Define a function calls addNumber(x, y) that takes in two number and returns the sum of the two numbers.

In [1]:
```
def addNumber(x, y):
    return(x+y)

print (addNumber(2,5))
```

```
7
```

Define a function calls subtractNumber(x, y) that takes in two numbers and returns the difference of the two numbers.

In [3]:
```
def subtractNumber(x, y):
    return(x-y)

print (subtractNumber(10,5))
```

```
5
```

Write a function getBiggerNumber(x, y) that takes in two numbers as arguments and returns the bigger number.

In [17]:
```
def getBiggerNumber(x, y):
    if x>y:
        return x
    elif x<y:
        return y
    else:
        return ("The two numbers are equal")

a=getBiggerNumber(5,24)
print(a)
```

```
24
```

In [22]:
```
#Second alternative using Lambda function
getBiggerNumber=lambda x,y: x if x>y else y if x<y else "The two entered num
print(getBiggerNumber(10,20))
```

```
20
```

In [29]:
```
# Python provides many built-in modules with many useful functions.
# One such module is the math module. The math module provides many useful f
# You will need to do a "import math" before you are allowed to use the func
import math


# Calculate the square root of 16 and stores it in the variable a
# a= sqrt(16)

# Calculate 3 to the power of 5 and stores it in the variable b
b=pow(3,5)
print(b)

# Calculate area of circle with radius = 3.0 by making use of the math.pi co
C=math.pi
r=3.0
Area=C*(r**2)
print(Area)

```

```
243
28.274333882308138
```

In [35]:
```
# Write a function to convert temperature from Celsius to Fahrenheit scale.
# oC to oF Conversion: Multipy by 9, then divide by 5, then add 32.

# Note: Return a string of 2 decimal places.
# In - Cel2Fah(28.0)
# Out - '82.40'
# In - Cel2Fah(0.00)
# Out - '32.00'

def Cel2Fah(oC):
    oF=oC*(9/5)+32
    return oF

print(f'Temperature in 28 degree Celcius to temperature in degree Fahrenheit

print(f'Temperature in 0 degree Celcius to temperature in degree Fahrenheit

```

```
Temperature in 28 degree Celcius to temperature in degree Fahrenheit is 82.4
Temperature in 0 degree Celcius to temperature in degree Fahrenheit is 32.0
```

In [39]:
```
# Write a function to compute the BMI of a person.
#     BMI = weight(kg)  /  ( height(m)*height(m) )

# Note: Return a string of 1 decimal place.
# In - BMI(63, 1.7)
# Out - '21.8'
# In - BMI(110, 2)
# Out - '27.5'

BMI=lambda x,y: round(x/y,1)

print("BMI of weight 110 Kg and height 2 m is ",BMI(63, 1.7))

print("BMI of weight 110 Kg and height 2 m is ",BMI(110, 2))
```

```
BMI of weight 110 Kg and height 2 m is  37.1
BMI of weight 110 Kg and height 2 m is  55.0
```

In [51]:
```
# Write a function percent(value, total) that takes in two numbers as argume
# In - percent(46, 90)
# Out - 51
# In - percent(51, 51)
# Out - 100
# In - percent(63, 12)
# Out - 525

percent=lambda x,y: round((x/y)*100,0)

print("Percentage of 46 in 90 is ", int(percent(46, 90)))
print("Percentage of 51 in 51 is ", int(percent(51, 51)))
print("Percentage of 63 in 12 is ", int(percent(63, 12)))
```

```
Percentage of 46 in 90 is  51
Percentage of 51 in 51 is  100
Percentage of 63 in 12 is  525
```

In [56]:
```
# Write a function to compute the hypotenuse given sides a and b of the tria
# Hint: You can use math.sqrt(x) to compute the square root of x.
# In - hypotenuse(3, 4)
# Out - 5
# In - hypotenuse(5, 12)
# Out - 13

hypotenuse=lambda a,b:(a**2+b**2)**0.5
print("The hypotenuse of a triangle with base 3 units and perpendicular 4 un
print("The hypotenuse of a triangle with base 5 units and perpendicular 12 u
```

```
The hypotenuse of a triangle with base 3 units and perpendicular 4 units, is 5.
0 units.
The hypotenuse of a triangle with base 5 units and perpendicular 12 units, is 1
3.0 units.
```

