Module 1

TYPES, CASTING, AND SYNTAX

Keywords - Syntax

- Sometimes called reserved or reserved words

- You can’t use these as names or it will confuse the interpreter and cause an error

- In python the following are reserved:

'False', 'None', 'True', 'and', 'as', 'assert', 'async', 'await', 'break', 'class', 'continue', 'def', 'del', 'elif', 'else', 'except', 'finally', 'for', 'from', 'global', 'if', 'import', 'in', 'is', 'lambda', 'nonlocal', 'not', 'or', 'pass', 'raise', 'return', 'try', 'while', 'with', 'yield‘

Simple Types

Integer – A number rounded to the nearest digit: -3, 1, 5, 10000

Float – A number with a floating point: 0.01, 3.14, 0.5

Boolean – Either True or False

String – A series of letters/symbols, denoted by the ‘’ and “” symbols:

- “1WXNRI&^\\\`”
- “ Python”

String Formatting

- The + operator, Concatenation
  - “Hello” + “ World!”, note that both operands need to be string or an error will occur

- The [:] operator

  “string”[0] will give you “s” (whatever is at index 0)

  “string”[1:] will give you “tring”(everything at and after index 1)

  “string”[:3] will give you “str” (everything before index 3)

- Other formatting options

  “%s” % ‘anystring’ will insert anystring into the string

  “{}”.format(anything) will insert anything into the string

Casting

Casting is when you convert something to another type.

For example, you have a string “1” and you want an integer,

int(“1”)

Or if you have an integer and want it to be a string,

str(1)

In some cases casting happens automatically for example:

Print(0.001) Will automatically print that float

1 / 2 will give you a float 0.5

Try it out

1. Make a string ‘0’ into ‘1’ by casting and adding one and casting again
2. Separate the string “Hello World!” into “Hello” and “World” using [:] operators
3. Format the following strings:
   - “My favorite number is {}”
   - “My name is %s”