

Logistics

- Homework due Thursday 5pm
 - o Start early – this one is a bit longer
 - o Will give some hints at the end of lecture
 - o Autograder will be up after lecture
- Today: strings, tomorrow: testing/debugging/style, Friday quiz!
 - o Thursday's lecture will also be tested on the quiz, but loops and strings are the main focus of this week.
 - o Start studying for quiz (in recitation on Friday)
 - You get the full 50 mins
 - TAs will or have reached out about small groups
 - Large group session led by Tas (Katja & Jonathan) at 730pm in Gates 4307 (optional)
 - Quiz prep + practice quiz + any questions about past HWs
 - I will be doing quiz review as well in lecture on Friday + other topics people want to cover (required)

Dropping/passfail/other concerns/course moving too fast – come talk to me

- My OH has moved to GHC 5222, same time 1-3
- Questions about last lecture?
- Videos are linked on the website, good way of reviewing material

Strings

- Why are they so important?
 - o Useful for any user-centric applications
 - o We speak language (ex. English), and sentences need to be stored somehow in our computer/Python
 - Ex. Chatbot
 - Ex. Something I actually do sometimes – SIO gives all your emails, and I need to extract just the AndrewID to add you certain course resources (ex. For grading)
 - This is going to be very easy to do after today's lecture
 - Ex. Cryptography
 - Ex. Any application that involves user input (like Google)
- Syntax:
 - o Double quoted vs triple quoted
 - Single line strings are double quotes
 - Multiple line strings are triple quotes
 - Only way to comment out multiple lines in Python
 - Show code snippet 2
 - No distinction between single quotes and double quotes (practically)
 - o String is a sequence of characters.
 - Special characters
 - Normal characters are like the letters, numbers, punct
 - Special characters are ones like “\n” and “\t”.

- “\n” is new line, “\t” is a tab
 - Important: these are strings of length 1
 - Backslash is “\”
- String constants
 - Don’t worry about exact name, you’ll probably only lose 1 point for syntax
 - If you are really concerned tho, write out the whole thing haha
- Add + multiply
- In operator
- Indexing
 - Have to stress that strings are sequences of characters
 - Stress 0 indexing
 - Example with “112 is lit”
- Slicing
- Looping
 - Lecture yesterday would have been useless if we couldn’t loop through strings!
 - Demonstrate two kinds of loops:
 - Split and splitlines as well
- Strings are immutable
 - One take away from today’s lecture
 - Not true but definitely the most important takeaway from today’s lecture
- Cast to str()
- chr and ord
 - useful for jumping between letters
- String methods
- Activity (10 mins) coolcoolCount(s) – write this function that takes in a string and returns how many times “coolcool” appears in the string s.
- String formatting
- File IO
 - Lot of data is stored in files
 - Its useful to pass in large strings stored in text files
 - Ex. Gradebooks, data (stored as csv), etc.