Assignment 3

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1.write a lambda expression to get the product of two numbers.

In [16]:
```
product = lambda var1,var2 : (var1*var2)
print(product(5,6)) #run test for expresson (5,6)
```

```
30
```

2.write a function to get the area of a circle from the radius.

In [15]:
```
import math
area = lambda radius : (math.pi*radius*radius) #write a function
print(area(10)) #run test for function(10)
```

```
314.1592653589793
```

3.build a simple calculator which can: add, subtract, multiply, divide.

In [192…
```
class calculator:
    def __init__(self,num1,num2,symbols):
        self.num1 = num1
        self.num2 = num2
        self.symbols = symbols
    def cal(self):
        if(self.symbols == 'add'):
            return self.num1+self.num2
        elif(self.symbols == 'sub'):
            return self.num1-self.num2
        elif(self.symbols == 'mul'):
            return self.num1*self.num2
        elif(self.symbols == 'div'):
            return self.num1/self.num2
        else:
            return "error"

c=calculator(2,5,'div')
print(c.cal())
```

```
0.4
```

4.defind a class named rectangle which can be constructed by a lenght and width.

In [67]:
```
class Rectangle:
    def __init__(self,lenght,width):
        self.lenght = lenght
        self.width = width

    def area(self):
        return self.lenght*self.width
    def showArea(self):
        print(self.area)

r=Rectangle(5,10)
r.area()
```

Out[67]:
```
50
```

5.defind a class named shape and its subclass square.

In [113…
```
class Shape(object):
    def __init__(self):
        pass
    def area(self):
        return 0

class Square(Shape):
    def __init__(self,name,lenght):
        Shape.__init__(self)
        self.lenght = lenght
        self.name = name

    def area(self):
        return self.lenght*self.lenght

    def describe(self):
        return self.name



S=Square('Square',5)
print("The area is :", S.area())
print("This is a:", S.describe())
```

```
The area is : 25
This is a: Square
```