Assignment 1

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1.Write a lambda expression to get the productof two numbers.Run test for expression(5,6)Output:30

In [2]:
```
theproduct = lambda number1,number2: number1*number2
theproduct(5,6)
```

Out[2]:
```
30
```

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 [3]:
```
import math
radius = float(input("Enter the radius of the circle :"))
area = math.pi * radius * radius
print("Area of the circle is : {0}".format(area))
```

```
Enter the radius of the circle :10
Area of the circle is : 314.1592653589793
```

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 [4]:
```
print("Select an operation")
print("a = add")
print("s = subtract")
print("m = multiply")
print("d = divide")
operation = str(input())
if operation == "a":
    number1= input("Enter the first number :")
    number2= input("Enter the second number :")
    print("The sum is :",str(int(number1) + int(number2)))
elif operation == "s":
    number1= input("Enter the first number :")
    number2= input("Enter the second number :")
    print("The subtract is :",str(int(number1) - int(number2)))
elif operation == "m":
    number1= input("Enter the first number :")
    number2= input("Enter the second number :")
    print("The multiply is :",str(int(number1) * int(number2)))
elif operation == "d":
    number1= input("Enter the first number :")
    number2= input("Enter the second number :")
    print("The devition is :",str(int(number1) / int(number2)))
else :
    print("Invalide entry")
```

```
Select an operation
a = add
s = subtract
m = multiply
d = divide
```

```
d
Enter the first number :2
Enter the second number :5
The devition is : 0.4
```

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 [5]:
```
class Rectangle:
    def __init__(self, length, breadth):
        self.length = length
        self.breadth = breadth
    def display(self):
        print("Length of Rectangle is:", self.length)
        print("Breadth of Rectangle is:", self.breadth)
    def area(self):
        return(self.length * self.breadth)
length = int(input("Enter the length of Rectangle:"))
breadth = int(input("Enter the breadth of Rectangle:"))
r = Rectangle(length , breadth)
print("Area of Rectangle is:", r.area())
```

```
Enter the length of Rectangle:10
Enter the breadth of Rectangle:5
Area of Rectangle is: 50
```

5.Define a class named Shape and its subclass Square.Shapeobjects can be consrtucted by name andlengthhas an area function wich return 0Square subclass has an init function which take a length and name as argumentand has anarea 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: 25This is a: square

In [6]:
```
class shape:
    def __init__(self, name, length):
        self.name = name
        self.length = length
    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
```

In [ ]:
```

```