

## Assignment No.02

### Basics

- What is an expression?
- What is a syntax error?
- What is PEP8?
- What does a linter do?
- What is the result of this expression: `"" * 10`
- What is CPython?
- How is CPython different from Jython?
- How is CPython different from IronPython?

### Primitive Types

- What is a variable?
- What are the primitive built-in types in Python?
- When should we use `"""` (triple quotes) to define strings?
- Assuming `(name = "John Smith")`, what does `name[1]` return?
- What about `name[-2]`?
- What about `name[1:-1]`?
- How to get the length of `name`?
- What are the escape sequences in Python?
- What is the result of `f'{2+2}+{10%3}'`?
- Given `(name = "john smith")`, what will `name.title()` return?
- What does `name.strip()` do?
- What will `name.find("Smith")` return?
- What will be the value of `name` after we call `name.replace("j", "k")`?
- How can we check to see if `name` contains `"John"`?
- What are the 3 types of numbers in Python?

### Control Flow

- What is the difference between `10 / 3` and `10 // 3`?
- What is the result of `10 ** 3`?
- Given `(x = 1)`, what will be the value of `x` after we run `(x += 2)`?
- How can we round a number?

- What is the result of `float(1)`?
- What is the result of `bool("False")`?
- What are the falsy values in Python?
- What is the result of `10 == "10"`?
- What is the result of `"bag" > "apple"`?
- What is the result of `not(True or False)`?
- Under what circumstances does the expression `18 <= age < 65` evaluate to `True`?
- What does `range(1, 10, 2)` return?
- Name 3 iterable objects in Python.

## Functions

- What is the difference between a parameter and an argument?
- All functions in Python by default return ...?
- What are keyword arguments and when should we use them?
- How can we make a parameter of a function optional?
- What happens when we prefix a parameter with an asterisk (\*)?
- What about two asterisks (\*\*)?
- What is scope?
- What is the difference between local and global variables?
- Why is using the `global` statement a bad practice?