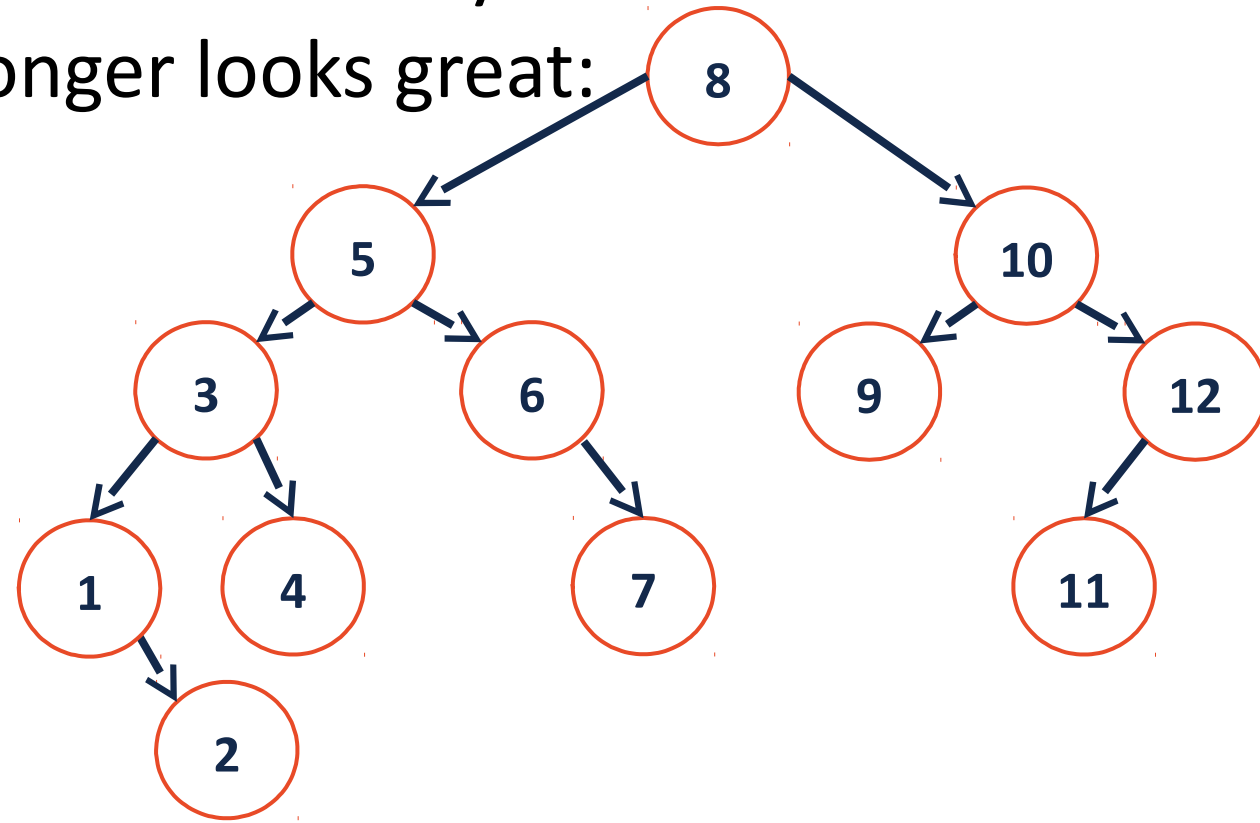# CS 400

B-Tree Introduction

ID: 08-01

B-Tree Motivation

Big-O <u>assumes uniform</u> time for all operations, but this isn't always true.

However, seeking data from the cloud may take 100ms+.
...an O(lg(n)) AVL tree no longer looks great:

Real Application

Imagine storing Facebook profiles for everyone in the US:

How many records?

How much data in total?

How deep is the AVL tree?

BTree Motivations

Knowing that we have large seek times for data, we want to:

BTree (of order m)

-3	8	23	25	31	42	43	55

m=9

Order = number of nodes + 1

Goal: Minimize the number of reads!

Build a tree that uses _____ / node

[1 network packet]
[1 disk block]