Lecture 4: Arrays and Strings

Arrays in Python

- Arrays are used to store multiple values of same type in one varilable
- Think of them as rows and columns in a Microsoft Excel/ Google Sheet

	0	1	2	3

2D array

0,0	0,1	0,2	0,3
1,0	1,1	1,2	1,3
2,0	2,1	2,2	2,3

Accessing 1D array

- names = ["Ross", "Rachel", "Monica"]
- names[0]
- names[1]
- len(names)

10	20	30
33	44	55
300	200	100

Accessing 2D array

- num_array[0][0]   => 10
- num_array[0][2]   => 30
- num_array[2][1]   => 300
- num_array[2][2]   => 100
- len(num_array) => 3

Add or remove items to an array

- Use **array_name.append(item)** to add an item to **array_name**
- Use **array_name.pop()** and **array_name.remove()** to remove items

What are Strings?

- Underneath string is an array
- arrays of bytes
- bytes of unicode representation of characters

Assigning String to a Variable

- Strings are surrounded by either single quotes or double quotes
- Assign string to a variable the way you assign any variable, but place them inside quotes
- Use 'single quotes' or "double quotes" for strings
- Use """triple quotes""" for multiline strings

Simple operations on strings

- Slicing
- Length of a string
- Use of negative indexing
- strip()
- lower(), upper()
- replace()
- split()
- concatenation

Escape Characters in Python

- \\
- \'
- \n
- \t
- \b