#10: Creative Coding

SAMS SENIOR NON-CS TRACK

Last Time

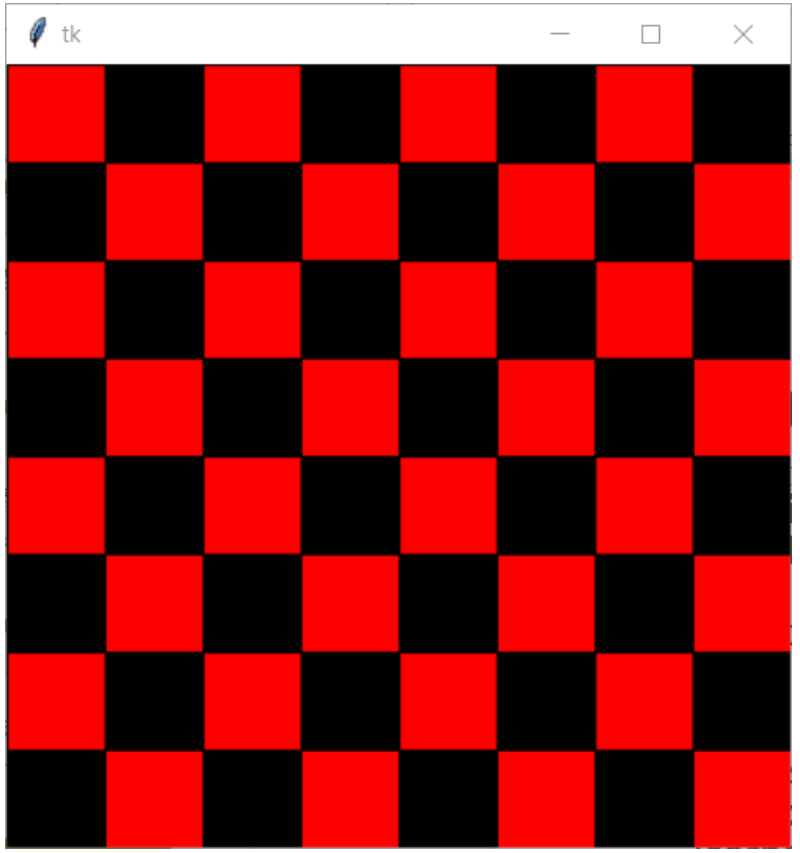
Use **for-range loops** to iterate a specific number of times

Use **for-each loops** to iterate over strings

Use **nested loops** to create two-dimensional patterns

Ex 5-2 Feedback

Almost everyone did quite well! There was a bit of struggle on checkerboard- let's go over that quickly.



This Week

We'll use the workshop time this week for you all to build programs of your own design!

You should spend today planning out your program & producing it, then submit whatever you finish by the end of the class period. We'll grade the programs and give you feedback by Thursday morning.

Thursday's workshop is **optional**, so that you can focus on your team project if needed. If you come to class, you can spend the time improving on your creative project; then you can resubmit it at the end of the class for an updated grade & feedback.

We'll also use the time on Thursday to answer any general computer science questions you have!

Program Requirements

We'll only consider a few requirements when grading your creative coding projects:

- The project must be a **python program**
- The program must be something **new** written by you (not mostly one of the previous exercises)

- The program must produce some kind of **output**, either textual or graphical
- The program must use at least one of the following to change the program's **input** in a meaningful way: variables, input, or functions

- The program must use at least one **conditional** in a meaningful way
- The program must use at least one **loop** in a meaningful way

- You should put a decent amount of **effort** into making the best project you can during class

Recommendations

As long as you meet the previous requirements, you can program whatever you want! If you're not sure what you want to do, here are a few recommendations:

- Use graphics to produce a complex image (like the DJ set from week2)
- Use input and print to produce a simple choose-your-own-adventure story
- Make graphical art like an Andy Warhol painting- a grid of repeated images but in different color patterns
- Write a textual equation-solving problem that prints out the result

Additional Tips

- Spend at least 5-10 minutes planning out what you want to do. If you're doing something graphical, sketch it out on paper. If you're doing something textual, map out the different options for how to react to input.

- Test your program as you go! It's much easier to debug if you run your code every time you add a new component, instead of waiting all the way until the end

- If you can't remember how to write a certain piece of syntax, check out the new python cheat sheet for an example