In [ ]:
```python
#Agenda of the Day :
                    1. Functions in Python
                    2. Strings in Python
                       Discuss about tasks:
```

In [2]:
```python
#1. Basic calculator operations(using if )
print("select operations")
print("1. add")
print("2. sub")
print("3. Mul")
print("4. Div")
choice = input("enter ur choice(1/2/3/4)") #its take input as str
if choice in ("1","2","3","4"):
    n1 = int(input("enter first num"))
    n2 = int(input("enter second num"))
if choice=="1":
    print(n1,"+",n2,"=",n1+n2)
elif choice=="2":
    print(n1,"-",n2,"=",n1-n2)
elif choice=="3":
    print(n1,"*",n2,"=",n1*n2)
elif choice=="4":
    print(n1,"/",n2,"=",n1/n2)
else:
    print("invalid input")
```

```
select operations
1. add
2. sub
3. Mul
4. Div
enter ur choice(1/2/3/4)3
enter first num8
enter second num8
8 * 8 = 64
```

In [5]:
```python
#2. Given 3 numbers (taken from user)
a = int(input("enter a value"))
b = int(input("enter b value"))
c = int(input("enter c value"))
if ((a!=b) and (b!=c) and (c!=a)):
    print(a+b+c)
elif (a==b) and (a!=c):
    print(c)
elif (b==c) and (b!=a):
    print(a)
elif (a==c) and (a!=b):
    print(b)
elif (a==b) and (b==c):
    print("zero")
```

```
enter a value3
enter b value3
enter c value3
zero
```

In [11]:
```python
#3.Print no. of even and odd numbers in given range:
even =0
odd = 0
for i in range(11,16):
    if i%2==0:
        even+=1
    else:
        odd+=1
print(even)
print(odd)
print(even+odd)
```

```
2
3
5
```

In [14]:
```python
#4. Print all numbers in a range divisible by given input number:
n1= int(input("enter a number"))
n2= int(input("enter a number"))
for i in range(1,101):
    if i%n1==0 and i%n2==0:
        print(i,end=" ")
```

```
enter a number5
enter a number3
15 30 45 60 75 90
```

In [16]:
```python
#Username and password:
from getpass import getpass
username = input("enter your username")
pwd = getpass("enter your password")
if username=="surya" and pwd=="12345":
    print("welcome",username)
else:
    print("invalid username or password")
```

```
enter your usernamesurya
enter your password········
welcome surya
```

In [ ]:
```python
#Functions in Python:
    - Its a group of related statements that performs a specific task.
#why we use?
  1. To avoid code repititon
  2. Complex program divided into small piece of code to debug easily
  3. write once and use any times (code resuablity.)
```

In [ ]:
```python
#How to declare functions ?
  By using def keyword
```

In [ ]:
```python
#declaring the functions?
def functioname(parameters):    #function definition
    """doc string"""
  #block of statements
  return
functionname(arguments) #function calling
```

In [18]:
```python
#Example: (without parameters)
def username():              #function definition
    """This functions print the name of the user"""
    print("Hello Surya")
username()                   #function calling
```

Hello Surya

In [46]:
```python
#Example:
def sums(a,b,c):    #positional arguments
    """This is worked on sum of given 2 nums"""
    print(a+b*c)
    print(a-(b/c))
a= int(input("enter a value"))
b= int(input("enter b value"))
c= int(input("enter c value"))
sums(a,b,c)
```

enter a value20
enter b value30
enter c value50
1520
19.4

In [28]:
```python
#we can use any no.of functions :
def add(x,y):
    return x+y
def sub(x,y):
    return x-y
def mul(x,y):
    return x*y
def div(x,y):
    return x/y
print(add(10,60))
print(sub(10,60))
print(mul(10,20))
print(div(10,2))
```

70
-50
200
5.0

In [31]:
```python
#Difference b/w print and return statement:
def first():
    a = 5
    print(a)
    return 6
def second():
    return 10*first()
print(first())
print(second())
```

5
6
5
60

In [32]:
```python
def rangenumbers():
    n1= int(input("enter a number"))
    n2= int(input("enter a number"))
    for i in range(1,101):
        if i%n1==0 and i%n2==0:
            print(i,end=" ")
rangenumbers()
```

```
enter a number10
enter a number3
30 60 90
```

In [40]:
```python
#Task with functions:
def findoutvalue(a,b,c):
    if ((int(a)!=int(b)) and (int(b)!=int(c)) and (int(c)!=int(a))):
        return int(a)+int(b)+int(c)
    elif (a==b) and (a!=c):
        return c
    elif (b==c) and (b!=a):
        return a
    elif (a==c) and (a!=b):
        return b
    elif (a==b) and (b==c):
        return "zero"
a,b,c=input("enter a,b,c values").split(" ")
findoutvalue(a,b,c)
```

```
enter a,b,c values10 20 30
```

Out[40]: 60

In [44]:
```python
#Recursive functions in python: (a function itself called)
def factorial(x):
    """This function is find out factorial of a given number"""
    if x==1 or x==0:
        return 1
    else:
        return (x*factorial(x-1))    #recursive calling
x = int(input("enter the value to find out factorial"))
print(factorial(x))
```

```
enter the value to find out factorial1
1
```

In [ ]:
```python
#Type of Arguments:
1. Default Arguments
2. keyword Arguments
3. arbitary Arguments
```

In [ ]:
```python
#Default Arguments:
Values of default arguments are fixed at function declaration.
```

In [48]:
```python
#Example:
def info(program="python workshop",mode="online"):
    return "Apssdc is conducting " + program+" to students in " + mode
info()
```

Out[48]: 'Apssdc is conducting python workshop to students in online'

In [49]:
```python
#Keyword Arguments: (value of these arguments are fixed at function definition)
def info(program,mode):
    return "Apssdc is conducting " + program+" to students in " + mode
info(mode="Online",program="Python Workshop") #function definition
```

Out[49]: 'Apssdc is conducting Python Workshop to students in Online'

In [58]:
```python
#Arbitary Arguments:(variable lenghth arguments)
#here we use * symbol before the variable name
def indianTeam(*Players):
    for name in (Players):
        print(name,end=" ")
indianTeam("Dhoni","kohli","Jadeja","Ro-Hit","Bumrah","Swevag","Padikal")
```

Dhoni kohli Jadeja Ro-Hit Bumrah Swevag Padikal

In [60]:
```python
li = [1,2,3,4,5,6]
li[0]
li[3]
```

Out[60]: 4

In [ ]: