

The First
Normal Form



First Normal Form Definition

- Data is in a relational database table
 - Rows
 - Columns
 - Primary Key
- Each Column contains Atomic Values

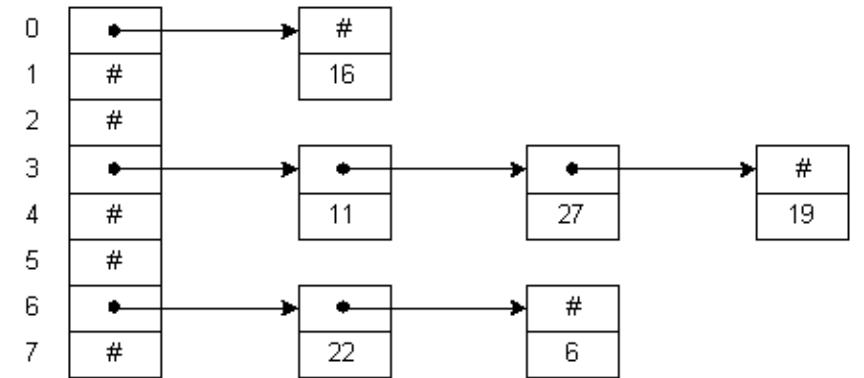
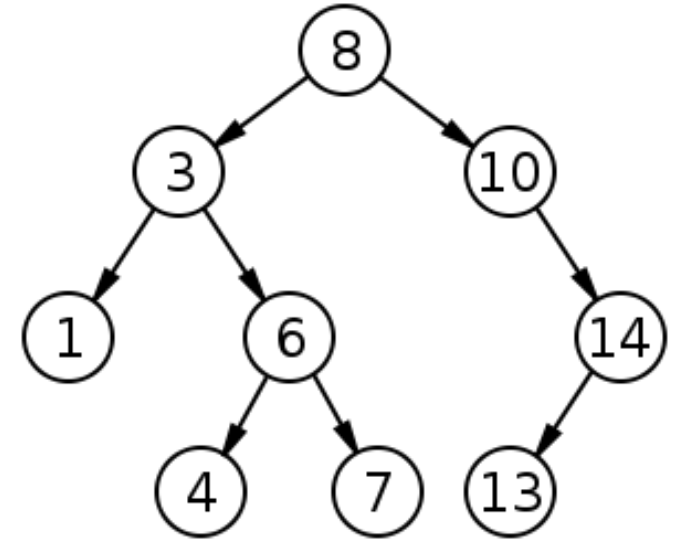


Relational Database Table

Three Components:

- Rows
- Columns
- Primary Key

Relational Database Table?



Relational Database Table?

SalesPerson	SalesOffice	OfficeNumber	Customer1	Customer2	Customer3
Mary Smith	Chicago	312-555-1212	Ford, Dearborn, 94000	GM, Detroit, 670000	
John Hunt	New York	212-555-1212	Dell, Austin, 950000	HP, Palo Alto, 67000	Apple, Cupertino, 60000
Martin Hap	Chicago	312-555-1212	Boeing, Chicago, 2700000		

Atomic Value?

23

Green

Los Angeles

George Washington

Washington, George

03/14/1879

Carbon Dioxide

Chicago, IL

Pizza; Bead Sticks; 2 Liters Coke