In [1]:

```
#1) list operations

n = int(input("Total elements: "))
l = list(map(int,input("Enter numbers: ").strip().split()))[:n]
ins = list(map(int, input("insert ").split()))
l.insert(ins[1],ins[0])
print(l)
de = int(input("remove "))
l.remove(de)
app = int(input("append "))
l.append(app)
l.sort()
l.pop()
l.reverse
print(l)
```

```
Total elements: 5
Enter numbers: 34 23 56 1 8
insert 2 3
[34, 23, 56, 2, 1, 8]
remove 8
append 10
[1, 2, 10, 23, 34]
```

In [2]:

```
#2) Calculator

def add(x, y):
    return x + y
def subtract(x, y):
    return x - y
def multiply(x, y):
    return x * y
def divide(x, y):
    return x / y
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")
choice = input("Enter choice(1/2/3/4): ")
if choice in ('1', '2', '3', '4'):
    if choice == '1':
        print(num1, "+", num2, "=", add(num1, num2))
    elif choice == '2':
        print(num1, "-", num2, "=", subtract(num1, num2))
    elif choice == '3':
        print(num1, "*", num2, "=", multiply(num1, num2))
    elif choice == '4':
        print(num1, "/", num2, "=", divide(num1, num2))
else:
    print("Invalid Input")
```

```
Enter first number: 67
Enter second number: 23
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 2
67.0 - 23.0 = 44.0
```

In [3]:

```
#3) string operations

s1 = input("Enter string 1: ")
s2 = input("Enter string 2: ")
#slice
print("Sliced string: "+s1[2:5])
#reverse
print("Reversed string: "+s1[::-1])
#concatenation
print("Concatenated string: "+s1+s2)
```

```
Enter string 1: chennai
Enter string 2: india
Sliced string: enn
Reversed string: iannehc
Concatenated string: chennaiindia
```

4) Why is python a popular programming language?

It uses a simplified syntax with an emphasis on natural language, for a much easier learning curve for beginners. And, because Python is free to use and is supported by an extremely large ecosystem of libraries and packages, it's often the first-choice language for new developers.

5) What are the other frameworks used along with python?

Django and Flask are the top two most popular frameworks that can be used along with python.

6) Full form of WSGI.

WSGI - Web Server Gateway Interface

In [4]:

```
#p1) prime number

from math import sqrt
n = int(input("Enter a number: "))
f=1
if(n>1):
    for k in range(2,int(sqrt(n))+1):
        if(n%k==0):
            f=-1
            break
if(f==1):
    print("Prime Number")
else:
    print("Not a Prime Number")
```

```
Enter a number: 45
Not a Prime Number
```

In [5]:

```
#p2) odd number from m to n

m = int(input("Enter m: "))
n = int(input("Enter n: "))
while m<=n:
    if(m%2!=0):
        print(m,end=" ")
    m=m+1
```

```
Enter m: 2
Enter n: 4
3
```

In [6]:

```
#p3) prime number series till n

from math import sqrt
n = int(input("Enter a number: "))
for i in range(2,n):
    f=1
    for k in range(2,int(sqrt(i))+1):
        if(i%k==0):
          f=-1
          break
    if(f==1):
        print(i,end=" ")
```

```
Enter a number: 40
2 3 5 7 11 13 17 19 23 29 31 37
```

In [8]:

```
#p4) fibonacci series

n = int(input("Enter total terms: "))
n1,n2,c=0,1,0
if(n>=1):
    while c<n:
        print(n1,end=" ")
        m=n1+n2
        n1=n2
        n2=m
        c=c+1
elif(n<1):
    print("Enter Positive number :")
```

```
Enter total terms: 12
0 1 1 2 3 5 8 13 21 34 55 89
```