```c
#include <stdio.h>

void main()
{
    int heap[10], num, i, j, c, rootElement, tempVar;
    printf("\n Enter num of elements :");
    scanf("%d", &num);
    printf("\n Enter the nums : ");
    for (i = 0; i < num; i++)
        scanf("%d", &heap[i]);
    for (i = 1; i < num; i++)
    {
        c = i;
        do
        {   rootElement = (c - 1) / 2;
            if (heap[rootElement] < heap[c])
            {
                tempVar = heap[rootElement];
                heap[rootElement] = heap[c];
                heap[c] = tempVar;
            }
            c = rootElement;
        } while (c != 0);
    }

    printf("Heap array : ");
    for (i = 0; i < num; i++)
        printf("%d\t ", heap[i]);
    for (j = num - 1; j >= 0; j--)
    {
        tempVar = heap[0];
        heap[0] = heap[j];
        heap[j] = tempVar;
        rootElement = 0;
```

```c
    do
    {
        c = 2 * rootElement + 1;

        if ((heap[c] < heap[c + 1]) && c < j-1)

            c++;

        if (heap[rootElement]<heap[c] && c<j) {

            tempVar = heap[rootElement];

            heap[rootElement] = heap[c];

            heap[c] = tempVar;

        }

        rootElement = c;

    } while (c < j);

    }
    printf("\n The sorted array is : ");
    for (i = 0; i < num; i++)

        printf("\t %d", heap[i]);

}
```

```
Enter num of elements :6

Enter the nums : 11 12 5 7 6 13
Heap array : 13  11       12       7       6       5
 The sorted array is :    5       6       7       11      12      13
```