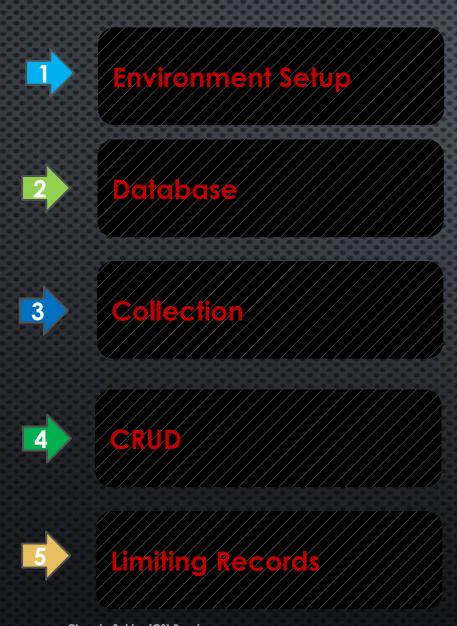
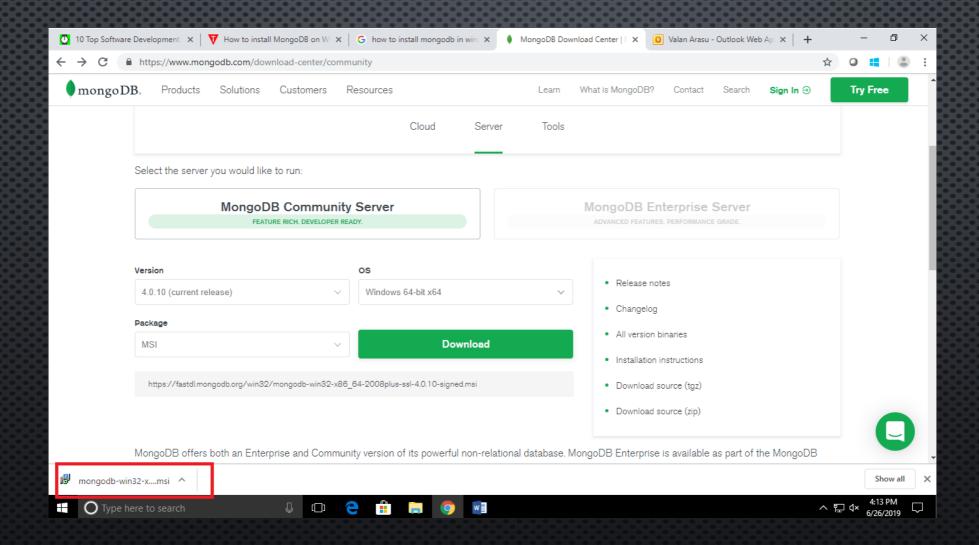
MONGO DB

