

//Array Sorting

/*Problem statement: Given an array of integers arr, the task is to sort the array in ascending order and return it, without using any built-in functions.

Example:

Input: arr = [5, 2, 4, 3, 1]

Output: [1, 2, 3, 4, 5]

Input: arr = [1, 2, 2, 1, 3, 5, 4]

Output: [1, 1, 2, 2, 3, 4, 5]*/

Code:

```
#include <stdio.h>
```

```
int main() {  
    int n;
```

```
  
    printf("Enter the number of elements: ");  
    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]);  
    }
```

```
    // Bubble sort algorithm to sort the array
```

```
    for (int i = 0; i < n - 1; i++) {  
        for (int j = 0; j < n - i - 1; j++) {  
            if (arr[j] > arr[j + 1]) { // Compare adjacent elements  
                // Swap if they are in the wrong order  
                int temp = arr[j];  
                arr[j] = arr[j + 1];  
                arr[j + 1] = temp;  
            }  
        }  
    }  
}
```

```
printf("Sorted array in ascending order: ");  
for (int i = 0; i < n; i++) {  
    printf("%d ", arr[i]);  
}  
printf("\n");  
  
return 0;  
}
```