

6.S061: Recitation 1

8 September 2022

Agenda

- Administrative Items
- Lecture Recap
 - L01 - Intro to Python knowledge & fundamental concepts

Administrative Items | Problem Sets



- Collaboration: don't plagiarise. Write your own code.
 - All PSET submissions are checked against each other and against historical submissions.
- **Halfway hand-in** - submit some code before the deadline.
- Checkoffs occur at Office Hours - typically due 1 week after deadline.
- Late day policy
 - 3 late days total
 - 1 late day = 24hr extension
 - Late days are discrete (no half days)
 - Apply only to problem sets
- The last submitted pset is used for grading and late day calculation
- Submit on course website

Administrative Items | Finger Exercises

- Link on course website
- Due before each lecture
- Lots of small, quick problems - one poor score won't have much impact

Administrative Items | Check Offs

- Starting with PS1, you need a checkoff for each pset (generally worth 30% of your overall pset grade)
- Go through your code with a TA or LA, and answer some simple questions about the pset. Score is based on code style and understanding of the pset code
- Carefully check due date of Checkoff for each p set
- Late days cannot be used for checkoffs
- The queue gets long around the checkoff deadline, so get them done early!

Intro to Python | Python

- **Anaconda** is a Python Distribution, which contains Python, a set of Python packages, a code editor (**Spyder**), and an interactive interpreter/shell (**IPython**)
- Spyder: Scientific Python Development Environment
 - A place to edit code, run it, and debug it
- We encourage this dev environment for this class
- **Make sure you run your code before you turn it in.**

Lecture 1 Recap: Intro to Python + Fundamental Programming Concepts

- **Python programs**

- Set of instructions telling the computer exactly what to do.
- Can be run from a script (e.g script1.py) or directly from the console
- Each line of code is executed in the order it's written in.
- It's good practice to write tidy code & comments.

- **Objects**

- Programs manipulate data objects.
- Typically define an object with a variable name (e.g my_name = "Nicole")
- Each object has a type (e.g. string, list, integer, float, boolean etc...)
- Scalar objects cannot be subdivided.
- Non-scalar objects have an internal structure that can be assessed.
- The type defines what you can do with the object

Lecture 1 Recap: Intro to Python + Fundamental Programming Concepts

- **Operations & Expressions**

- Operations are carried out on objects (what operations are valid is controlled by object type)
- Expressions are formed by a combination of operations and objects.
- Complex & long expressions often evaluate to one value.

Example Code

```
# declaring a simple string  
basic_string = "My name is Nicole!"  
  
# integers and simple operations  
a = 1  
b = 20  
sum_ab = a + b  
difference_ab = b - a  
  
# example operations on integers and strings  
my_numbers_as_string = str(9) + ' ' + str(10) + ' ' + str(7)
```

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