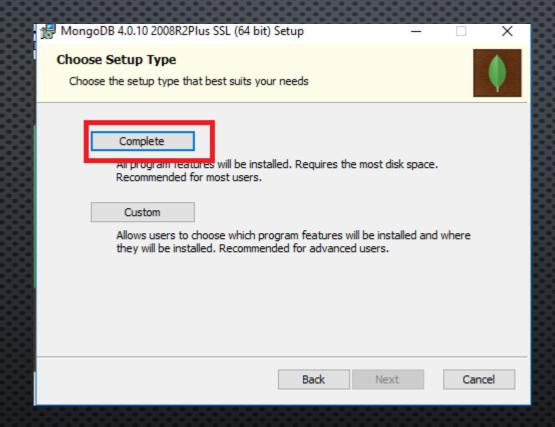


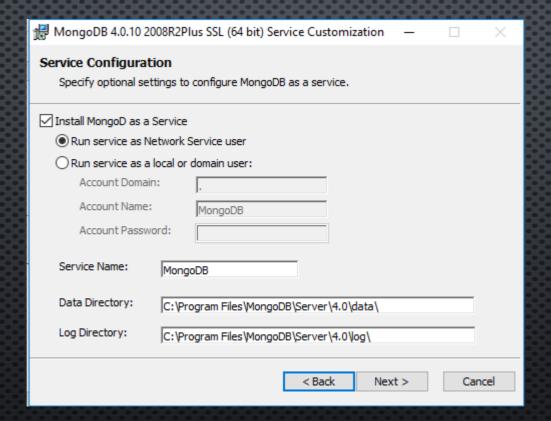
Sorling Records

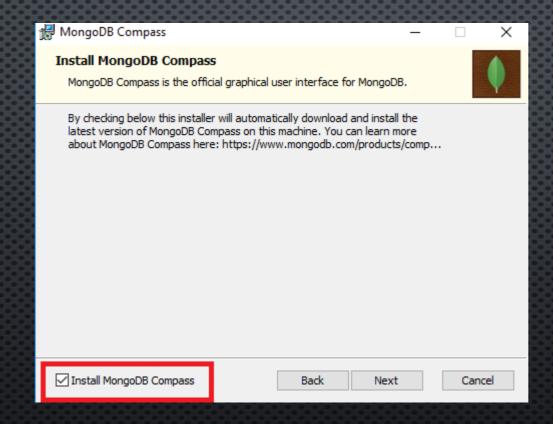
ENVIRONMENT SETUP



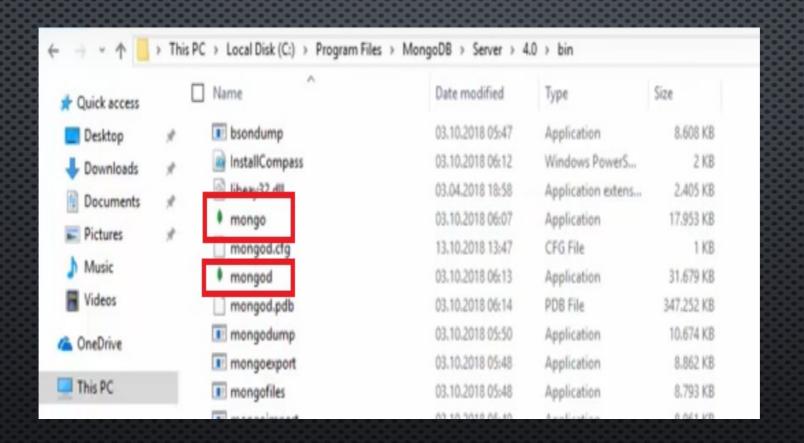












```
C:\Users\lear >cd C:\Program Files\MongoD8\Server\4.0\bin
C:\Program Files\MongoDB\Server\4.0\bi
2018-10-13T14:00:52.895+0200 I CONTROL [Nain] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols
one'
2018-10-13T14:00:53.392+0200 I CONTROL [initandlisten] MongoDB starting : pid=4248 port=27017 dbpath=C:\data\db\ 64-bit host=DESKTOP-K5I
SPOL
                                        [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2018-10-13T14:00:53.401+0200 I CONTROL
                                        [initandlisten] db version v4.0.3
2018-10-13T14:00:53.409+0200 I CONTROL
                                        [initandlisten] git version: 7ea530946fa7880364d88c8d8b6026bbc9ffa48c
2018-10-13T14:00:53.415+0200 I CONTROL
                                        [initandlisten] allocator: tcmalloc
2018-10-13T14:00:53.423+0200 I CONTROL
2018-10-13T14:00:53.435+0200 I CONTROL
                                        [initandlisten] modules: none
                                        [initandlisten] build environment:
2018-10-13T14:00:53.468+0200 I CONTROL
                                        [initandlisten]
                                                           distmod: 2008plus-ssl
2018-10-13T14:00:53.472+0200 I CONTROL
                                        [initandlisten]
                                                           distarch: x86 64
2018-10-13T14:00:53.483+0200 I CONTROL
2018-10-13T14:00:53.487+0200 I CONTROL
                                        [initandlisten]
                                                           target_arch: x86_64
2018-10-13T14:00:53.494+0200 I CONTROL
                                        [initandlisten] options: {}
                                        [initandlisten] exception in initAndListen: NonExistentPath: Data directory C:\data\db\ not found
2018-10-13T14:00:53.510+0200 I STORAGE
., terminating
2018-10-13T14:00:53.529+0200 I NETWORK
                                        [initandlisten] shutdown: going to close listening sockets...
                                        [initandlisten] now exiting
2018-10-13T14:00:53.539+0200 I CONTROL
                                        [initandlisten] shutting down with code:100
2018-10-13T14:00:53.565+0200 I CONTROL
C:\Program Files\MongoDB\Server\4.0\bin>
```