In [31]:
```
# Write a function getSumOfLastDigits() that takes in a list of positive num
# getSumOfLastDigits([2, 3, 4])
# 9
# getSumOfLastDigits([1, 23, 456])
# 10

from functools import reduce

def getSumOfLastDigits(a):
    return reduce(lambda x,y: (x%10)+(y%10), a)

print(getSumOfLastDigits([2,3,4]))
print(getSumOfLastDigits([1, 23, 456]))

```

```
9
10
```

In [83]:
```
# Write a function that uses a default value.
# In - introduce('Lim', 20)
# Out - 'My name is Lim. I am 20 years old.'
# In - introduce('Ahmad')
# Out - 'My name is Ahmad. My age is secret.'

def introduce(a="", b=0):
    print(f'My name is {a}, I am {b} years old.')
introduce('Lim', 20)

def introduce1(a=""):
    print(f'My name is {a}, My age is secret.')
introduce1('Ahmad')

```

```
My name is Lim, I am 20 years old.
My name is Ahmad, My age is secret.
```

In [49]:
```
# Write a function isEquilateral(x, y, z) that accepts the 3 sides of a tria
# The program should return True if it is an equilateral triangle.

# In - isEquilateral(2, 4, 3)
# False - False
# In - isEquilateral(3, 3, 3)
# Out - True
# In - isEquilateral(-3, -3, -3)
# Out - False

def isEquilateral(a=0,b=0,c=0):
    return (lambda a,b,c: "True" if a==b and b==c else "False")(a,b,c)

print(isEquilateral(2, 4, 3))
```

```
False
```

In [52]:
```
# For a quadratic equation in the form of ax2+bx+c, the discriminant, D is b
# In - quadratic(1, 2, 3)
# Out - 'The discriminant is -8.'
# In - quadratic(1, 3, 2)
# Out - 'The discriminant is 1.'
# In - quadratic(1, 4, 4)
# Out - 'The discriminant is 0.'

def quadratic(a=0,b=0,c=0):
    return (lambda a,b,c: b**2-4*a*c)(a,b,c)

print(f'The discrimimant is {quadratic(1, 2, 3)}')
print(f'The discrimimant is {quadratic(1, 3, 2)}')
print(f'The discrimimant is {quadratic(1, 4, 4)}')
```

```
The discrimimant is -8
The discrimimant is 1
The discrimimant is 0
```

In [66]:
```
# Define a function calls addFirstAndLast(x) that takes in a list of numbers
# In - addFirstAndLast([])
# Out - 0
# In - addFirstAndLast([2, 7, 3])
# Out - 5
# In - addFirstAndLast([10])
# Out - 10

def addFirstAndLast(lst):
    if len(lst) == 1:
        return lst[0]
    elif lst:
        return lst[0] + lst[-1]
    else:
return 'List is empty'

addFirstAndLast([2,7,93])
```

Out[66]:
```
95
```

In [58]:
```
# Complete the 'lambda' expression so that it returns True if the argument i
a=int(input("Enter a number: "))

(lambda num : True if num%2 == 0 else False)(a)
```

```
Enter a number: 34
```

Out[58]:
```
'True'
```

In [83]:
```
# getScore.__doc__
# 'A function that computes and returns the final score.'

def getScore():
  '''A function that computes and returns the final score.'''
  pass
getScore.__doc__
```

Out[83]:
```
'A function that computes and returns the final score.'
```

In [85]:
```
# In Python, it is possible to pass a function as a argument to another func
# Write a function useFunction(func, num) that takes in a function and a num
# The useFunction should produce the output shown in the examples given belo

# def addOne(x):
#   return x + 1
# useFunction(addOne, 4)
# 25
# useFunction(addOne, 9)
# 100
# useFunction(addOne, 0)
# 1


def addOne(x):
    return x + 1

def useFunction(addOne, n):
    print(addOne(n)**2)

useFunction(addOne, 4)
useFunction(addOne, 9)
useFunction(addOne, 0)
```

```
25
100
1
```

In [75]:
```
def f1():
    print('This is f1 function')
    f1()
    f1()
```

In [82]:
```
print('\\t')
```

```
\t
```

In [73]:
```
if 4:
    print("Hello")
elif 23-23:
    print(23+23)
```

```
Hello
```