

Introduction to Programming in Python

Module 2: Data Types & Operations

Course References & Material

- Webpages of the course:
 - ★ <https://bit.ly/Intro2Python1920SSSA>
 - ▶ Slides and examples from the lectures, further materials and links
 - ★ <https://repl.it/student/classrooms/186198>
 - ▶ Weekly coding assignments
- Suggested book: M. Lutz, Learning Python.
- Well-done tutorial: <https://docs.python.org/3/tutorial/>
- Software
 - ★ Python: <https://www.python.org/>
 - ★ Suggested Python editor: JupyterLab <https://jupyter.org/>
 - ★ Setup your machine: <https://bit.ly/Intro2Python1920SSSA-setup>

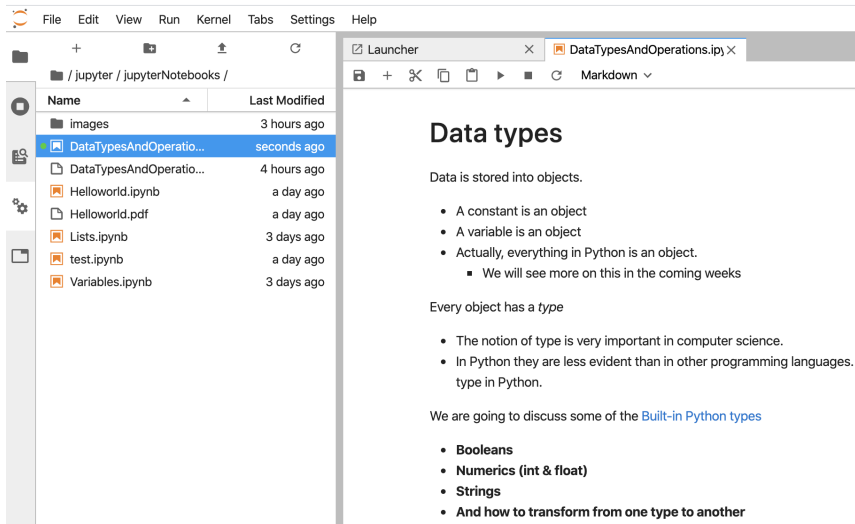
Tentative Lecture Plan

#	Date	Time	Topic
1	16/04	17:30-19:30	Course introduction
2	20/04	15:00-18:00	Data types & operations
3	27/04	15:00-18:00	Collections
-	04/05	-	<i>Break</i>
4	11/05	15:00-18:00	Control and Repetition structures
-	18/05	-	<i>Break</i>
5	25/05	15:00-18:00	Functions
6	01/06	15:00-18:00	Exceptions and OOP
7	08/06	15:00-18:00	Basic data manipulation & visualization
-	TBD	TBD	Exam

Outline

- ➊ Arithmetic Data Types
- ➋ Booleans & characters
- ➌ Strings
- ➍ Casts

Continue on Jupyter



The screenshot shows the JupyterLab interface. On the left is a file browser pane showing the directory structure: `/ jupyter / jupyterNotebooks /`. It lists several files and folders with their last modified times:

Name	Last Modified
images	3 hours ago
DataTypesAndOperatio...	seconds ago
DataTypesAndOperatio...	4 hours ago
Helloworld.ipynb	a day ago
Helloworld.pdf	a day ago
Lists.ipynb	3 days ago
test.ipynb	a day ago
Variables.ipynb	3 days ago

On the right is the notebook editor for `DataTypesAndOperations.ipynb`. The top bar shows the menu (File, Edit, View, Run, Kernel, Tabs, Settings, Help) and the current mode is `Markdown`. The notebook content is as follows:

Data types

Data is stored into objects.

- A constant is an object
- A variable is an object
- Actually, everything in Python is an object.
 - We will see more on this in the coming weeks

Every object has a *type*

- The notion of type is very important in computer science.
- In Python they are less evident than in other programming languages. type in Python.

We are going to discuss some of the [Built-in Python types](#)

- **Booleans**
- **Numerics (int & float)**
- **Strings**
- **And how to transform from one type to another**

<https://bit.ly/Intro2Python1920SSSA-slides-code>