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

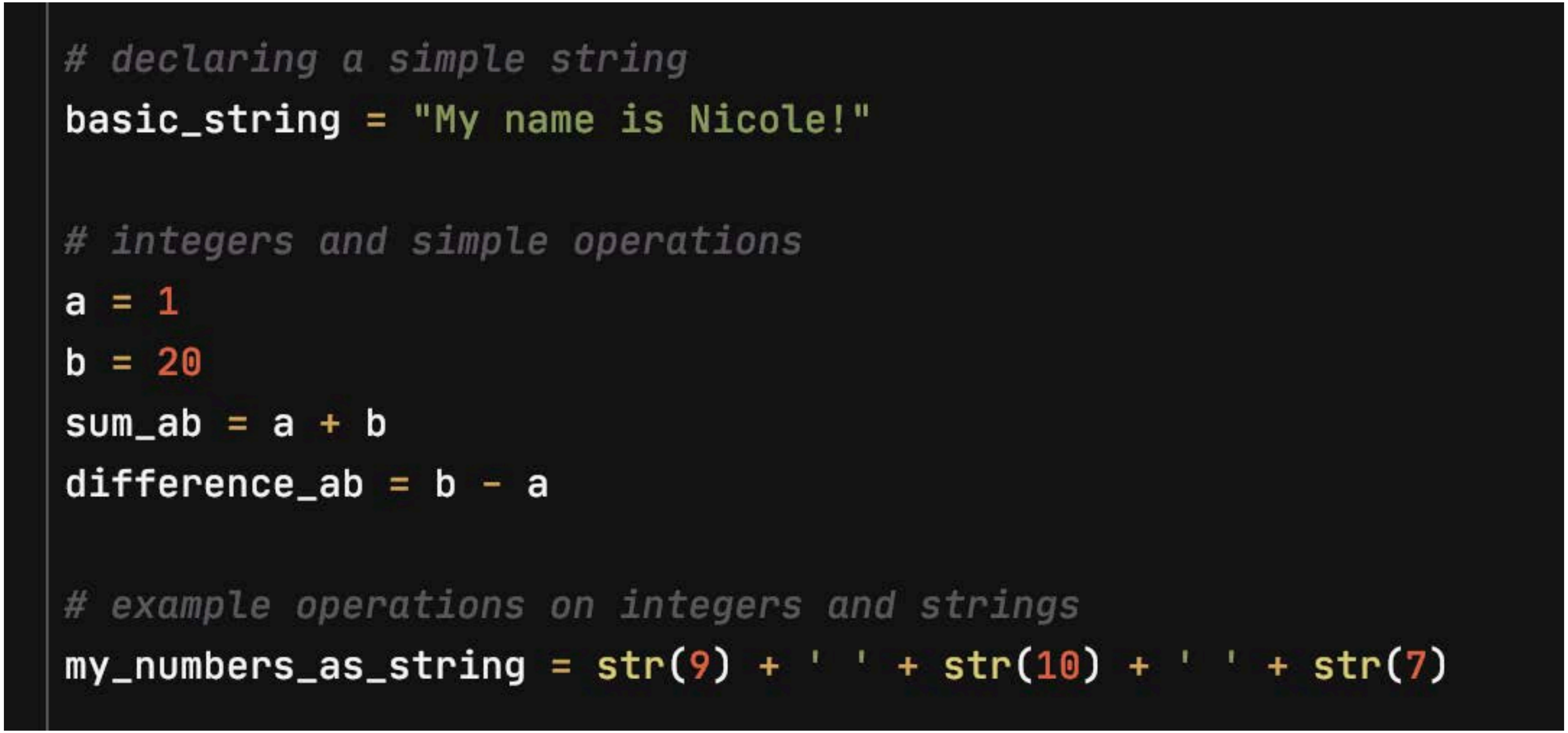
- **Python programs**
  - Set of instructions telling the computer exactly what to do.
  - Can be run from a script (e.g script1.py) or directly from the console
  - Each line of code is executed in the order it's written in.
  - It's good practice to write tidy code & comments.

- **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)
```