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#include <stdio.h>

void bubbleSort(int arr[], int n) {
    for (int i = 0; i < n - 1; i++) {
        for (int j = 0; j < n - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                // swap elements if they are in the wrong order
                int temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
            }
        }
    }
}

void insertionSort(int arr[], int n) {
    for (int i = 1; i < n; i++) {
        int key = arr[i];
        int j = i - 1;

        // Move elements of arr[0..i-1] that are greater than key to one position
        // ahead of their current position
        while (j >= 0 && arr[j] > key) {
            arr[j + 1] = arr[j];
            j--;
        }
        arr[j + 1] = key;
    }
}

void selectionSort(int arr[], int n) {
    for (int i = 0; i < n - 1; i++) {
        int minIndex = i;
        for (int j = i + 1; j < n; j++) {
            // find the minimum element in the unsorted part of the array
            if (arr[j] < arr[minIndex]) {
                minIndex = j;
            }
        }
        // swap the found minimum element with the first element
        int temp = arr[i];
        arr[i] = arr[minIndex];
        arr[minIndex] = temp;
    }
}

void printArray(int arr[], int n) {
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }
    printf("\n");
}

```

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int main() {
    int n;

    printf("Enter the number of elements in the array: ");
    scanf("%d", &n);

    int arr[n];

    printf("Enter the elements of the array:\n");
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }

    int choice;
    do {
        printf("\nMenu:\n");
        printf("1. Bubble Sort\n");
        printf("2. Insertion Sort\n");
        printf("3. Selection Sort\n");
        printf("4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                bubbleSort(arr, n);
                printf("Array after Bubble Sort: ");
                printArray(arr, n);
                break;
            case 2:
                insertionSort(arr, n);
                printf("Array after Insertion Sort: ");
                printArray(arr, n);
                break;
            case 3:
                selectionSort(arr, n);
                printf("Array after Selection Sort: ");
                printArray(arr, n);
                break;
            case 4:
                printf("Exiting the program.\n");
                break;
            default:
                printf("Invalid choice. Please enter a valid option.\n");
        }
    } while (choice != 4);

    return 0;
}

```