1) **Aim**: WAP to implement Bubble Sort.

Program:

```
l = []
n = int (input("Enter the range: "))
print("Enter the numbers: ")
for i in range(n):
    x = int(input())
    l.append(x)
def bubble_sort(l):
    for i in range(n):
        for j in range(i+1,n):
            if l[i]>l[j]:
                c = l[i]
                l[i]=l[j]
                l[j]=c
        print(l)
bubble_sort(l)
```

Output:

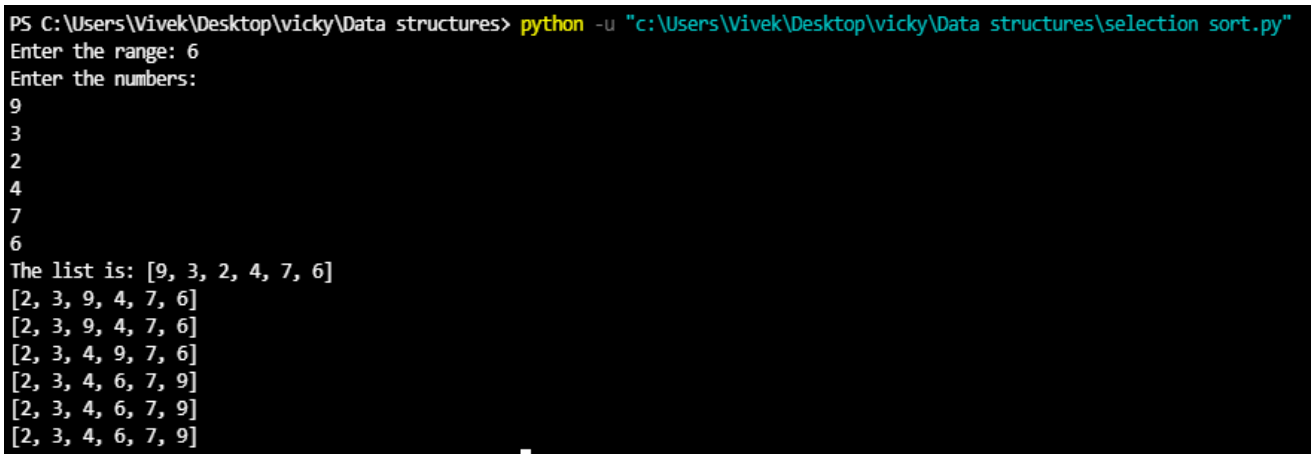
```
PS C:\Users\Vivek\Desktop\vicky\Data structures> python -u "c:\Users\Vivek\Desktop\vicky\Data structures\bubble sort.py"
Enter the range: 5
Enter the numbers:
3
6
2
1
9
[1, 6, 3, 2, 9]
[1, 2, 6, 3, 9]
[1, 2, 3, 6, 9]
[1, 2, 3, 6, 9]
[1, 2, 3, 6, 9]
```

2) **Aim**: WAP to implement Selection Sort

Program:

```
l = []
n = int (input("Enter the range: "))
print("Enter the numbers: ")
for i in range(n):
    x = int(input())
    l.append(x)
print("The list is:",l)
def selection_sort(l):
    for i in range(n):
        min = i
        for j in range(i+1,n):
            if(l[j]<l[min]):
                min = j
                l[i],l[min]=l[min],l[i]
        print(l)
selection_sort(l)
```

Output:



3) **Aim**: Write an application to implement Quick sort

Program:

```
def quick_sort(list,first,last):
  if(first<last):
      pivot=first
      i=first
      j=last
      while(i<j):
         while(list[i]<=list[pivot] and i<j):
            i=i+1
         while(list[j]>list[pivot]):
            j=j-1
         if(i<j):
            list[i],list[j]=list[j],list[i]
      list[pivot],list[j]=list[j],list[pivot]
      print(*list)
      quick_sort(list,first,j-1)
      quick_sort(list,j+1,last)
list=[]
x=int(input("enter the number of elements:"))
for i in range(x):
   y=int(input())
   list.append(y)
n=len(list)
print(*list)
quick_sort(list,0,n-1)
```

Output:

```
PS C:\Users\Vivek\Desktop\vicky\Data structures> python -u "c:\Users\Vivek\Desktop\vicky\Data structures\quick sort.py"
enter the number of elements:5
8
2
3
6
1
8 2 3 6 1
1 2 3 6 8
1 2 3 6 8
1 2 3 6 8
1 2 3 6 8
```