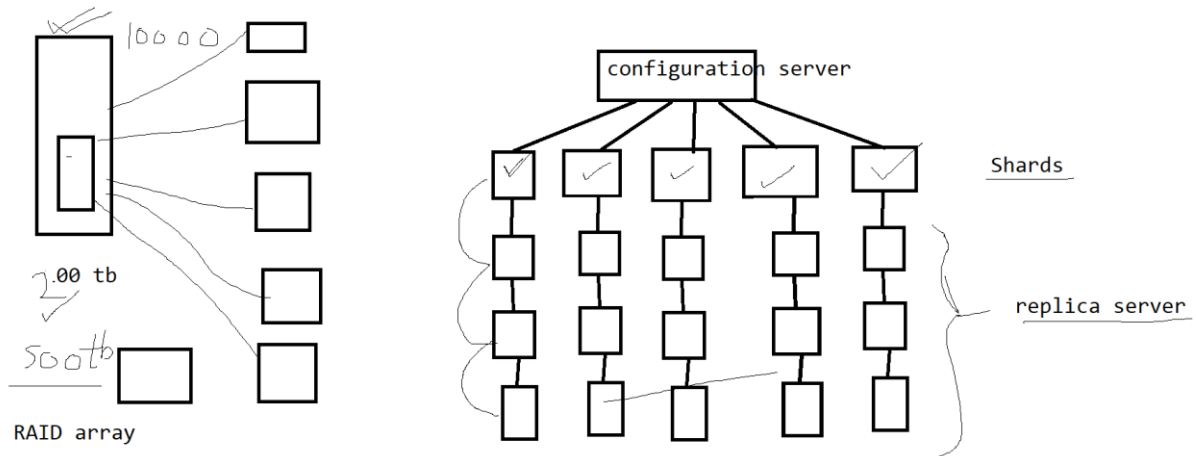MongoDB

--it is NoSql data, used to stored data in unstructured format

Examples of nosql databases are MongoDB, Cassandra,couchbaseDB, hbase

SQL VS NoSQL

SQL	NoSQL
It stores Structured data	It stores unstructured data
It supports ACID properties	It Supports CAP principle
Highly secure, because of transaction control and ACID property	Less secure as compared to SQL databse
Data is stored on central server,	Data is stored in distributed manner
Data retrieval will be slower as compared to nosql	Data retrieval will be faster, because stored in distributed manner
Less available as compared to no SQL	Highly available because of replica facility
It uses vertical scaling	It uses horizontal scaling

Row oriented storage VS column oriented storage

Empid	Ename	sal
1	Rajan	3000
2	Revati	4000

Empid	Ename	sal
1	Rajan	3000
2	Revati	4000

SQL, MySQL

Row oriented

1rajan3000 2 Revati 4000 3 Atharva 5678

OLTP
Online transaction
processing
OLAP
OnlinevvvAnalytical
processing

Column oriented

Empid	Ename	sal
1	Rajan	3000
2	Revati	4000

1 2 3   Rajan Revati Atharva 3000 4000 5000

1 2 3   3000 4000 500

Rajan Revati Atharva

MongoDB

It is designed in c++

It stores the data in BSON format

It uses wiredTiger engine to store data

It uses sharding to store the data in distributed manner.

It uses replica to keep the backup.

Terminology

SQL	MongoDB
Database	Database
table	Collections
Attributes/fields	fields
Row/tuple/record	Document
Primary key	Primary key
Indexes	Indexes
Joins	No joins are available. And hence we use Nested objects

Employee

{empid:1111, Ename:'Kishori', sal:46545.90,

Hobbies:['Reading','Biking','Trekking'],

Dept:{deptno:12,dname:'HR'},

Experience: [{name:'igate',years:3,desg:'sr manager'},{name:'Oracle', years:5}],

DOJ: ISODate("2018-04-03T08:10:45.34"),

Married:True}

To retrieve dname

    Dept.dname

To get years at 1 st index position

Experience.1.year

To get designation

Experience.0.desg

To Create collection

1. You may use insert function

While inserting document, if you add key _id, then the value should be unique, and if you don't add _id then mongo db will add it and it also will make data unique.

2. To create collection without inserting data
    Db.createCollection("test")
3. While creating collection you may put a cap or limit on the collection size, then it is called as capped collection
4. Db.createCollection("blogs",{capped:true,size:30000,max:2})