

## Exp\_04\_Selection Sort\selectionsort.c

```
1  #include <stdio.h>
2
3  void selectionSort(int arr[], int n) {
4      int i, j, minIdx, temp;
5
6      for (i = 0; i < n - 1; i++) {
7          minIdx = i;
8          for (j = i + 1; j < n; j++) {
9              if (arr[j] < arr[minIdx]) {
10                 minIdx = j;
11             }
12         }
13         if (minIdx != i) {
14             temp = arr[i];
15             arr[i] = arr[minIdx];
16             arr[minIdx] = temp;
17         }
18     }
19 }
20
21 void printArray(int arr[], int n) {
22     for (int i = 0; i < n; i++) {
23         printf("%d ", arr[i]);
24     }
25     printf("\n");
26 }
27
28 int main() {
29     int n;
30
31     printf("Enter number of elements: ");
32     scanf("%d", &n);
33
34     int arr[n];
35     printf("Enter elements: ");
36     for (int i = 0; i < n; i++) {
37         scanf("%d", &arr[i]);
38     }
39
40     printf("Original array: ");
41     printArray(arr, n);
42
43     selectionSort(arr, n);
44
45     printf("Sorted array: ");
46     printArray(arr, n);
47
48     return 0;
49 }
```