**NoSQL database**

There are three types of databases:

1. RDBMS / Relational Database Management System
   1. MySQL
   2. Oracle DB
   3. MS SQL Server
2. OLAP [ Online Analytical Processing ]
3. NoSQL
   1. MongoDB
   2. Google Bigtable
   3. Apache Cassandra
   4. Amazon DynamoDB

NoSQL database is “not only SQL” database.

It can also be used to store information/data in a format other than relational tables;

It uses a non-tabular structure model for data storage.

It is generally used to store big data and real-time information. For example data from social media that is used in business analytics.

**Advantages of NoSQL**

1. It support query language
2. It provides fast performance
3. It provides horizontal Scalability.

**Types of No-SQL Database**

1. Document Database
   1. It stores data in objects that similar to the JavaScript object
2. Key-Value Database
   1. Simple database where each item contains keys n values
3. Wide-Column Database
   1. Store data in tables, rows and dynamic column
4. Graph database
   1. Store data in nodes and edges.

**MongoDB Atlas is MongoDB on the cloud.**

**Mongo DB Enterprise Server or Community Edition**

**Mongo DB Compass is a GUI client like MYSQL Workbench**

**https://www.mongodb.com/**

Download / Installation

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

watch-video

tutorial

<https://docs.mongodb.com/manual/core/databases-and-collections/>

show dbs // List database

Creating database / Open database [ if db doesn’t exist , it will create one ]

use nitindb; // use <dbname>;

db; // current database name;

db.employee.insertOne({id:1,name:"Nitin",salary:2300.00}); //employee is the name of collection and if it doesn’t exist, it will be created.

db.employee.find(); // display all the documents

cls // clear the screen

db.createCollection(<dbname>,[option]);

db.createCollection(“department”);

show collections ; // list the collections in current db;

db.createCollection(**"logs"**, { capped : true, size : 5242880, max : 5000 } )

|  |
| --- |
| db.products.insertMany( [ |
| { item: **"card"**, qty: 15 }, |
| { item: **"envelope"**, qty: 20 }, |
| { item: **"stamps"** , qty: 30 } |
| ] ); |

db.products.find(); /// select \* from products;

db.products.find({qty:{$gt:20}}); // select \* from products where qty>20

db.products.find({qty:{$gte:20}}); // select \* from products where qty>=20

db.products.find({qty:20}); // select \* from products where qty=20;

comparison operator

$eq $gt $lt $gte $lte $in $ne $nin

<https://docs.mongodb.com/manual/tutorial/query-documents/#specify-and-conditions>

db.inventory.find({item:1} ); // select \* from inventory where item=1;

db.inventory.find({} , {item:1} ); select \_id, item from inventory;

db.inventory.find( { status: **"A"** }, { item: 1, status: 1 } )

//select \_id, item, status from inventory where status=’A’;

db.inventory.find( { status: **"A"** }, { item: 1, status: 1, \_id: 0 } )

//select item, status from inventory where status=’A’;

db.inventory.updateOne({item:"notebook"},{$set:{"status":"D"}});

db.inventory.find( { status: "A" }, { item: 1, status: 1, \_id:0 } )

db.inventory.find( { }, { item: 1, status: 1, \_id:0 } )

db.inventory.deleteMany({}) // delete all documents

db.inventory.deleteMany({ status: **"A"** }) // delete all documents where status=A

db.inventory.deleteOne({ status: **"A"** }) // delete One documents where status=A

db.employee.insertOne({id:2,name:"Azom",salary:3400.01, deptId:101});

db.employee.insertOne({id:2,name:"Naser",salary:2400.01});

localhost

Connecting MongoDB from Java.

Download MongoClient Driver

--- Github Repository

MongoClient mongo = MongoClients.*create*("mongodb://127.0.0.1:27017");