Session 1 - Object Oriented Programming Features

September 4, 2018

1 Python Training: Day 2 Session 1

Topic:

1. Inheritance
2. Polymorphism
3. Access modifier
4. Overriding function

1.1 Inheritance

```python
In [ ]: class Pet:
            def __init__(self, name):
                self.name = name
            def sing(self):
                print('default pet sound')

        class Cat(Pet):
            pass

In [ ]: c = Cat('doraemon')
        c.name

In [ ]: c.sing()
```

1.2 Polymorphism

1.2.1 Assignment 2.1.1

Implement polymorphism to obtain the following behavior

```python
>>> d = Cat('doraemon')
>>> g = Dog('muku')
>>> print(d.name, g.name)

doraemon muku

>>> d.sing()
```

meong meong

```
>>> g.sing()
```

guk guk

1.3 Public, Private, Protected Access Modifier

```
In [ ]: # Spot the difference

        class B:
            def __init__(self):
                self.text1 = 'text1'
                self._text2 = 'text2'
                self.__text3 = 'text3'

        class D(B):
            def print_1(self):
                print(self.text1)
            def print_2(self):
                print(self._text2)
            def print_3(self):
                print(self.__text3)

In [ ]: d = D()

In [ ]: d.text1

In [ ]: d._text2 # we should not access this, this is not part of the api

In [ ]: d.__text3

In [ ]: d._B__text3
```