First Class Objects

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# First class objects
# 1. They can be passed as an fuction
# 2. They can be assigned into new variables
# 3. They can be stored in collection
# 4. They can return an value
# 5. An function also can return multiple values in python.
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# 1.They can be passed as an fuction
def upper1(str1):
  str1 = str1.upper()
  print(str1)

def lower1(str1):
  str1 = str1.lower()
  print(str1)

def demo(fun,str1):
  fun(str1)      #bheaving like upper1(str1)

demo(upper1,"abc")
```

```
# 2. They can be assigned into new variables
def fun1(str1):
  print(str1)

fun2 = fun1  # copy of function1 is created into function2, fun1 and fun1()
# both have different meanings, fun1() is considered as returned value by an function.
fun2("This is function 2")
```

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# 3. They can be stored in collection
def fun1(str1):
  print(str1.upper())

def fun2(str1):
  print(str1.lower())

list1 = [fun1,fun2]                # can be stored in any types of collections
dict1 = {101:fun1,102:fun2}

list1[0]("My name is hitendra sisodia")
list1[1]("My name is hitendra sisodia")
dict1[101]("Rajesh")
dict1[102]("Bupesh")
```

```
# 4. They can return an function
def fun1():
  def fun2(num):
    return num*2
  return fun2

      #fun2
fun3 = fun1()  #fun1() function returns fun2() functions. and fun2 function
               # assigned into 3rd function named fun3.
fun3(10)
```

```
# 5. An function can return multiple values
def fun1():
  return 10,20,30

(a,b,c) = fun1()
print(a,b,c)
```