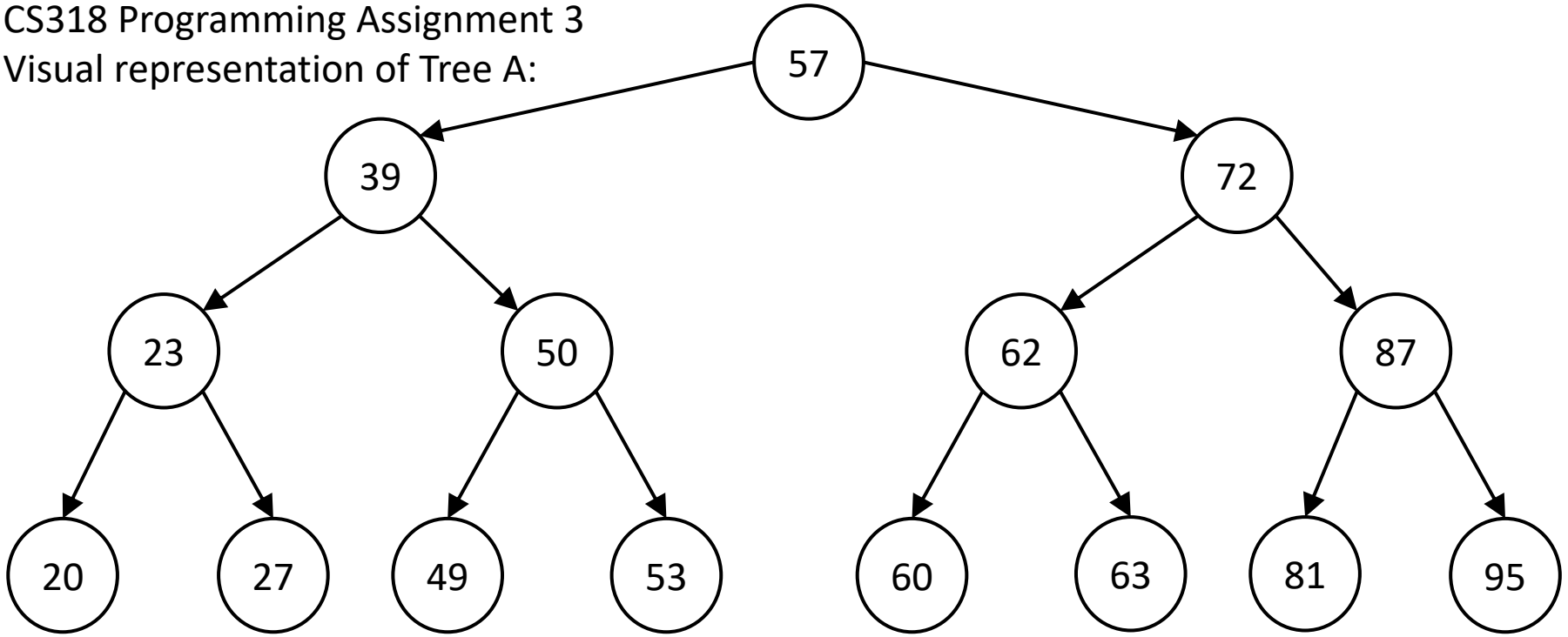
CS318 Programming Assignment 3

Visual representation of Tree A:



Tree A stored in an array. For any node stored at index **`i`**, its left child is stored at index **`(2i +1)`** and its right child is stored at index **`(2i + 2)`**

Index	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Value	57	39	72	23	50	62	87	20	27	49	53	60	63	81	95

To **search for a node recursively**, you start at the root, then compare the value to be searched with the value of the root. If it's equal, you are done with the search. If the key is lesser, go to the left subtree, if not, go to the right subtree. To look for #87 in treeA, 87>57 (=0), so next compare right child at index 2i+2=2. 87>72, so compare with right child at 2i+2= 6. 87==87, so return array index 6.