

Class: TE IT(A)

Roll No: 35040

Batch: B

Group: C

### Assignment No. 1

**Title:** Insert, update and remove in MongoDB

**Problem Statement:** Create a database with suitable example using MongoDB and implement

1. Inserting and saving document (batch insert, insert validation)
2. Removing document
3. Updating document (document replacement, using modifiers, upserts, updating multiple documents, returning

**Requirements:** MongoDB

**Prerequisites:** Basic knowledge about MongoDB.

**Theory:**

#### 1. What is NOSQL DB?

NoSQL databases (aka "not only SQL") are non tabular, and store data differently than relational tables. NoSQL databases come in a variety of types based on their data model. The main types are document, key-value, wide-column, and graph. They provide flexible schemas and scale easily with large amounts of data and high user loads.

#### 2. Difference between SQL and NOSQL.

SQL	NoSQL
RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS)	Non-relational or distributed database system.
These databases have fixed or static or predefined schema	They have have dynamic schema
These databases are not suited for hierarchical data storage.	These databases are best suited for hierarchical data storage.
These databases are best suited for complex queries	These databases are not so good for complex queries
Verticlly Scalable	Horizontally scalable

### 3. Types of NOSQL

- Key Value Pair Storage Database
- Column Based Database
- Graph Based Database
- Document Oriented Database

### 4. Properties of MongoDB

MongoDB maintains the most valuable features of relational databases:

- strong consistency
- ACID transactions
- expressive query language
- secondary indexes.

As a result, developers can build highly functional applications faster than NoSQL databases.

### 5. Syntax of insert, update and remove in detail

#### INSERT:

- **db.collection.insert({document});**
- example- `db.driver_info.insert({did:1,name:"Akash",address:"Pune"});`

#### UPDATE:

- `db.collection.update({query},{update},{options});`
- `db.collection.update({query},{update},{upsert:true});`
- example- `db.driver_info.update({did:2},{set:{name:"Ravi"}});`

#### REMOVE:

- `db.collection.remove({query},{justOne});`
- example- `db.driver_info.remove({did:8});`

**Conclusion:** Thus, in this assignment how to insert,update and remove in MongoDB.