Create this folder in C drive. And then run the "mongod" command

Chandras

```
Command Prompt - mongo
                                                                                  Command Prompt - mongod
                                                                                                              Suggested: Node.is Tutorial for Beginners
C:\Users\lear >cd C:\Program Files\MongoDB\Server\4.0\bin
                                                                                 server with --bind ip <addre
                                                                                 2018-10-13T14:01:51.850+0200 1 CONTROL
                                                                                 it should serve responses from, or with --bind ip all to
                                                                                                                                                         Info
:\Program Files\MongoDB\Server\4.0\bir>mongo
tongoDB shell version v4.0.3
                                                                                 2018-10-13T14:01:51.896+0200 I CONTROL [initandlisten] **
                                                                                                                                                     bind to
connecting to: mongodb://127.0.0.1:27017
                                                                                 interfaces. If this behavior is desired, start the
                                                                                 2018-10-13T14:01:51.929+0200 I CONTROL [initandlisten] **
Implicit session: session { "id" : UUID("fc69be76-e3bc-4daf-ae53-4febed54a895
                                                                                                                                                      server w
                                                                                  --bind ip 127.0.0.1 to disable this warning.
                                                                                 2018-10-13T14:01:51.985+0200 I CONTROL [initandlisten]
tongoDB server version: 4.0.3
                                                                                 2018-10-13T14:01:51.997+0200 I STORAGE [initandlisten] createCollection: adm
Welcome to the MongoDB shell.
or interactive help, type "help".
                                                                                 n.system.version with provided UUID: e5111ac9-ccb8-4865-a468-1dcfefe6b5e0
or more comprehensive documentation, see
                                                                                 2018-10-13T14:01:52.117+0200 I COMMAND [initandlisten] setting featureCompat
       http://docs.mongodb.org/
                                                                                 bilityVersion to 4.0
                                                                                 2018-10-13T14:01:52.131+0200 I STORAGE [initandlisten] createCollection: lo
Questions? Try the support group
       http://groups.google.com/group/mongodb-user
                                                                                 l.startup_log_with_generated_UUID: 1112df95-6776-4cd5-bcf8-07b84b80fc27
                                                                                                                         [initandlisten] Initializing full-time
                                                                                 2018-10-13T14:01:52.420+0200 I FTDC
erver has startup warnings;
2018-10-13T13:47:29.184+0260 I CONTROL [initandlisten]
                                                                                 diagnostic data capture with directory 'C:/data/db/diagnostic.data'
2018-10-13T13:47:29.185+0200 I CONTROL [initandlisten] ** WARNING: Access con
                                                                                 2018-10-13T14:01:52.434+0200 I STORAGE [LogicalSessionCacheRefresh] createCo
                                                                                 lection: config.system.sessions with generated UUID: 6fa27513-c8a3-4994-8489-
trol is not enabled for the database.
1018-10-13T13:47:29.185+0200 I CONTROL [initandlisten] **
                                                                    Read and w
                                                                                 064c308c7ee
rite access to data and configuration is unrestricted.
                                                                                 2018-10-13T14:01:52.434+0200 I NETWORK [initandlisten] waiting for connection
2018-10-13T13:47:29.185+0200 I CONTROL [initandlisten]
                                                                                 on port 27017
                                                                                 2018-10-13T14:01:52.710+0200 I INDEX
                                                                                                                         [LogicalSessionCacheRefresh] build in
nable MongoDB's free cloud-based monitoring service, which will then receive
                                                                                 ex on: config.system.sessions properties: { v: 2, key: { lastUse: 1 }, name:
and display
                                                                                 lsidTTLIndex", ns: "config.system.sessions", expireAfterSeconds: 1800 }
metrics about your deployment (disk utilization, CPU, operation statistics, et
                                                                                 2018-10-13T14:01:52.754+0200 I INDEX
                                                                                                                         [LogicalSessionCacheRefresh]
                                                                                                                                                          bui
:).
                                                                                 ing index using bulk method; build may temporarily use up to 500 megabytes of
The monitoring data will be available on a MongoDB website with a unique URL
                                                                                                                         [LogicalSessionCacheRefresh] build in
                                                                                 2018-10-13T14:01:52.780+0200 I INDEX
ccessible to you
                                                                                 ex done. scanned 0 total records. 0 secs
and anyone you share the URL with MongoDR may use this information to make
```

