22, GPIO.OUT)         #22 are going to be used for outputting
                                 #information, which means you are going
                                 #to be able to turn the pins 'on' and
                                 #'off'

print("Lights and sound on")     #Print a statement on the screen

GPIO.output(18, GPIO.HIGH)       # These three lines turn the GPIO
GPIO.output(24, GPIO.HIGH)       #pins 'on'. This is enough to turn
GPIO.output(22, GPIO.HIGH)       #on the LEDs and make the buzzer
                                 #sound

time.sleep(1)                    #Pauses the running of the code for one
                                 #second

print("Lights and sound off")    #Prints a statement on the screen

GPIO.output(18, GPIO.LOW)        # To turn the LEDs off, you need to
GPIO.output(24, GPIO.LOW)        #replace the GPIO.HIGH with GPIO.LOW.
GPIO.output(22, GPIO.LOW)        #This will turn the pins off so that
                                 #they no longer supply any voltage.

GPIO.cleanup()                   #will reset the status of any GPIO pins
                                 #when you exit the program
```

Save and run the code