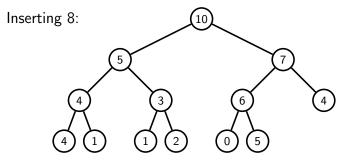
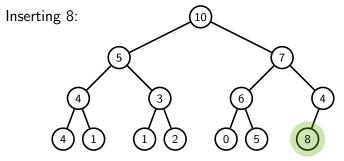
Binary Heap Tree Insertion

Idea: Insert the value at the end of the last level and then keep bubbling it up as long as it is larger than its parent.



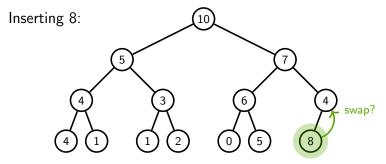
As we bubble up, when we swap the value of a node i with that of its parent, we don't have to compare i with its sibling, because if the value of i is greater than that of its parent, then it must be greater than that of its sibling because of the Binary Heap Tree property.

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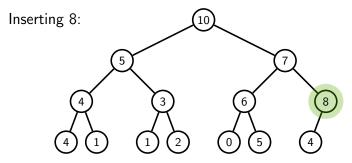
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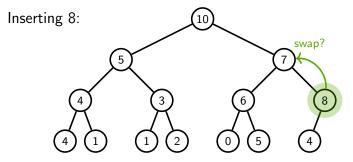
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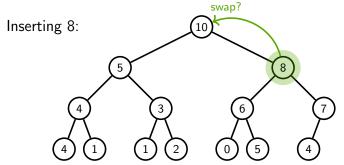
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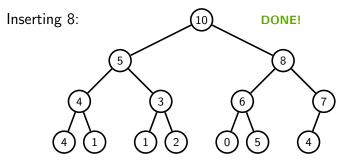
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Insert (pseudocode)

```
private void bubbleUp(int i) {
   if (i == 1) return; // i is the root

if (heap[i] > heap[parent(i)]) {
   swap heap[i] and heap[parent(i)];
   bubbleUp(parent(i));
}
```