UNIT II: NO SQL DATABASES

SYLLABUS:

NoSQL – CAP Theorem – Sharding - Document based – MongoDB Operation: Insert, Update, Delete, Query, Indexing, Application, Replication, Sharding, Deployment – Using MongoDB with PHP / JAVA – Advanced MongoDB Features – Cassandra: Data Model, Key Space, Table Operations, CRUD Operations, CQL Types – HIVE: Data types, Database Operations, Partitioning – HiveQL – OrientDB Graph database – OrientDB Features

SNAPSHOT

1. NoSQL
   1.1. Introduction to NoSQL Databases
   1.2. CAP Theorem (Consistency, Availability, Partition Tolerance)
   1.3. Sharding in NoSQL Databases
2. Document-Based NoSQL: MongoDB
   2.1. MongoDB Overview
   2.2. MongoDB Operations
   2.3. Indexing in MongoDB
   2.4. Application Development with MongoDB
   2.5. Replication in MongoDB
   2.6. Sharding in MongoDB
   2.7. Deployment Considerations for MongoDB
   2.8. Using MongoDB with PHP/Java
   2.9. Advanced MongoDB Features
3. Cassandra
   3.1. Data Model in Cassandra
   3.2. Key Space Operations
   3.3. Table Operations in Cassandra
   3.4. CRUD Operations in Cassandra
   3.5. CQL (Cassandra Query Language) Types
4. Hive
   4.1. Introduction to Hive
   4.2. Data Types in Hive
   4.3. Database Operations in Hive
   4.4. Partitioning in Hive
   4.5. HiveQL (Hive Query Language)
5. OrientDB Graph Database
   5.1. Introduction to OrientDB
   5.2. Features of OrientDB