Day -3 21-May 2025

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Mongod and mongoSh installation and

setup Environmental variable

Database Fundamentals

NoSQL

Relational vs Non Relational Databases: Relational vs Non Relational Databases

Introduction to NoSQL: Downloading the required Software, NoSQL Architecture with MongoDB

CRUD and the MongoDB Shell: Basics, MongoDB Advantages, MongoDB Data Modelling, MongoDB Tools

Querying Data: Databases and Collections, Querying Collections, Working with Operators, Referencing a Database, Querying Dates

Manipulating Data: Inserting Data into Collections, Updates, Deletes, Atomic Operations, Removing Data, Capped Collections

Relational vs Non Relational Databases: Relational vs Non Relational Databases

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ACID - definitions

Atomicity:

A transaction is treated as a single, indivisible unit of work. Either all changes within a transaction are applied successfully, or none of them are. If any part of a transaction fails, the entire transaction is rolled back to its previous state, ensuring data consistency.

Consistency:

This property ensures that transactions maintain the database's integrity by adhering to defined rules and constraints. Every transaction must move the database from one valid state to another, preventing data corruption or invalid data.

Isolation:

This property guarantees that concurrent transactions do not interfere with each other. Each transaction appears to execute independently, preventing data conflicts or inconsistencies that could occur if multiple transactions were modifying the same data simultaneously.

Durability:

Once a transaction is committed (meaning it has been successfully executed), its changes are permanently stored and will persist even in the event of system failures, hardware malfunctions, or power outages. This ensures that data is not lost after a transaction has been completed.

RDBMS Doc 4.pdf

https://drive.google.com/file/d/1cgSZ6wmPmFbx-tC78lt6zC9UBYiDJlyP/view?usp=sharing

NOSQL Doc 5 pdf

https://drive.google.com/file/d/1PDqGKE766Z-rG4GVh3ycwJyrraiJV-my/view?usp=sharing

MongoDb Installation link

https://www.mongodb.com/try/download/community

MongoDb installation steps link

https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-windows/

this is also MongoDb link any one you can follow..

https://www.geeksforgeeks.org/how-to-install-mongodb-on-windows/

Mongosh installation steps link

https://www.mongodb.com/docs/mongodb-shell/install/

Setting the path..

Env path

C:\Program Files\MongoDB\Server\7.0\bin

C:\Program Files\MongoDB\mongosh\mongosh-2.2.12-win32-x64\bin

mongo db compass

Make sure 2 cmd s are open

Cmd - mongod

Cmd - mongosh