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3/22/18

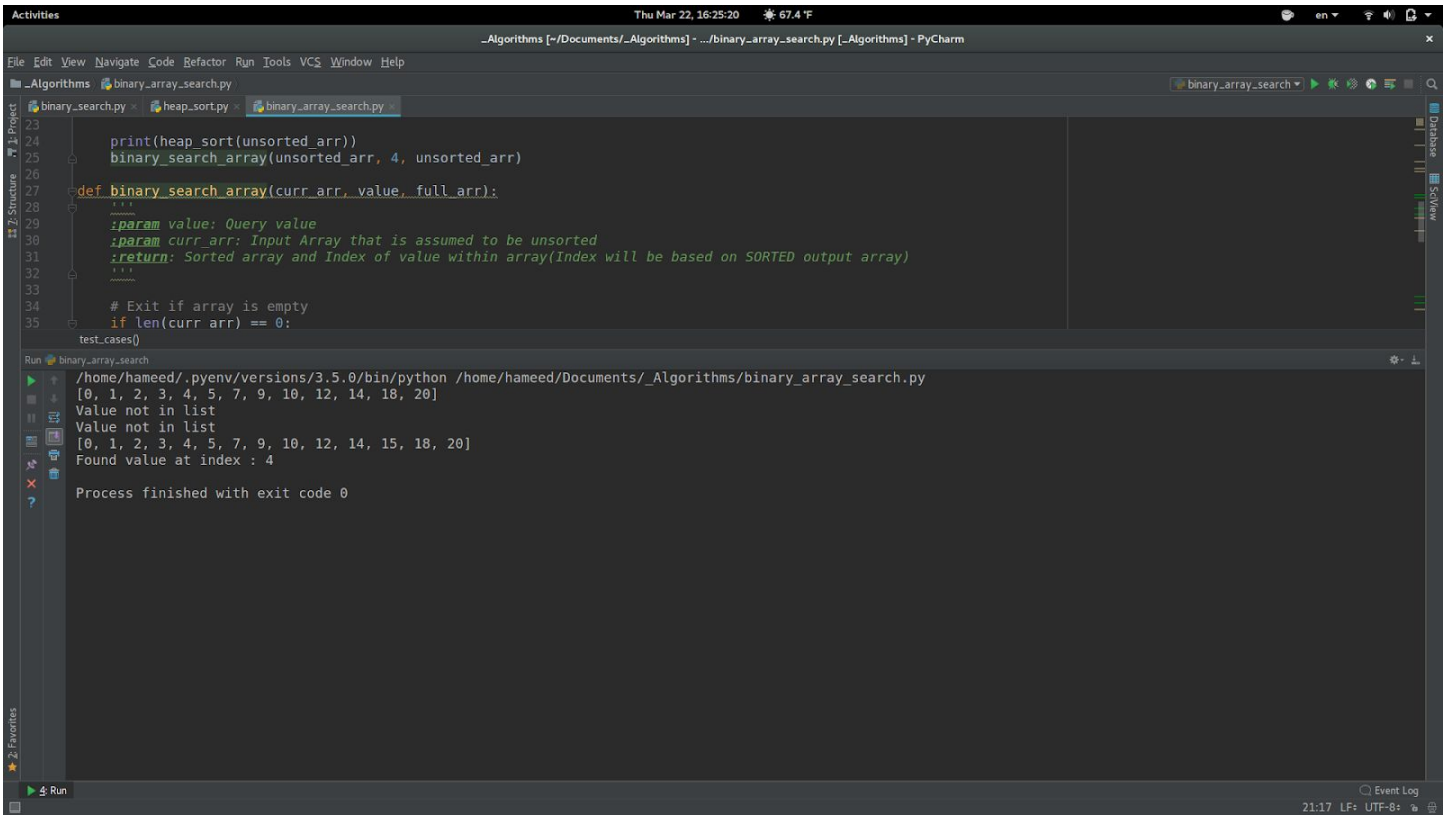
Binary Search (Array)

Input: An array (assumed to be unsorted)
Return: Boolean/String confirming whether or not a node with the query value exists.

Thought Process:

1. Create a binary tree
2. Heap Sort the input array
3. Populate the tree with the elements from the array. (**Goal is to make the tree as balanced as possible)**
4. Walk the tree in search for the a node that has the queried value

Turning a sorted array into a balanced tree:
Root : length of the array / 2
Left child : length of first element to root / 2
Right : length of (root + 1) to last element / 2



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Binary Search Tree

Input : An array (Assumed to be unsorted)
Output : Index value, where the query value is stored in the array

Thought process : **Same as previous just ditch the tree**
Turning a sorted array into a balanced tree:
Root : length of the array / 2
Left child : length of first element to root / 2
Right : length of (root + 1) to last element / 2