In the new command prompt run the "mongo" command to get the mongo db

```
show dbs
admin
       0.000GB
config 0.000GB
local 0.000GB
  use mylib
switched to db mylib
> show dbs
admin
       0.000GB
config 0.000GB
local
       0.000GB
 db.books.insert({"name":"mongodb book"})
WriteResult({ "ninserted" : 1 })
 show dbs
admin 0.000GB
config 0.000GB
       0.000GB
local
mylib 0.000GB
  show collections:
books
```

DATABASE

• CREATE DATABASE

MongoDB do not provide any command to create database. If there is no existing database, the following command is used to create a new database

Syntax

use DATABASE NAME

```
> use mydb
switched to db mydb
> show dbs
admin 0.000GB
local 0.000GB
> db.books.insert({"name" : "Java Book"})
WriteResult({ "nInserted" : 1 })
> show dbs
admin 0.000GB
local 0.000GB
mydb 0.000GB

**Solution**

**Solution**
```

2DROP DATABASE

The dropDatabase command is used to drop a database. It also deletes the associated data files. It operates on the current database.

Syntax

db.dropDatabase(

SFIND CURRENT DATABASE

The getName command is used to display the database name. It operates on the current database.

Syntax:

db.gefName()

```
> use mydb
switched to db mydb
> db.getName()
mydb
>
```

4COPY DATABASE

The copyDatabase command is used to copy or rename the database. It also copy the associated data files.

Syntax:

db.copyDatabase('old' , 'new')

COLLECTION

• CREATE COLLECTION

In MongoDB, createCollection command is used to create a collection. It operates on the current database.

Syntax:

db.createCallection('CallectionName')

```
> use mydb
switched to db mydb
> db.createCollection('Books')
{ "ok" : 1 }
> show collections
Books
>
```

DROP COLLECTION

In MongoDB, db.collection.drop() method is used to drop a collection from a database. It completely removes a collection from the database and does not leave any indexes associated with the dropped collections.

Syntax:

db.collection_name.drap()

```
> show collections
Books
> db.Books.drop()
true
> show collections
```

3 RENAME COLLECTION

In MongoDB, db.collection.renameCollection() method is used to rename of collection.

Syntax:

db.collection name.renameCollection('new name'

```
> show collections
Books
> db.Books.renameCollection('Book1')
{ "ok" : 1 }
> show collections
Book1
```



INSTRT

- * db.collection.insertOne()
 Inserts a single document into a collection.
- db.collection.insertMany()

 inserts multiple documents into a collection

 inserts multiple documents multipl
- * db.collection.insert()
 inserts a single document or multiple documents into a collection.



db.collection.insertOne()

db.collection.insertMany()



db.collection.insert()

```
> db.Books.insert ( { name : "Angular" , price : 200 } )
WriteResult({ "nInserted" : 1 })
> db.Books.find()
{ "_id" : ObjectId("5d39412f05d762dcceaaa5f4"), "name" : "Java", "price" : 200 }
{ "_id" : ObjectId("5d39418305d762dcceaaa5f5"), "name" : "C++", "price" : 100 }
{ "_id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
{ "_id" : ObjectId("5d39428205d762dcceaaa5f7"), "name" : "Angular", "price" : 200 }
>
```

db.collection.insert()

```
> db.Books.insert ( [ { name : "Oracle" , price : 200 } , { name : "MongoDB" , price : 300 } ] )
     BulkWriteResult({
            "writeErrors" : [ ],
            "writeConcernErrors" : [ ],
            "nInserted" : 2,
            "nUpserted" : 0,
            "nMatched" : 0,
            "nModified" : 0,
            "nRemoved" : 0,
            "upserted" : [ ]
     > db.Books.find()
     { " id" : ObjectId("5d39412f05d762dcceaaa5f4"), "name" : "Java", "price" : 200 }
      "_id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
        id": ObjectId("5d39428205d762dcceaaa5f7"), "name": "Angular", "price": 200 }
       " id" : ObjectId("5d39434805d762dcceaaa5f8"), "name" : "Oracle", "price" : 200 }
Chandrot { " id" : ObjectId("5d39434805d762dcceaaa5f9"), "name" : "MongoDB", "price" : 300 }
```



