8 7 6 4 1 1

Index: 0 1 2 3 4 5 6 7 8 9

actual data representation

conceptual data representation

Phase 1

Sort 8 7 6 4 1 1 in decreasing order
Repeat steps 2 to 6.

Prefix: 0 1 2 3 4 5 6

Unsorted: 1 2 3 4 5 6

Prefix: 8 4 7 6 9 8 4

Prefix: 3 1 2 4 3 5 6

Prefix: 8 4 7 6 9 8 4

Unsorted: 1 2 3 4 5 6

Prefix: 3 1 2 4 3 5 6

Prefix: 3 1 2 4 3 5 6

Prefix: 3 1 2 4 3 5 6

Rearrangement:
Result: 9876411

Heap Sort stops since unordered

1

Index: 0 1 2 3 4 5 6

b

Since heap[index] is a leaf, heap[0] is not performed.

heap[0]
as we are tracking the execution of the algorithm

This is the reason why we often draw an array
array as its underlying data structure
since a binary heap is implemented using an
array (insert, delete and sort) manipulate an array

In our lecture notes, all binary heap algorithms

Heap Algorithm Execution

A Note About the Tracking of Binary

CMP 225
memory space for the tree

binary heap, hence it does not require additional
not create the tree representation of the

However, understand that the algorithm does
when the binary heap is represented as a tree
earlier to visualize how the algorithm executes

The reason we do this is because it is often
representation of the binary heap
algorithm, we also often draw the tree

However, as we are tracing the execution of the

Heap Algorithm Execution

A Note About the Tracing of Binary