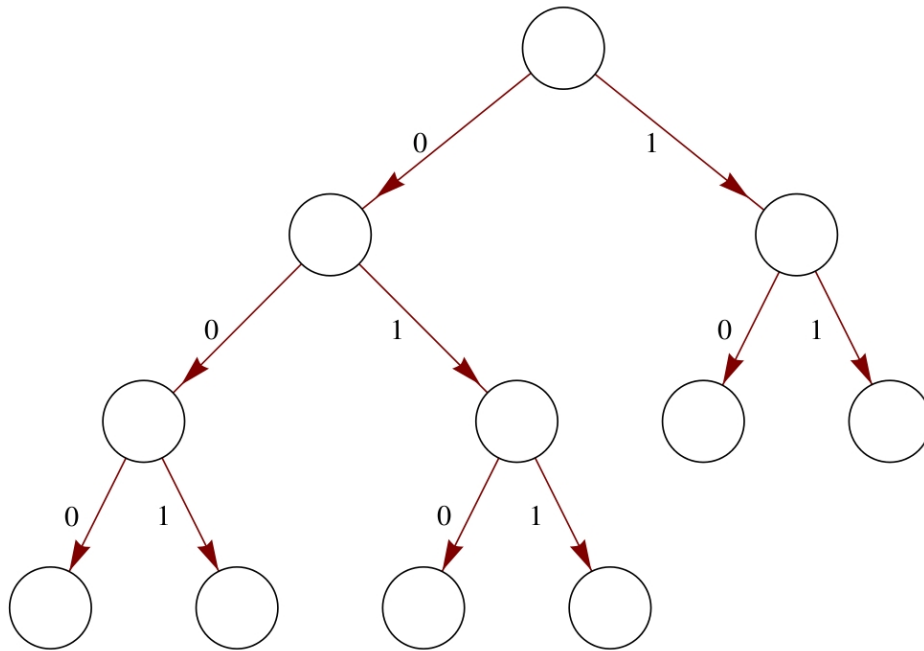
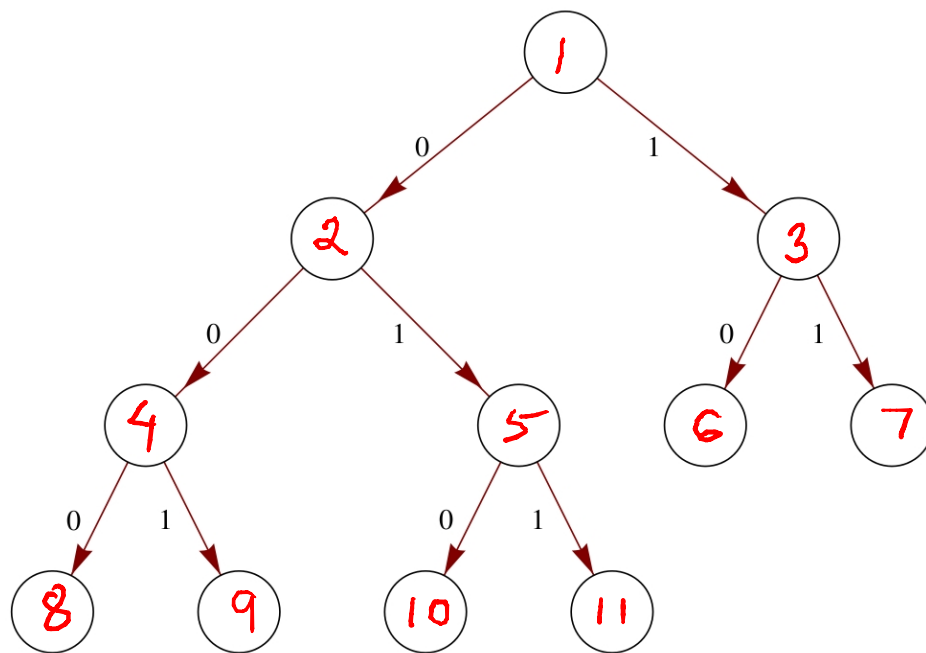


Heapsort

Note Title

3/6/2012

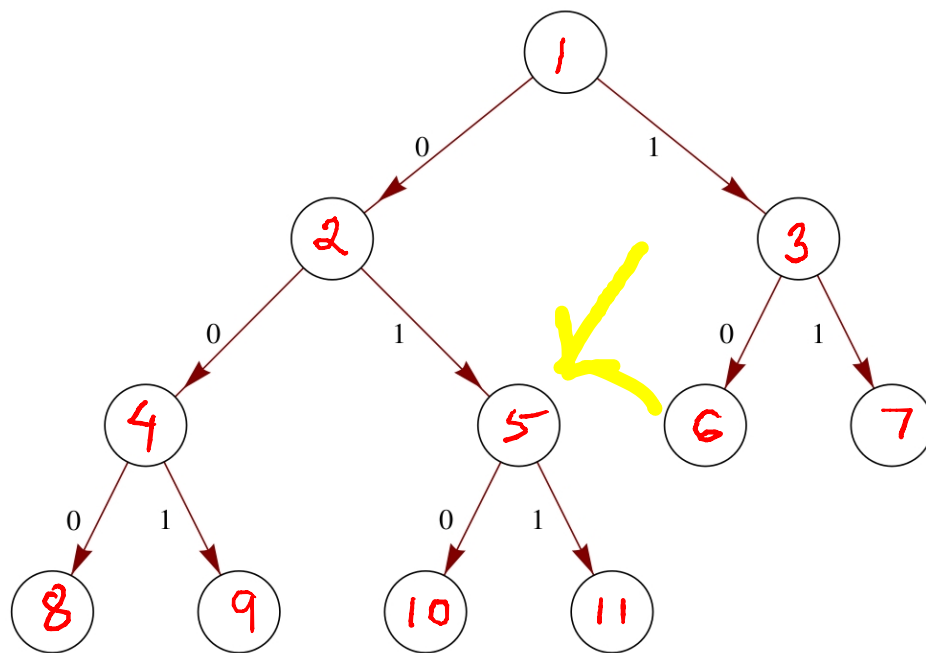




A level-by-level
complete tree
with 11
nodes

The last parent

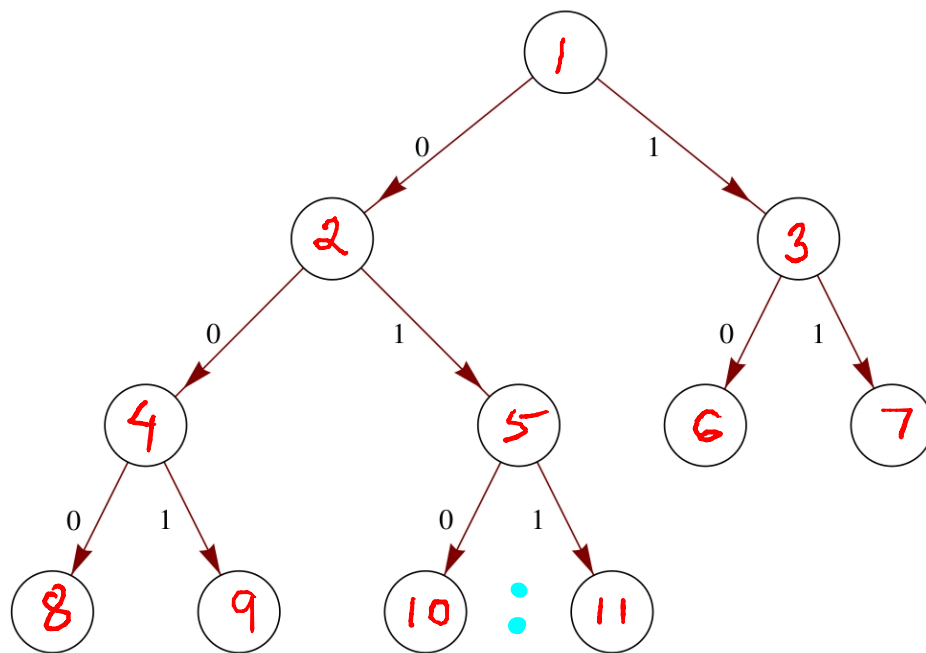
$$\left\lfloor \frac{11}{2} \right\rfloor = 5$$



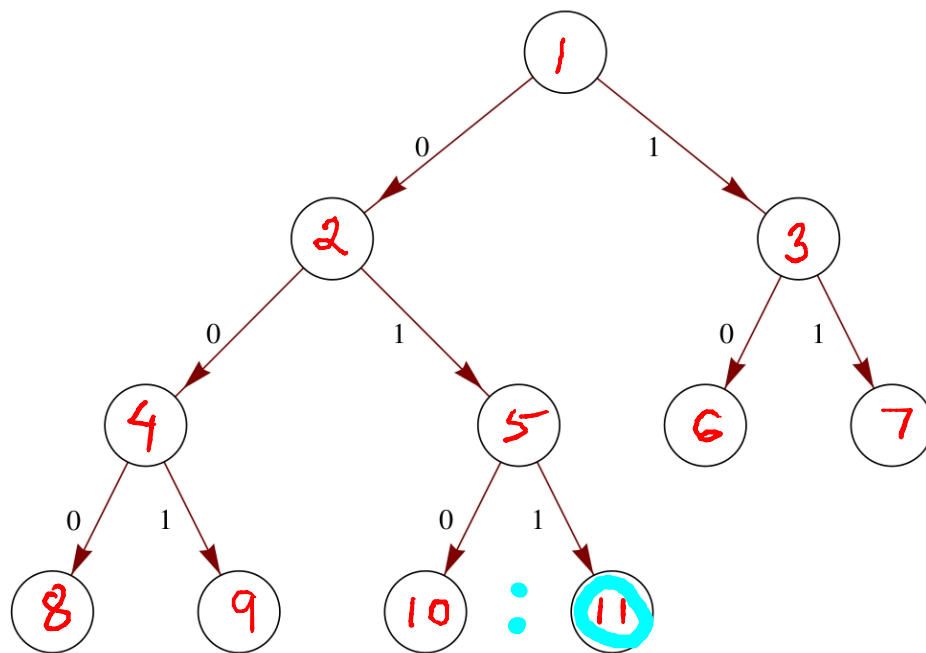
A level-by-level
complete tree
with 11
nodes

The last parent

$$\left\lfloor \frac{11}{2} \right\rfloor = 5$$

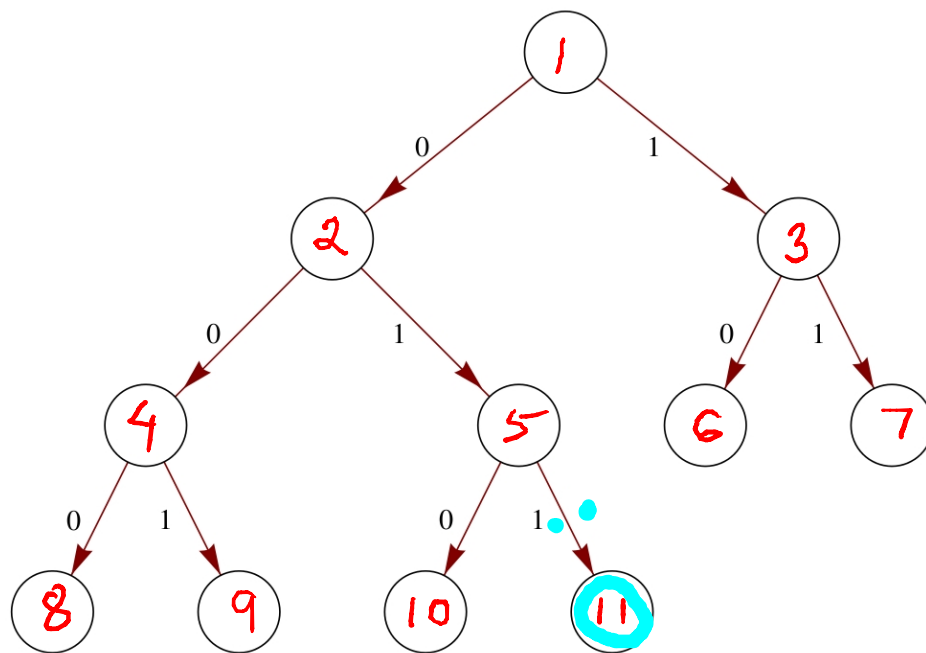


Compare 10 and 11

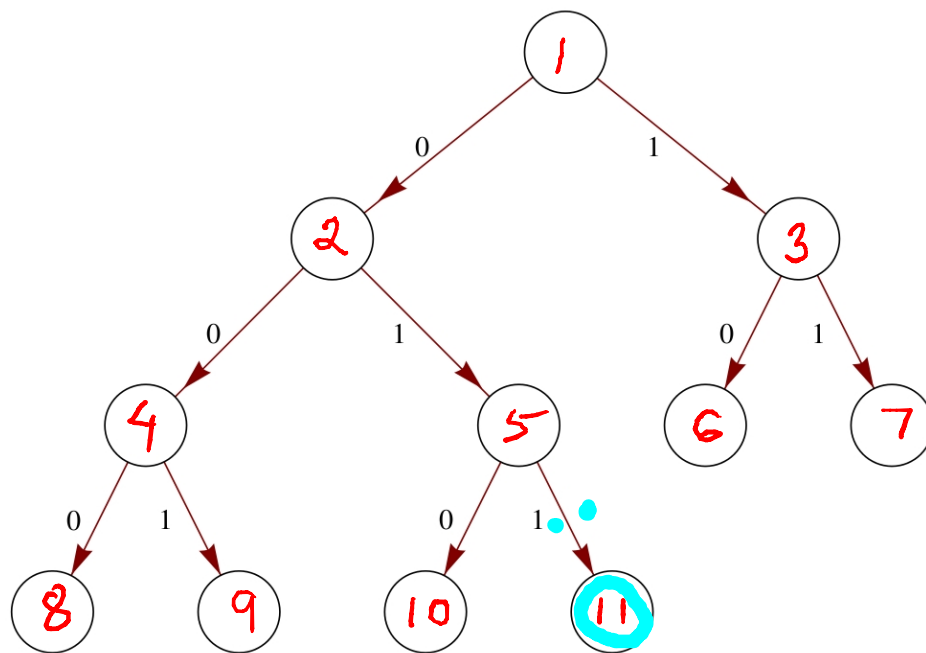


Compare 10 and 11

11 is larger

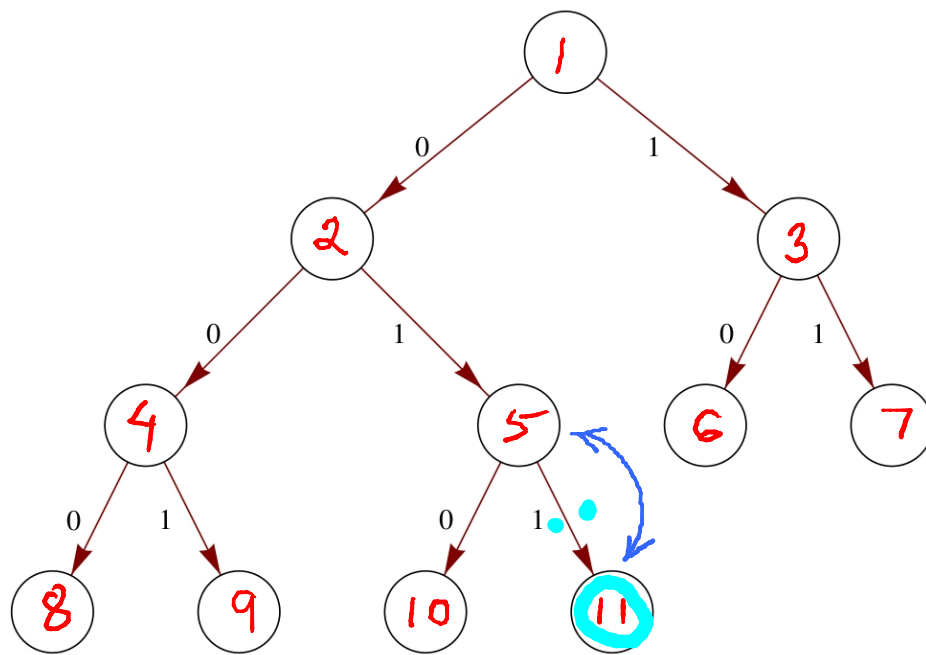


Compare 11 and 5



Compare 11 and 5

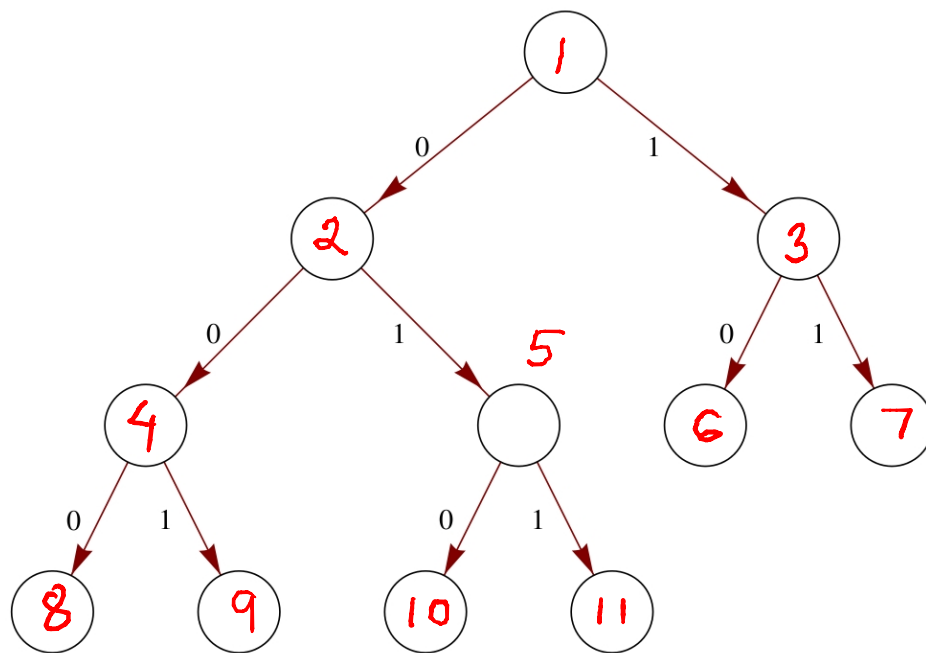
5 is smaller



Compare 11 and 5

5 is smaller

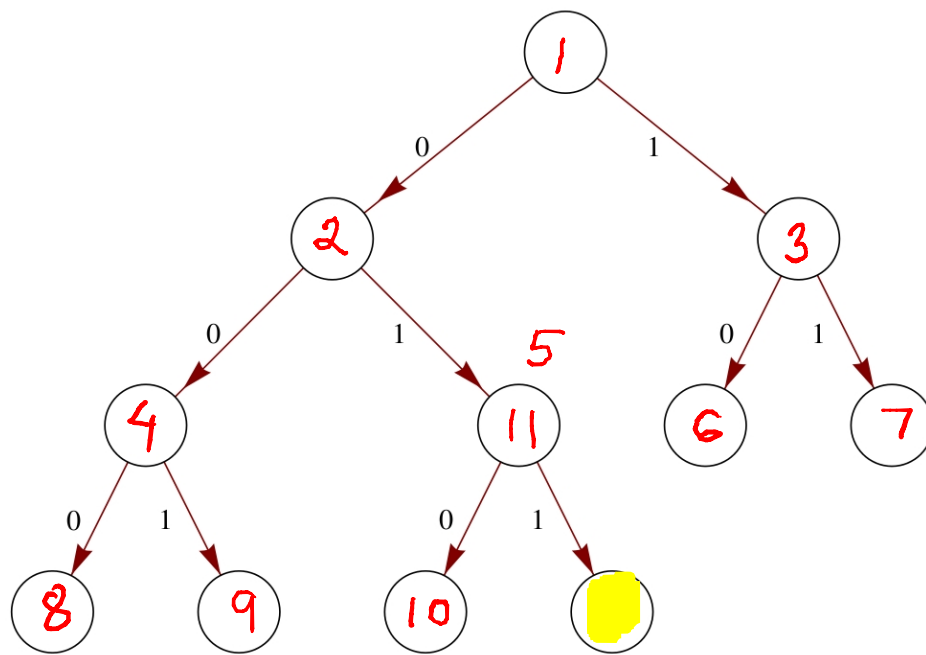
So, 11 must be promoted and 5 must be demoted



Compare 11 and 5

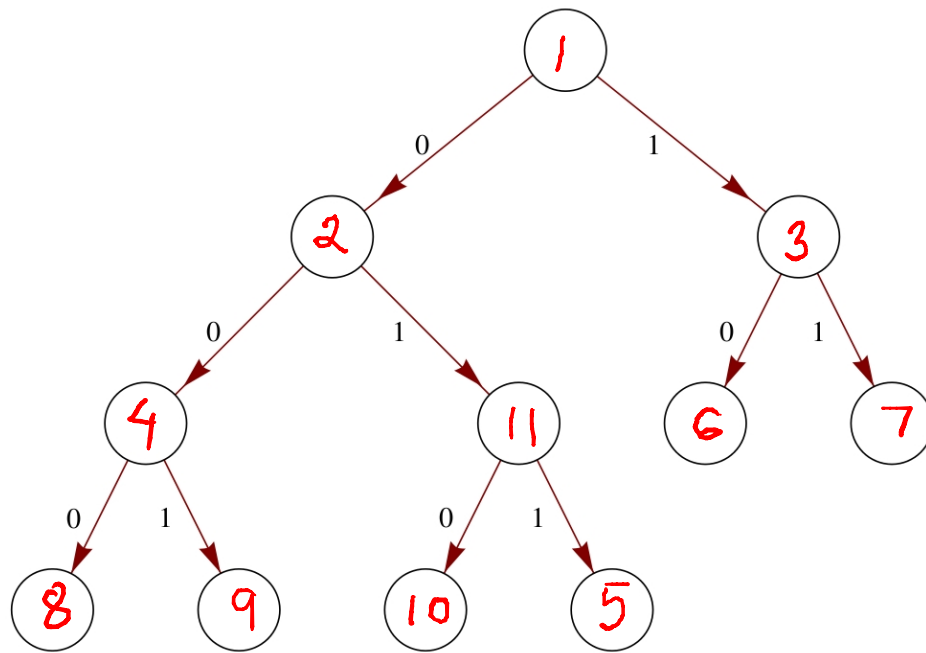
5 is smaller

So, 11 must be promoted and 5 must be demoted



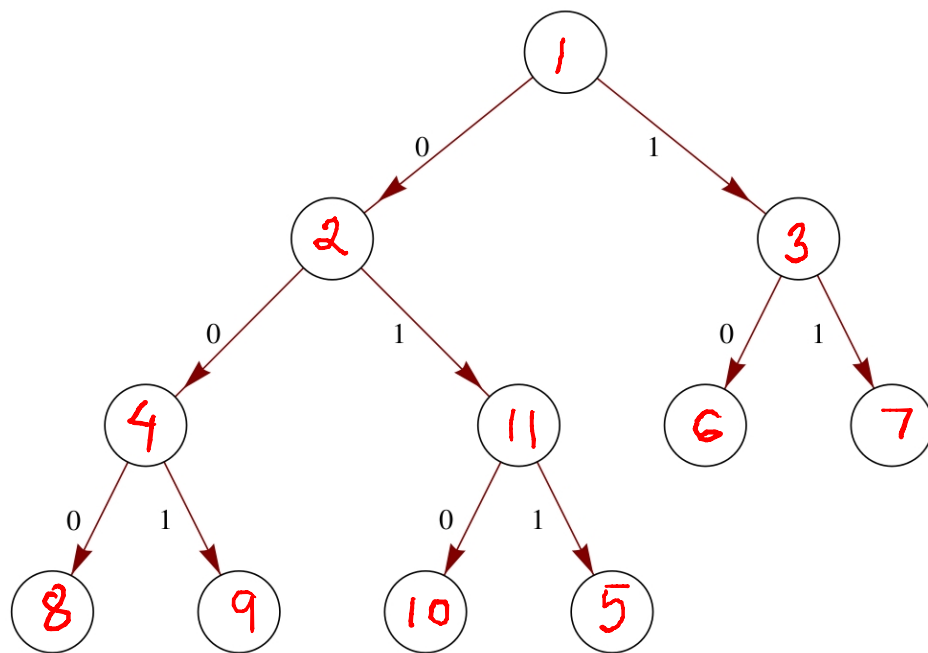
So, 11 must be promoted and 5 must be demoted

Since the vacancy is at a leaf, 5 will be placed there.



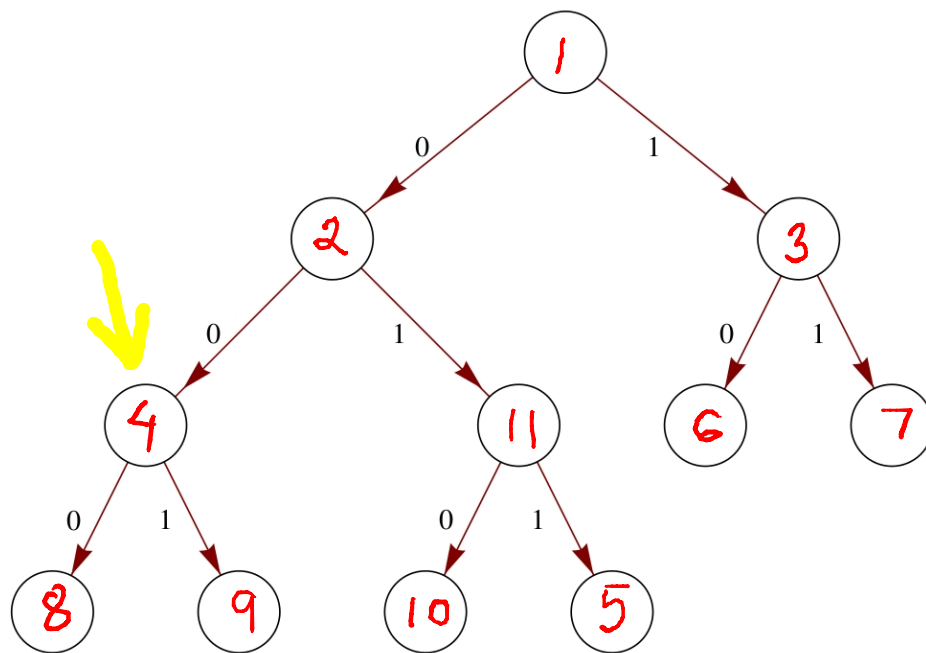
So, 11 must be promoted and 5 must be demoted

Since the vacancy is at a leaf, 5 will be placed there.



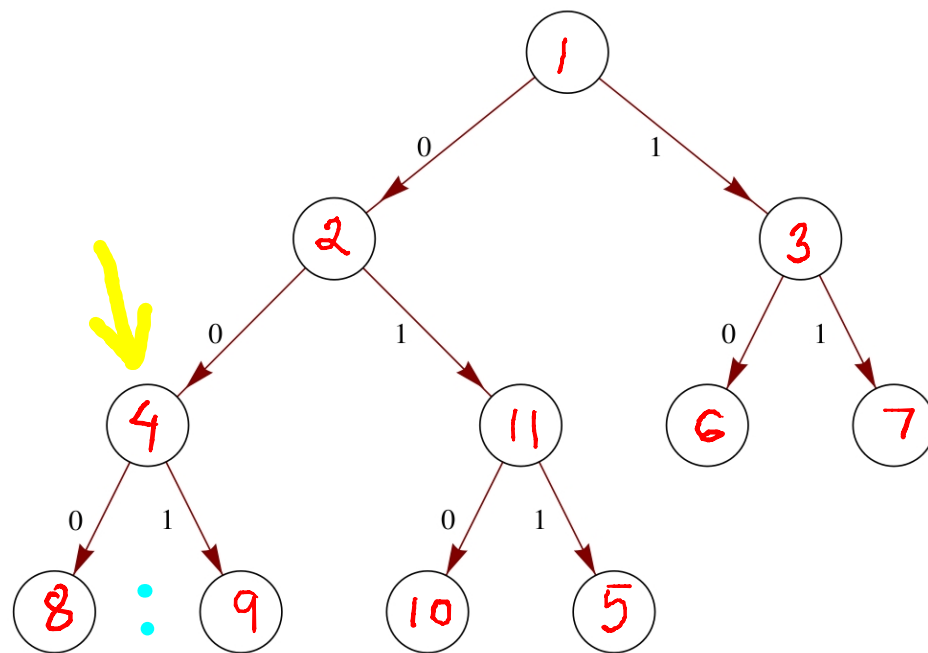
And so

on ...



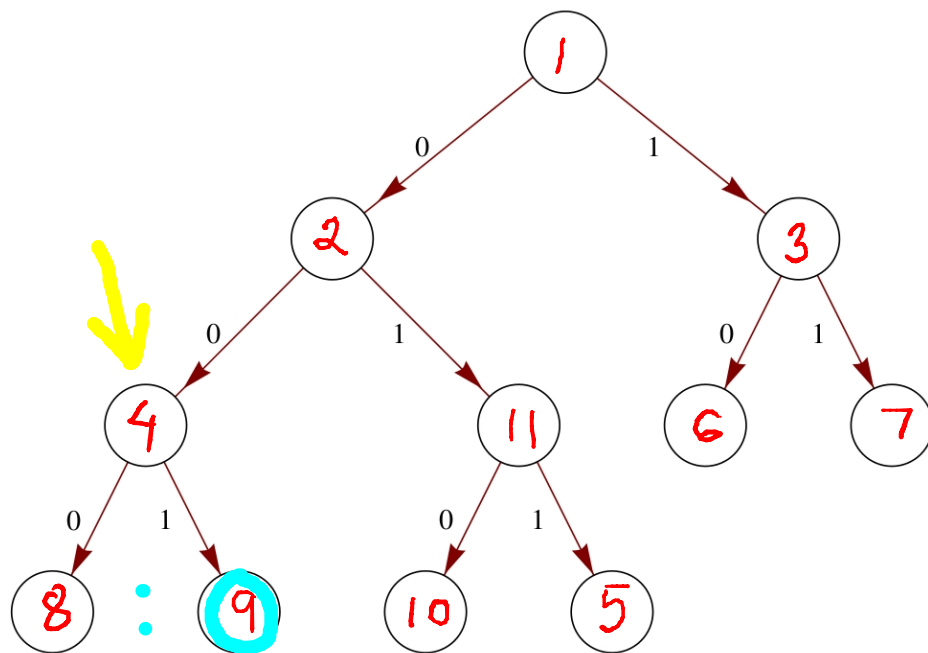
And so

on ...



