**MongoDB** is a type of **database** – a place where data is stored so it can be used later.

But instead of storing data in **tables** like traditional databases (such as Excel sheets), MongoDB stores it in a **flexible format** called **documents** (like filling out forms).

1. Horizontal scaling: sharding allows distribute data across multiple servers/clusters to handle large data and traffic.
2. Vertical scaling: Add more power (CPU, RAM, storage) to a single MongoDB server to improve performance.
3. Replica sets: A group of MongoDB servers that keep copies of the same data to ensure high availability and failover.

**Applications:**

1. E-commerce Websites
2. IoT
3. Mobile & Web Applications
4. Gaming Applications
5. Log Management
6. Banking and Finance

**Resilient:**

E commerce- during sale

**Aggregate functions:**

* count()
* distinct()

$Group:

db.users.aggregate([

 { $group: { \_id: "$city", averageAge: { $avg: "$age" } } }

])

$project:

Merge

db.sales.aggregate( [

  { $project: { \_id: 0 } },

  { $merge : { into : "newCollection" } }

] )

Upsert:

db.employee.findAndModify({

     query:{name:"Ram"},

      update:{$set:{department:"Development"}},

      upsert:true

})

$match:

db.users.aggregate([

 { $match: { age: { $gt: 30 } } }

])

$sort:

db.users.aggregate([

 { $sort: { age: 1 } }

])

**Tasks:**

* MongoDB, Aggregations, indexing, regex in mongodb
* To decode the files which scripted in MongoDB : need to use some tools (mongodump, mongoexport, mongorestore)





