Assignment no 3

Input-

```
#include <iostream>
void selectionSort(int arr[], int n) {
    for (int i = 0; i < n-1; i++) {
        int min_idx = i;
        for (int j = i+1; j < n; j++) {
            if (arr[j] < arr[min_idx]) {
                min_idx = j;
            }
        }
        std::swap(arr[i], arr[min_idx]);
        // Print the current state of the array
        std::cout << "After " << i+1 << " iteration: ";
        for (int k = 0; k < n; k++) {
            std::cout << arr[k] << " ";
        }
        std::cout << std::endl;
    }
}

int main() {
    int n;
    std::cout << "Enter the number of elements in the array: ";
    std::cin >> n;

    int arr[n];
    std::cout << "Enter the elements of the array: ";
    for (int i = 0; i < n; i++) {
        std::cin >> arr[i];
```

```
    }

    selectionSort(arr, n);
    std::cout << "Sorted array: ";
    for (int i = 0; i < n; i++) {
        std::cout << arr[i] << " ";
    }
    std::cout << std::endl;

    return 0;
}
```

Output-

Enter the number of elements in the array: 4

Enter the elements of the array: 64 5 90 45

After 1 iteration: 5 64 90 45

After 2 iteration: 5 45 90 64

After 3 iteration: 5 45 64 90

Sorted array: 5 45 64 90