

Tutorial 8: Indexing Techniques

CS3402 Database Systems

Question 1

- Construct a B⁺-tree for the following set of key values:

(2, 3, 5, 7, 11, 17, 19, 23, 29, 31)

Assuming that the tree is initially empty, values are added in ascending order, and the number of key values in internal nodes and leaf nodes are both 3.

Question 2

- For the B⁺-tree constructed for Question 1, show the form of the tree after each of the following series of operations:
 - Insert 9
 - Insert 10
 - Insert 8
 - Delete 7
 - Delete 8
 - Delete 5
 - Delete 3
 - Delete 11