**#include <stdio.h>**

**void swap(int \*a, int \*b) {**

**int temp = \*a;**

**\*a = \*b;**

**\*b = temp;**

**}**

**void heapify(int arr[], int n, int i) {**

**int largest = i;**

**int left = 2 \* i + 1;**

**int right = 2 \* i + 2;**

**if (left < n && arr[left] > arr[largest])**

**largest = left;**

**if (right < n && arr[right] > arr[largest])**

**largest = right;**

**if (largest != i) {**

**swap(&arr[i], &arr[largest]);**

**heapify(arr, n, largest);**

**}**

**}**

**void heapSort(int arr[], int n) {**

**for (int i = n / 2 - 1; i >= 0; i--)**

**heapify(arr, n, i);**

**for (int i = n - 1; i >= 0; i--) {**

**swap(&arr[0], &arr[i]);**

**heapify(arr, i, 0);**

**}**

**}**

**void printArray(int arr[], int n) {**

**for (int i = 0; i < n; ++i)**

**printf("%d ", arr[i]);**

**printf("\n");**

**}**

**int main() {**

**int arr[] = {1, 12, 9, 5, 6, 10};**

**int n = sizeof(arr) / sizeof(arr[0]);**

**heapSort(arr, n);**

**printf("Sorted array is \n");**

**printArray(arr, n);**

**}**

**OUTPUT:**

**Sorted array is**

**1 5 6 9 10 12**

**…program finished with exit code 0**

**Press ENTER to exit console..**