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from machine import Pin
import time
from neopixel import NeoPixel
import random

#assigning variables to all switches
switch1A =Pin(27,Pin.IN,Pin.PULL_UP)
switch1B =Pin(26,Pin.IN,Pin.PULL_UP)
switch2A =Pin(18,Pin.IN,Pin.PULL_UP)
switch2B =Pin(14,Pin.IN,Pin.PULL_UP)
switch3A =Pin(21,Pin.IN,Pin.PULL_UP)
switch3B =Pin(19,Pin.IN,Pin.PULL_UP)
switch4A =Pin(23,Pin.IN,Pin.PULL_UP)
switch4B =Pin(22,Pin.IN,Pin.PULL_UP)

#neopixel ring variable assigned
np_pin=Pin(4, Pin.OUT)
np=NeoPixel(np_pin,16)

#neopixel led strip var assigned
led=NeoPixel(Pin(25, Pin.OUT), 10)

#variables assigned for randomizing game
x = random.choice([0,1])
y = random.choice ([0,1])
z= random.choice ([0,1])
m= random.choice ([0,1])

led.fill((0,0,0))
led.write()
current_round=1
```

```
while True:
    #round1
    if current_round == 1:
        if switch1A.value() == 0:
            if x == 0: #correct switch pressed
                print("Congrats, you get to move to the next round!")
                current_round = 2
                led[1]= 0,255,0 #first led turns on green
                led.write()
                while switch1A.value() == 0:
                    time.sleep(0.01)
            else:
                print("Oops, better luck next time!") #wrong switch pressed
                led[1]= 255,0,0 #first led turns red
                led.write()
                time.sleep(2)
                led.fill((0,0,0)) #led cleared
                led.write()
                break #game ends

        elif switch1B.value() == 0:
            if x == 1:
                print("Congrats, you get to move to the next round!")
                current_round = 2
                led[1]= 0,255,0
                led.write()
                while switch1B.value() == 0:
                    time.sleep(0.01)
            else:
                print("Oops, better luck next time!")
```

```
            led[1]= 255,0,0
            led.write()
            time.sleep(2)
            led.fill((0,0,0))
            led.write()
            break


elif current_round == 2: #only moves to round 2 if switch in round 1 correct
    if switch2A.value() == 0:
        if y == 0:
            print("Congrats, you get to move to the next round!")
            led[3] = (0,255,0)
            led.write()
            current_round = 3
            while switch2A.value() == 0:
                time.sleep(0.01)
        else:
            print("Oops, better luck next time!")
            led[3] = (255,0,0)
            led.write()
            time.sleep(2)
            led.fill((0,0,0))
            led.write()
            break

    elif switch2B.value() == 0:
        if y == 1:
            print("Congrats, you get to move to the next round!")
            led[3] = (0,255,0)
            led.write()
```

```
            current_round  = 3
            while switch2B.value() == 0:
                time.sleep(0.01)
        else:
            print("Oops,  better luck next time!")
            led[3] = (255,0,0)
            led.write()
            time.sleep(2)
            led.fill((0,0,0))
            led.write()
            break


elif current_round  == 3:
    if switch3A.value() == 0:
        if z == 0:
            print("Congrats,  you get to move to the next round!")
            led[6] = (0,255,0)
            led.write()
            current_round  = 4
            while switch3A.value() == 0:
                time.sleep(0.01)
        else:
            print("Oops,  better luck next time!")
            led[6] = (255,0,0)
            led.write()
            time.sleep(2)
            led.fill((0,0,0))
            led.write()
            break
```

```
    elif switch3B.value() == 0:
        if z == 1:
            print("Congrats, you get to move to the next round!")
            led[6] = (0,255,0)
            led.write()
            current_round = 4
            while switch3B.value() == 0:
                time.sleep(0.01)
        else:
            print("Oops, better luck next time!")
            led[6] = (255,0,0)
            led.write()
            time.sleep(2)
            led.fill((0,0,0))
            led.write()
            break


elif current_round == 4:
    if switch4A.value() == 0:
        if m == 0:
            print("Congrats, you win!")
            led[9] = (0,255,0)
            led.write()
            for i in range(16): #gradual lighting up of neopixel in pink to show victory
                np[i] = (255, 20, 147)
                np.write()
                time.sleep(0.1)
            time.sleep(1)
            led.fill((0,0,0))
            led.write()
```

```
            np.fill((0,0,0))
            np.write() #clearing both led and ring
            break
        else:
            print("Oops,  better luck next time!")
            led[9] = (255,0,0)
            led.write()
            time.sleep(2)
            led.fill((0,0,0))
            led.write()
            break

elif switch4B.value() == 0:
    if m == 1:
        print("Congrats,  you win!")
        led[9] = (0,255,0)
        led.write()
        for i in range(16):
            np[i] = (255, 20, 147)
            np.write()
            time.sleep(0.1)
        time.sleep(1)
        led.fill((0,0,0))
        led.write()
        np.fill((0,0,0))
        np.write()
        break
    else:
        print("Oops,  better luck next time!")
        led[9] = (255,0,0)
        led.write()
```

```
time.sleep(2)
led.fill((0,0,0))
led.write()
break
```