In [1]:

```
#1. Define a function which will return Max of three numbers.
def max(x,y,z):
    if x>y and x>x:
        print("maximum value is ",x)
    if y>z and y>x:
        print("maximum value is ",y)
    if z>x and z>y:
        print("maximum value is ",z)
```

In [2]:

```
max(2,4,6)
```

```
maximum value is  6
```

In [4]:

```
#2. Define a Python Function to reverse a string.
def reverse(r):
    rever=r[::-1]
    return rever
```

In [6]:

```
reverse("dinesh")
```

Out[6]:

```
'hsenid'
```

In [13]:

```
#3. Write a Python program to define a function that accepts 2 values and return its sum, subtraction and multiplication.
def values(x,y):
    print("sum of two values is:",x+y)
    print("sub of two values is:",x-y)
    print("mul of two values is:",x*y)
```

In [14]:

```
values(4,5)
```

```
sum of two values is: 9
sub of two values is: -1
mul of two values is: 20
```

In [4]:

```
#4. Define a function that accepts roll number and returns whether the student is present or absent.
def rollnumber(r):
    if r==1:
        print("ramu present")
    elif r==2:
        print("raju absent")
    elif r==3:
        print("sanju absent")
    else:
        print(" invalid rollnumber")
```

In [5]:

```
rollnumber(2)
```

```
raju absent
```

In [6]:

```
#4. Define a function that accepts roll number and returns whether the student is present or absent.
l=[1,2,3,4,5,6,7]
def person(roll):
    if roll in l:
        print("roll number {} is present".format(roll))
    else:
        print("roll number {} is absent ".format(roll))
```

In [7]:

```
person(3)
```

```
roll number 3 is present
```

In [8]:

```
person(8)
```

```
roll number 8 is absent
```

In [9]:

```
#5.Define a function in python that accepts n values and returns the maximum of n numbers.
def maximum(*met):
    x=max(met)
    return x
```

In [10]:

```
maximum(1,3,6,2,6,4,9,8)
```

Out[10]:

```
9
```

In [24]:

```
#6.Define a function which counts vowels and consonant in a word.
def counts(word):
    vowel=['a','e','i','o','u']
    x=0
    y=0
    for i in (word.lower()):
        if i in vowel:
            x=x+1
        else:
            y=y+1
    print("Number of vowels : ",x)
    print("Number of consonants :",y)
```

In [25]:

```
counts("dinesh")
```

```
Number of vowels :  2
Number of consonants : 4
```

In [1]:

```
#7. Define a function that returns Factorial of a number.
def factorial(n):
    i=1
    for y in range(1,n+1):
        i=i*y
    return i
```

```
In [3]: factorial(11)

Out[3]: 39916800
```

```
In [11]: #8.Define a function that accepts radius and returns the area of a circle.
         def area(r):
             circle_area=3.14*r**2
             return print('area of circle is',circle_area)
```

```
In [12]: area(2)

         area of circle is 12.56
```

```
In [54]: #9. Define a function that takes a number as a parameter and check the number is prime or not.
         def prime(n):
             if n>1:
                 for y in range(2,n):
                     if n%y==0:
                         retur n "Number is not Prime"
                     else:
                         return "Number is Prime"
```

```
In [55]: prime(5)

Out[55]: 'Number is Prime'
```

```
In [75]: #10. Mary wants to run a 25-mile marathon. When she attempts to sign up for the marathon, she notices the sign-up
         #sheet doesn't directly state the marathon's length. Instead, the marathon's length is listed in small, different portions.
         #Help Mary find out how long the marathon actually is. So create a function that ** Return True if the marathon is 25 miles
         #long, otherwise, return False.
         def marathon(n):
             total=0
             for y in n:
                 total=total+y
             if total==25:
                 return True
             else:
                 return False
```

```
In [76]: marathon([10,10,4])

Out[76]: False
```

```
In [77]: marathon([10,10,5])

Out[77]: True
```

```
In [78]: marathon([-6, 15, 4])

Out[78]: False
```

In [79]:
```
marathon([-6, 29, 2])
```

Out[79]:
```
True
```

In [103]:
```
#11. Create a function that takes a number and returns True if the number is automorphic, False if it isn't.
#** number n is automorphic if n^2 ends in n.
#Example:
#n=5, n^2=25.
#so 5 is an automorphic.
def automorphic(n):
    num=str(n**2)
    if num[-1]==str(n):
        return "TRUE the number is Automorphic"
    else:
        return "False the number is Not Automorphic"
```

In [104]:
```
automorphic(2)
```

Out[104]:
```
'False the number is Not Automorphic'
```

In [105]:
```
automorphic(5)
```

Out[105]:
```
'TRUE the number is Automorphic'
```

In [113]:
```
#12) Create a function, that will take given a, b, c, and do the following:Add a to itself b times and
#Check if the result is divisible by c.and return true if it is divisible by c or false
#Type your text
#Example:
# A=1
# B=2
# C=2
# So output is True because 1+1=2 and 2/2=0
def f1(a,b,c):
    add=0
    for z in range(b):
        add=add+a
    if add//c==1:
        return True

    else:
        return False
```

In [114]:
```
f1(1,1,1)
```

Out[114]:
```
True
```

In [115]:
```
f1(1,2,3)
```

Out[115]:
```
False
```

In [116]:

```
f1(1,1,2)
```

Out[116]:

```
False
```

In [117]:

```
f1(1,2,2)
```

Out[117]:

```
True
```

In [8]:

```
#13) Create a function that changes specific words into emoticons.
#Given a sentence as a string, replace the words smile, grin, sad and mad
#with their corresponding emoticons.
#word emoticon
#smile :D
#grin :)
#sad :(
#mad :P
#Examples:
# (Strange Coder)
#functionname("Make me smile") ➞ "Make me :D"
#functionname ("Make me grin") ➞ "Make me :)"
#functionname ("Make me sad") ➞ "Make me :("
def emoticons(s):
    l=s.split(" ")
    for y in range(len(l)):
        if l[y]=="smile":
            l[y]=":D"
        elif l[y]=="grin":
            l[y]=":)"
        elif l[y]=="sad":
            l[y]=":("
        elif l[y]=="money":
            l[y]=":$"
    return " ".join(l)
```

In [9]:

```
emoticons("make me smile")
```

Out[9]:

```
'make me :D'
```

In [10]:

```
emoticons("make me grin")
```

Out[10]:

```
'make me :)'
```

In [11]:

```
emoticons("make me sad")
```

Out[11]:

```
'make me :('
```

In [12]:

```
emoticons("make me money")
```

Out[12]:

```
'make me :$'
```

In [24]:

```
#14) Write a Python program to square and cube every number in a given list of integers using Lambda.
print("square of numbers")
print((list(map(lambda x:x**2,(1,4,3,5)))))
print("cube of numbers")
print((list(map(lambda x:x**3,(1,4,3,5)))))
```

```
square of numbers
[1, 16, 9, 25]
cube of numbers
[1, 64, 27, 125]
```

In [26]:

```
#5)Write a Python program to check whether a given string is number or not using Lambda.
var=lambda s:s.isdigit()
```

In [27]:

```
var("tiny")
```

Out[27]:

```
False
```

In [29]:

```
var("236")
```

Out[29]:

```
True
```