

## EXPERIMENT-10

TO SET AN ARRAY IN ASCENDING ORDER AND RETURN IT WITHOUT USING ANY BUILT IN FUNCTION

PROGRAM:

```
1 def heapify(arr, n, i):
2     largest = i
3     l, r = 2*i+1, 2*i+2
4     if l < n and arr[l] > arr[largest]:
5         largest = l
6     if r < n and arr[r] > arr[largest]:
7         largest = r
8     if largest != i:
9         arr[i], arr[largest] = arr[largest], arr[i]
10        heapify(arr, n, largest)
11 def heap_sort(arr):
12     n = len(arr)
13     for i in range(n//2 - 1, -1, -1):
14         heapify(arr, n, i)
15     for i in range(n-1, 0, -1):
16         arr[0], arr[i] = arr[i], arr[0]
17         heapify(arr, i, 0)
18 nums = [5, 2, 3, 1, 6, 4]
19 heap_sort(nums)
20 print(nums)
21
```

OUTPUT:

```
[1, 2, 3, 4, 5, 6]
=== Code Execution Successful ===
```