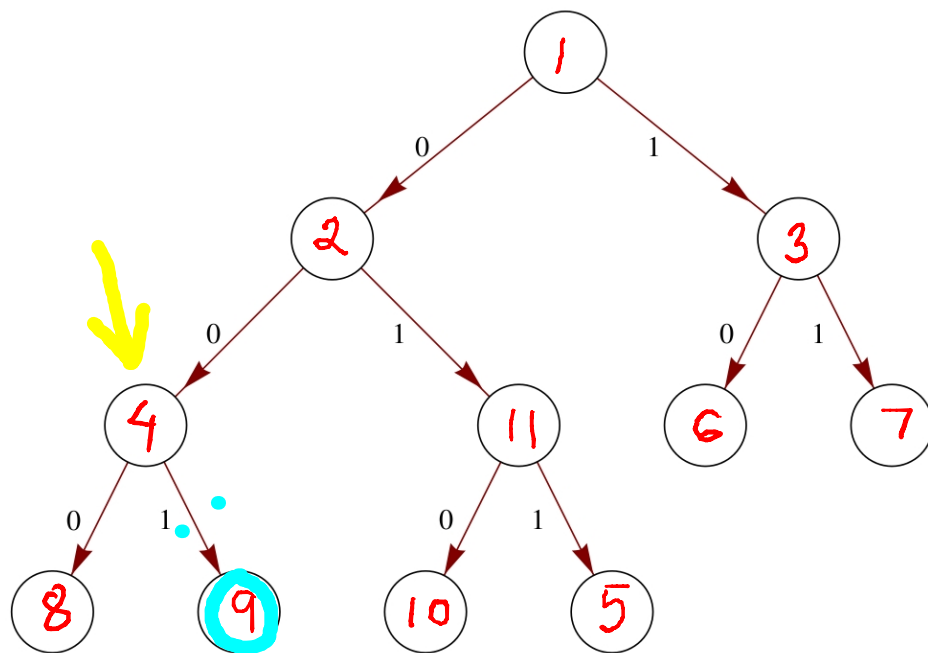
And so

on ...



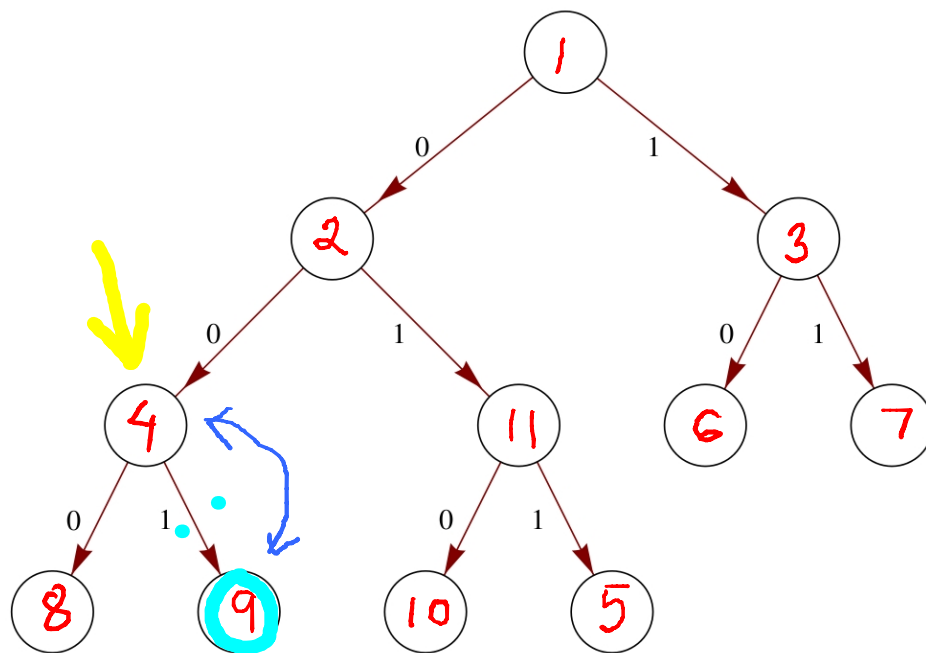
And so

on ...



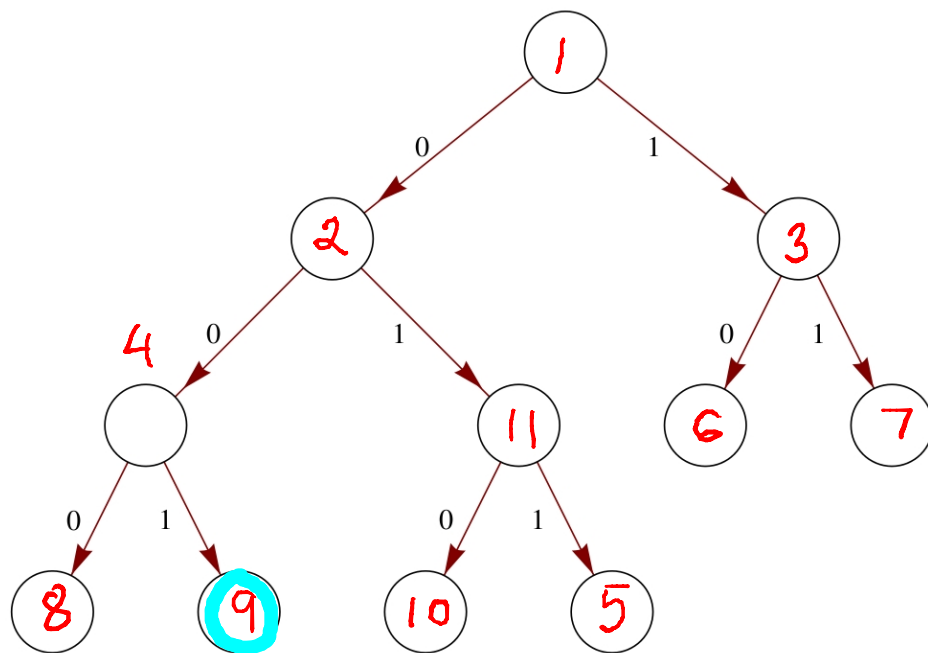
And so

on ...



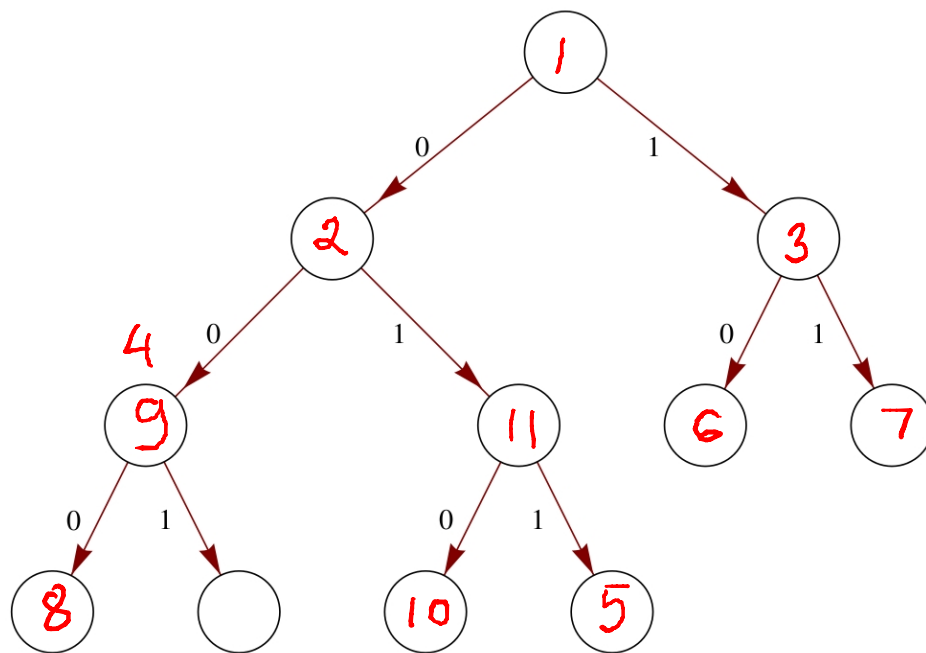
And so

on ...



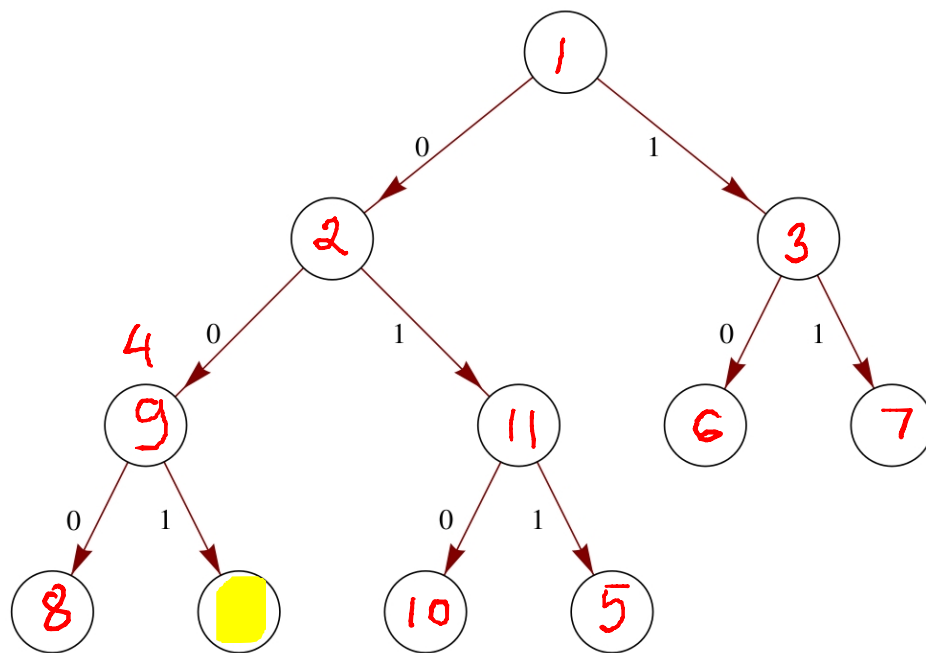
And so

on ...



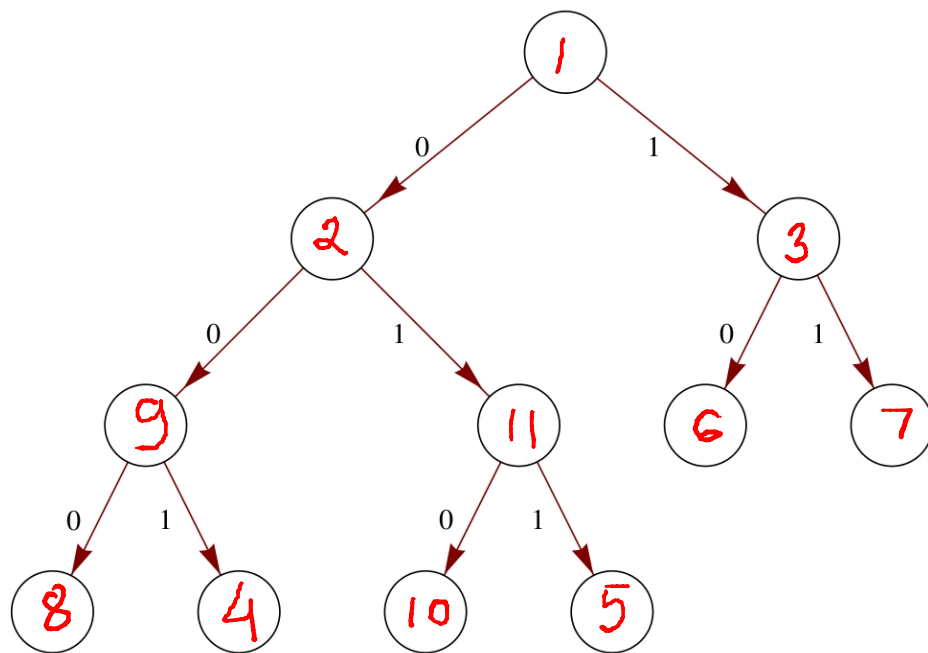
And so

on ...



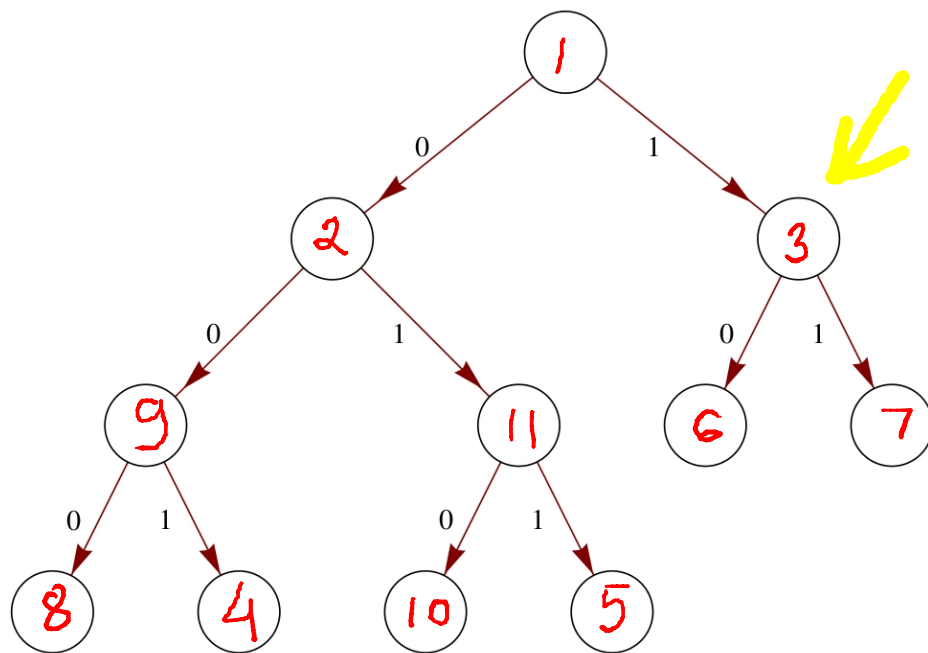
And so

on ...



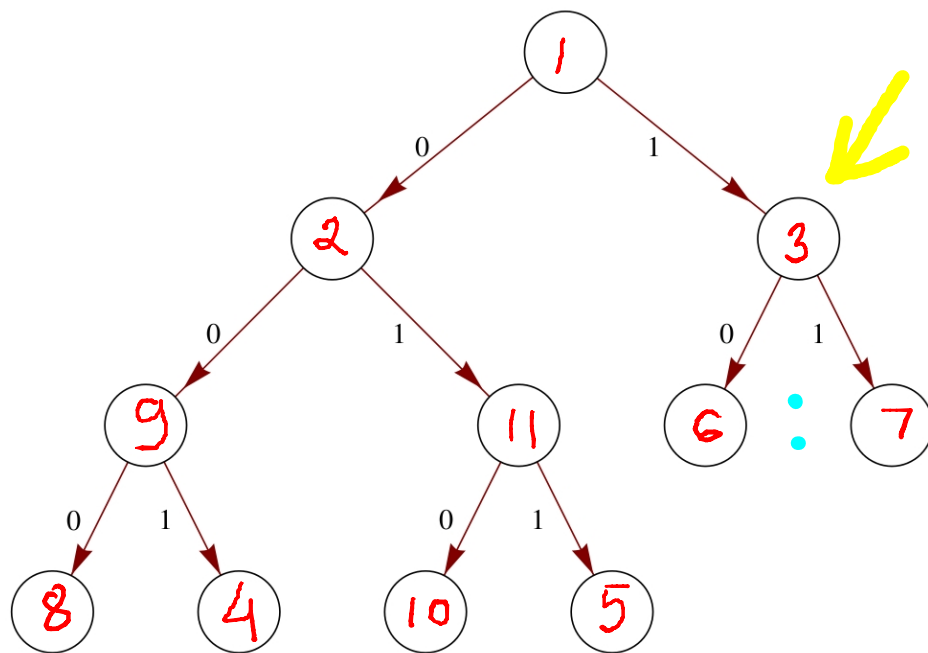
And so

on ...



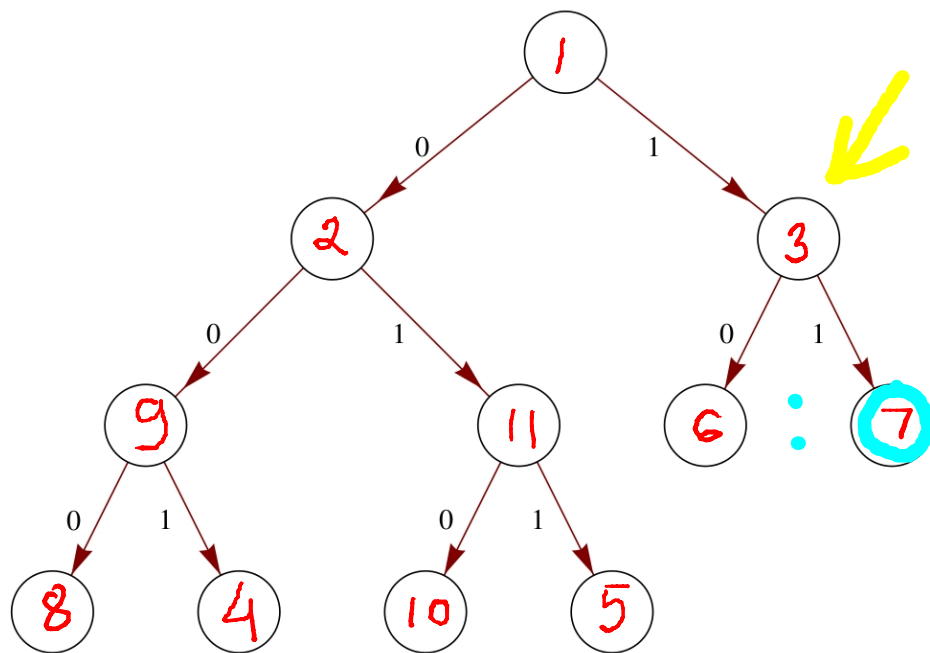
And so

on ...



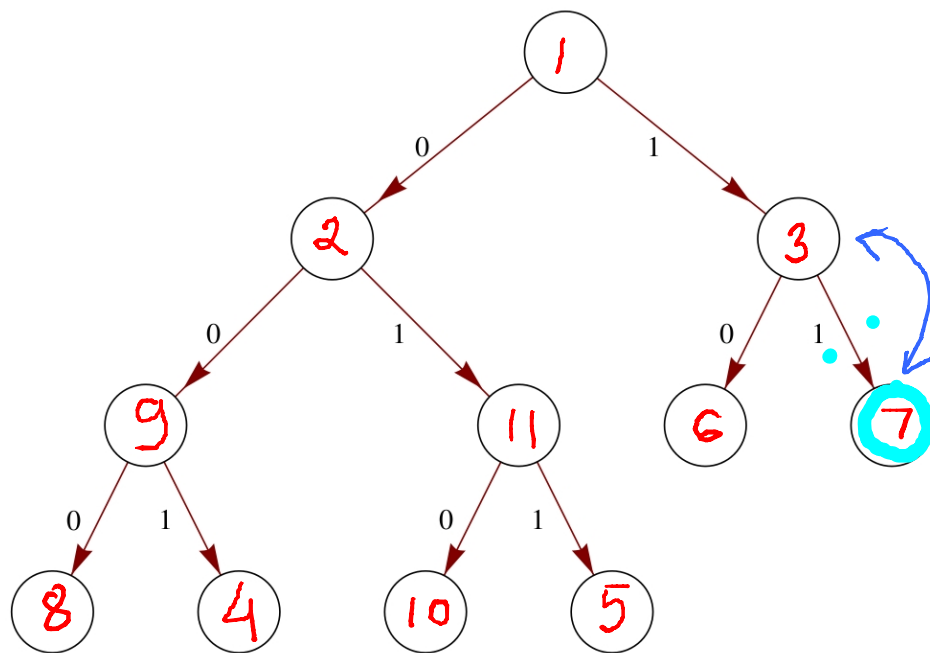
And so

on ...



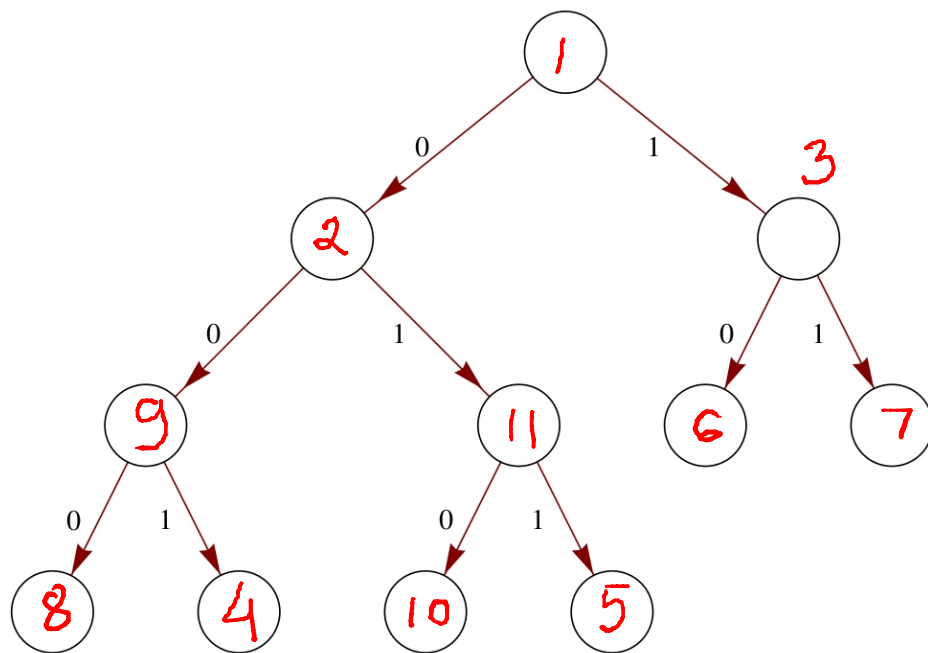
And so

on ...



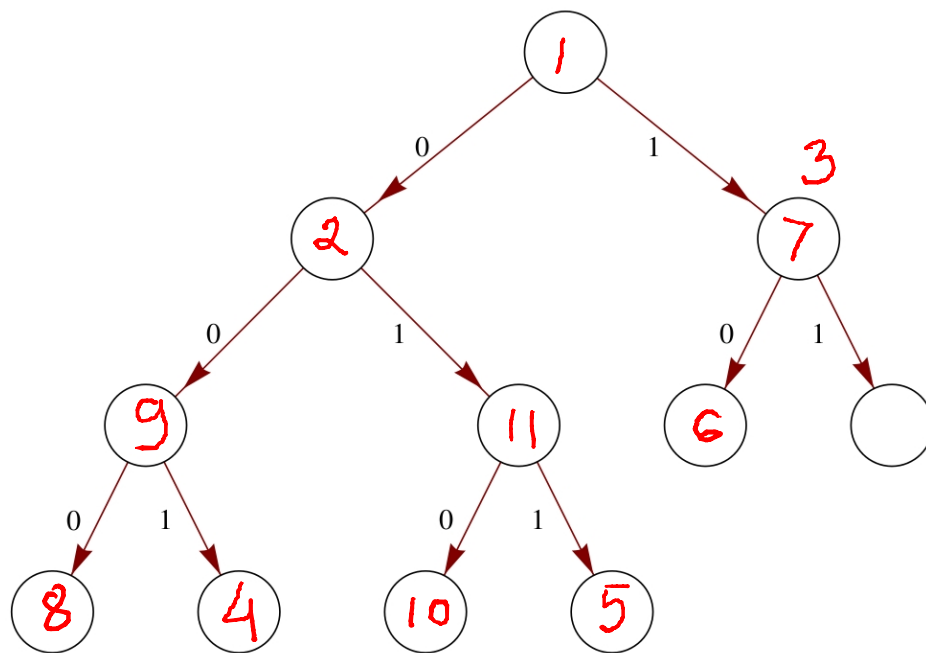
And so

on ...



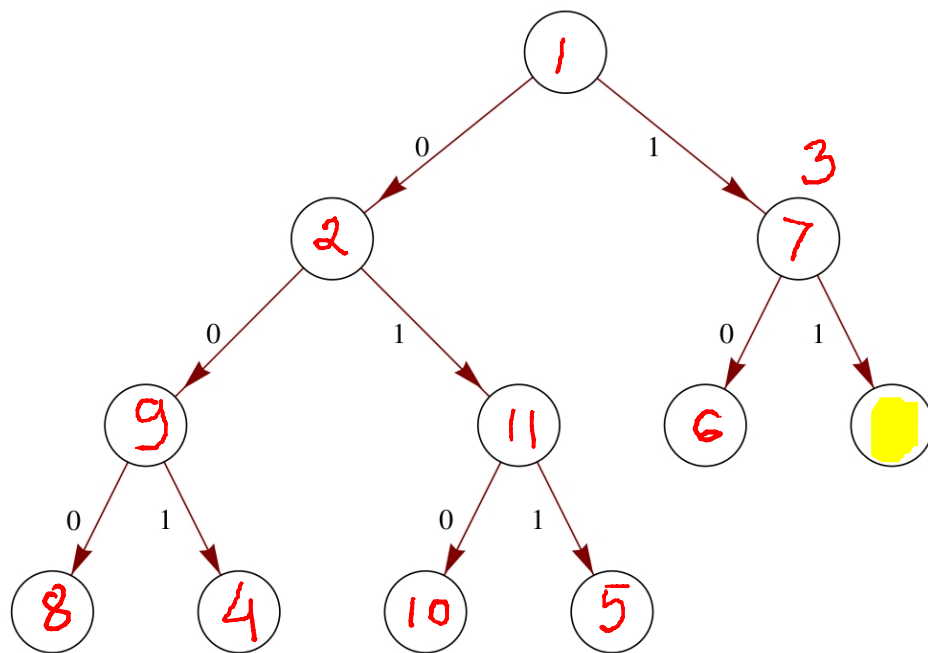
And so

on ...



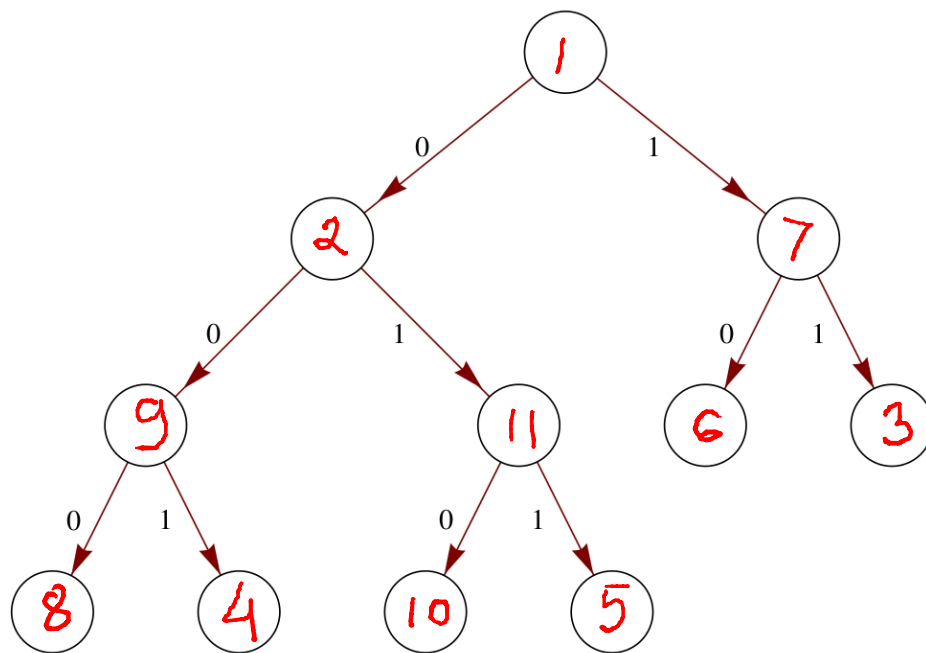
And so

on ...



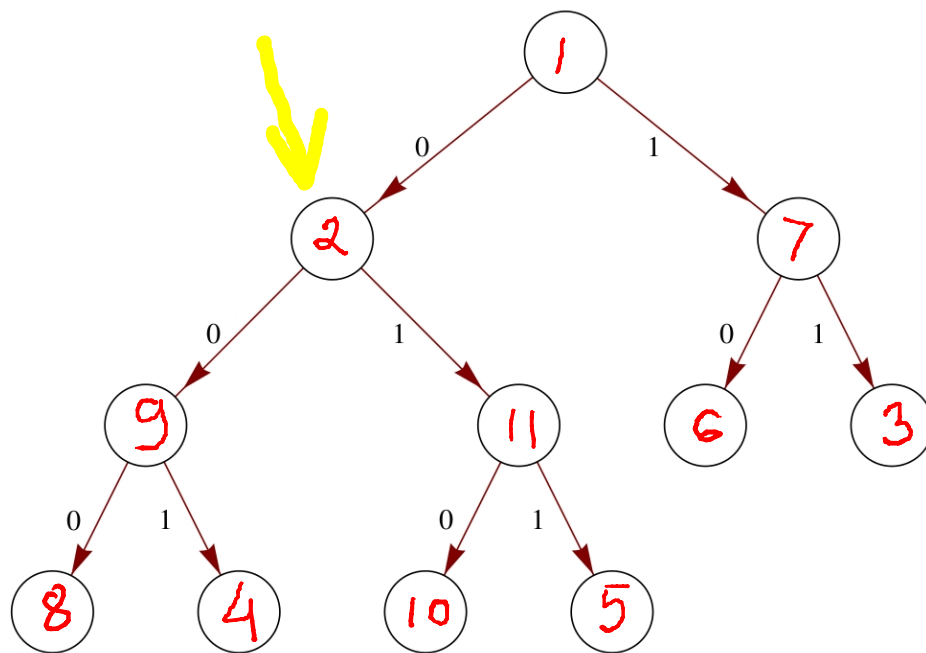
And so

on ...



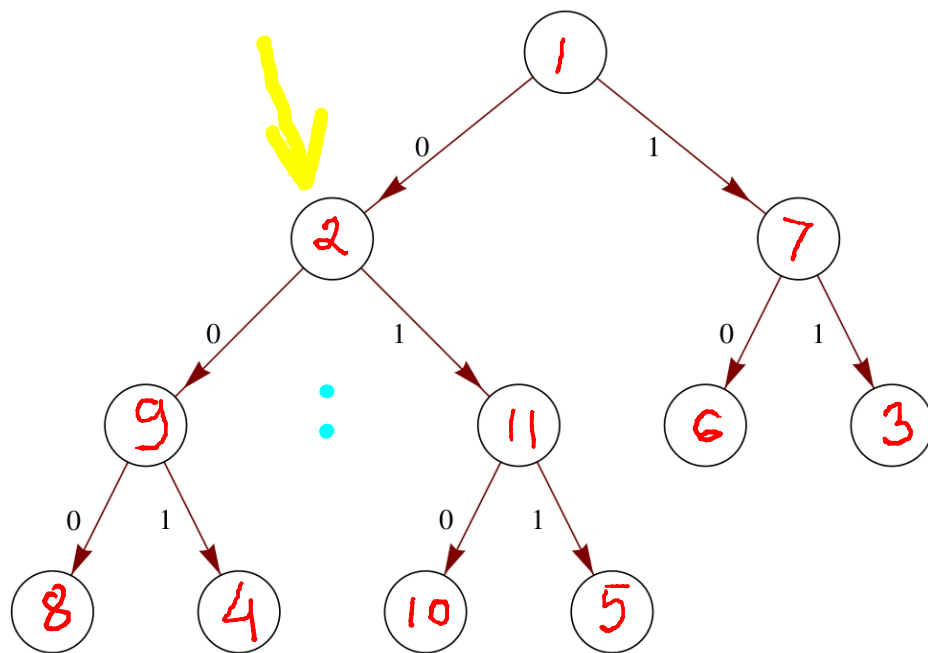
And so

on ...



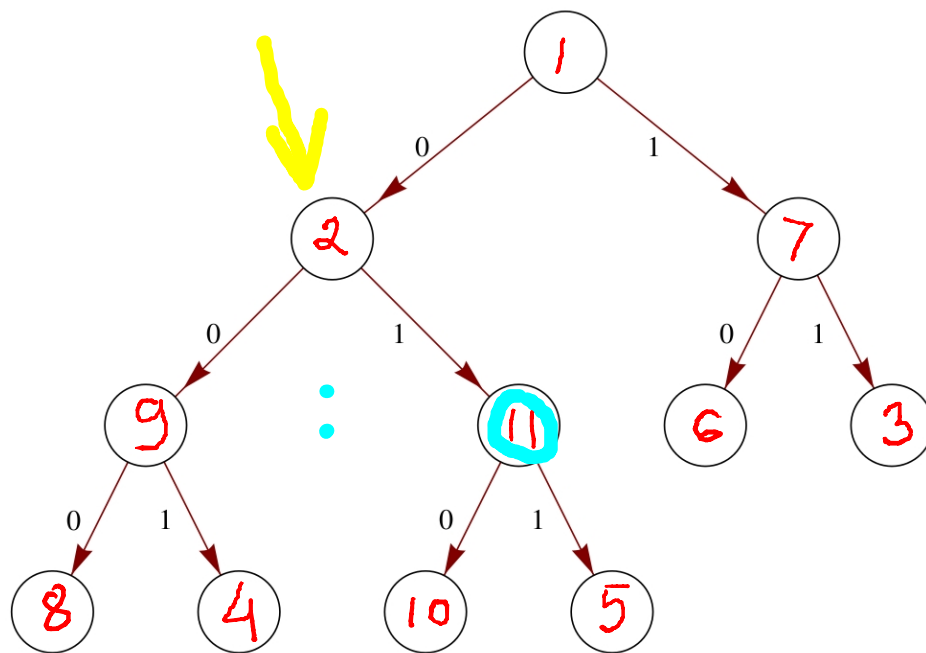
And so

on ...



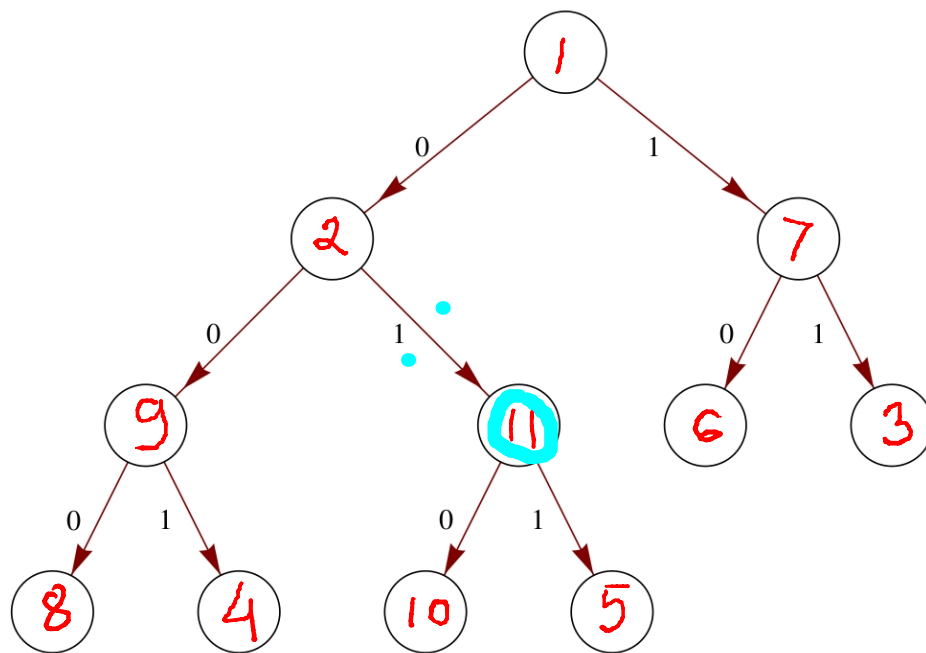
And so

on ...



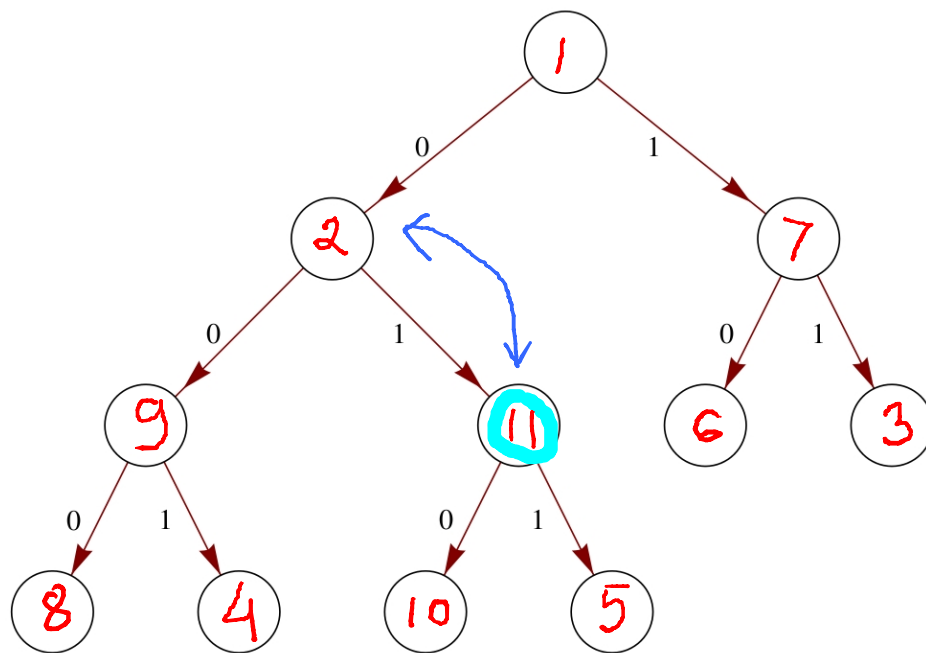
And so

on ...



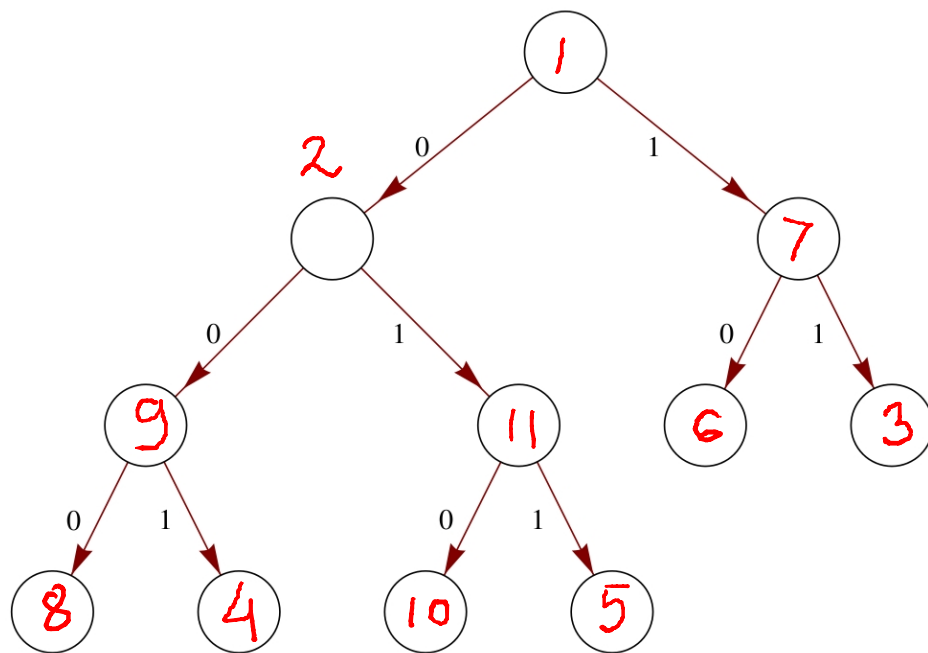
And so

on ...



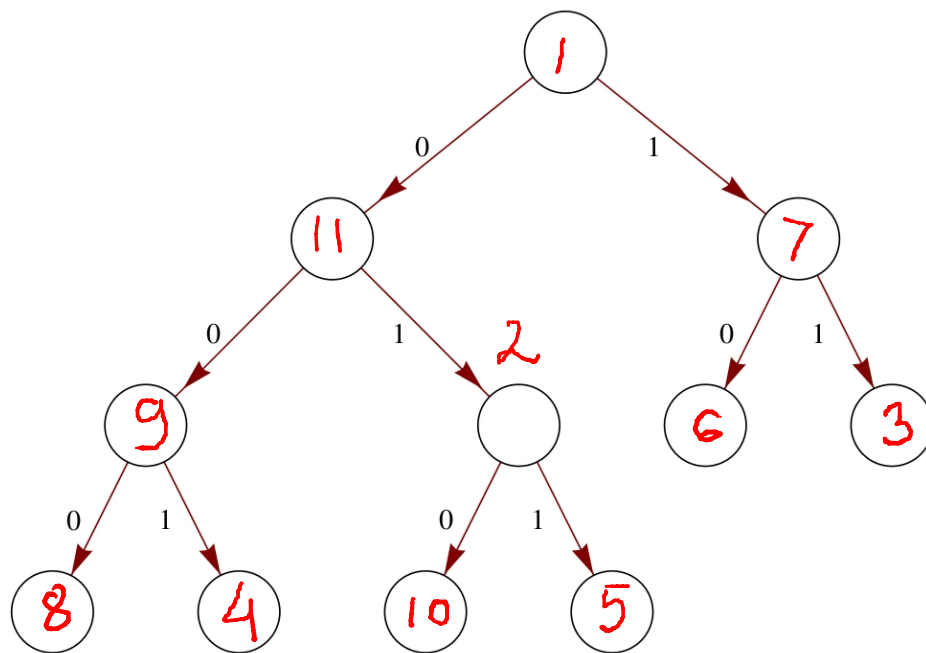
And so

on ...



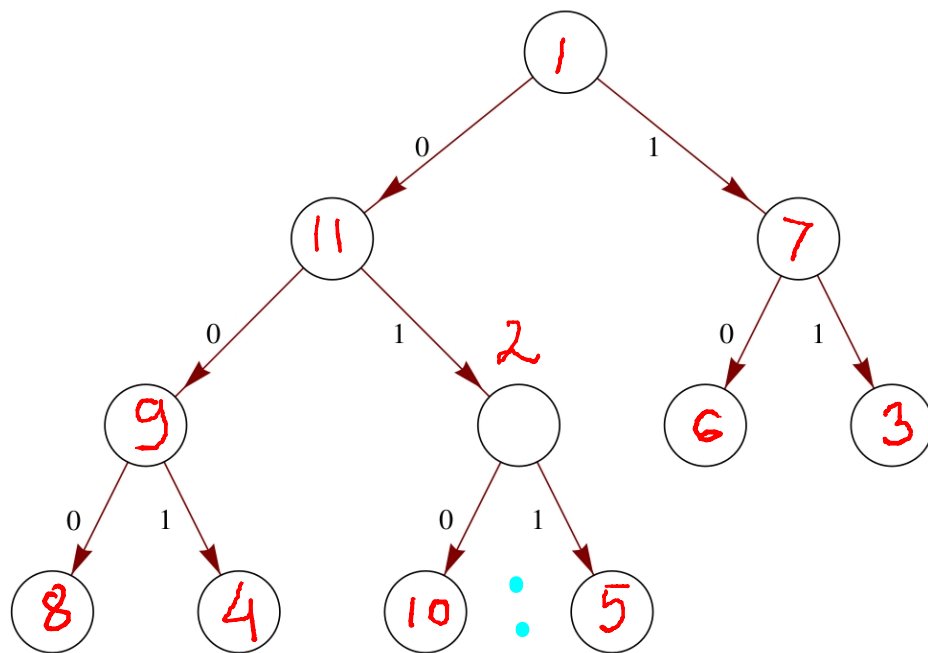
And so

on ...



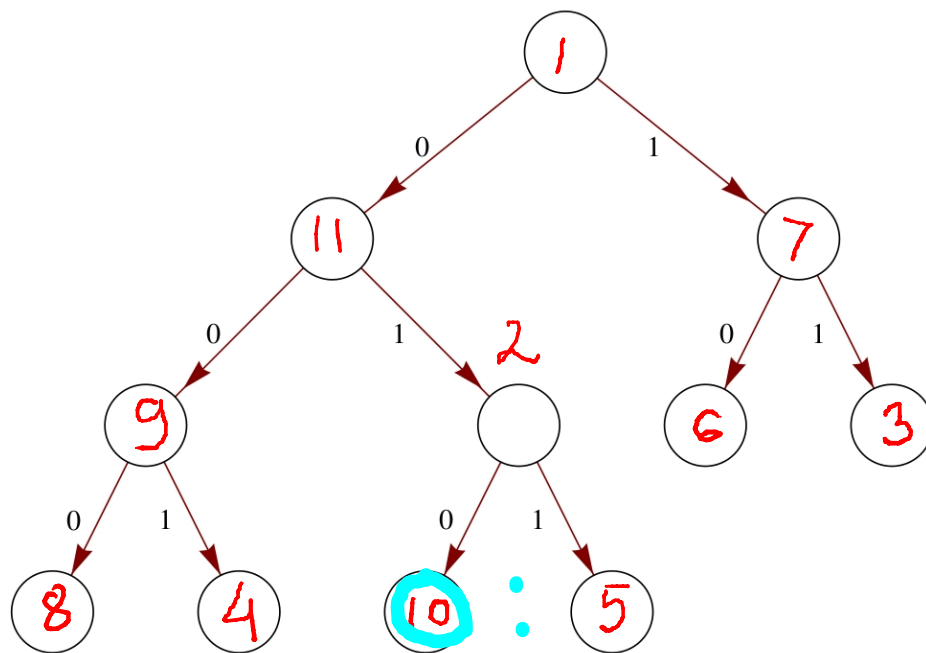
And so

on ...



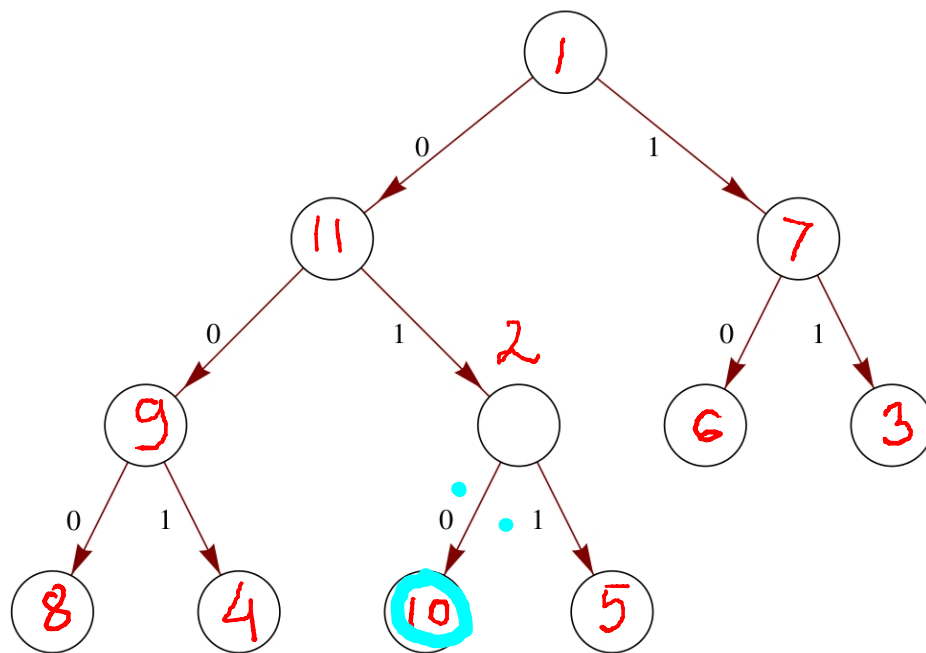
And so

on ...



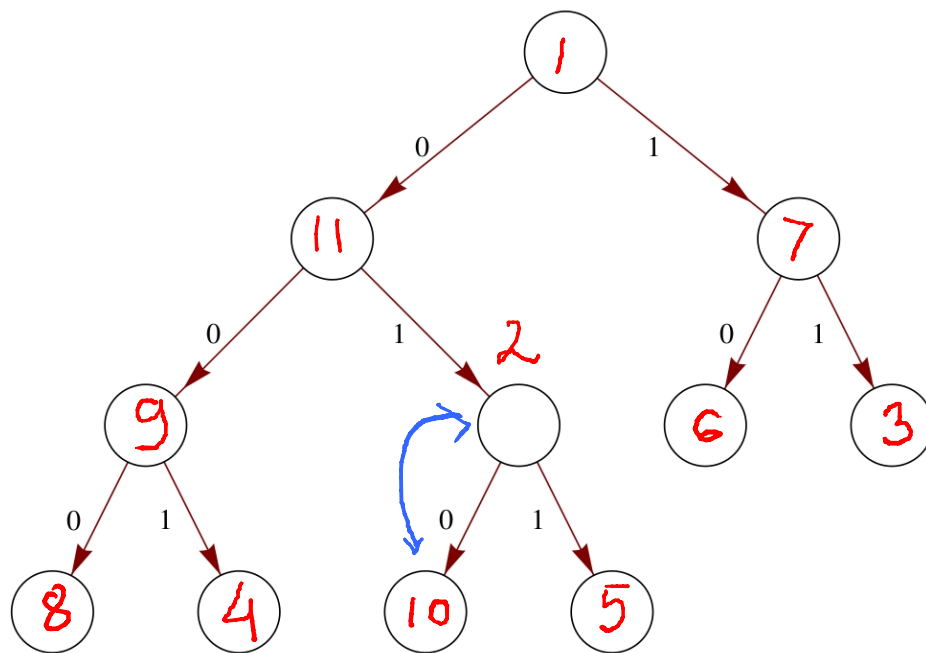
And so

on ...



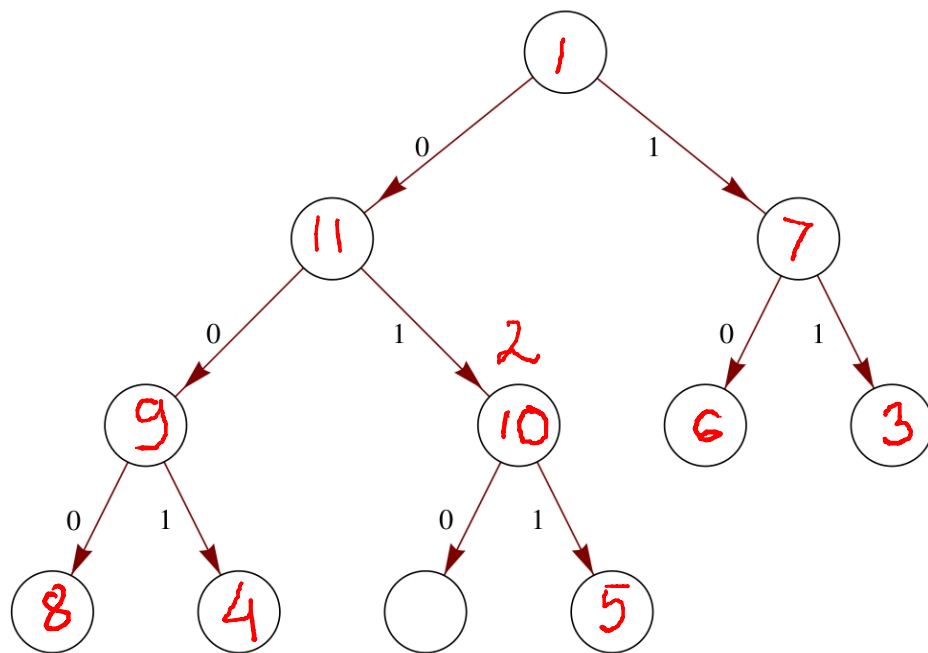
And so

on ...



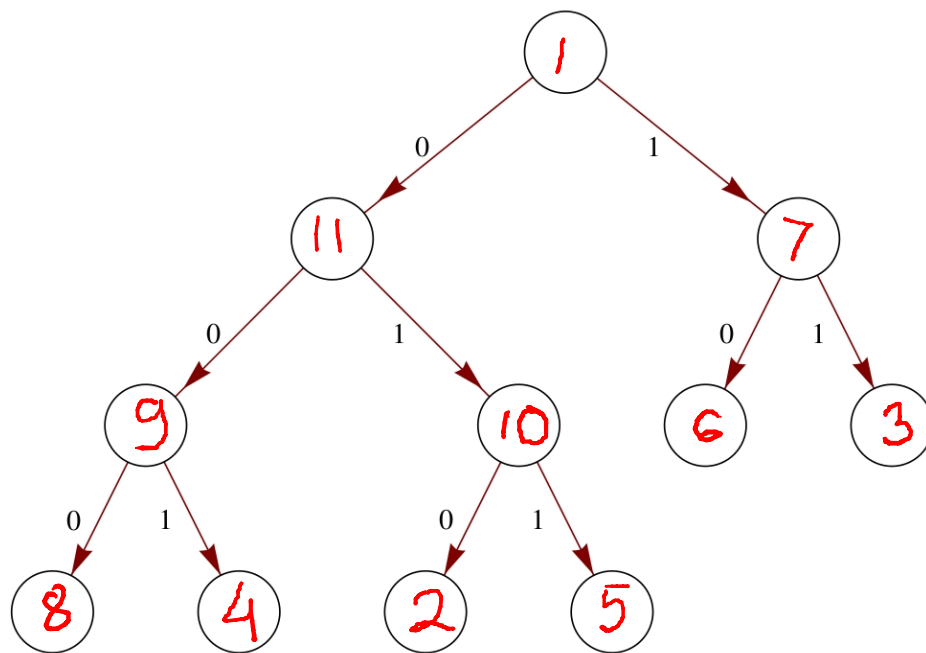
And so

on ...



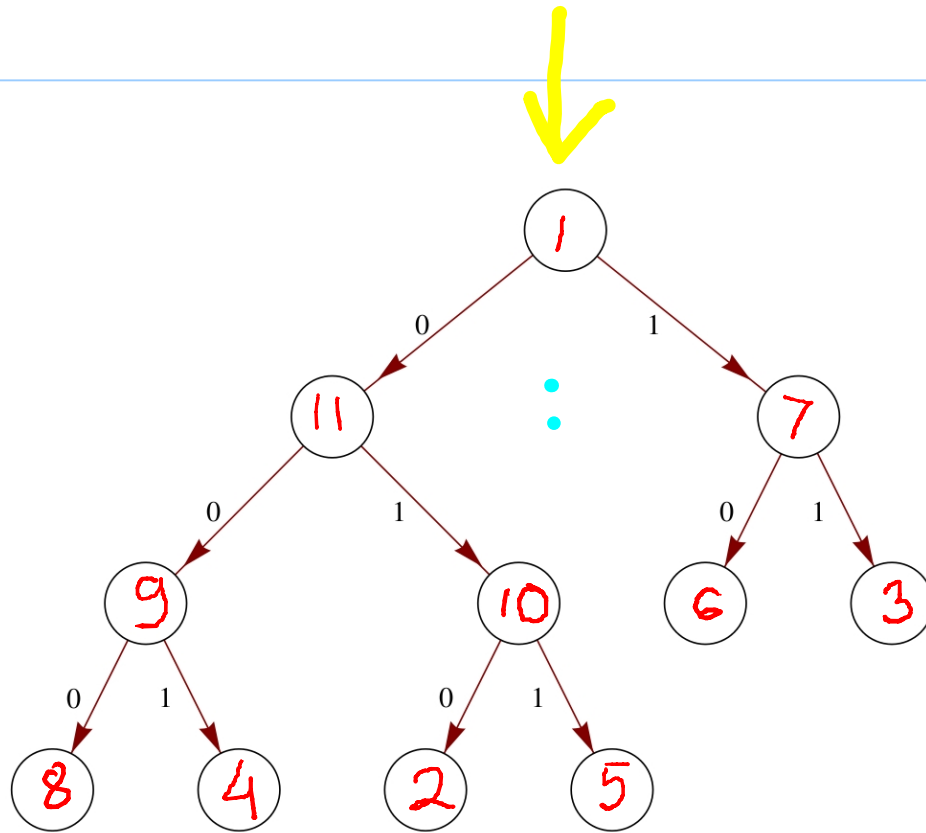
And so

on ...



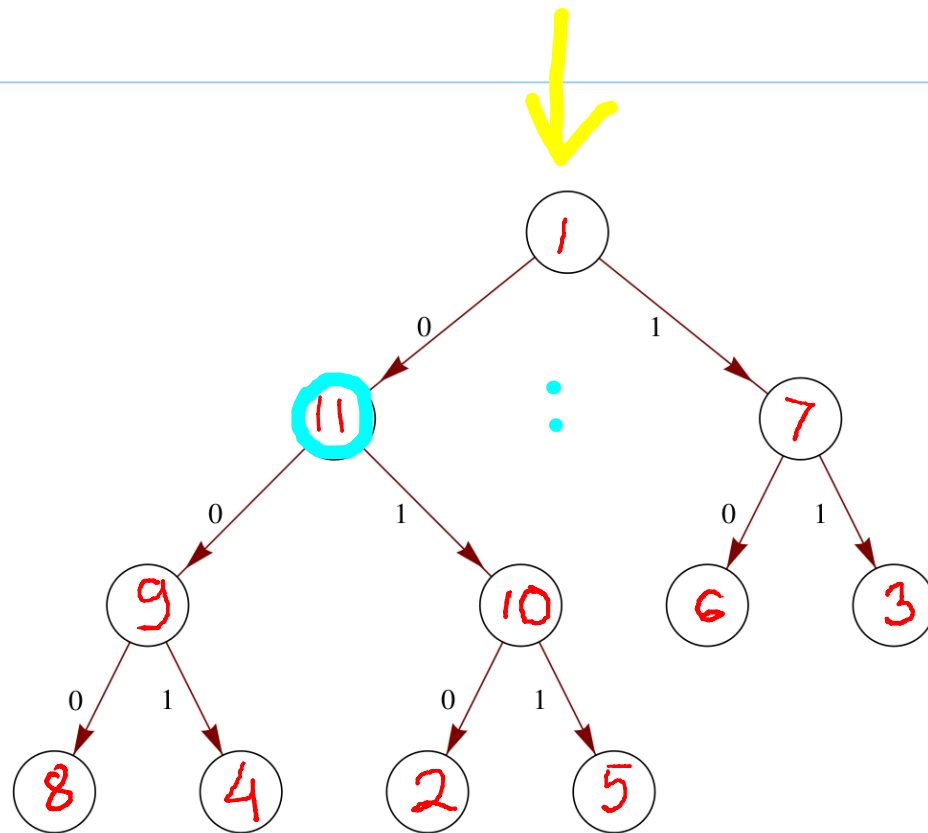
And so

on ...



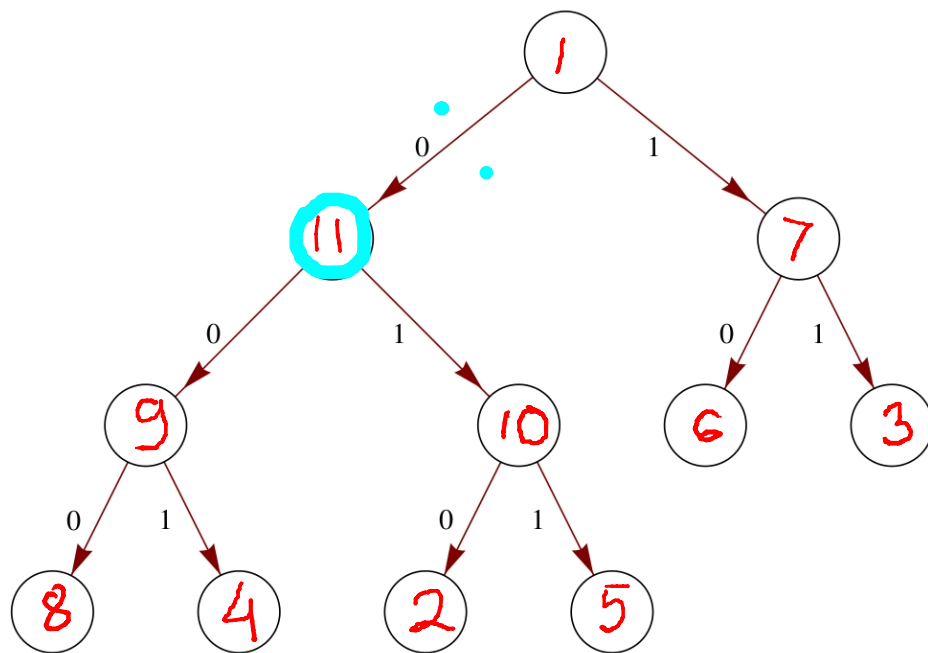
And so

on ...



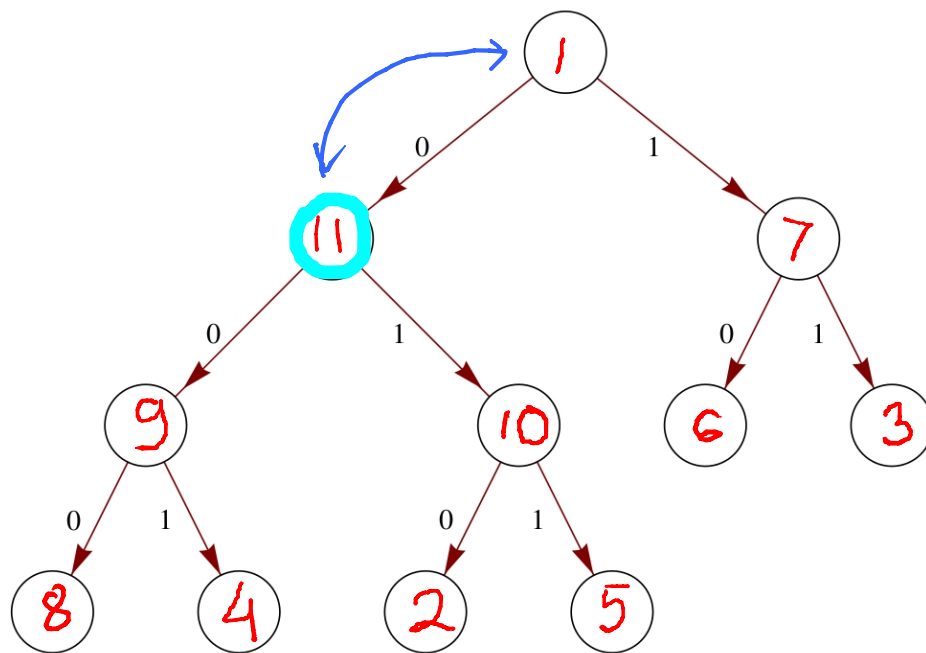
And so

on ...



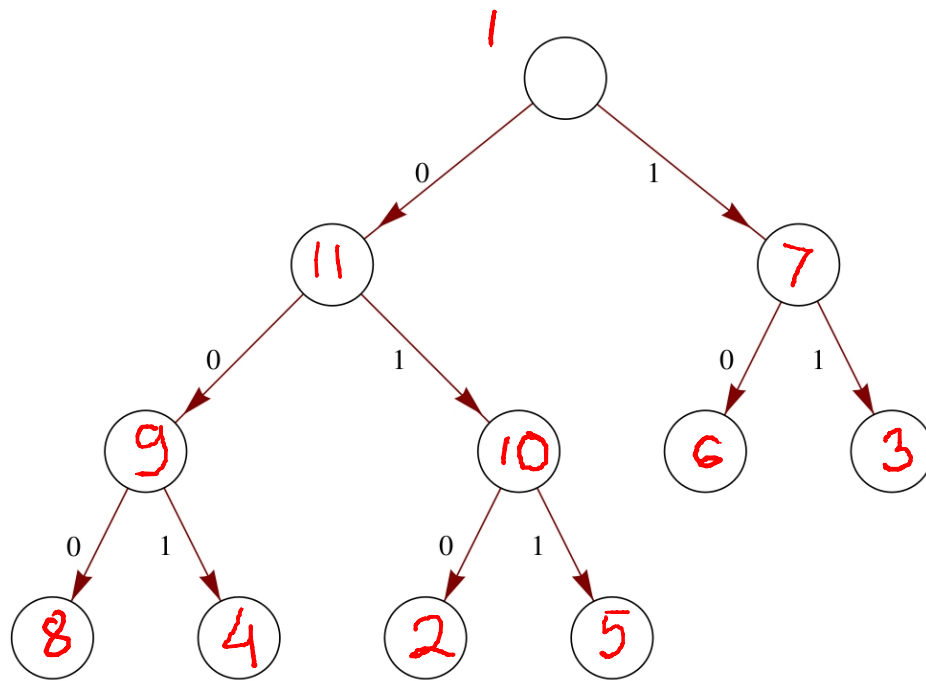
And so

on ...



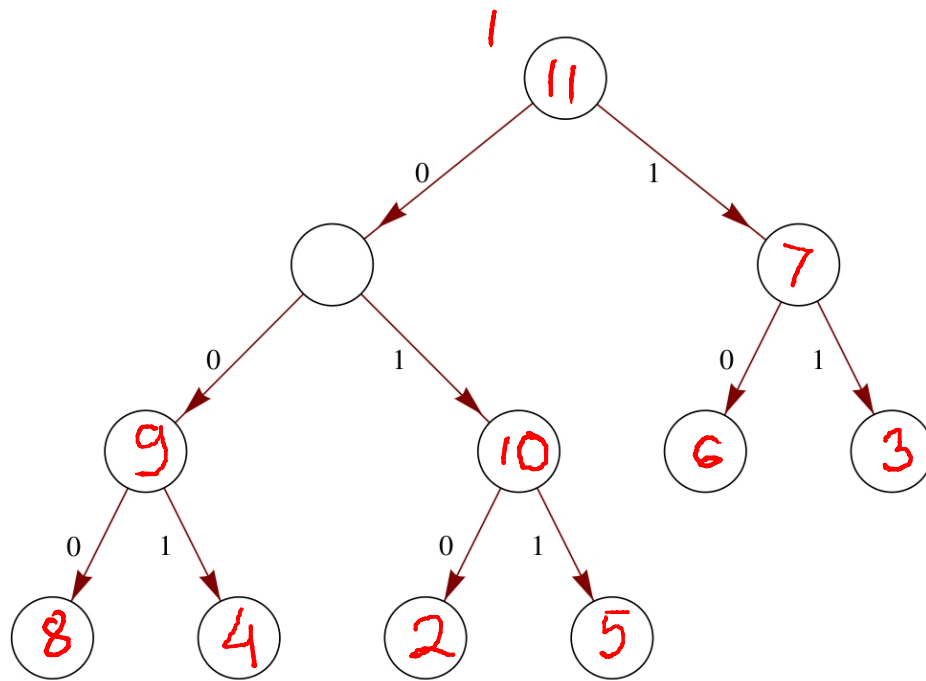
And so

on ...



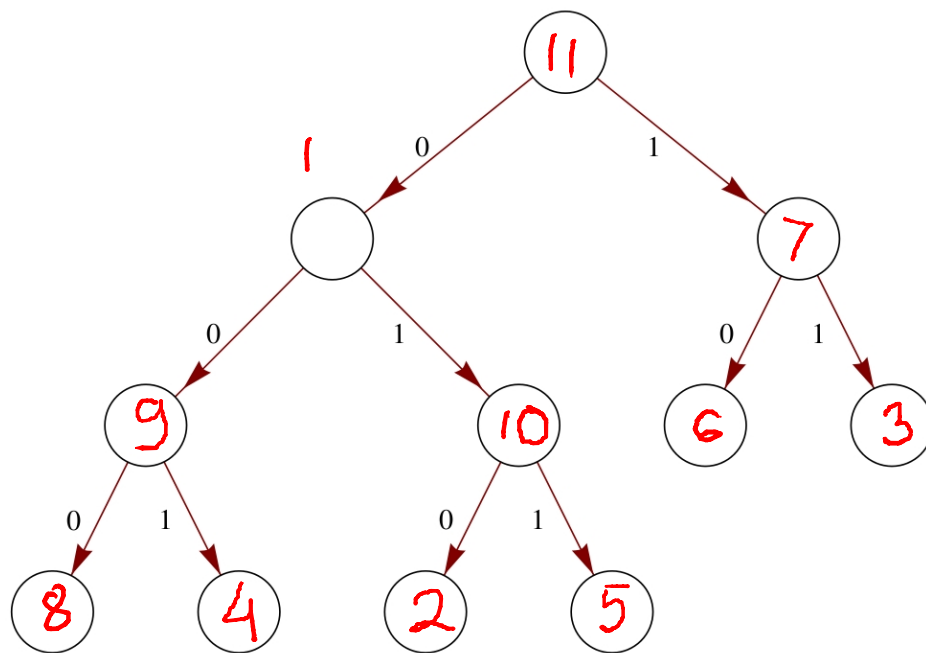
And so

on ...



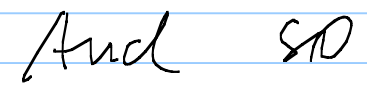
And so

on ...

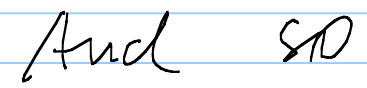


And so

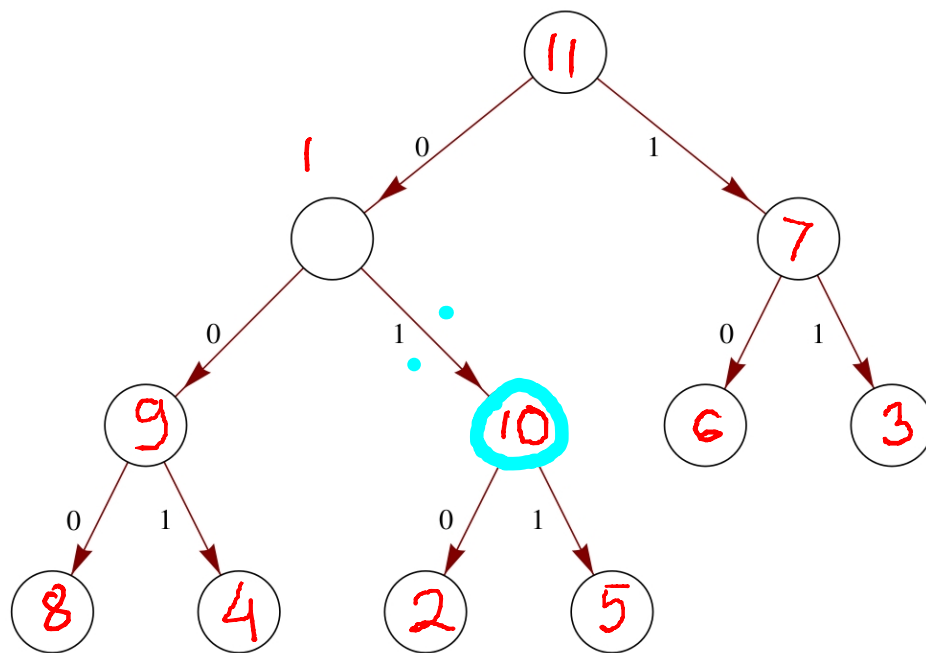
on ...



on . . .

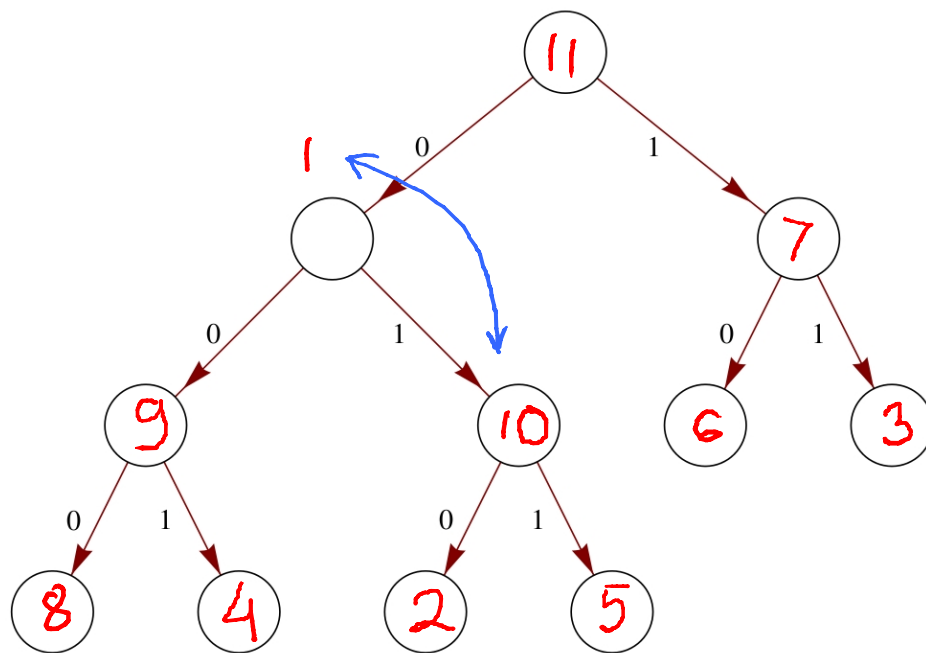


And so



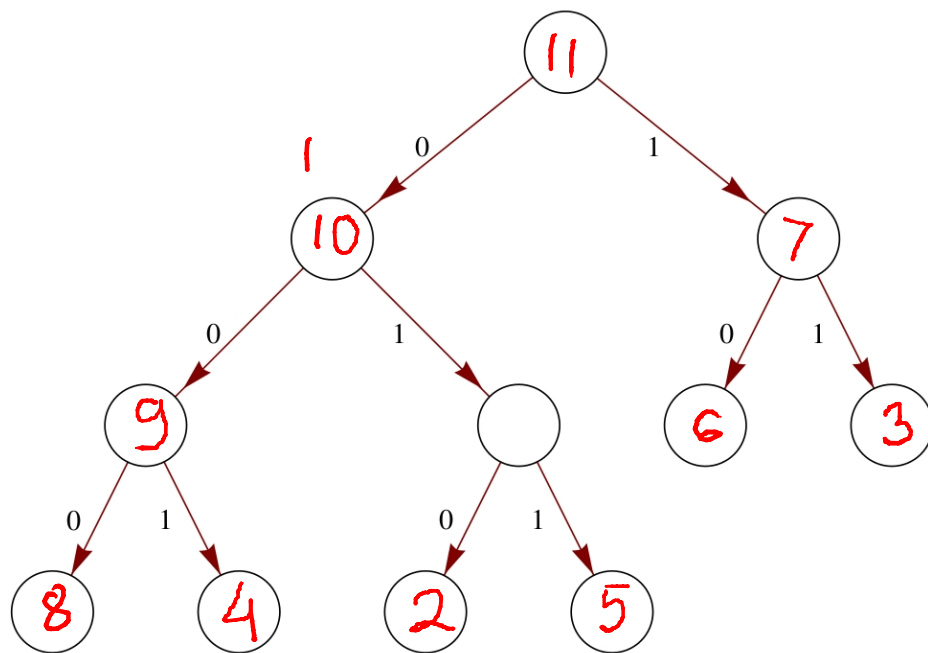
And so

on ...



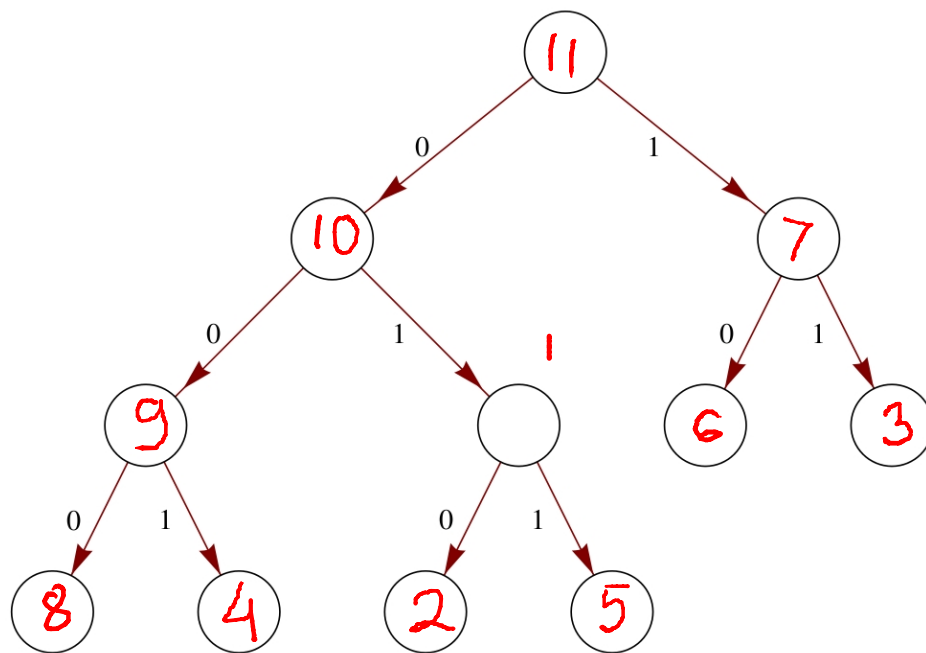
And so

on ...



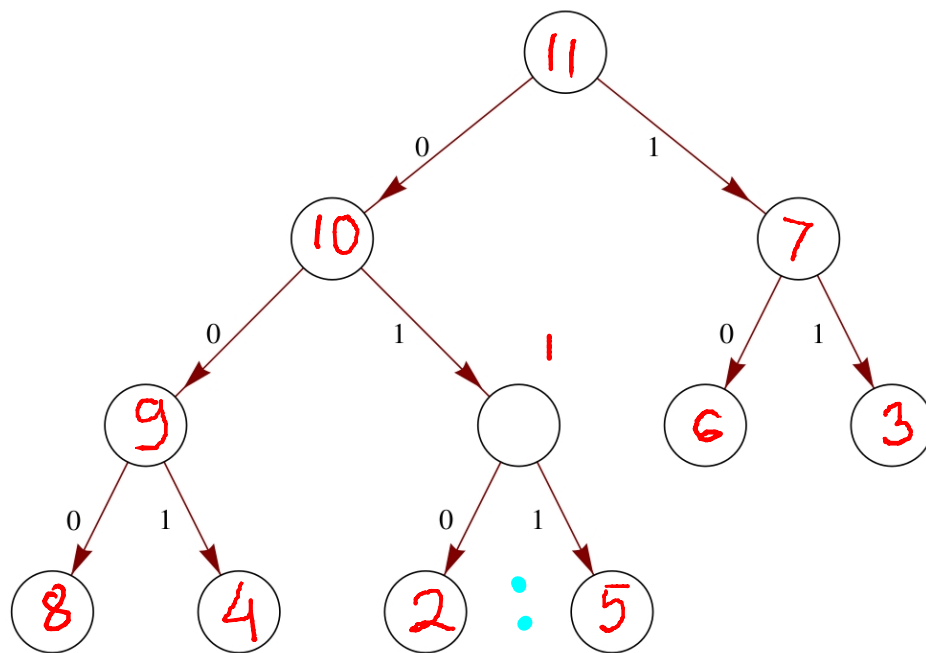
And so

on ...



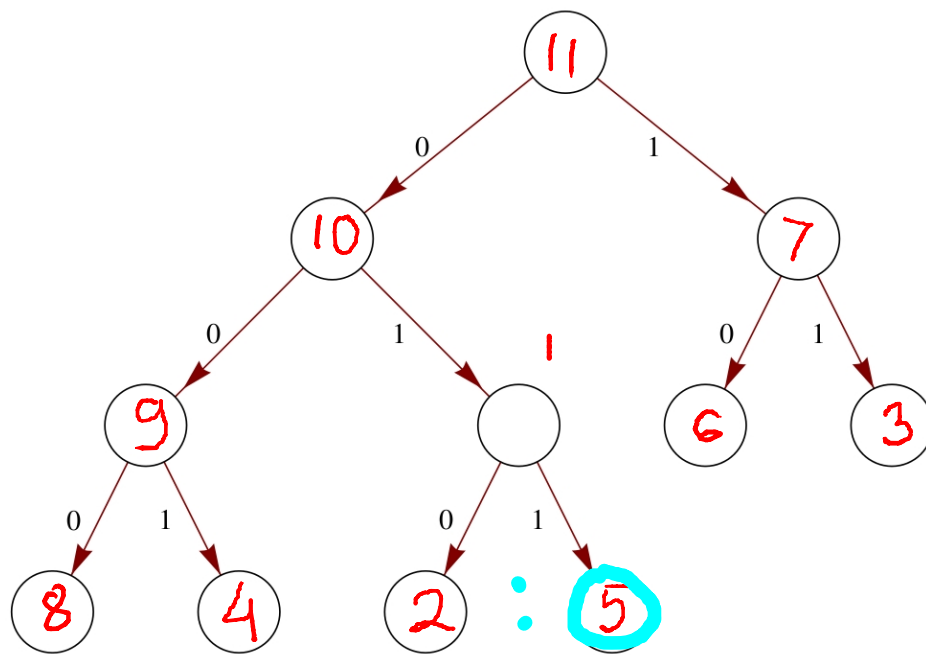
And so

on ...



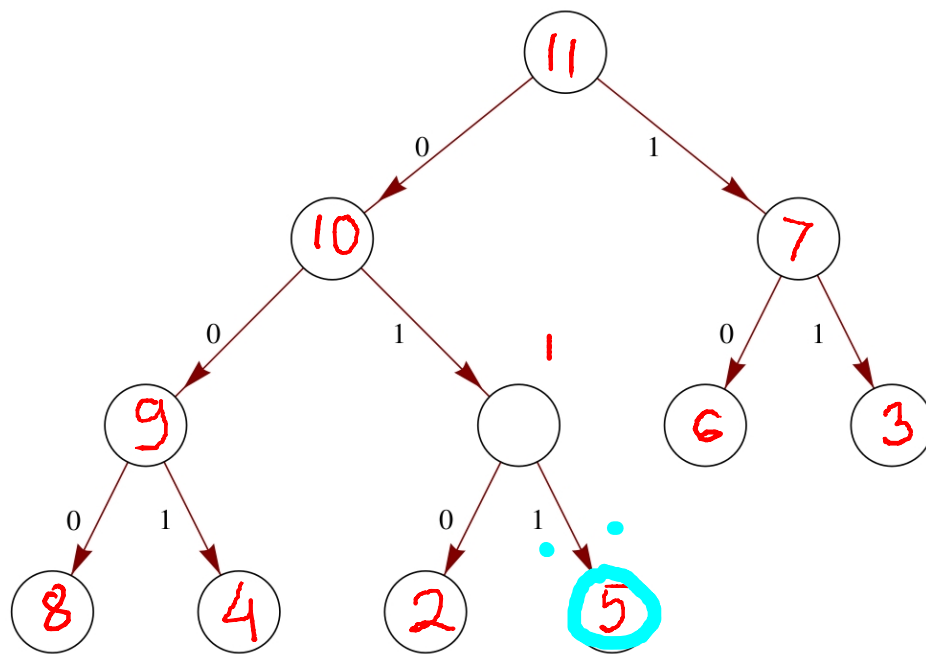
And so

on ...



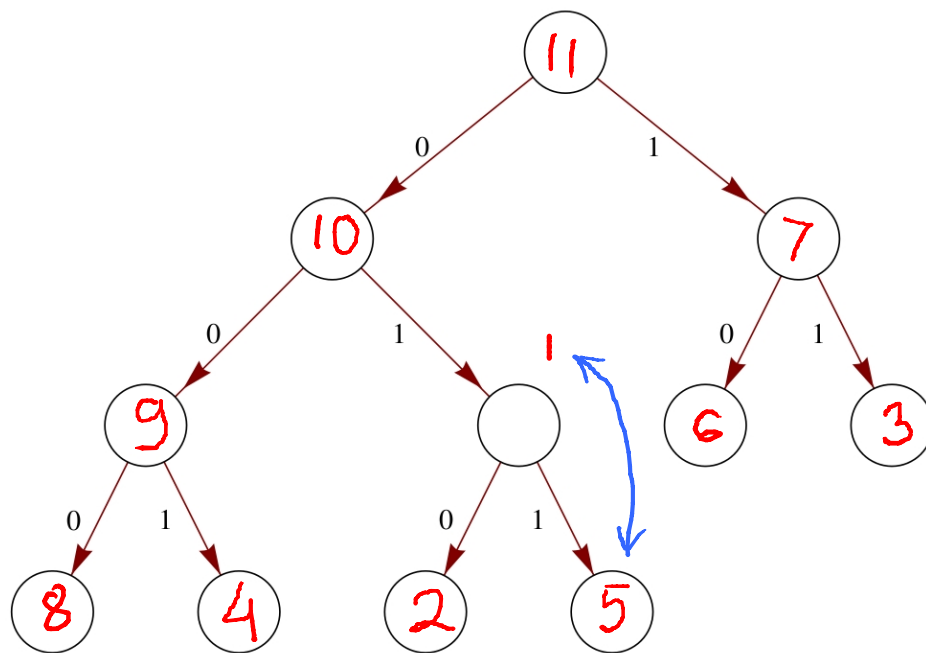
And so

on ...



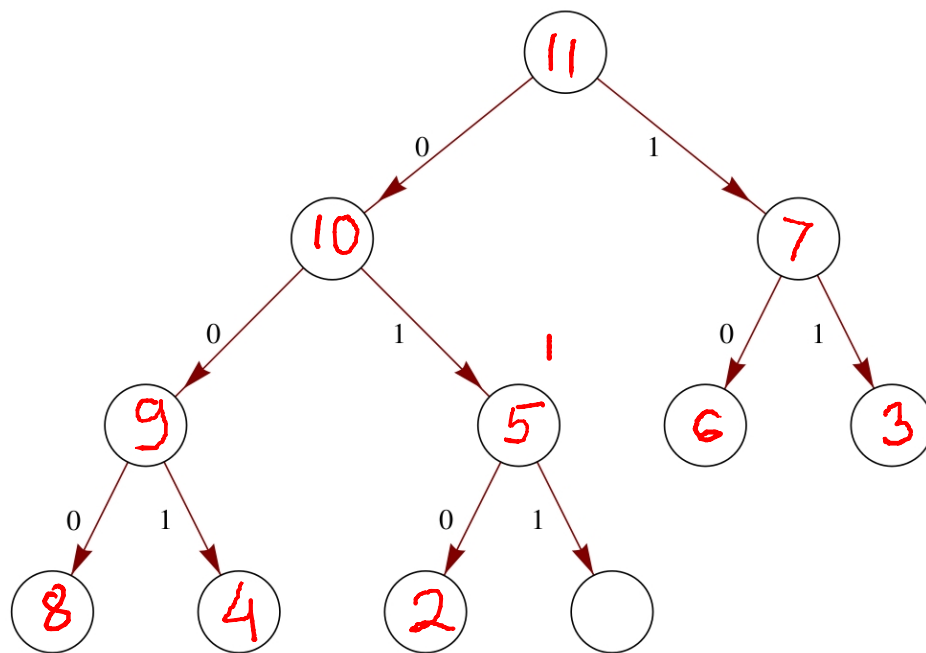
And so

on ...



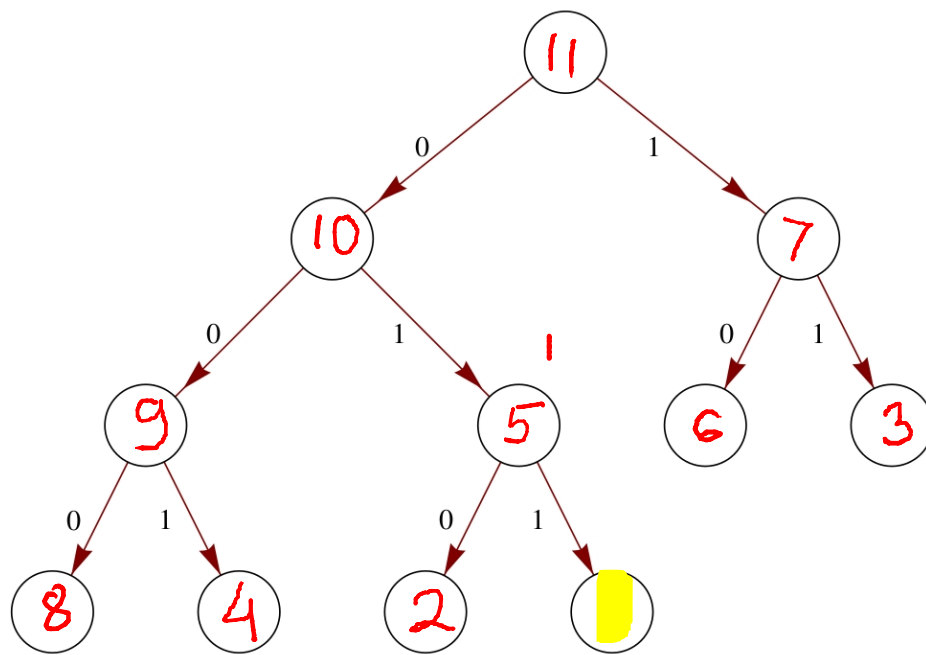
And so

on ...



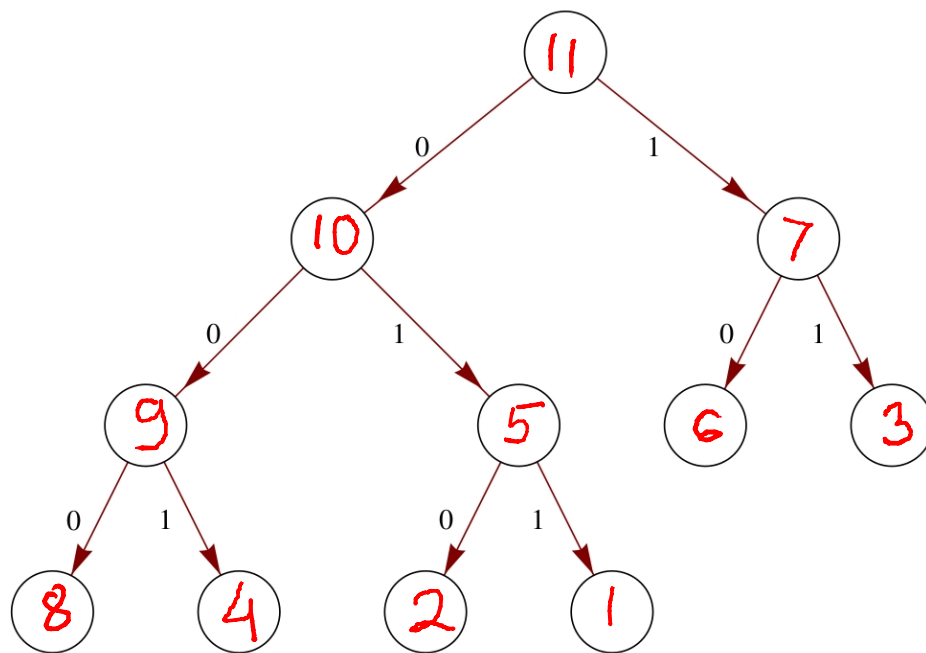
And so

on ...



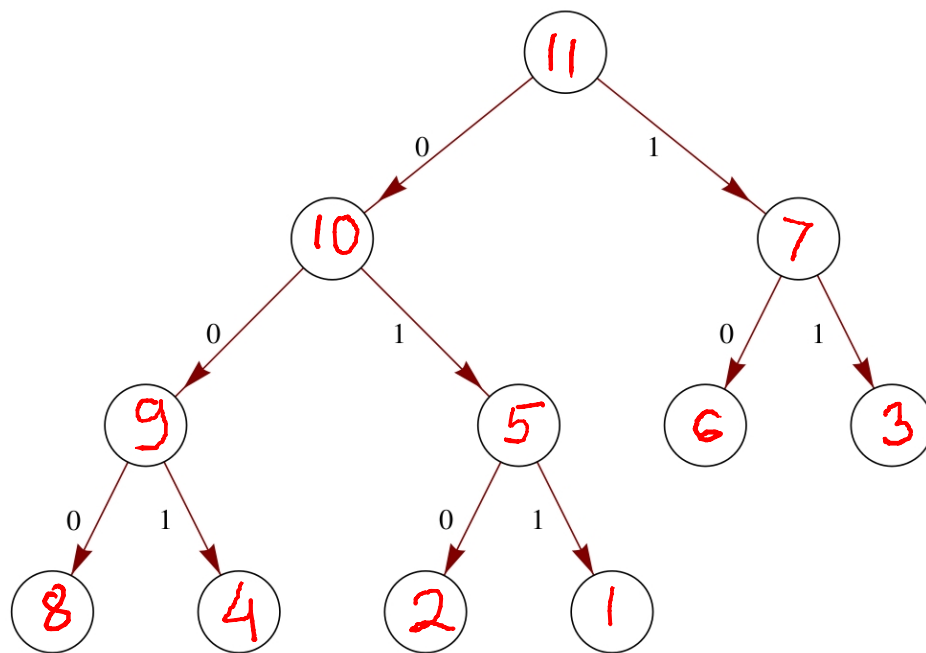
And so

on ...

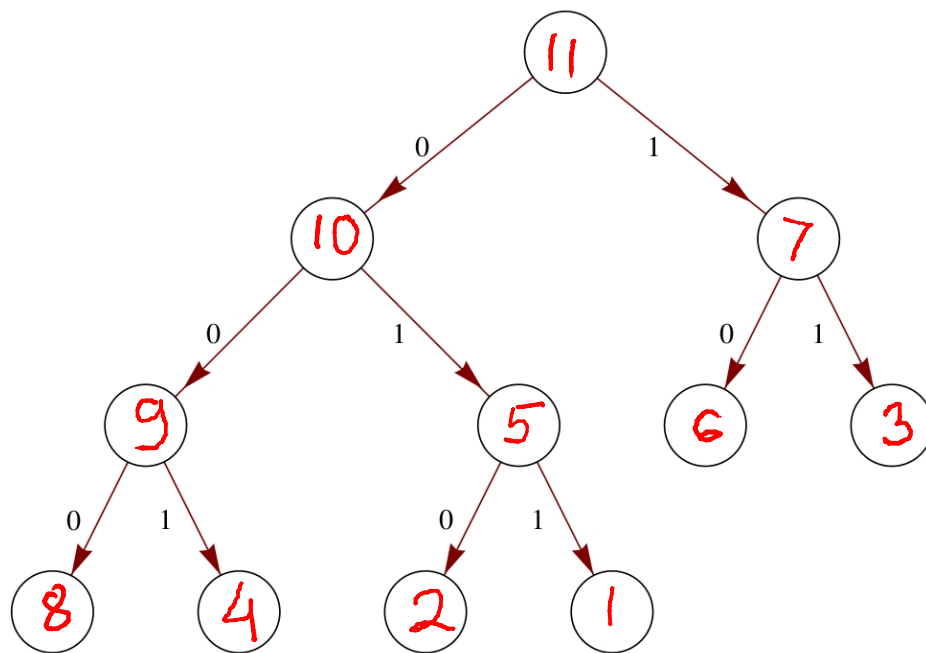


And so

on ...

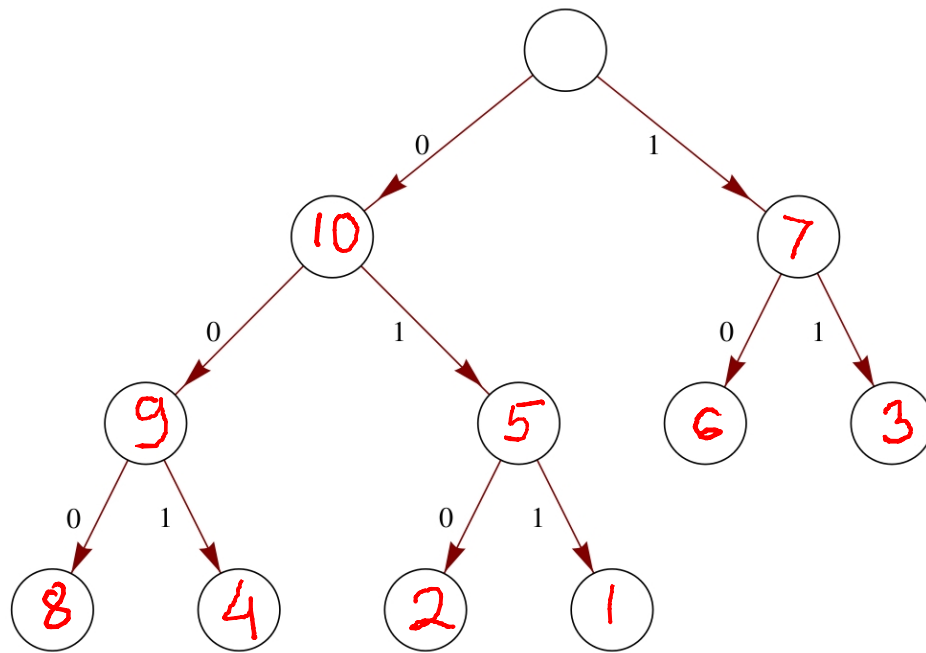


Heap
construction
done!



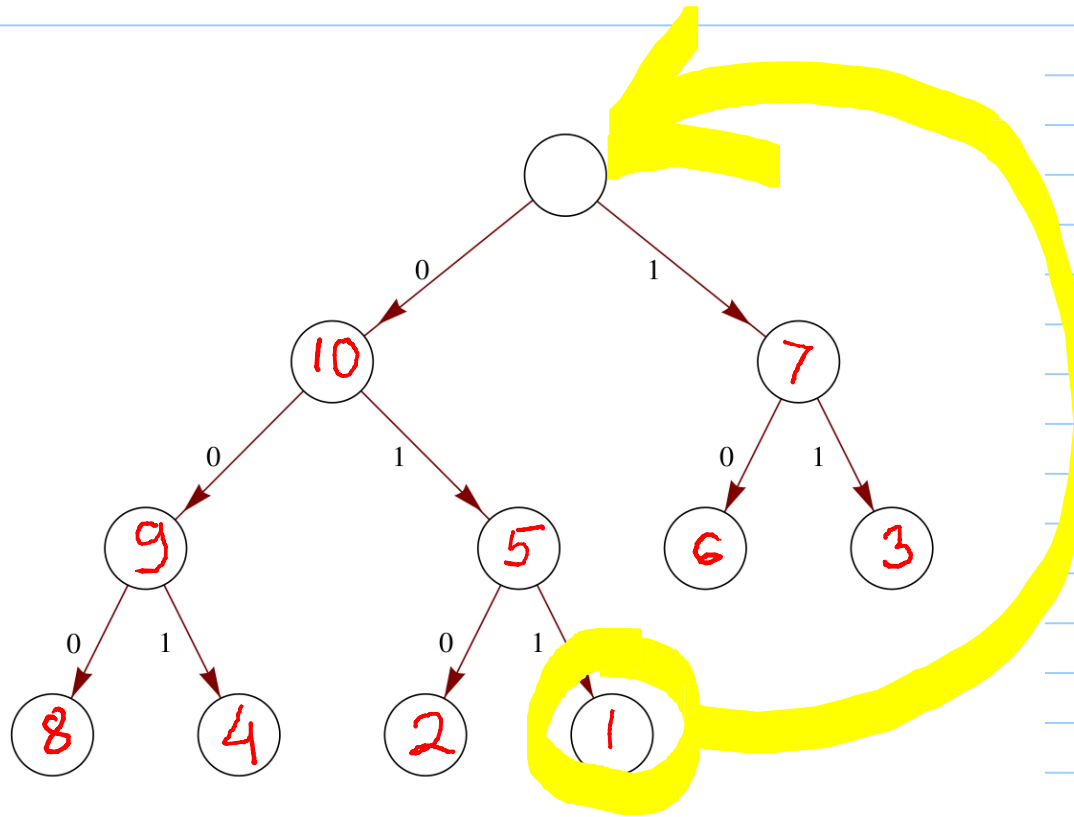
Removal

11



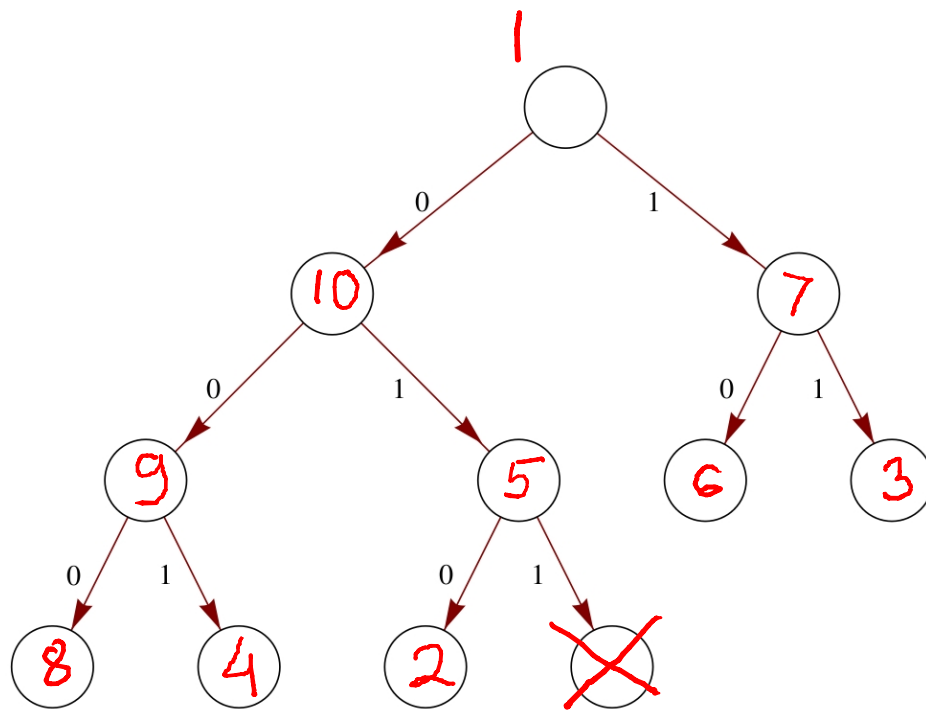
Removal

11



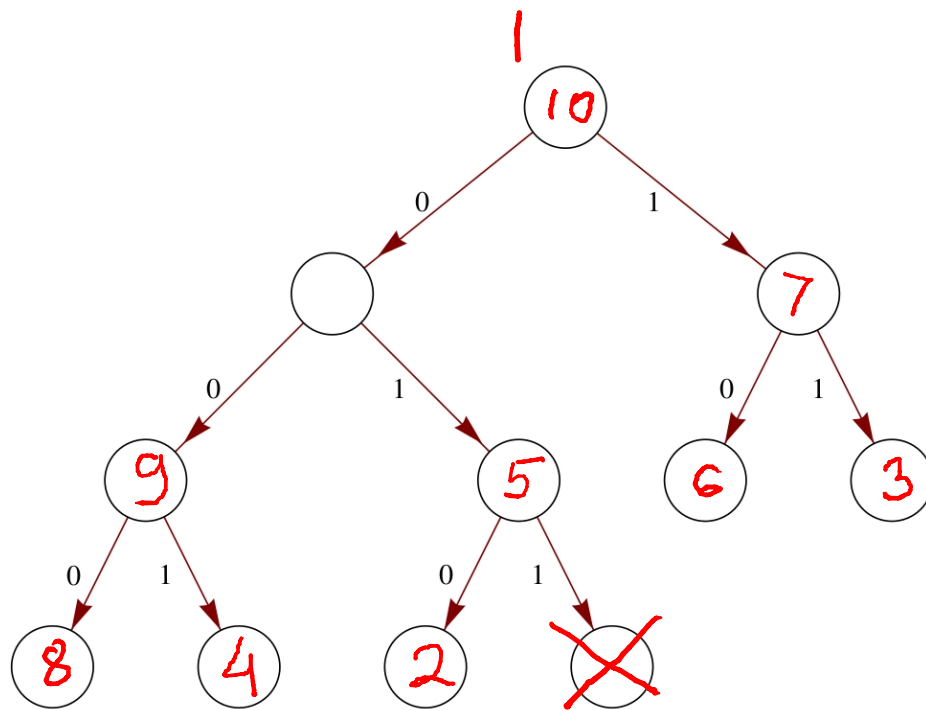
Removal

11



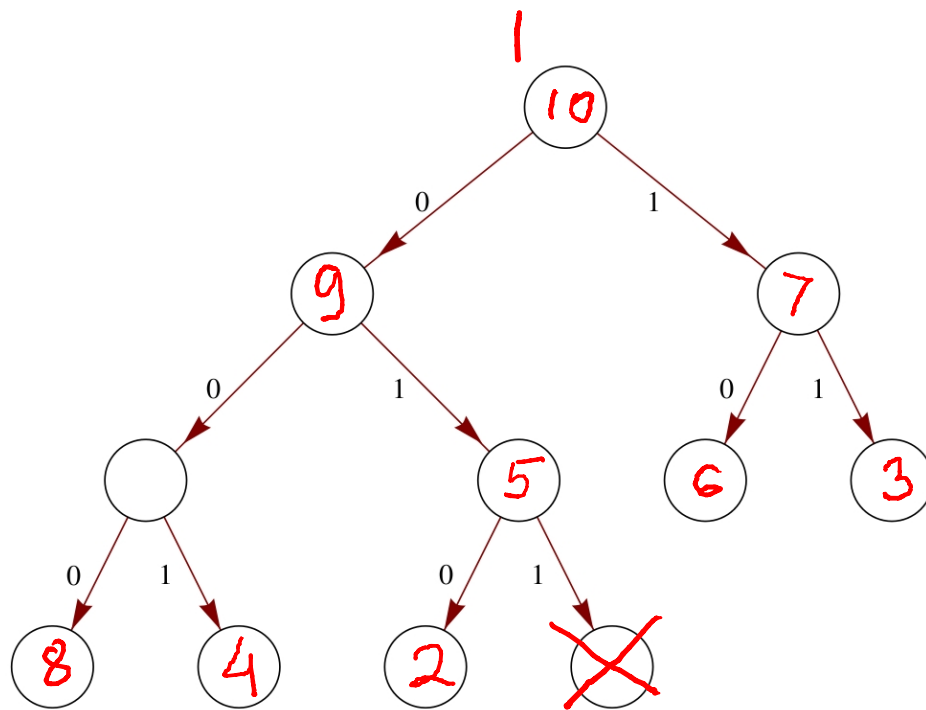
Removal

11



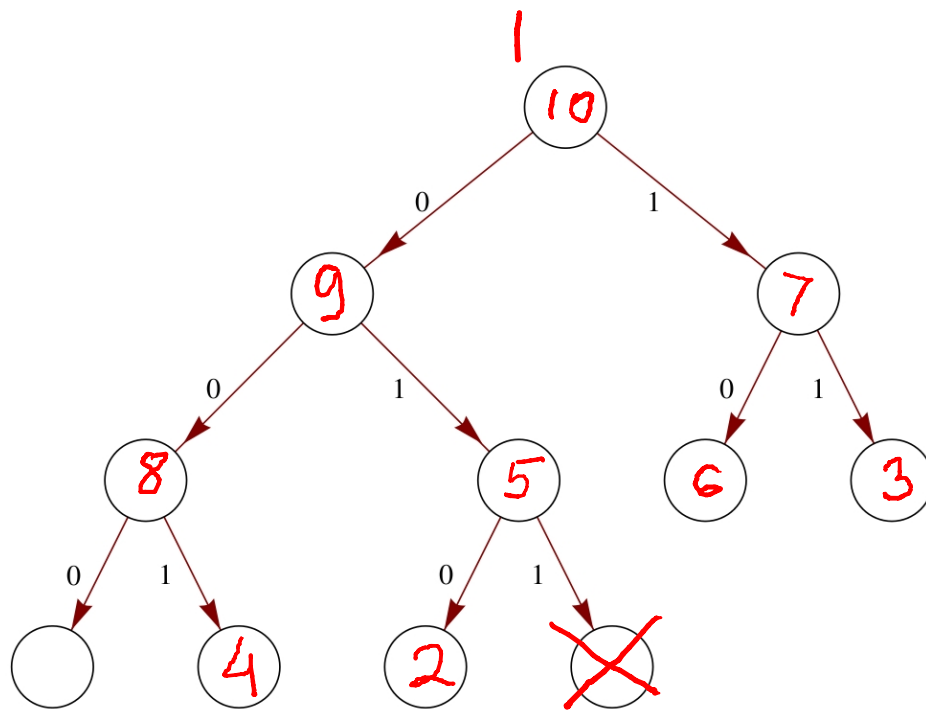
Removal

11



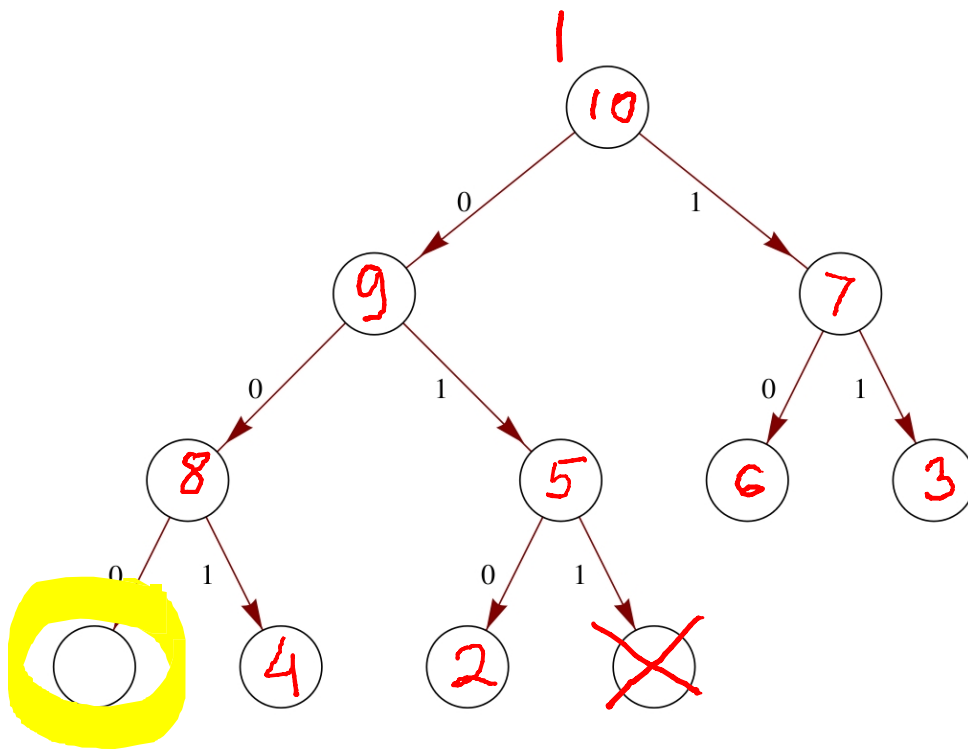
Removal

11



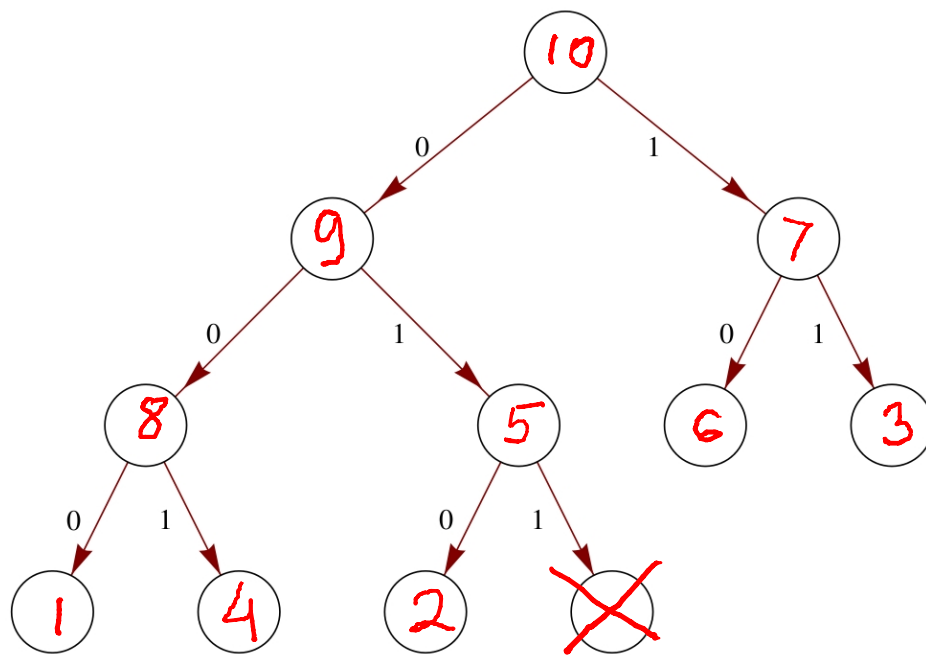
Removal

11



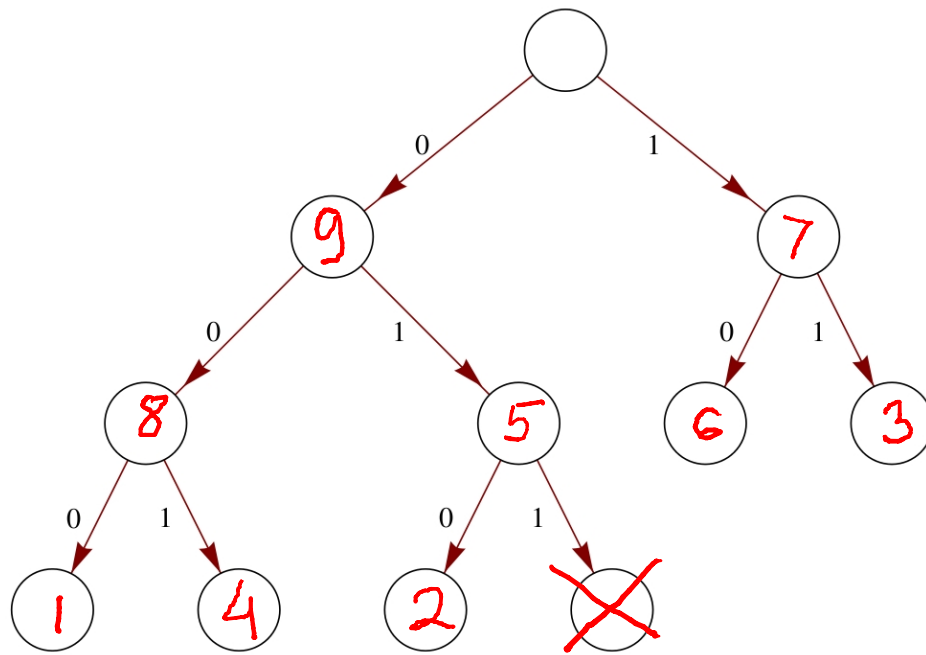
Removal

11



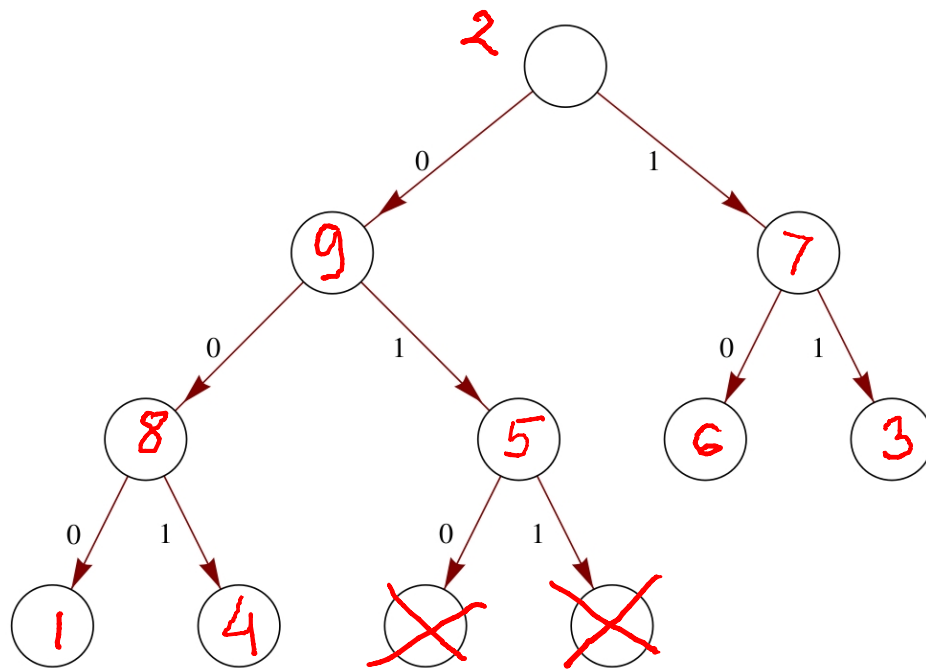
Removal

11 10



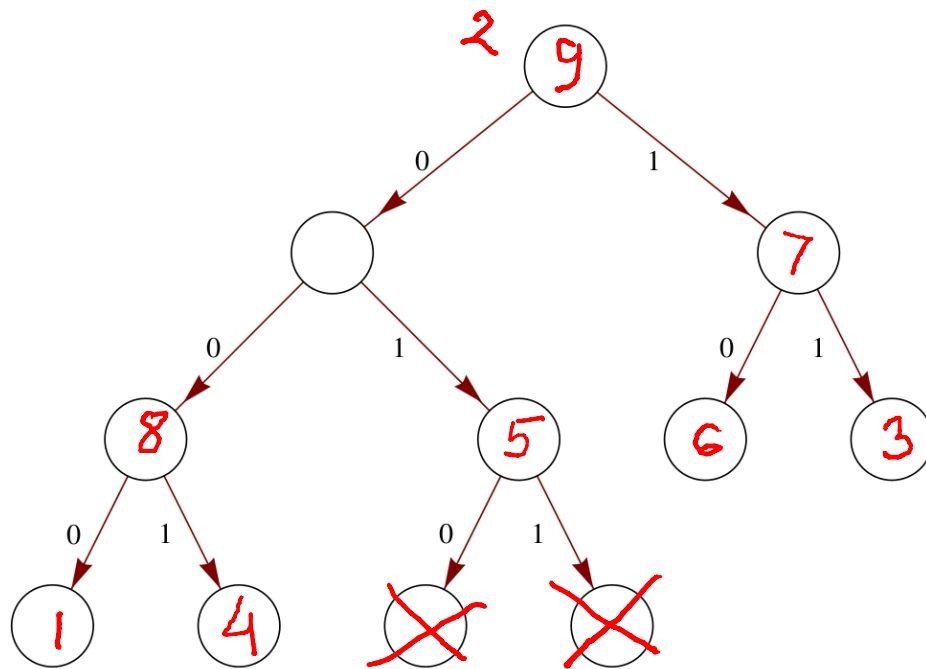
Removal

11 10



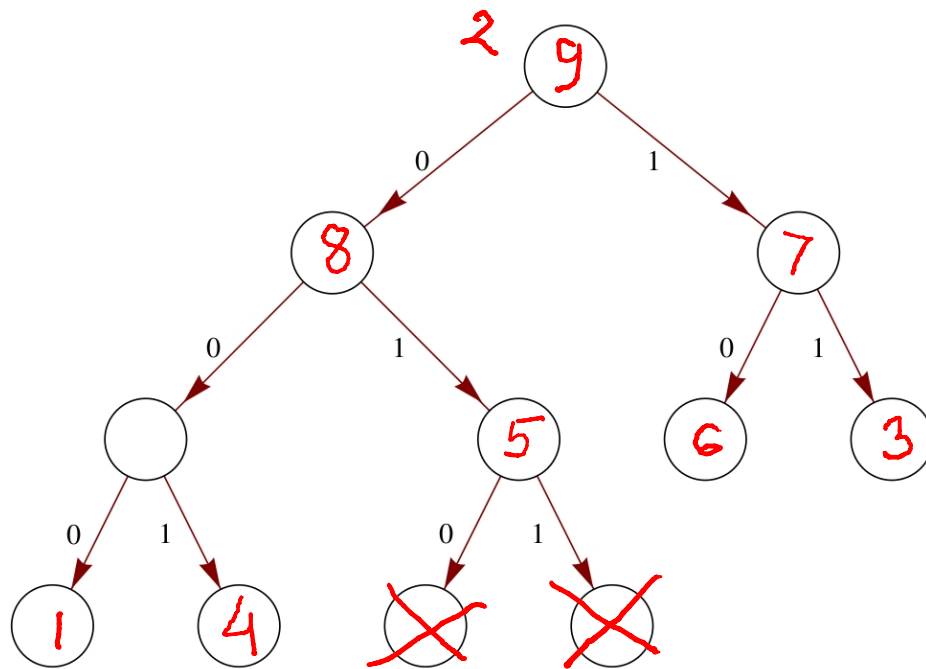
Removal

11 10



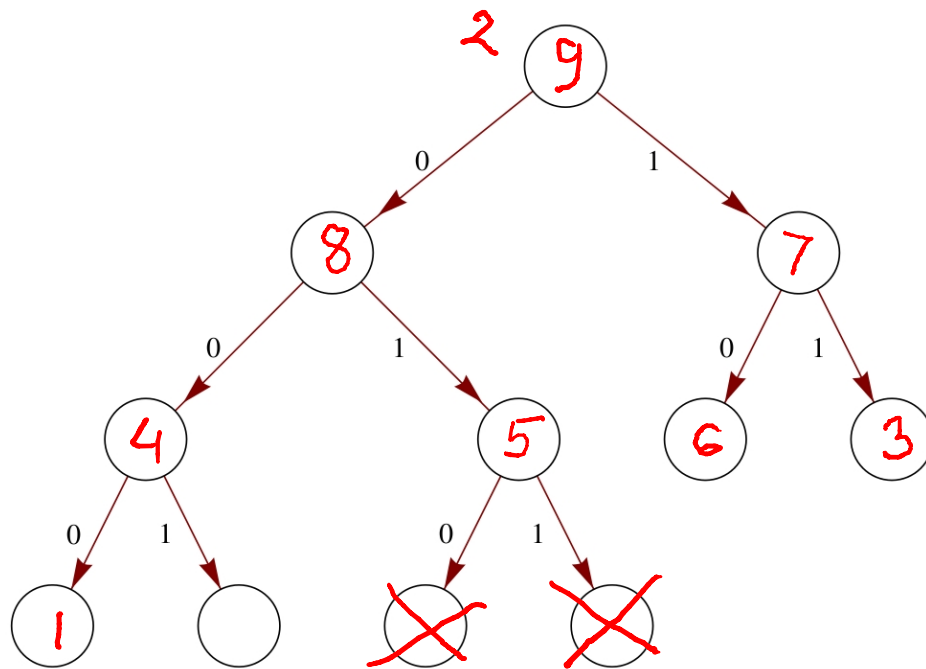
Removal

11 10



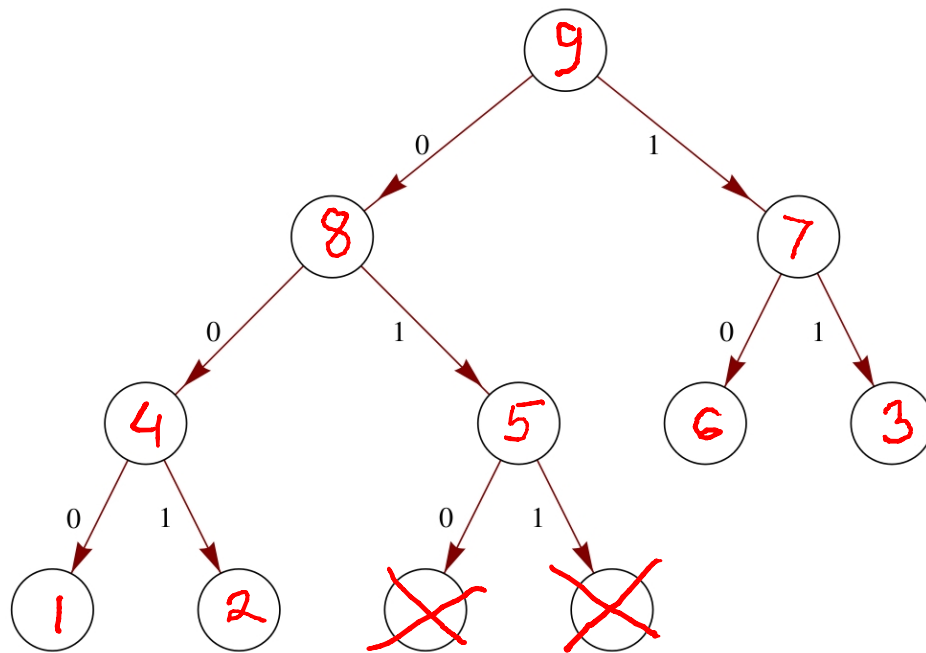
Removal

11 10



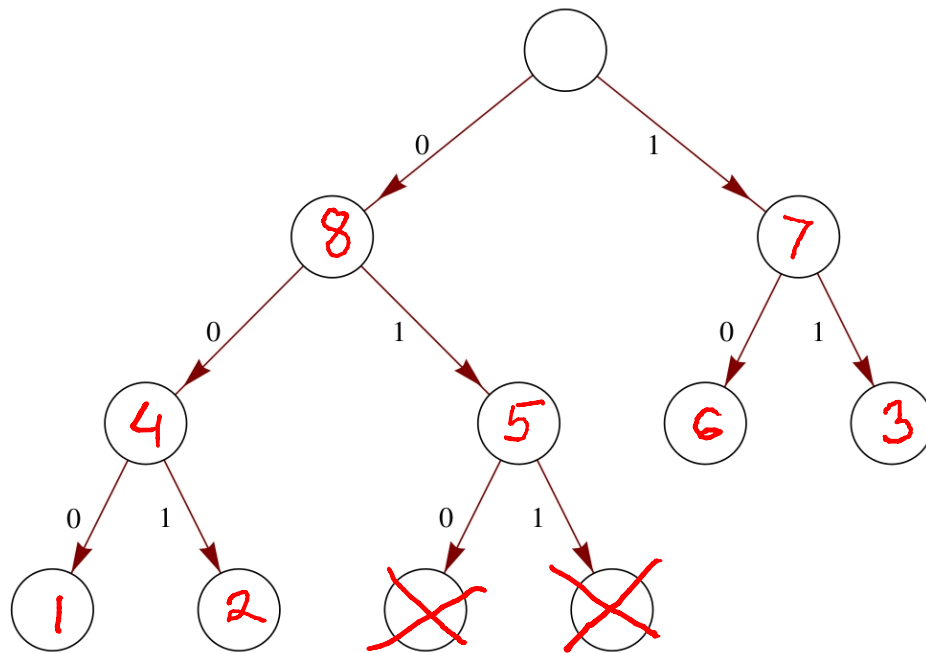
Removal

11 10



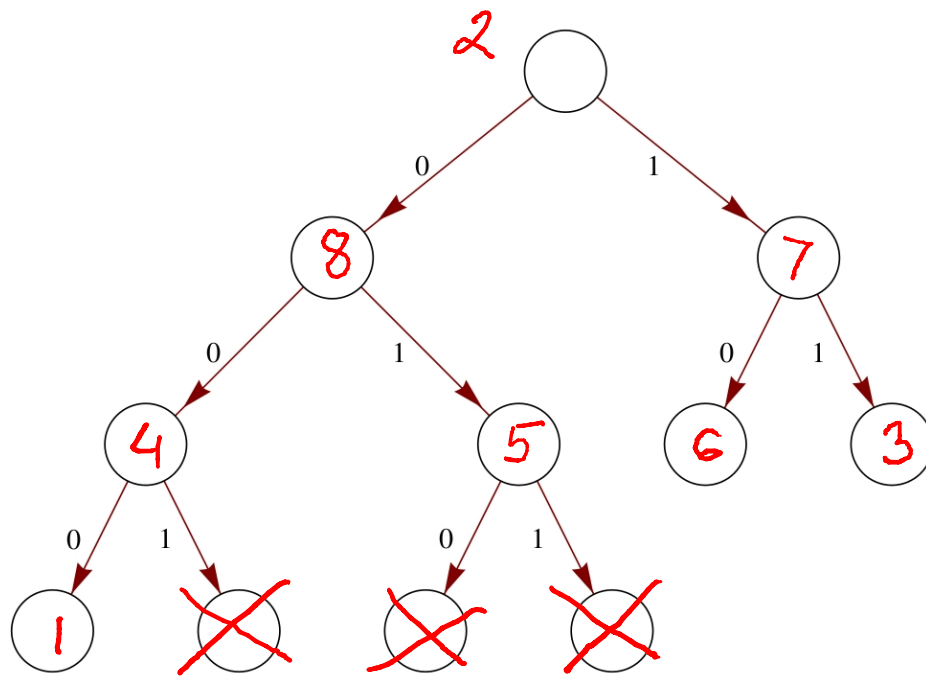
Removal

11 10 9



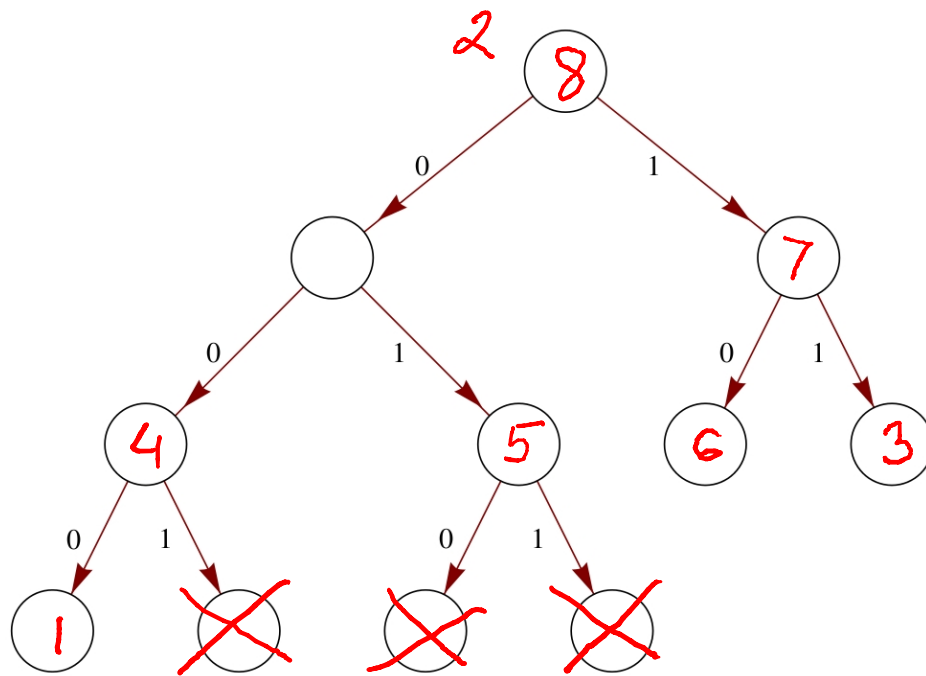
Removal

11 10 9



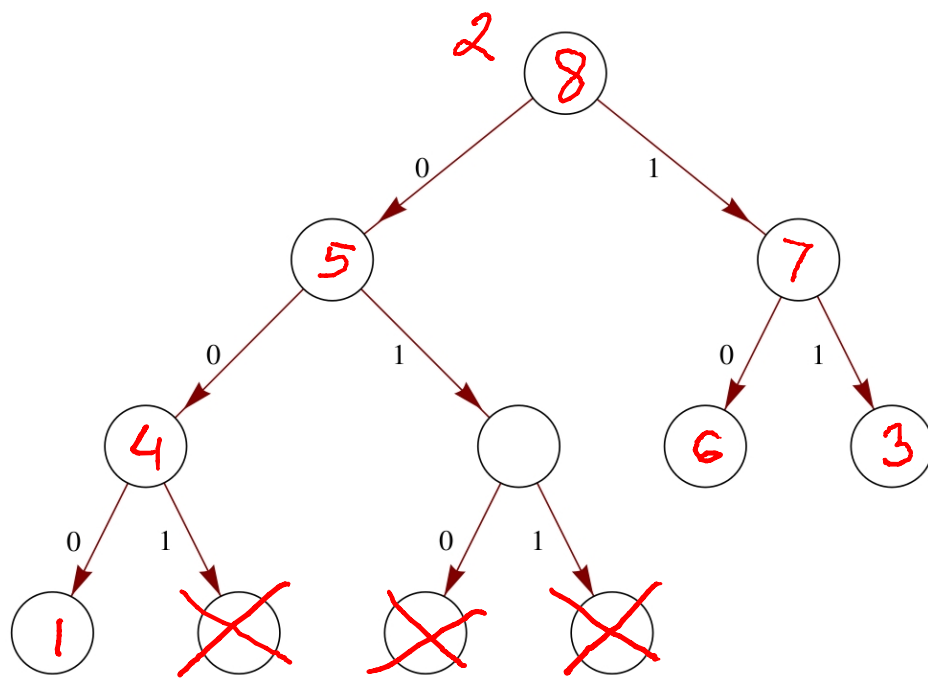
Removal

11 10 9



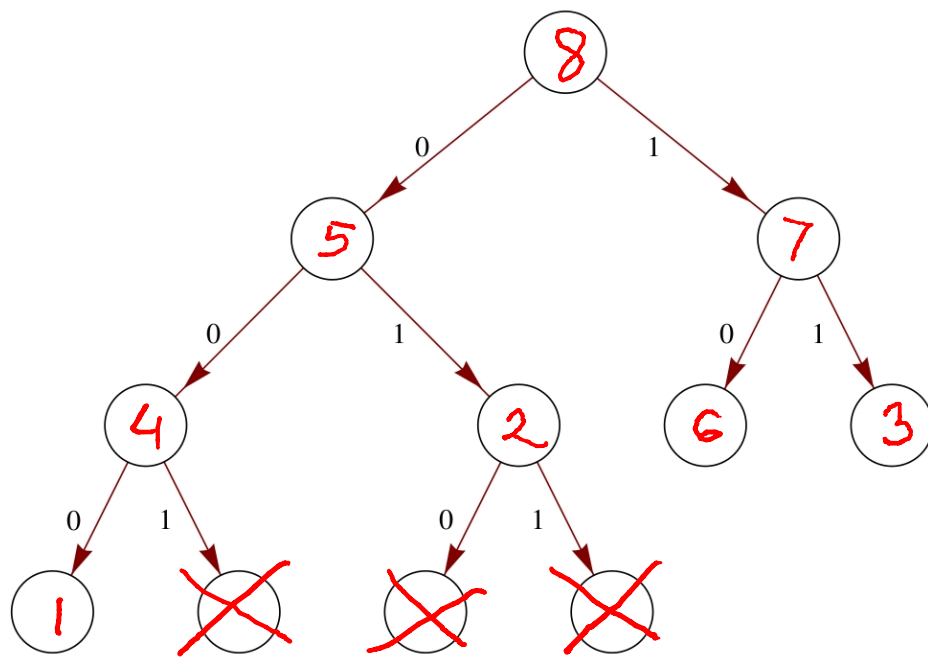
Removal

11 10 9



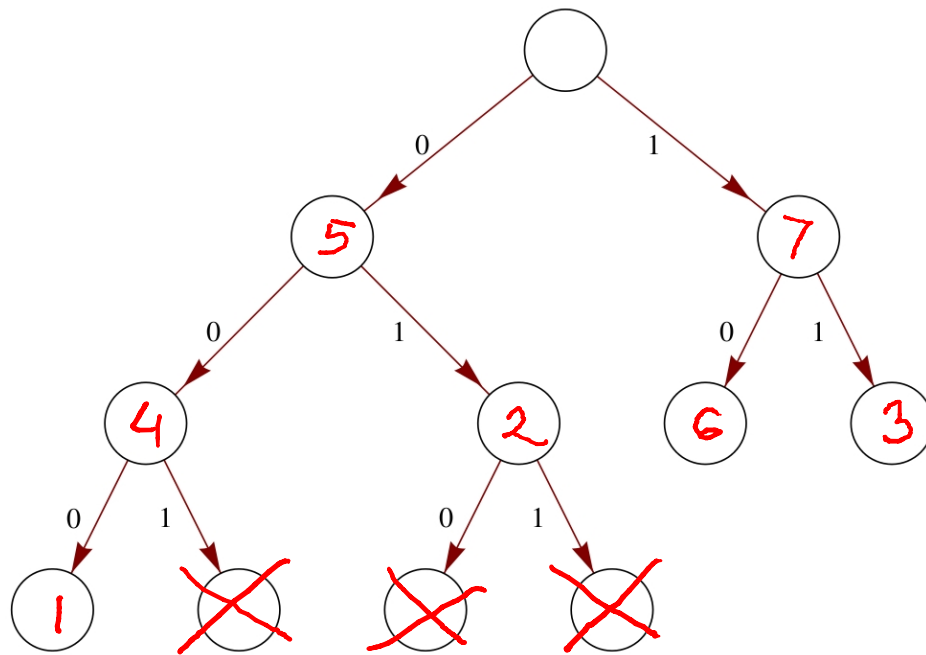
Removal

11 10 9



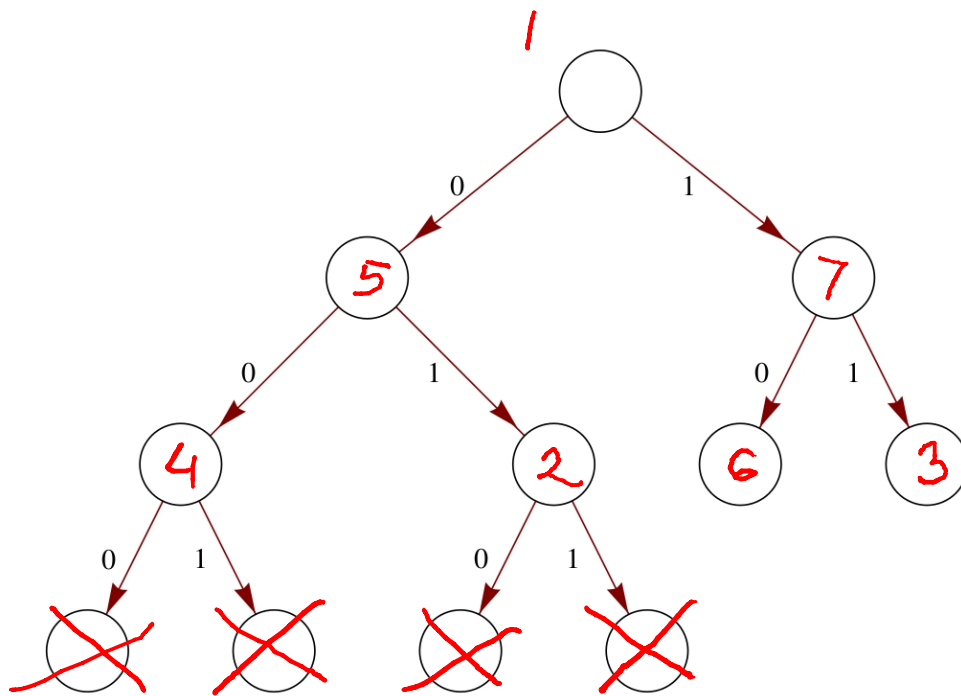
Removal

11 10 9 8



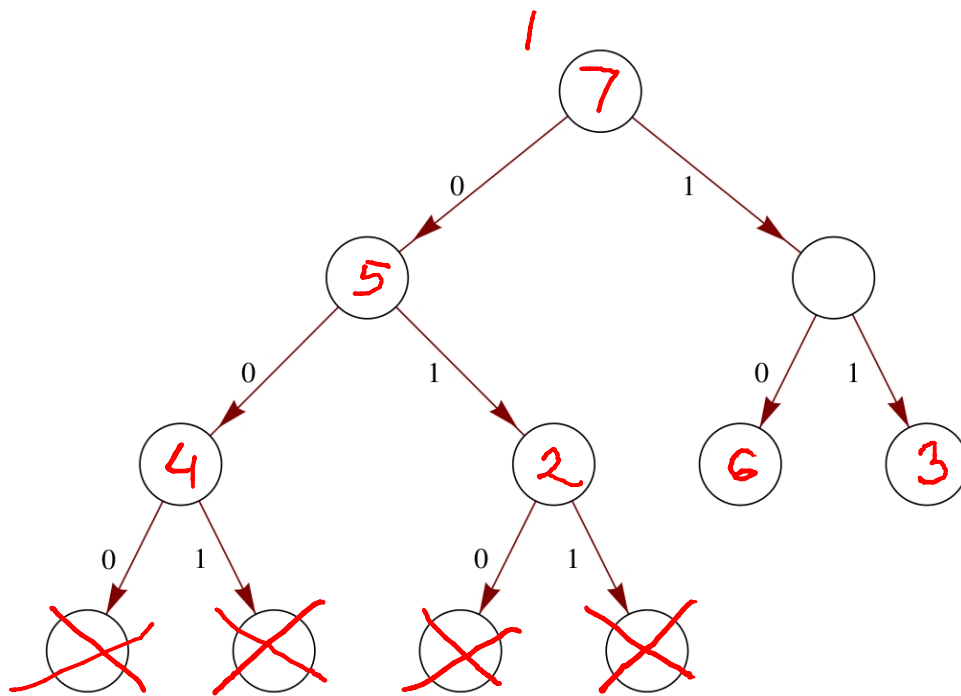
Removal

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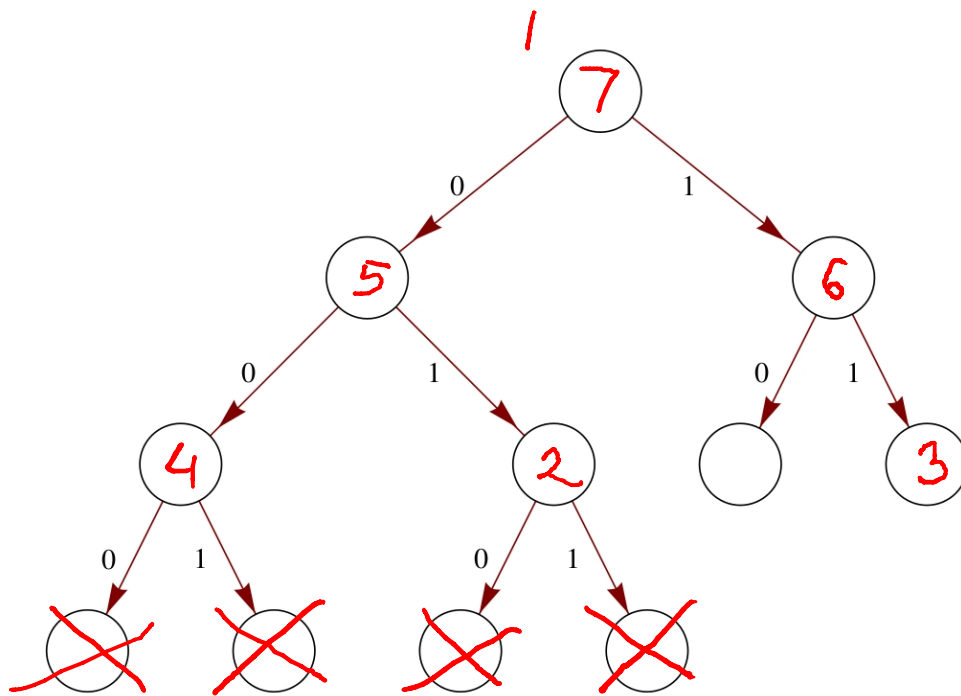
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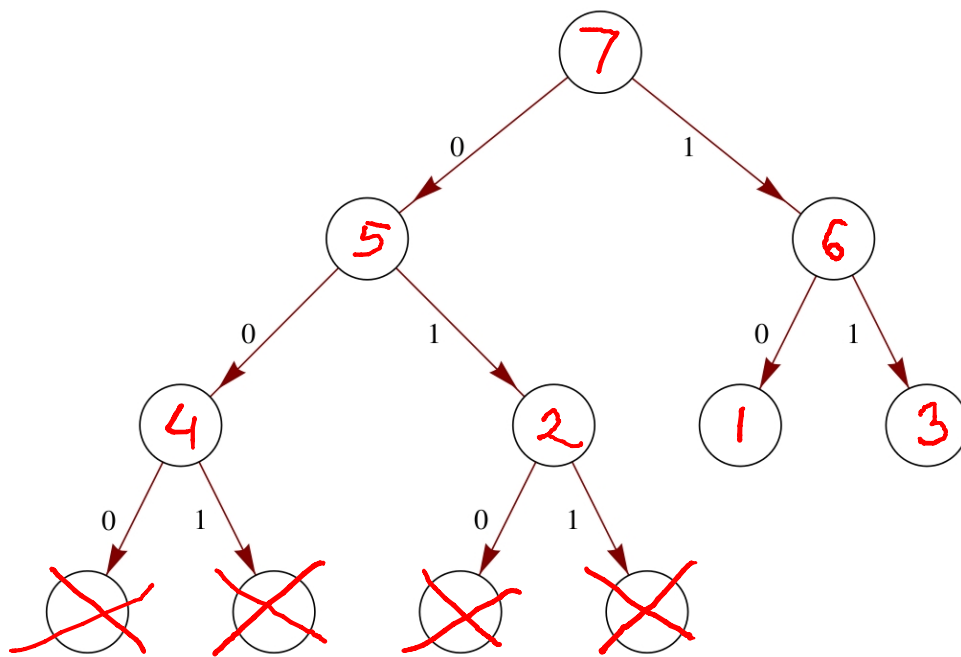
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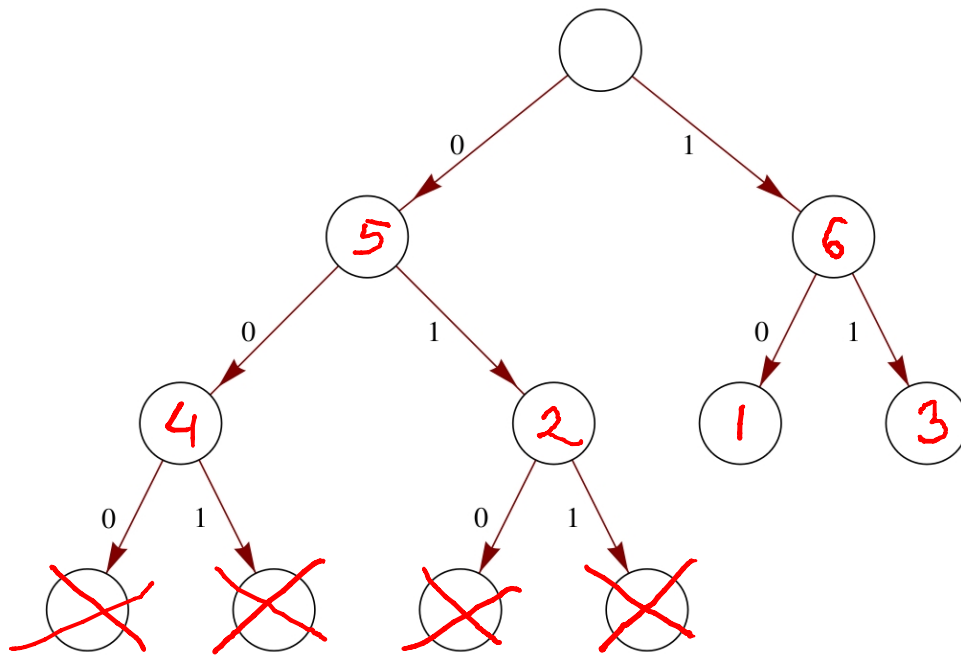
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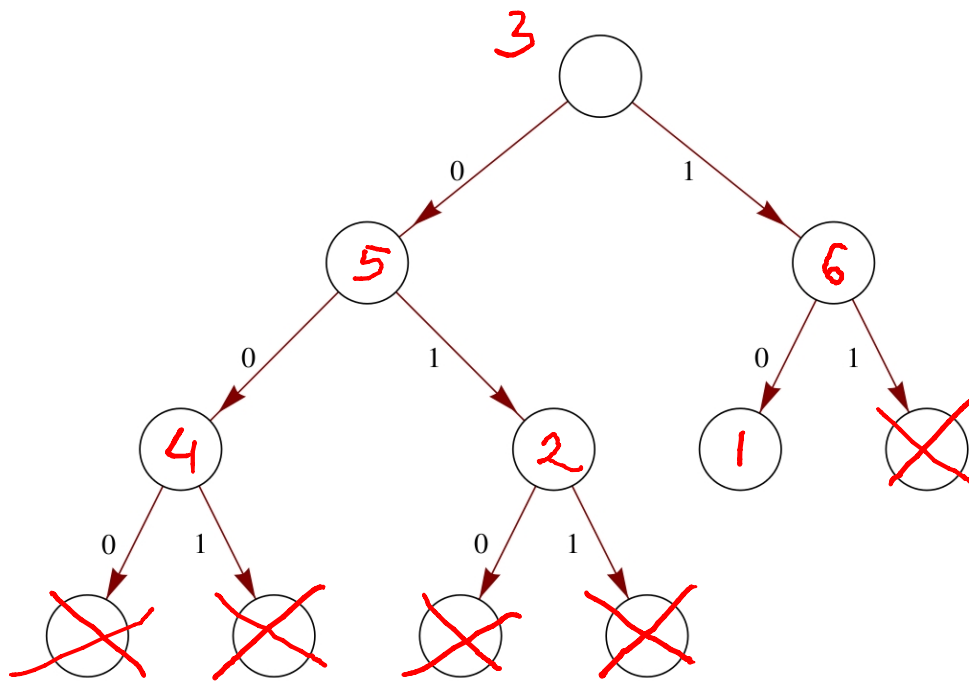
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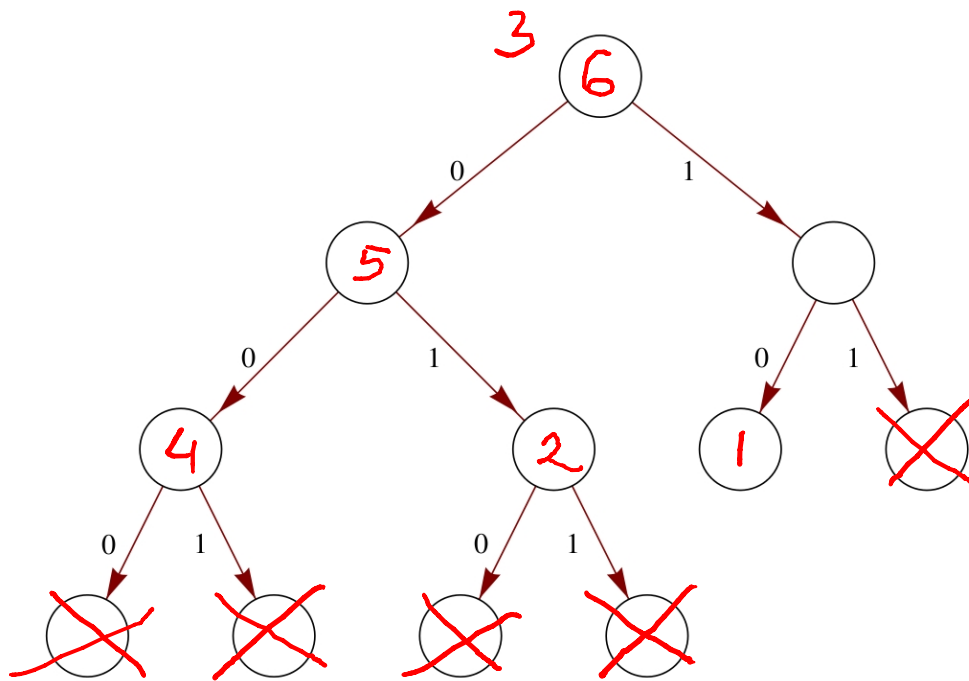
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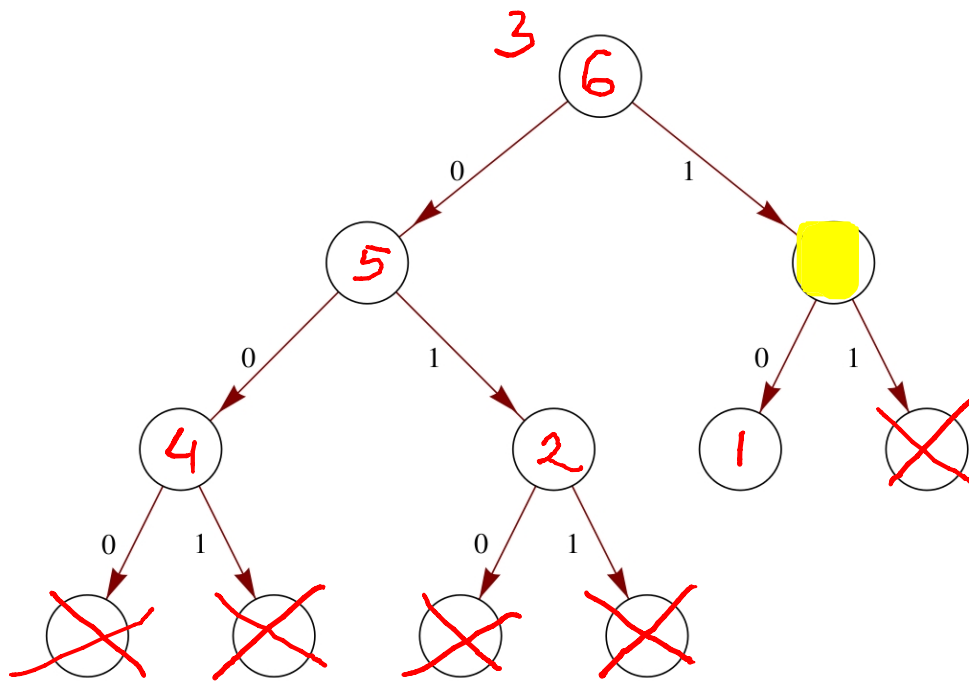
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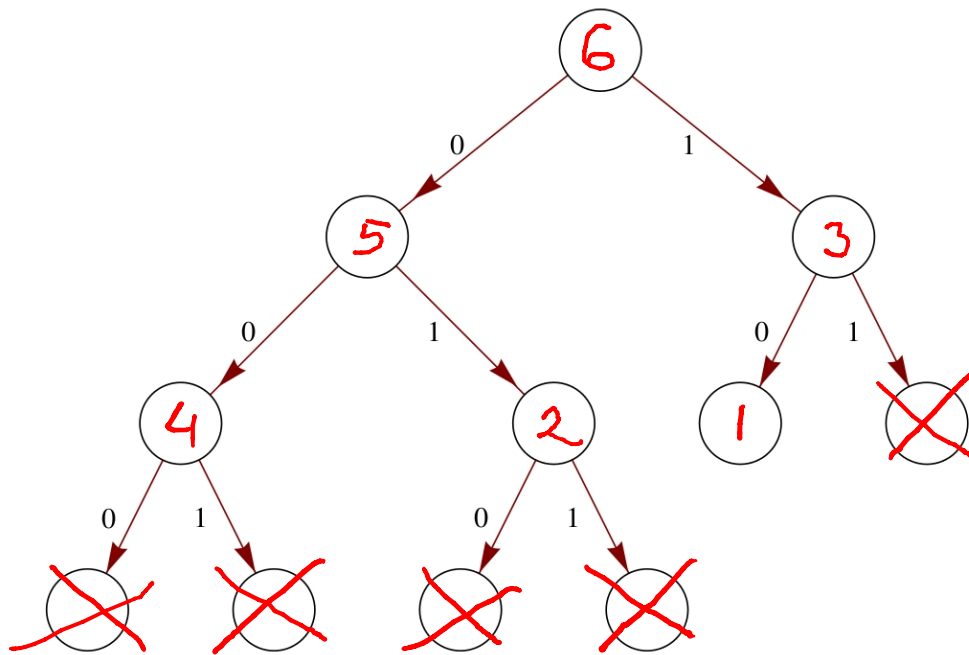
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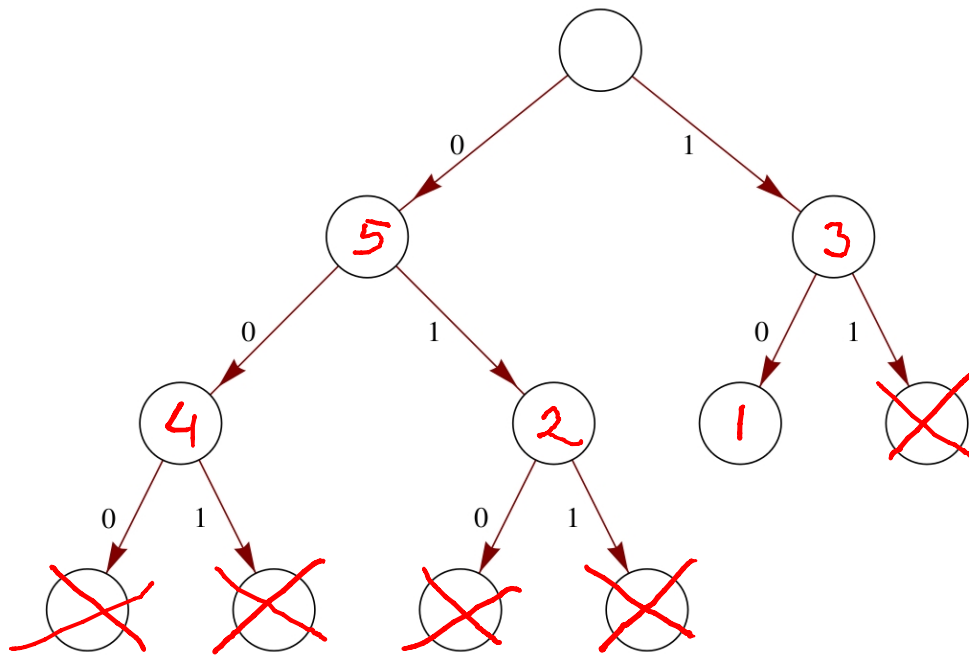
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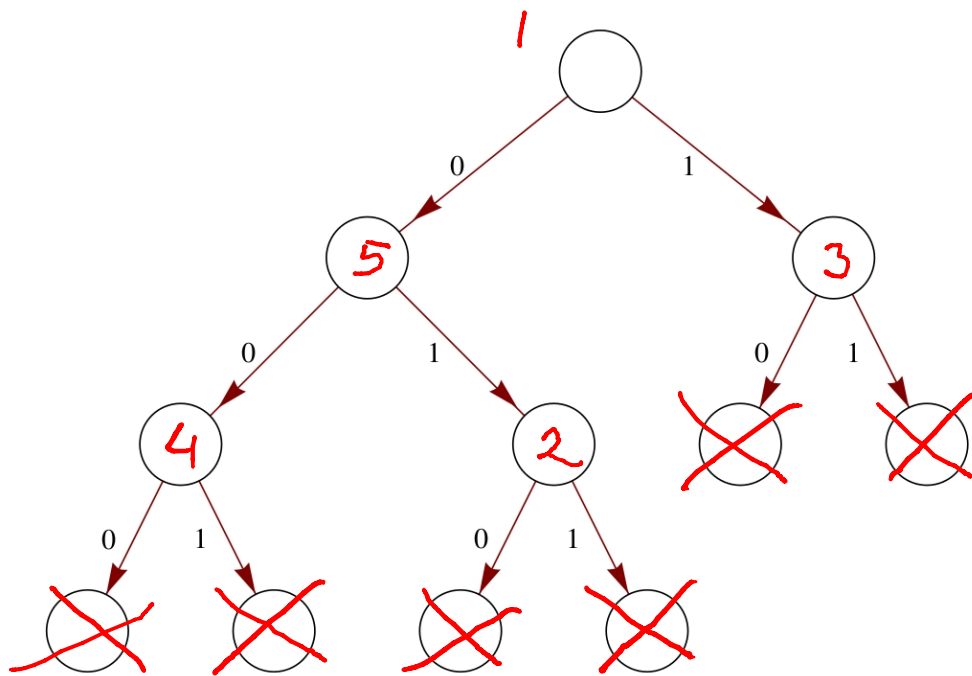
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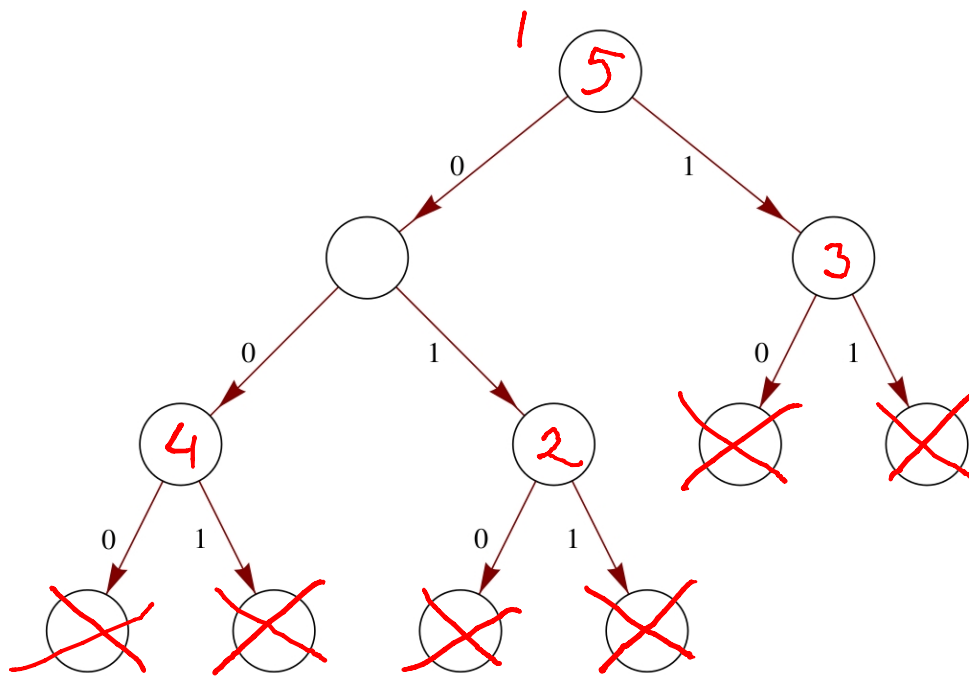
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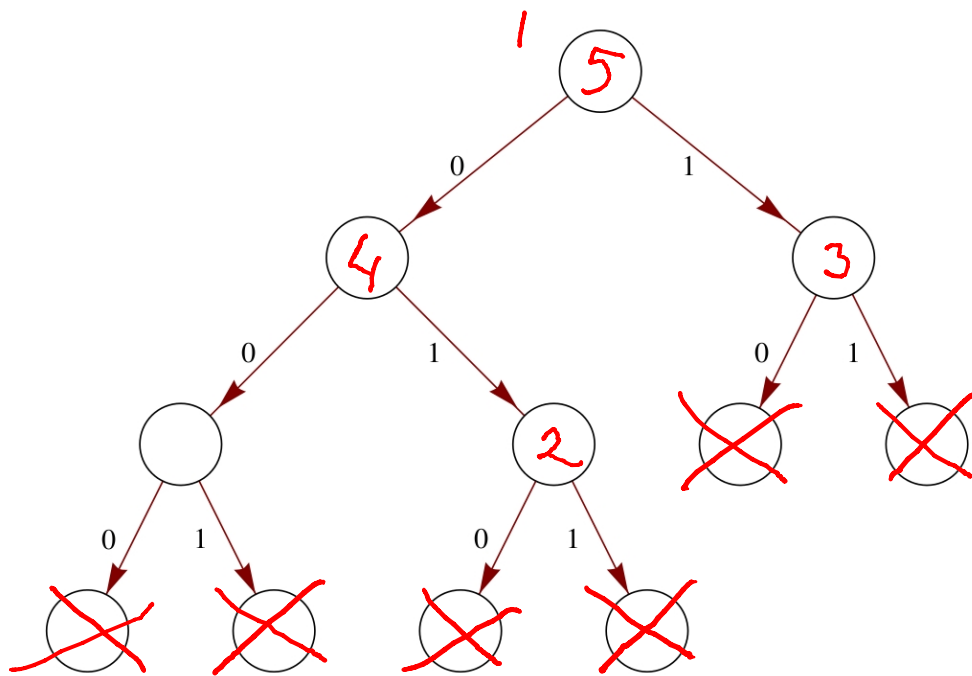
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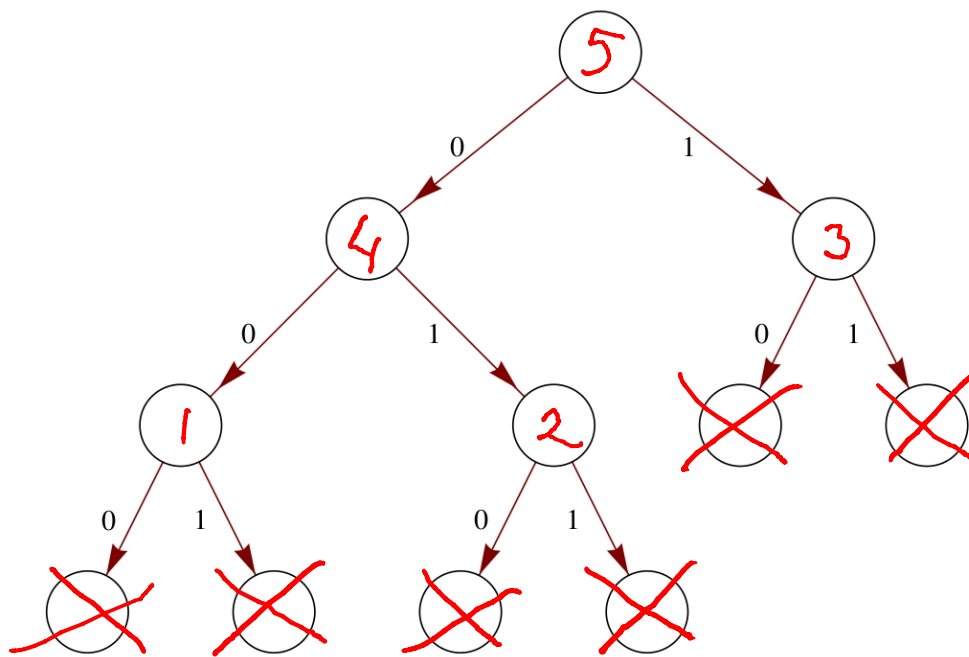
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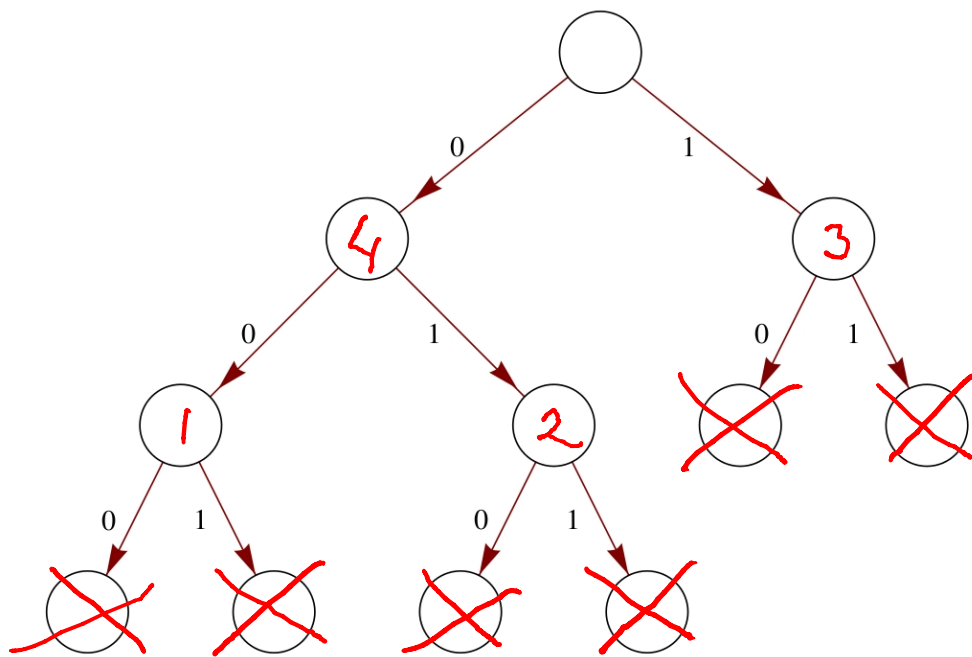
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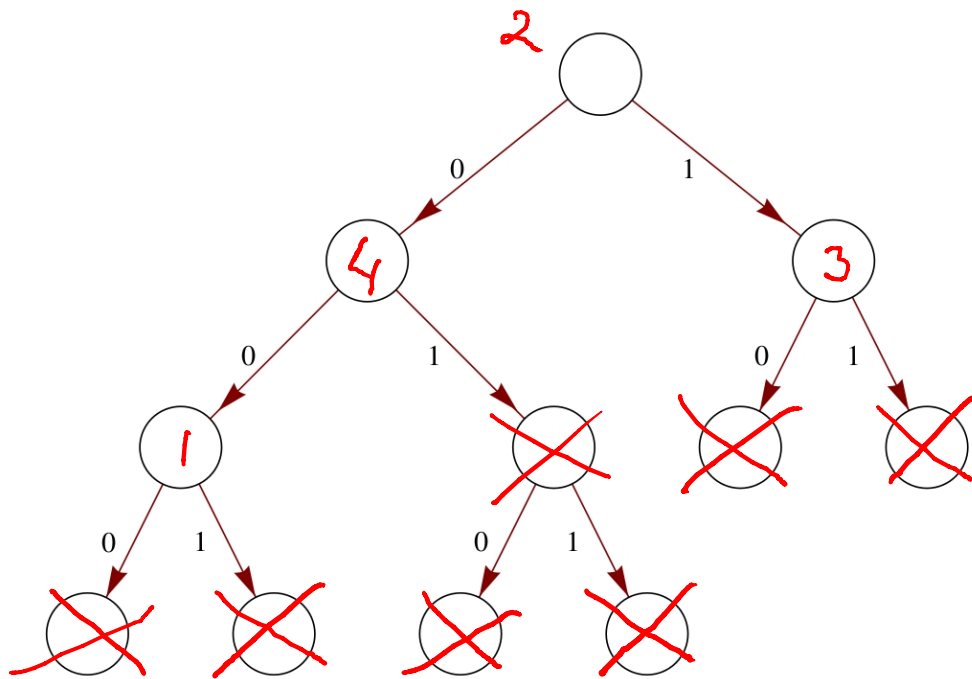
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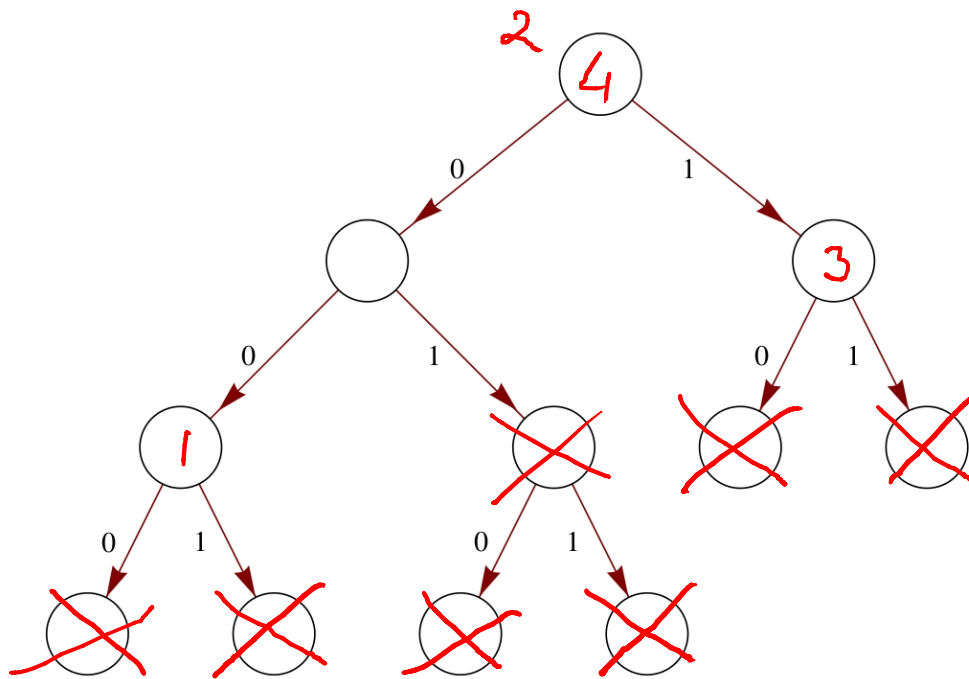
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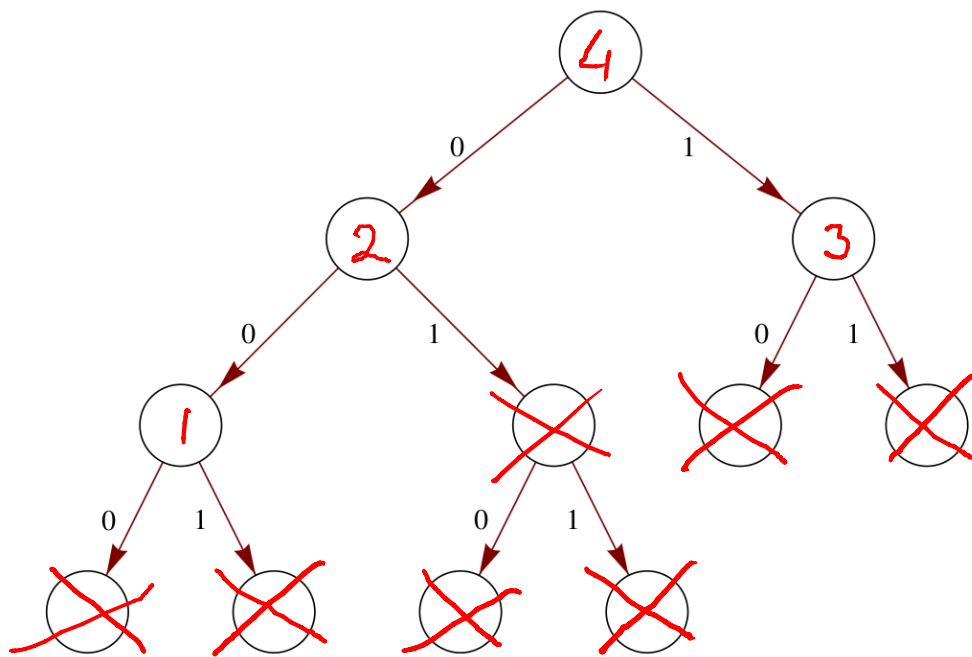
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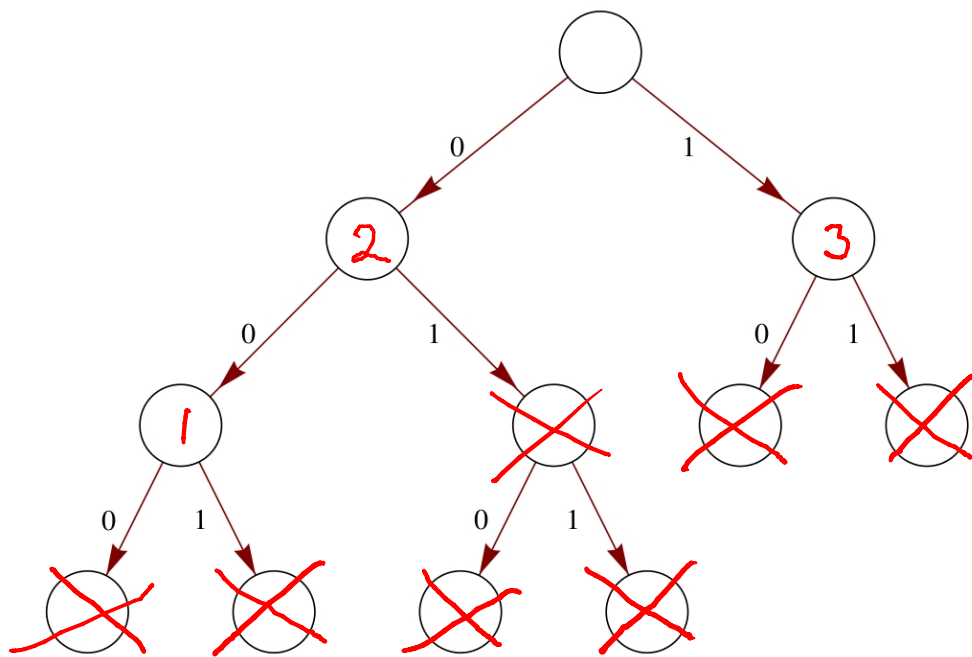
