CSCI 4380 - Database Systems

Fall 2020

Lecture 19 3:

B-Tree indices

Insertion and deletion

Sibel Adali, RPI
Internal node

5 pointers
4 key values

n = 4

Leaf node

4 key values/tuples
5 pointers

Pointers to nodes below

Pointer to tuples
N = 54

Equally spaced # nodes = 3
scanned = 3 one for each level

n = 4
Range query: $45 \geq n \geq 12$

$\#\text{nodes scanned} = 6$

$n = 4$
Insertion

$\begin{align*}
\text{n} &= 55 \\
\text{n} &= 80 \\
\text{n} &= 82
\end{align*}$

$\text{n} = 4$
Delete
41
64
68
61

n = 4