Programming

Lesson17 – Class

Saeed Isa

Person

To define a person, we need the following details:

1. First name
2. Last name
3. Age
4. Address
5. Job title
6. …

- Requirements:
  - Get First/Last name
  - Get Age
  - Change Age
  - Print details
  - …

How ?

- Solutions:
  - Dictionary
    - {“FirstName”: .., “LastName”: …}
    - def get_name(person_dictionary) ..
  - Tuple
    - (“Saeed”, “Isa”, …)
  - ..

➔ Class

Class

- Define new type
- Bund data and functions

```
class <Name>:
        def __init__(self):
                …
                members
                …
        # functions
        def get<…>():
                …
        def change<…>():
                …
```

Class example

```
class MyClass:
    def __init__(self):
        self.member1 = ""
        self.member2 = ""

    def get_member1(self):
        return self.member1

    def set_member1(self, val):
        self.member1 = val

    def print_details(self):
        return print('Details class:', self.member1, '---', self.member2)
```

Constructor
Class members definition

Functions
Class methods

```
p1 = MyClass()
```

Creating instance
Will call init function

```
p1.print_details()
```

Accessing class functions

What is "self"?

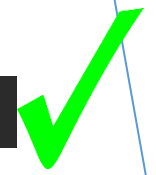
- The self parameter is a reference to the current instance of the class, and is used to access variables (members and functions) that belongs to the class. (W3schools)

Class example w/ arguments

```
class MyClass:
    def __init__(self, member1_val, member2_val):
        self.member1 = member1_val
        self.member2 = member2_val
        self.member3 = None

    def get_member1(self):
        return self.member1

    def set_member1(self, val):
        self.member1 = val

    def print_details(self):
        return print('Details class:', self.member1, '---', self.member2)
```

```
p1 = MyCla
```

```
p1 = MyClass('wow', 'nice')
```



```
p1.set_member1('amazing')
p1.print_details()
val = p1.get_member1()
```

Let’s try…☺

- Open PyCharm:
  - Create new file: class_example.py
  - Start coding ☺

Thank you ☺!

Stay tuned for more!