```
def selectionSort(array, size):


    for ind in range(size):
        min_index = ind


        for j in range(ind + 1, size):
            # select the minimum element in every iteration
            if array[j] < array[min_index]:
                min_index = j
         # swapping the elements to sort the array
        (array[ind], array[min_index]) = (array[min_index], array[ind])


arr = [-2, 45.7, 0, 11.99, -9,88.00,-97,-202,747]
size = len(arr)
selectionSort(arr, size)
print('The array after sorting in Ascending Order by selection sort is:')
print(arr)
//////////////////////
def bubbleSort(arr):
    n = len(arr)
    # optimize code, so if the array is already sorted, it doesn't need
    # to go through the entire process
    swapped = False
    # Traverse through all array elements
    for i in range(n-1):
        # range(n) also work but outer loop will
```

```
        # repeat one time more than needed.
        # Last i elements are already in place
        for j in range(0, n-i-1):

            # traverse the array from 0 to n-i-1
            # Swap if the element found is greater
            # than the next element
            if arr[j] > arr[j + 1]:
                swapped = True
                arr[j], arr[j + 1] = arr[j + 1], arr[j]

        if not swapped:
            # if we haven't needed to make a single swap, we
            # can just exit the main loop.
            return


# Driver code to test above
arr = [64, 34, 25, 12, 22, 11, 90]

bubbleSort(arr)

print("Sorted array is:")
for i in range(len(arr)):
    print("% d" % arr[i], end=" ")
////////////////////////////////////
# Function for Selection Sort of elements
```

```
def Selection_Sort(marks):
    for i in range(len(marks)):

        # Find the minimum element in remaining unsorted array
        min_idx = i
        for j in range(i + 1, len(marks)):
            if marks[min_idx] > marks[j]:
                min_idx = j

        # Swap the minimum element with the first element
        marks[i], marks[min_idx] = marks[min_idx], marks[i]

    print("Marks of students after performing Selection Sort on the list : ")
    for i in range(len(marks)):
        print(marks[i])

#<---------------------------------------------------------------------------------->

# Function for Bubble Sort of elements

def Bubble_Sort(marks):
    n = len(marks)
    # Traverse through all array elements
    for i in range(n - 1):
        # Last i elements are already in place
        for j in range(0, n - i - 1):
```

```
            # Traverse the array from 0 to n-i-1
            # Swap if the element found is greater than the next element
            if marks[j] > marks[j + 1]:
                marks[j], marks[j + 1] = marks[j + 1], marks[j]

    print("Marks of students after performing Bubble Sort on the list :")
    for i in range(len(marks)):
        print(marks[i])

#<------------------------------------------------------------------------------------>

# Function for displaying top five marks

def top_five_marks(marks):
    print("Top",len(marks),"Marks are : ")
    print(*marks[::-1], sep="\n")

#<------------------------------------------------------------------------------------>

# Main

marks=[]
n = int(input("Enter number of students whose marks are to be displayed : "))
print("Enter marks for",n,"students (Press ENTER after every students marks): ")
for i in range(0, n):
    ele = int(input())
```

```
    marks.append(ele)  # adding the element


print("The marks of",n,"students are : ")
print(marks)


flag=1;
while flag==1:
    print("\n---------------MENU---------------")
    print("1. Selection Sort of the marks")
    print("2. Bubble Sort of the marks")
    print("3. Exit")
    ch=int(input("\n\nEnter your choice (from 1 to 3) : "))

    if ch==1:
        Selection_Sort(marks)
        a=input("\nDo you want to display top marks from the list (yes/no) : ")
        if a=='yes':
            top_five_marks(marks)
        else:
            print("\nThanks for using this program!")
            flag=0

    elif ch==2:
        Bubble_Sort(marks)
        a = input("\nDo you want to display top five marks from the list (yes/no) : ")
        if a == 'yes':
            top_five_marks(marks)
```

```
        else:
            print("\nThanks for using this program!")
            flag = 0

    elif ch==3:
        print("\nThanks for using this program!!")
        flag=0

    else:
        print("\nEnter a valid choice!!")
        print("\nThanks for using this program!!")
        flag=0

//////////////////////
def print_roll(a):
    for i in range(0, len(a)):
        print("\t", a[i], end=" ")
    print()

#<----------------------------------------END OF PROGRAM---------------------------------------------->
```