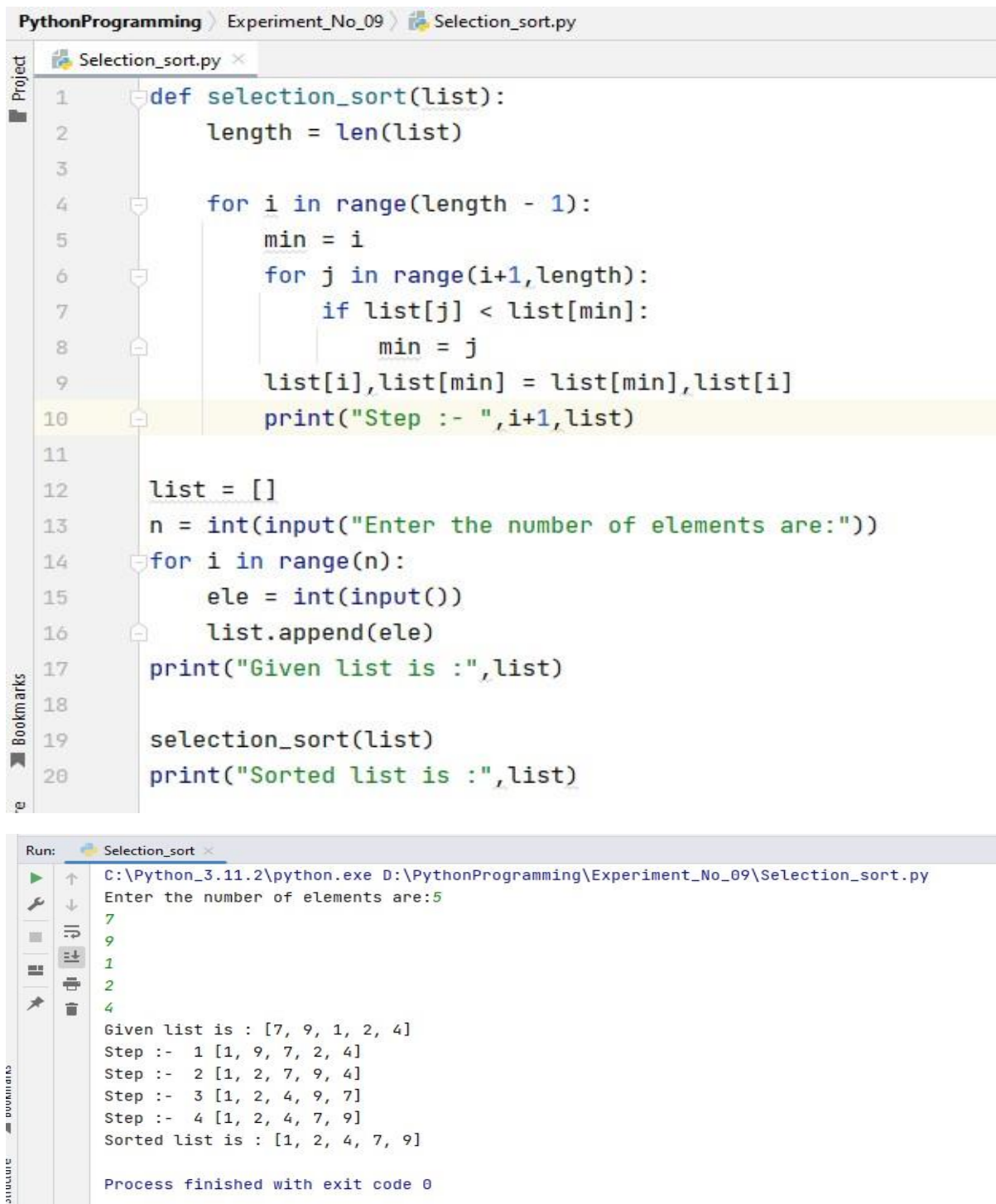


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Write a program to implement various sorting operations

1] Selection Sort



The image shows a Python IDE with a file named `Selection_sort.py` open. The code implements the Selection Sort algorithm. It defines a `selection_sort` function that takes a list and sorts it in ascending order. The function uses nested loops to find the minimum element in the unsorted portion of the list and swaps it with the element at the current index. The code also includes input handling to take the number of elements and the elements themselves from the user. The execution output shows the steps of the algorithm for the input list `[7, 9, 1, 2, 4]`.

```
PythonProgramming > Experiment_No_09 > Selection_sort.py
Selection_sort.py x
1 def selection_sort(list):
2     length = len(list)
3
4     for i in range(length - 1):
5         min = i
6         for j in range(i+1,length):
7             if list[j] < list[min]:
8                 min = j
9         list[i],list[min] = list[min],list[i]
10    print("Step :- ",i+1,list)
11
12    list = []
13    n = int(input("Enter the number of elements are:"))
14    for i in range(n):
15        ele = int(input())
16        list.append(ele)
17    print("Given list is :",list)
18
19    selection_sort(list)
20    print("Sorted list is :",list)
```

Run: Selection_sort x
C:\Python_3.11.2\python.exe D:\PythonProgramming\Experiment_No_09\Selection_sort.py
Enter the number of elements are:5
7
9
1
2
4
Given list is : [7, 9, 1, 2, 4]
Step :- 1 [1, 9, 7, 2, 4]
Step :- 2 [1, 2, 7, 9, 4]
Step :- 3 [1, 2, 4, 9, 7]
Step :- 4 [1, 2, 4, 7, 9]
Sorted list is : [1, 2, 4, 7, 9]
Process finished with exit code 0