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/*  ASSIGNMENT NO. 8
 PROBLEM STATEMENT:Design a program with a template for sorting the accepted
array and displaying it using integer or float type data. Implement any sorting type
using Generic Programming..
*/
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PROGRAM:

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#include <iostream>
using namespace std;

// Template function for Selection Sort
template <typename T>
void selectionSort(T arr[], int n) {
    for (int i = 0; i < n - 1; i++) {
        int minIndex = i;
        for (int j = i + 1; j < n; j++) {
            if (arr[j] < arr[minIndex]) {
                minIndex = j;
            }
        }
        // Swap the found minimum element with the first element
        if (minIndex != i) {
            T temp = arr[i];
            arr[i] = arr[minIndex];
            arr[minIndex] = temp;
        }
    }
}

// Template function to display the array
template <typename T>
void displayArray(T arr[], int n) {
    for (int i = 0; i < n; i++) {
        cout << arr[i] << " ";
    }
    cout << endl;
}

int main() {
    int choice;

    cout << "Choose the type of array you want to sort:" << endl;
```

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cout << "Enter your choice (1 or 2): ";
cin >> choice;

if (choice == 1) {
    int n;
    cout << "Enter the number of elements: ";
    cin >> n;

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

    // Sort and display the array
    selectionSort(arr, n);
    cout << "Sorted Integer Array: ";
    displayArray(arr, n);
}
else if (choice == 2) {
    int n;
    cout << "Enter the number of elements: ";
    cin >> n;

    float arr[n];
    cout << "Enter the elements: ";
    for (int i = 0; i < n; i++) {
        cin >> arr[i];
    }

    // Sort and display the array
    selectionSort(arr, n);
    cout << "Sorted Float Array: ";
    displayArray(arr, n);
}
else {
    cout << "Invalid choice!" << endl;
}
```

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    return 0;
}
```

OUTPUT: