**6.100L Recitation 2 – September 16, 2022**

**Reminders:**

* MQ 2 next Wednesday
* PS1 half way hand in due next Wednesday
* Finger exercises before each lecture

**Lecture 2 Recap: Strings, Input/Output, Branching**

***Strings***

* New data type – it is a sequence of characters
  + my\_string = “Hello world!”
* They can be indexed and sliced:
  + my\_string[0] # outputs “H”
  + my\_string[2] # outputs “l”
  + my\_string[-1] # outputs “!”
  + my\_string[-2] # outputs “d”
  + my\_string[1:3] # outputs “el”
* We can concatenate strings
  + my\_new\_string = my\_string + ‘ ‘ + my\_string

***Input***

* Done with the *input* command
* Anything the user inputs is read as a string object!
  + x = input("Enter a string: ") # what the user inputs is assigned to x as a string
* Can cast a user input as an integer
  + x\_as\_int = int(input(“enter and int: ”)) # here x will be an integer

***Output***

* Done with the *print* command
  + print(x)
  + print(("x = ", x) -> (comma concatenates with a space between)
  + print statements are super useful for debugging! especially to see what is happening in loops

***Branching***

* Idea that we only want to execute certain blocks if specific conditions are satisfied
* We create a code structure to satisfy out requirement.

Example branching:

x = 2

if x == 3:

print(“x is 3!”)

elif x == 2:

print(“x is 2!”)

else:

print(“x is neither 2 or 3”)

**Lecture 3 Recap: Loops & Iteration Methods**

***Looping Mechanisms***

* Loop over ranges of numbers
* Loop over elements of a string
* Main idea – want to repeat things multiple times 🡪 reuse code.

***For loops***

forloops​have pre-specified range over which they run.

for i in range(x):

* i goes from 0 to x­-1

for char in s:

* char is string that takes on the value of each character in s

***While loops***

whileloops **​**have a condition that they check to determine if they should keep running.They run until the condition no longer evaluates to True.

counter = 0

while counter < 3:

print(counter)

counter += 1

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6.100L Introduction to CS and Programming Using Python

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