

SEM 3\Exp9\counting_sort.c

```
1 // Function to perform counting sort
2 void countingSort(int arr[], int size)
3 {
4     int output[size];
5     int count[100] = {0}; // Assuming the range of input numbers is known (0-99)
6
7     // Store the count of occurrences
8     for (int i = 0; i < size; i++)
9         count[arr[i]]++;
10
11     // Build the output array
12     for (int i = 0, j = 0; i < 100; i++)
13     {
14         while (count[i] > 0)
15         {
16             output[j++] = i;
17             count[i]--;
18         }
19     }
20
21     // Copy the output array to arr[]
22     for (int i = 0; i < size; i++)
23         arr[i] = output[i];
24 }
25
```