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#include <stdio.h>
#include <stdlib.h>

void seperate0and1(int arr[], int size)
{
    int leftIndex = 0, rightIndex = size-1;
    while( leftIndex < rightIndex)
    {
        while((arr[leftIndex] == 0) && (leftIndex < rightIndex))
            leftIndex++;
        while((arr[rightIndex] == 1) && (rightIndex > leftIndex))
            rightIndex--;
        if(leftIndex < rightIndex)
        {
            arr[leftIndex++] = 0;
            arr[rightIndex--] = 1;
        }
    }
}

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

int main()
{
    int *arr, size;
    printf("Enter size of the array\n");
    scanf("%d", &size);
    printf("Enter elements in array\n");
    for(int index = 0; index < size; index++)
        scanf("%d", &arr[index]);
    seperate0and1(arr, size);
    printArray(arr, size);
    return 0;
}

```

Time complexity: $O(n)$

Space Complexity: $O(1)$