

//Sort 0s, 1s and 2s

Given an array arr containing only 0s, 1s, and 2s. Sort the array in ascending order.

Examples:

Input: arr[] = [0, 2, 1, 2, 0]

Output: 0 0 1 2 2

Explanation: 0s 1s and 2s are segregated into ascending order.

Input: arr[] = [0, 1, 0]

Output: 0 0 1

Explanation: 0s 1s and 2s are segregated into ascending order.

Code:

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

```
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 (0s, 1s, and 2s): ");
```

```
    for (int i = 0; i < n; i++) {
```

```
        scanf("%d", &arr[i]);
```

```
    }
```

```
    int low = 0, mid = 0, high = n - 1;
```

```
    while (mid <= high) {
```

```
        if (arr[mid] == 0) {
```

```
            int temp = arr[low];
```

```
            arr[low] = arr[mid];
```

```
            arr[mid] = temp;
```

```
            low++;
```

```
        mid++;
    } else if (arr[mid] == 1) {

        mid++;
    } else {

        int temp = arr[mid];
        arr[mid] = arr[high];
        arr[high] = temp;
        high--;
    }
}

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

return 0;
}
```