1. */\**
2. *\* C Program for counting sort*
3. *\*/*
4. #include <stdio.h>
6. */\* Counting sort function \*/*
7. void counting\_sort(int A[], int k, int n)
8. {
9. int i, j;
10. int B[15], C[100];
11. for (i = 0; i <= k; i++)
12. C[i] = 0;
13. for (j = 1; j <= n; j++)
14. C[A[j]] = C[A[j]] + 1;
15. for (i = 1; i <= k; i++)
16. C[i] = C[i] + C[i-1];
17. for (j = n; j >= 1; j--)
18. {
19. B[C[A[j]]] = A[j];
20. C[A[j]] = C[A[j]] - 1;
21. }
22. printf("The Sorted array is : ");
23. for (i = 1; i <= n; i++)
24. printf("%d ", B[i]);
25. }
26. */\* End of counting\_sort() \*/*
28. */\* The main() begins \*/*
29. int main()
30. {
31. int n, k = 0, A[15], i;
32. printf("Enter the number of input : ");
33. scanf("%d", &n);
34. printf("**\n**Enter the elements to be sorted :**\n**");
35. for (i = 1; i <= n; i++)
36. {
37. scanf("%d", &A[i]);
38. if (A[i] > k) {
39. k = A[i];
40. }
41. }
42. counting\_sort(A, k, n);
43. printf("**\n**");
44. return 0;
45. }

Enter the number of input : 10

Enter the elements to be sorted :

21 4 18 15 24 6 9 1 5 4

The Sorted array is : 1 4 4 5 6 9 15 18 21 24