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**Tutorial 07**



**BSc (Hons) in Information Technology – Year 2**

IE2042 – Database Management Systems for Security Semester 1, 2022

1. Explain the relationship between a database table and the data file.
2. Explain the three types of file organizations.
3. Compare and contrast the three file organizations.
4. Describe the importance of the indexes.
5. How to connect the index data to the table records? Explain the alternative ways.
6. Compare and contrast clustered and unclustered index
7. Compare and contrast sparse and dense index
8. Refer the B+ tree given below.

**Root**

**15 20**

**27**

**31**

**17\* 18\***

**20\* 22\* 26\***

**28\* 29\* 30\***

|  |  |  |  |
| --- | --- | --- | --- |
| **3\*** | **5\*** | **8\*** | **11\*** |

|  |  |  |  |
| --- | --- | --- | --- |
| **33\*** | **34\*** | **40\*** | **43\*** |

* 1. Search 22\*
  2. Insert 19\*
  3. Insert 13\*
  4. Delete 26\*
  5. Delete 22\*
  6. Delete 15\*