

Ds

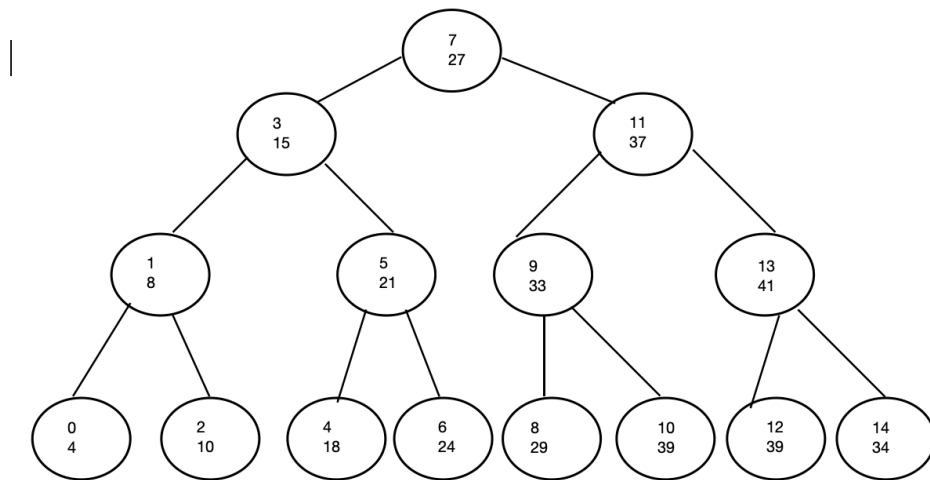
## Analysis of Binary Search

Size = 15  
Length = 15

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4	8	10	15	18	21	24	27	29	33	34	37	39	41	43
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

The tracing tree for the following list is as follows



- For successful search

The best case time for this problem is min -  $O(1)$

The worst case time for this problem is max -  $O(\log n)$

- For unsuccessful search

Its always  $O(\log n)$  weather the call be recursive or iterative

- The max no of calls this problem will be making is 4 and if the element is not the call will be 5