

2. Heap Sort

```
def heapSort(arr):  
    def heapify(arr, n, i):  
        largest = i  
        l = 2 * i + 1  
        r = 2 * i + 2  
        if l < n and arr[l] > arr[largest]:  
            largest = l  
        if r < n and arr[r] > arr[largest]:  
            largest = r  
        if largest != i:  
            arr[i], arr[largest] = arr[largest], arr[i]  
            heapify(arr, n, largest)  
  
    n = len(arr)  
    for i in range(n // 2 - 1, -1, -1):  
        heapify(arr, n, i)  
    for i in range(n - 1, 0, -1):  
        arr[i], arr[0] = arr[0], arr[i]  
        heapify(arr, i, 0)  
    return arr
```