

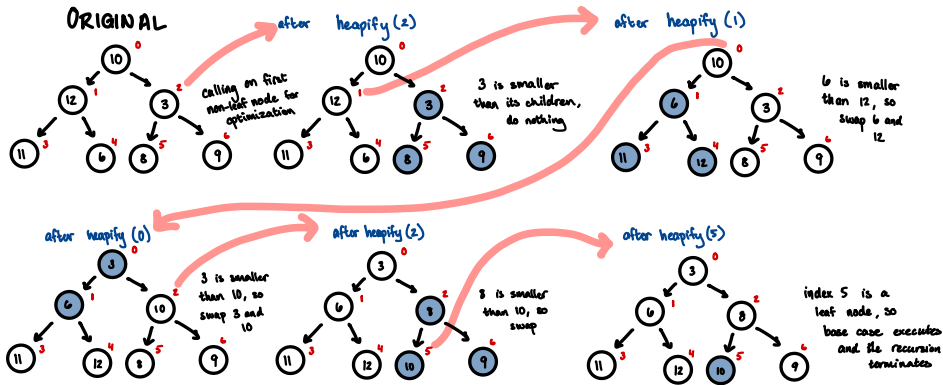
Part 4(a)

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CS104 HW3

Perform the `buildHeap` (aka `makeHeap`) algorithm on the following array to create a **min-Heap** from the arbitrary array shown below. Show the state of the array as a binary tree after each iteration (call to `heapify()`) of the algorithm. (If that does not make sense review the lecture materials to review the `buildHeap` algorithm.)

- [10, 12, 3, 11, 6, 8, 9]



Part 4(b)

Draw the tree representation of the following **binary Min Heap** in its initial configuration, and after each operation. Make sure to clearly indicate each of your final answers.

- Initial Configuration: [2, 4, 6, 8, 10, 12, 14, 16]
- Insert 3
- Pop (top element)
- Pop (top element)
- Insert 5

