Assignment 3

Date

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Your name:

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

In [26]:
```
multiplication = lambda number1,number2: number1*number2
multiplication(5,6)
```

Out[26]:
```
30
```

1. 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.

In [27]:
```
from math import pi
def area_of_circle(r):
    return(r*r*pi)
r=float(input())
print("result:",area_of_circle(r))
```

```
10
result: 314.1592653589793
```

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

In [28]:
```
def addition(number1, number2):
    return(number1+number2)
def subtraction(number1, number2):
    return(number1-number2)
def multiplication(number1, number2):
    return(number1*number2)
def division(number1, number2):
    return(number1/number2)
number1=float(input("Choose your first number:"))
number2=float(input("Choose your second number:"))
print("Choose the number of operations: 1:addition; 2:subtraction; 3:multiplication; 4:d
operations=input()
if operations==1:
    print(addition(number1, number2))
elif operations==2:
    print(subtraction(number1, number2))
elif operations==3:
    print(multiplication(number1, number2))
else:
    print(division(number1, number2))
```

```
Choose your first number:2
Choose your second number:5
```

```
Choose the number of operations: 1:addition; 2:subtraction; 3:multiplication; 4:division
4
0.4
```

1. 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.

In [29]:
```
class Rectangle ():
    def __init__(self, length, width):
        self.length = length
        self.width = width
    def area(self):
        return(self.length*self.width)
r=Rectangle(5,10)
r.area()
```

Out[29]:
```
50
```

1. 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.

In [30]:
```
class Shape ():
    def __init__(self, name, length):
        self.name = name
        self.length = length
    def area(self):
        return 0
class Square (Shape):
    def __init__(self, name, length):
        super().__init__(name, length)
    def area(self):
        return(self.length*self.length)
    def describe(self):
        return(self.name)
s = Square('square',5)
print("the area is:\n",s.area())
print("this is a",s.describe())
```

```
the area is:
 25
this is a square
```

In [ ]:
```
```