

COMP
110

CL01: Objects and Data Types

First, an introduction to Visual Studio...

Objects and Types

An **object** is *typed* unit of data in memory.

The object's **type** classifies it to help the computer know how it should be interpreted and represented.

Example types of data:

- Numerical
- Textual
- Sequences
- Grouping of different types

Numerical Built-In Types

- Integers
 - int
 - Zero or non-zero digit followed by zero or more integers (e.g. 100 is an int but 0100 is not)
- Decimals (Or floats)
 - float
 - Not the only way to represent decimal numbers, but a very precise way

Textual Built-In Type

- Strings
 - `str`
 - A sequence (or *string*) of characters
 - Can be denoted using “ ”

Indexing

- **Subscription** syntax uses square brackets and allows you to access an item in a sequence
- **Index numbering starts from 0**

Docstrings

- A string written at the top of every file to describe its purpose.
- Denoted with three quotations `""" """`

Booleans

- `bool`
- Evaluates to `True` or `False`

Check an Object's Type

- `type()`

Change an Object's Type

- `float()`
- `str()`
- `int()`