ASSIGNMENT 3

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Exercise 1:

Write a lambda expression to get the product of two numbers.

Run test for expression(5,6)

Output: 30

In [1]:
```
x = lambda num1, num2: num1*num2
print("Product of 2 numbers is:",x(5,6))
```

```
Product of 2 numbers is: 30
```

Exercise 2:

Write a function to get the area of a circle from the radius.

Hint: remember to import the right modul for being able to calculte the area of the circle.

Run test for function(10)

Output: 314.1592653589793

In [2]:
```
import math
PiNum = math.pi

def area(r):
    return PiNum*r*r

print("Area of circle is:",area(10))
```

```
Area of circle is: 314.1592653589793
```

Exercise 3:

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

Hint: solve by writing a function that takes as argument two numbers and the operation and returns the desired output.

Run test for function(2,5,'d')

Output: 0.4

In [3]:
```
def SimpleCal(num1, num2, oper):
    if oper == "a":
        return num1 + num2
    elif oper == "s":
        return num1 - num2
    elif oper == "m":
        return num1 * num2
    elif oper == "d":
        return num1 / num2

print("Result: ",SimpleCal(2,5,"d"))
```

```
Result:  0.4
```

Exercise 4:

Define a class named Rectangle which can be constructed by a length and width.

The Rectangle class has a method which can compute the area.

Run test for r = Rectangle(5,10)

r.area()

Output: 50

In [4]:
```
class Rectangle:
    def __init__(self, l, w):
        self.length = l
        self.width = w
    def area(self):
        return self.length * self.width

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

```
50
```

Exercise 5:

Define a class named Shape and its subclass Square.

Shape objects can be consrtucted by name and length has an area function wich return 0

Square subclass has an init function which take a length and name as argument and has an area method and a describe method what prints the name of the Shape.

Print the area from Square class.

Run test for: s = Square('square',5)

print(s.area())

print(s.describe())

Output: The area is:

25

This is a: square

In [5]:
```
class Shape:
    def __init__(self, n, l):
        self.name = n
        self.length = l
    def area(self):
        return 0

class Square(Shape):
    def area(self):
        print("This area is:",self.length ** 2)
    def describe(self):
        print("This is a:",self.name)

s = Square("square",5)
s.area()
s.describe()
```

```
This area is: 25
This is a: square
```