BST definition

Search in $\Theta(d)$-time.

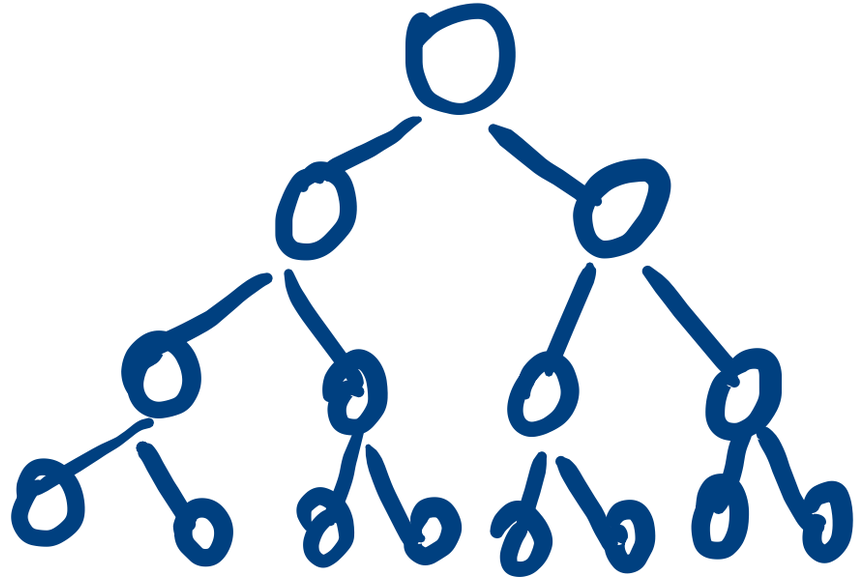
Insertion of (key, value) pairs in $\Theta(d)$-time.

How is d related to n

elts in the tree?

d. $\Omega(n)$ in the worst-case

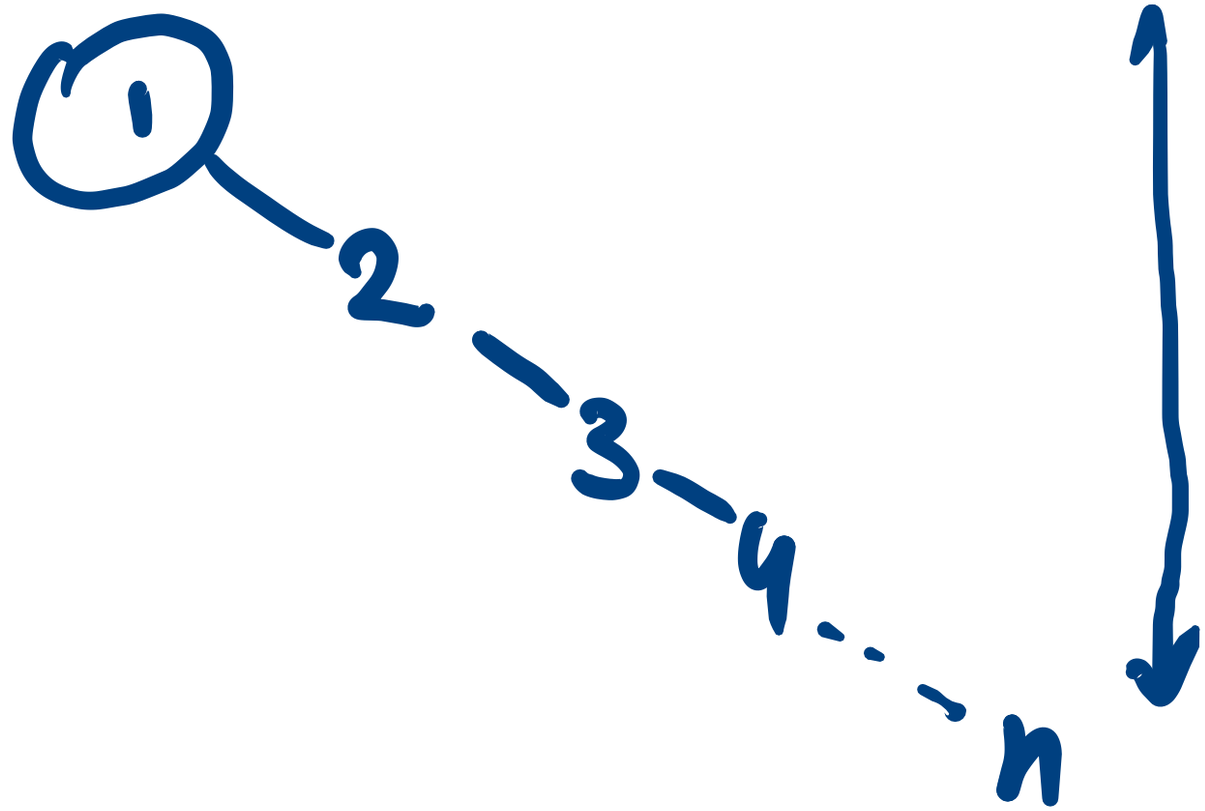
In the best-case, we want a tree that has the smallest possible depth



$n = 2^d - 1$

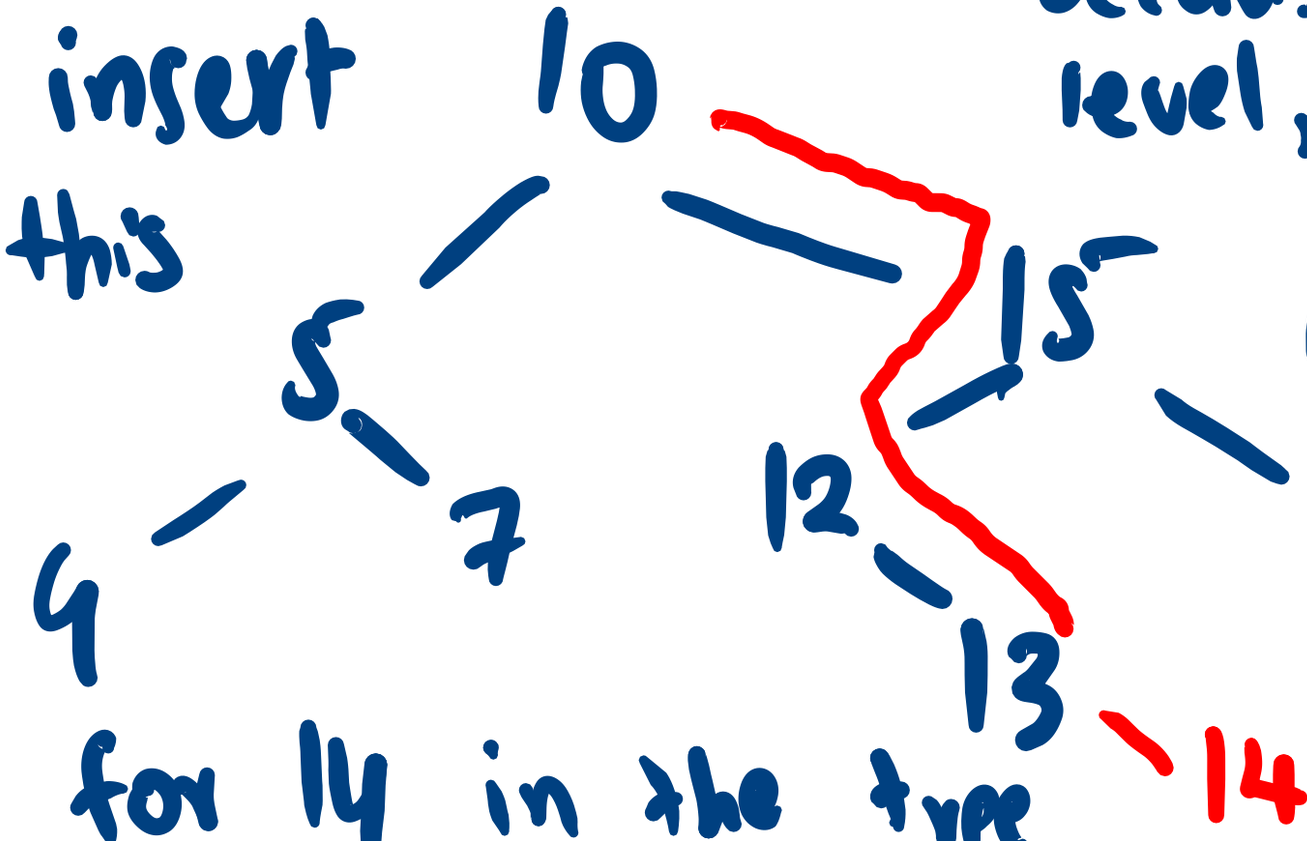
$d = \Omega(\log(n))$

Worst-case



Insertion

Want to insert 14 into this BST.



Insert is O(d) because at each level, it only spends unit time.

* Search for 14 in the tree
* Add 14 in the "missing" position

Public vs Private functions

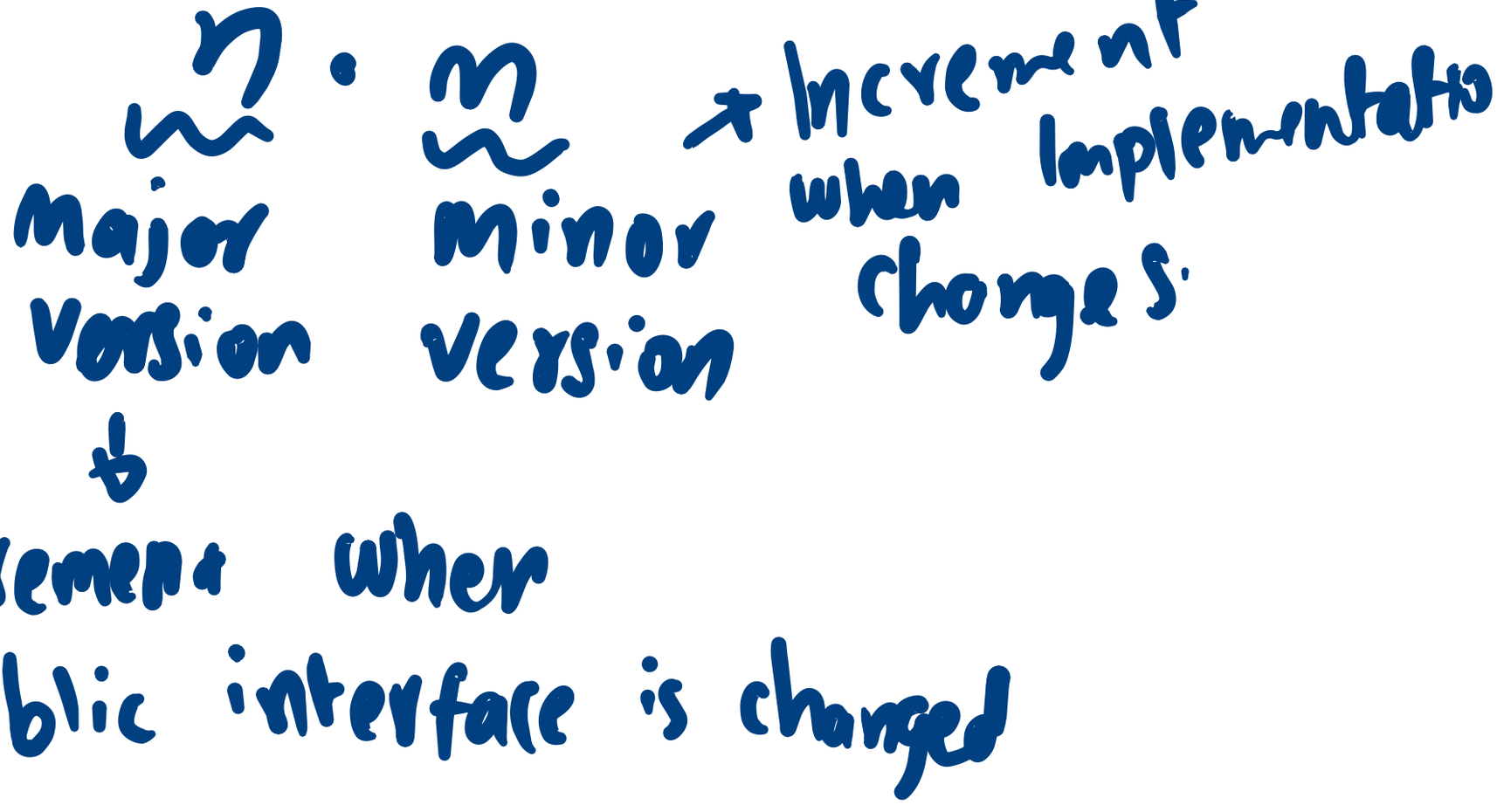
↳ Should not be called by outside world.

SemVer | Software version number

2.5

3.9 etc.

In Semver


2 . 0
Major version
Minor version
Increment when implementation changes.
Increment when Public interface is changed