Assignment 3

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

In [24]:

```
product=lambda num1,num2:num1*num2
print(product(5,6))
```

```
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 functio n (10) Output : 314.1592653589793

In [25]:

```
import math
def circle_area(radius):
    cal=math.pi*math.pow(radius,2)
    return cal
print(circle_area(10))
```

```
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 [26]:

```
def calculator(num1,num2,operator):
    if operator=="a":
        return num1+num2
    elif operator=="s":
        return num1-num2
    elif operator=="m":
        return num1*num2
    elif operator=="d":
        return num1/num2
print(calculator(2,5,"d"))
```

```
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 [27]:

```
class Rectangle():
    def __init__(self,length,width):
        self.lengh=length
        self.width=width
    def area(self):
        return self.lengh*self.width
r=Rectangle(5,10)
print(r.area())
```

```
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 [28]:

```
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 square_area(self):
        area_calculation=self.length**2
        return area_calculation
    def describe(self):
        return f"This is the {self.name}"
square=Square("square",5)
print(f"The area is:{square.square_area()}")

print(f"{square.describe()}")
```

```
The area is:25
This is the square
```

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In [ ]:
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In [ ]:
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In [ ]:
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In [ ]:
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