

problem.c

```
1  #include <stdio.h>
2
3  void waveSort(int arr[], int n) {
4      for (int i = 0; i < n; i += 2) {
5
6          if (i > 0 && arr[i] < arr[i - 1]) {
7              int temp = arr[i];
8              arr[i] = arr[i - 1];
9              arr[i - 1] = temp;
10         }
11
12         if (i < n - 1 && arr[i] < arr[i + 1]) {
13             int temp = arr[i];
14             arr[i] = arr[i + 1];
15             arr[i + 1] = temp;
16         }
17     }
18 }
19
20 int main() {
21     int n;
22     printf("Enter the number of elements: ");
23     scanf("%d", &n);
24
25     int arr[n];
26
27     printf("Enter the elements of the array:\n");
28     for (int i = 0; i < n; i++) {
29         scanf("%d", &arr[i]);
30     }
31
32     waveSort(arr, n);
33
34     printf("The wave sorted array is:\n");
35     for (int i = 0; i < n; i++) {
36         printf("%d ", arr[i]);
37     }
38
39     return 0;
40 }
41
42
43
```