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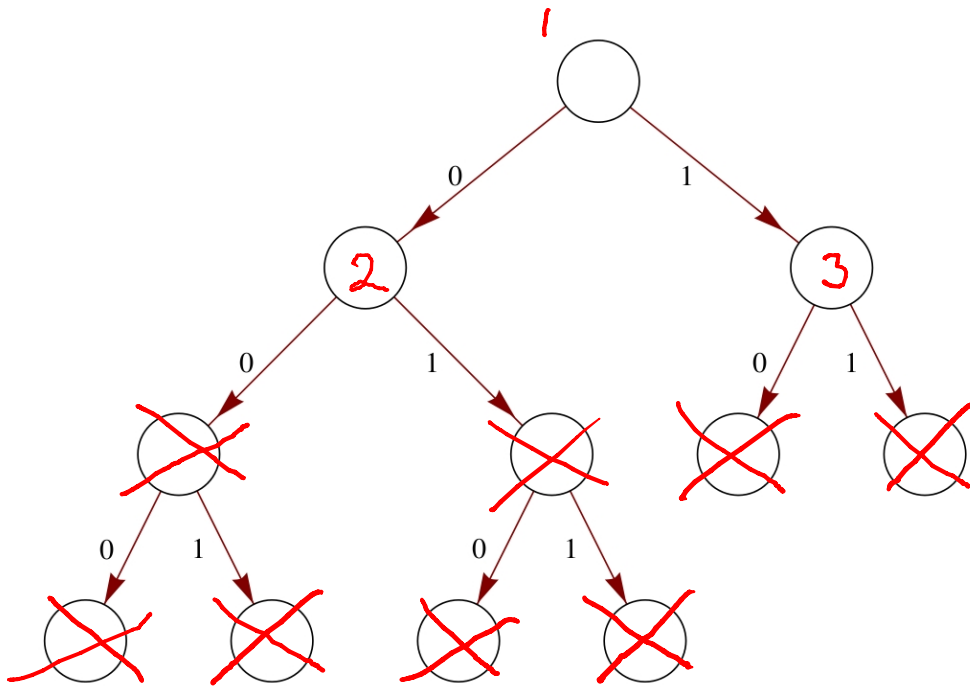
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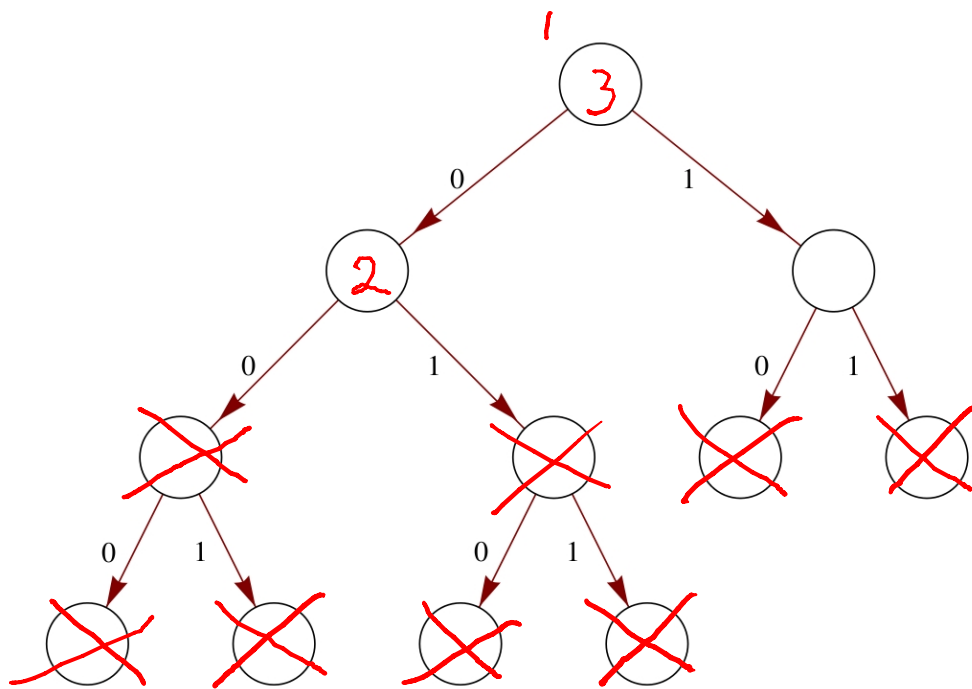
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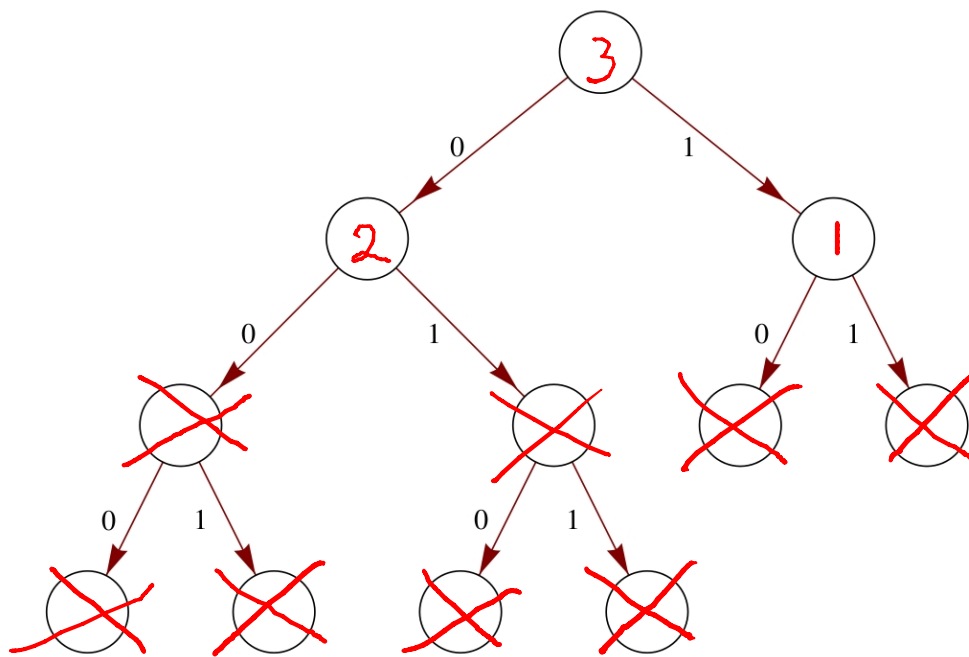
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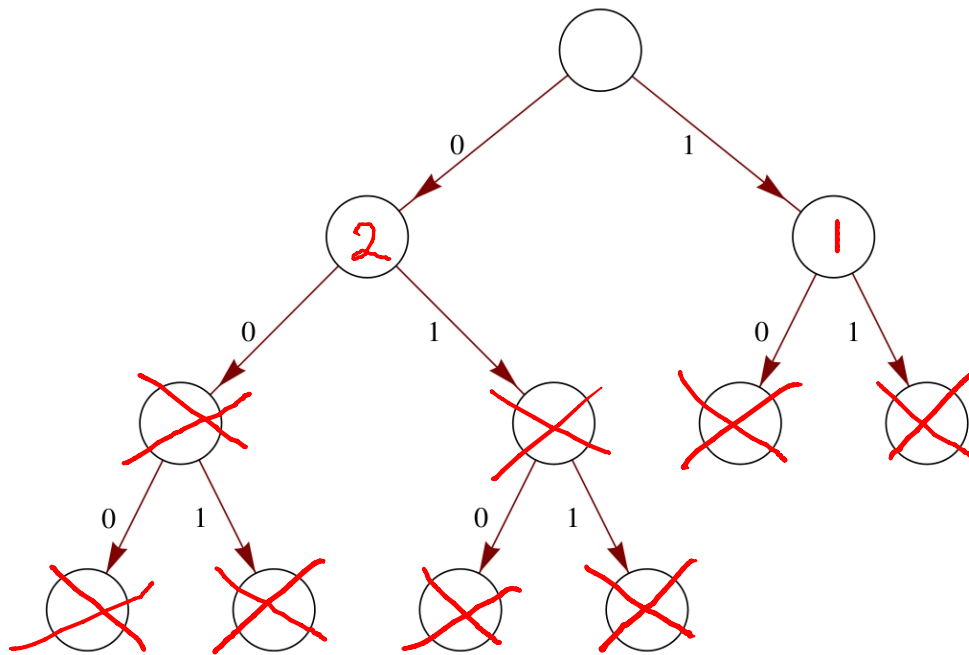
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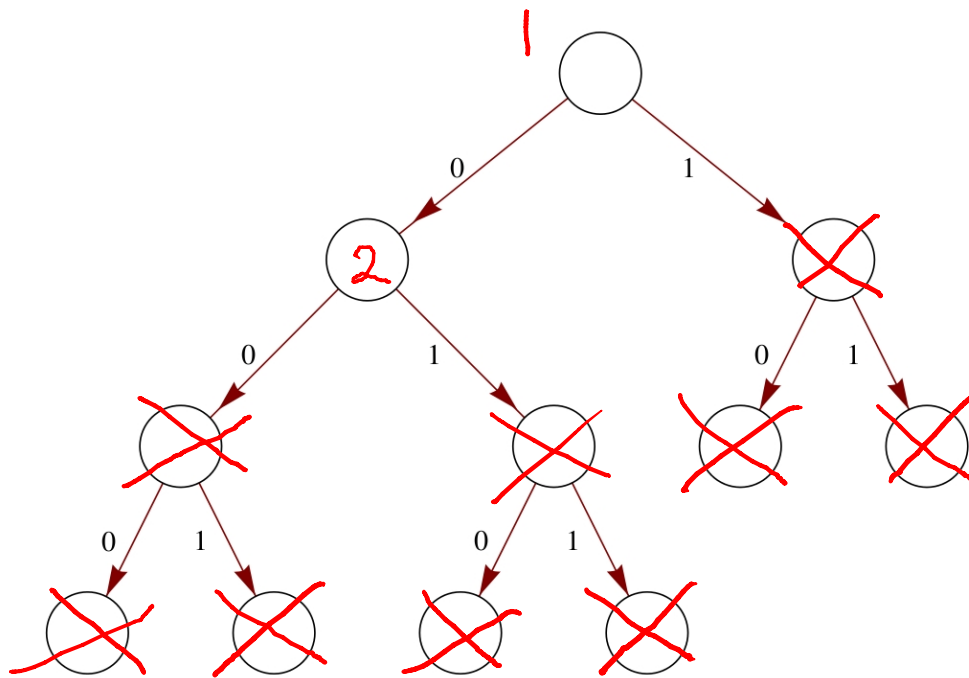
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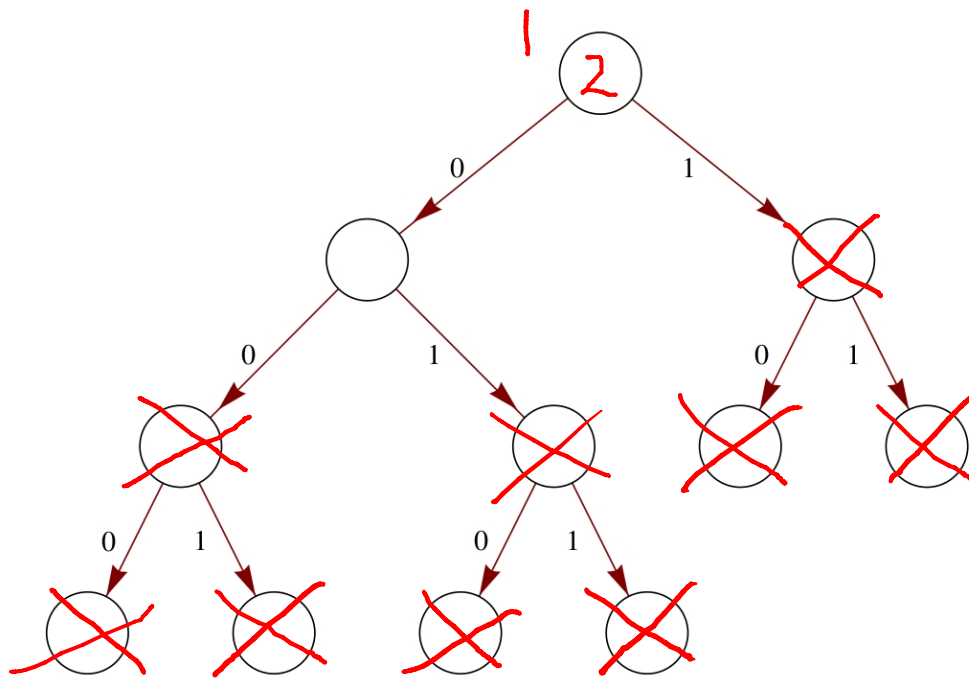
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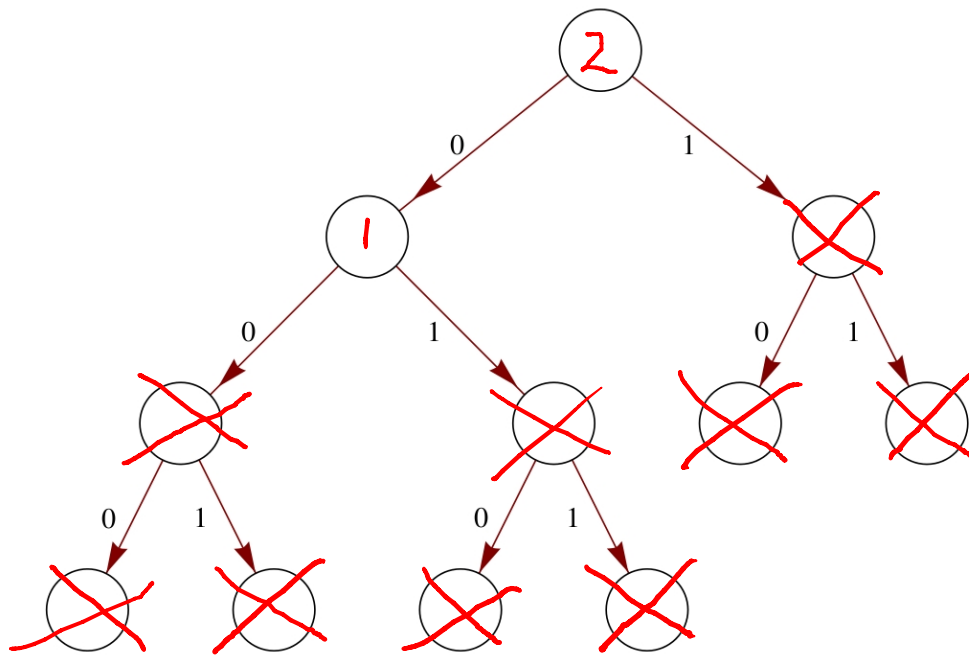
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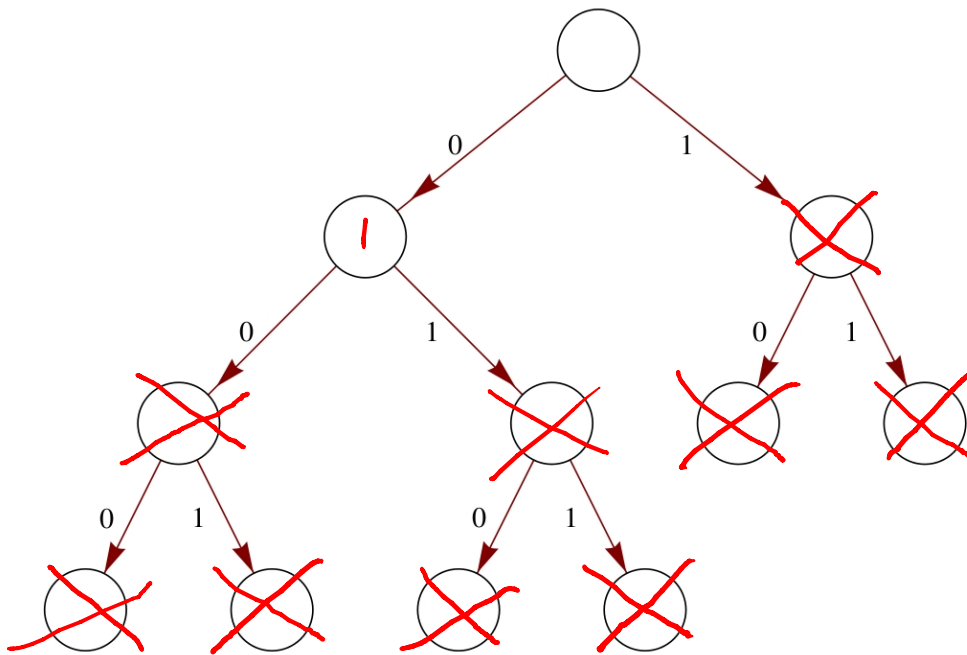
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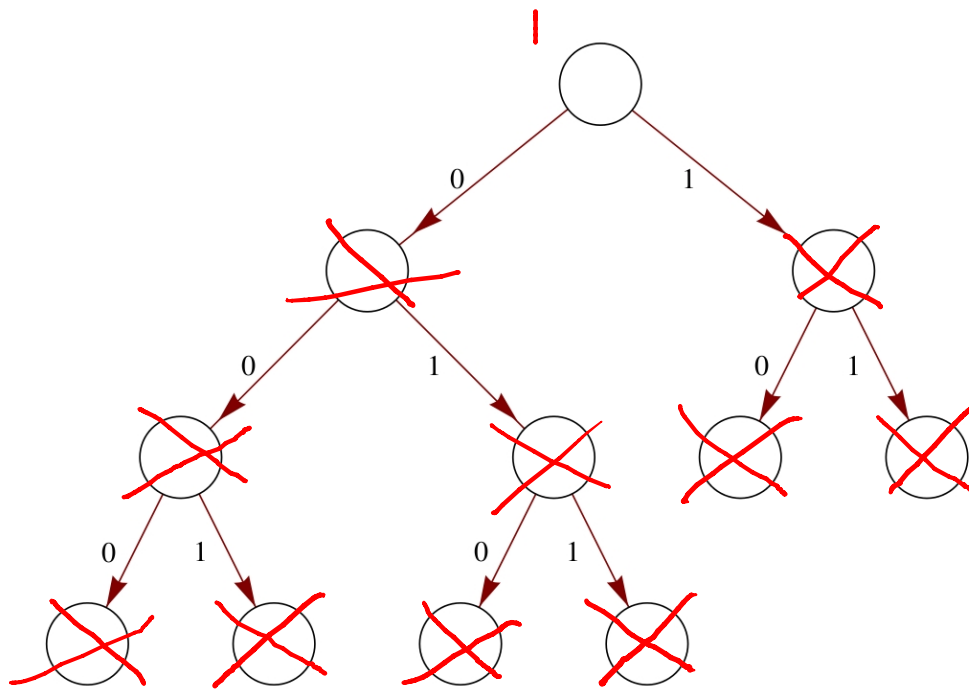
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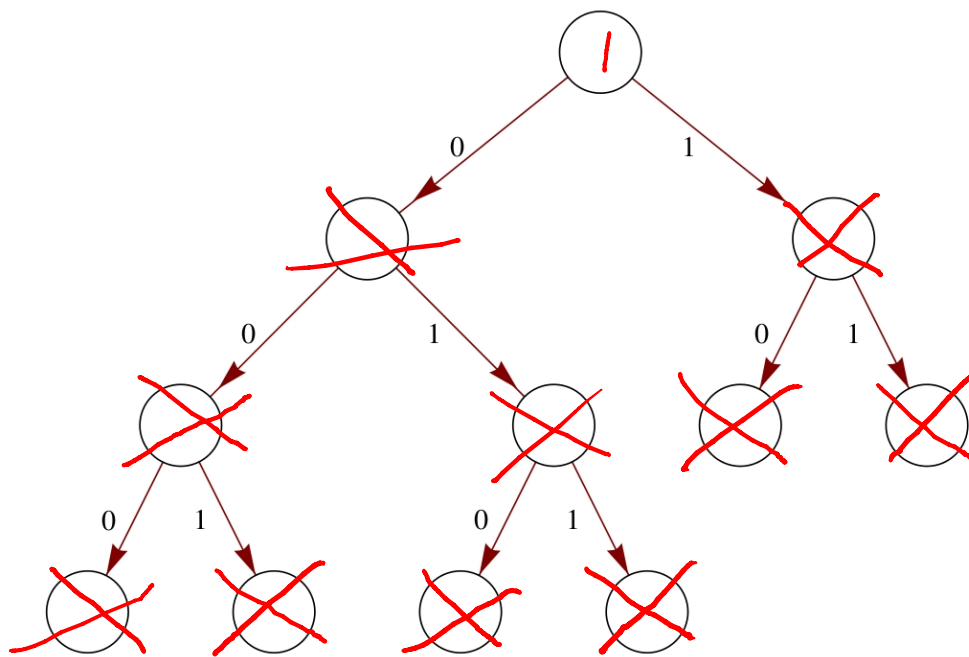
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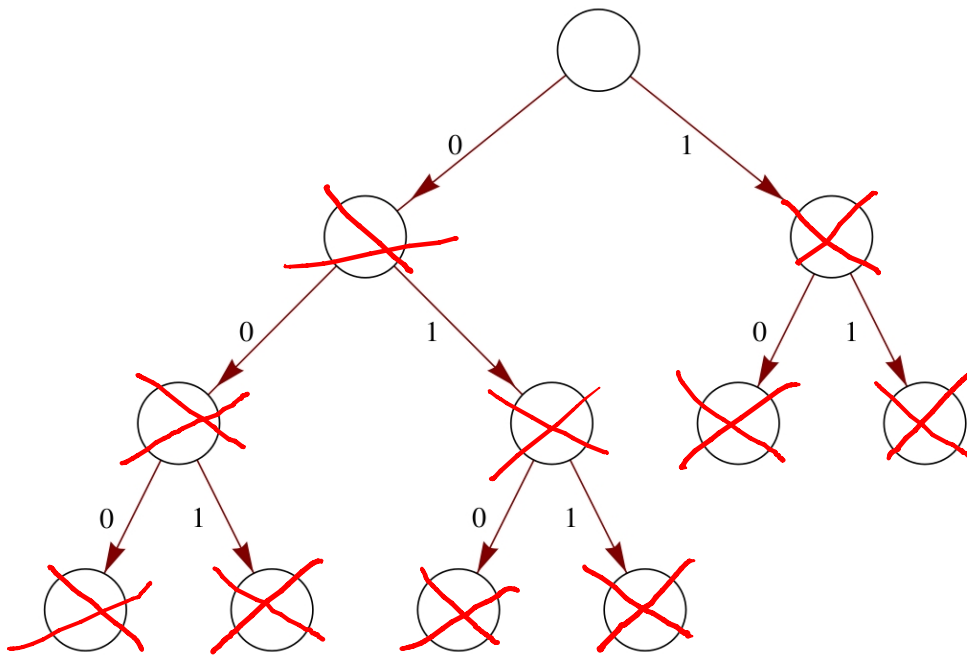
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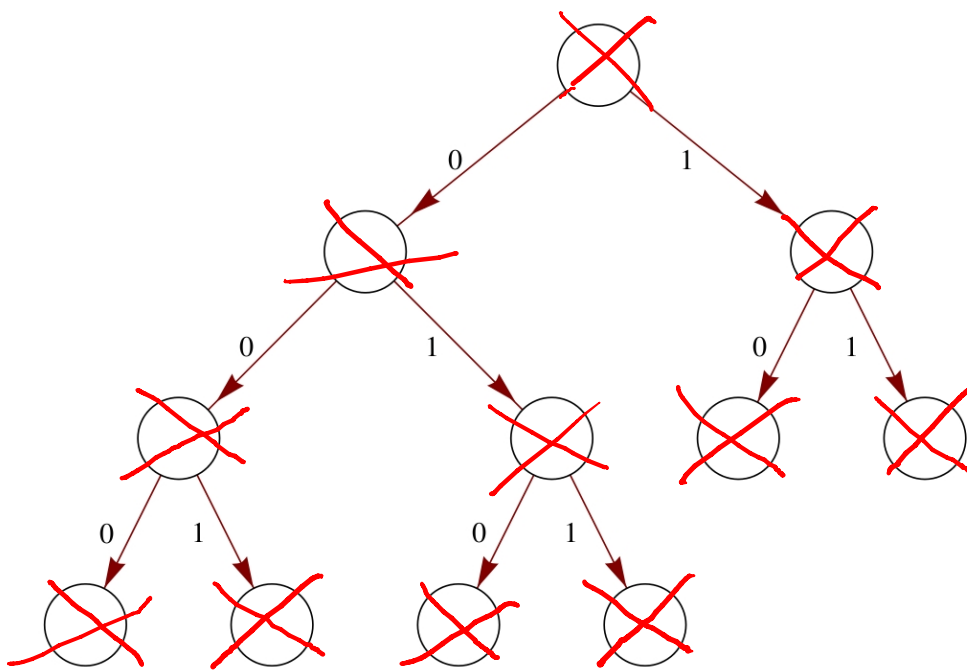
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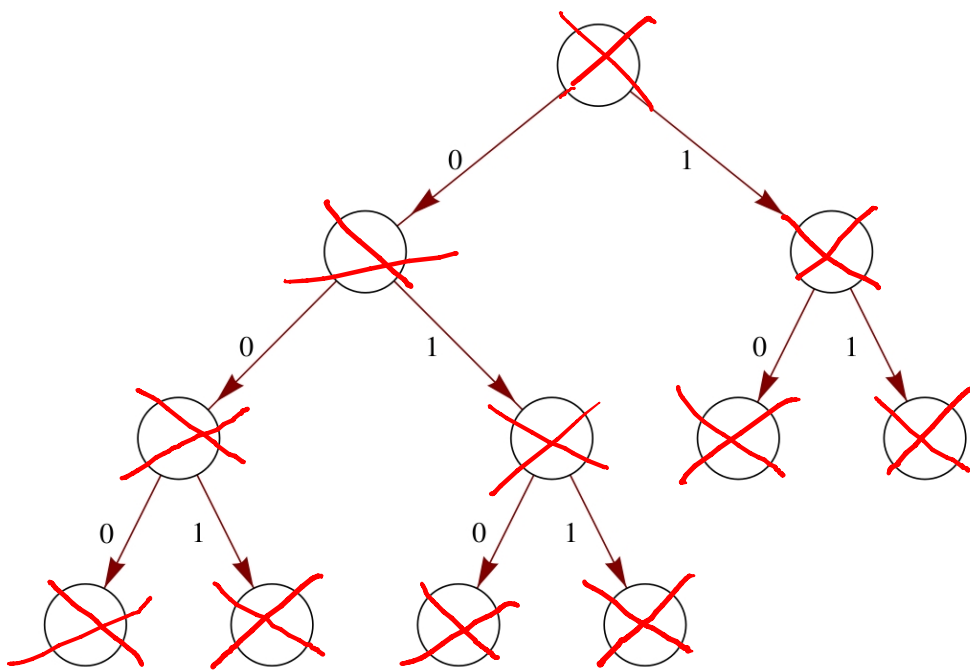
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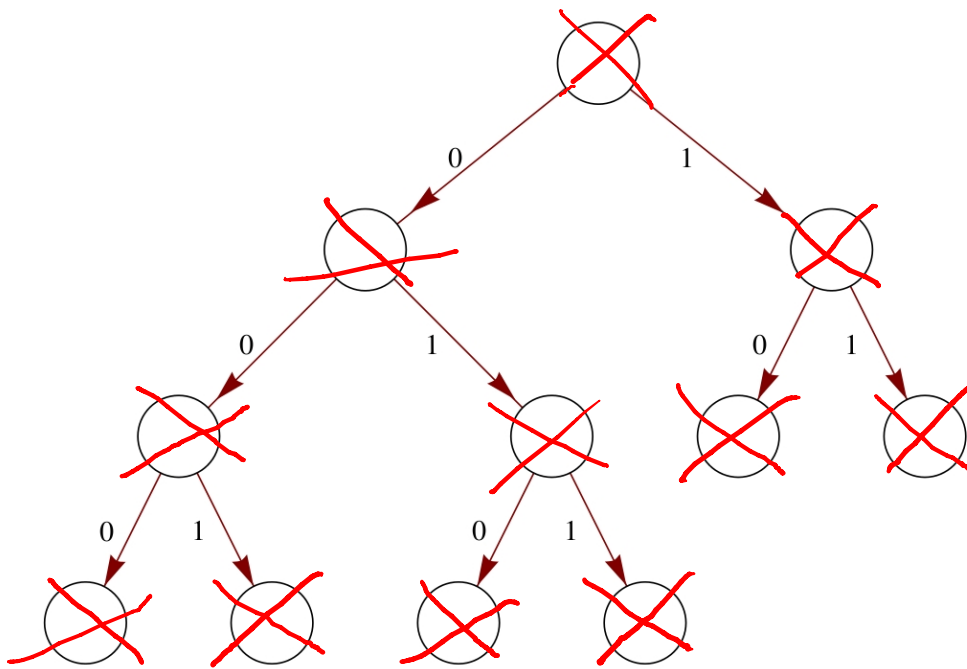
Removal

11 10 9 8 7 6 5 4 3 2 1



Removals
done!

11 10 9 8 7 6 5 4 3 2 1



Removal
done!

SORTED!

