Untitled

February 11, 2025

0.1 Assignment-3

0.1.1 Linda Zorem Mawii

0.1.2 13.2.2025

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

[2]:
```
expression =lambda num_1, Num_2 : num_1 * Num_2
result=expression (5,6)
print (result)
```

```
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.

[6]:
```
import math
def circle_area (radius):
   return math.pi * radius**2
result=circle_area(10)
print (result)
```

```
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.

[17]:
```
def calculator (num_1, num_2, operation):
    if operation == 'a':
         return num_1 + num_2
    elif operation == 's' :
         return num_1 - num_2
    elif operation =='m' :
         return num_1 * num_2
    elif operation == 'd':
         if num_2 == 0:
             return"cannot divided by zero"
         return num_1 / num_2
    else:
         return "Invalid operation"
```

```
result=calculator (2,5, 'd')
print (result)
```

```
0.4
```

4.Define a dass named Rectangle which can be constructed by a length and width. The Rectangle class has a method which can compute the area.

[25]:
```
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)
print(r.area())
```

```
50
```

5.Define a dass named Shape and its subclass Square. Shape objects can be constucted by name and length has an area function wich retum 0

[100]:
```
class Shape:
     def __init__(self, name) :
         self.name = name
     def area (self):
            return 0
class Square(Shape) :
      def __init__(self, name, length):
          super ().__init__(name)
          self. length = length
      def area(self):
             return self.length **2
      def describe(self) :
              print(f"This is a: {self.name}")
s=Square('square', 5)
print("The area is :" ,s.area())
s.describe()
```

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

[ ]:
```

```