

## *Sort the Array of 0s, 1s, and 2s*

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

```
void sort012(int arr[], int n) {
```

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

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

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

```
            // If the current element is 0, swapping it with the low pointer
```

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

```
            arr[mid++] = 0; // Moving mid pointer forward
```

```
        }
```

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

```
            mid++; // If it's 1, just move the mid pointer
```

```
        }
```

```
        else {
```

```
            // If the current element is 2, swapping it with the high pointer
```

```
            arr[mid] = arr[high];
```

```
            arr[high--] = 2; // Moving high pointer backward
```

```
        }
```

```
    }
```

```
}
```

```
int main() {
```

```
    int n;
```

```
    printf("Enter the number of elements (0s, 1s, and 2s): ");
```

```
    scanf("%d", &n);
```

```
int arr[n];

printf("Enter %d elements (only 0s, 1s, and 2s):\n", n);
for (int i = 0; i < n; i++) {
    scanf("%d", &arr[i]);
}

// Sort function
sort012(arr, n);

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

printf("\n");
return 0;
}
```