

day79 micro:bit practice
Due Monday 3/27/23

1. Create a new program. Name it day79 practice and put your name at the top in a comment.

Save your program in your folder on the computer.

2. Create a new Image named pic.

Turn on the top left light. Display pic for 1 second.

Turn the light off, turn on the top right light. Display for 1 second.

Next do the bottom right light, and then the bottom left light in the same way.

Finally, light up a random light for one second. (You'll have to put an import random up top. Remember that allowable values for the column and row are 0 through 4.)

Turn off all the lights.

3. Use a for loop to display the numbers 0, 1, 2, and 3, for half a second each. That would be "for x in range(4): and then a display.show(x) call and a sleep(500) call.

4. Store the running time in a variable named start: `start = running_time()`

Set up this loop:

```
while not button_a.is_pressed():
```

and inside have one line: `end = running_time()`

After the loop, find the elapsed time in seconds (that's end minus start). Round the elapsed time using the round() command and then display.scroll() the time. (You have to divide by 1000 to get seconds, then use round.)

5. Get the temperature and store it in a variable. If it is over 20, display the temperature and then "warm". If it is under 20 display the temperature and then display "cool".

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6. Write a for loop to draw a series of dots that animate across the screen, 50 milliseconds for each dot. Use the pic Image you made already. Make the pattern repeat 10 times.

You can do this with a pair of nested for loops like this:

```
pic = Image()
for x in range(10):
    for y in range(5):
        pic.set_pixel(y,2,9)
        display.show(pic)
        sleep(50)
        pic.set_pixel(y,2,0)
        display.show(pic)
        sleep(50)
```

7. Display an image of your choosing for 2 seconds.

Start the whole program over again. (To do this you'll need to go back to the top, add a while True: and then select everything below the while True: and type a tab to indent things.)

Call me over to check you off when you are done. Then turn the program in on the Google Classroom.