db.collection.insert()

```
> db.Books.insert ( { name : "Java" , author : "xyz" , address : { city : "Chennai" , State : "Tamil Nadu" } , price : 100, } )
WriteResult({ "nInserted" : 1 })
> db.Books.find()
{ "_id" : ObjectId("5d39412f05d762dcceaaa5f4"), "name" : "Java", "price" : 200 }
{ "_id" : ObjectId("5d39418305d762dcceaaa5f5"), "name" : "C++", "price" : 100 }
{ "_id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
{ "_id" : ObjectId("5d39428205d762dcceaaa5f6"), "name" : "Angular", "price" : 200 }
{ "_id" : ObjectId("5d39434805d762dcceaaa5f8"), "name" : "Oracle", "price" : 200 }
{ "_id" : ObjectId("5d39434805d762dcceaaa5f9"), "name" : "MongoDB", "price" : 300 }
{ "_id" : ObjectId("5d39449805d762dcceaaa5fb"), "name" : "Java", "author" : "xyz", "address" : { "city" : "Chennai", "State" : "Tamil Nadu" }, "price" : 100 }
>
```



- db.collection.find()
 db.collection.find({}}

12\D...

Find all documents that match a condition.

```
> db.Books.find ( { name : "Java" } )
> db.Books.find ( { price : 200 } )
" id" : ObjectId("5d396a9ed32253611cc71a5d"), "name" : "C++", "price" : 200 }
```

FI(2)...

Comparison

- \$ \$ \$ \$ \$ \$ \$ \$
- Matches values that are equal to a specified value.
- **%/\$@t**
- Matches values that are greater than a specified value
- \$/\$gte
- Matches values that are greater than or equal to a specified value.
- \$ /\$in
- Matches any of the values specified in an array
- **%/\$/t**
- Matches values that are less than a specified value
- **%/\$lte**
- Matches values that are less than or equal to a specified value.
- \$ne
- Matches all values that are not equal to a specified value.
- **%**/\$nin
- Matches none of the values specified in an array



Comparison.

```
> db.Books.find ( { price : { $gt : 150 } } )
{ "_id" : ObjectId("5d396a9ed32253611cc71a5d"), "name" : "C++", "price" : 200 }
{ "_id" : ObjectId("5d396abed32253611cc71a60"), "name" : "Oracle", "price" : 350 }
{ "_id" : ObjectId("5d396ac4d32253611cc71a61"), "name" : "Oracle", "price" : 300 }
>
```

```
> db.Books.find ( { name : "Java" , price : { $eq : 100 } } )
{ "_id" : ObjectId("5d396a90d32253611cc71a5c"), "name" : "Java", "price" : 100 }
{ "_id" : ObjectId("5d396aa5d32253611cc71a5e"), "name" : "Java", "price" : 100 }
>
```



Comparison..

```
> db.Books.find ( { name : { $in : [ "Java", "Oracle" ] } } )
    { "_id" : ObjectId("5d396a90d32253611cc71a5c"), "name" : "Java", "price" : 100 }
    { "_id" : ObjectId("5d396aa5d32253611cc71a5e"), "name" : "Java", "price" : 100 }
    { "_id" : ObjectId("5d396aadd32253611cc71a5f"), "name" : "Java", "price" : 150 }
    { "_id" : ObjectId("5d396abed32253611cc71a60"), "name" : "Oracle", "price" : 350 }
    { "_id" : ObjectId("5d396ac4d32253611cc71a61"), "name" : "Oracle", "price" : 300 }
}
```

```
> db.Books.find ( { price : { $nin : [ 100, 200 ] } } )
{ "_id" : ObjectId("5d396aadd32253611cc71a5f"), "name" : "Java", "price" : 150 }
{ "_id" : ObjectId("5d396abed32253611cc71a60"), "name" : "Oracle", "price" : 350 }
{ "_id" : ObjectId("5d396ac4d32253611cc71a61"), "name" : "Oracle", "price" : 300 }
>
```



Logical

- \$ \$and
 - Joins query clauses with a logical AND returns all documents that match the conditions of both clauses.
- */\$not
- Inverts the effect of a query expression and returns documents that do not match the query expression.
- **/\$/**\\$not
- Joins query clauses with a logical NOR returns all documents that fail to match both clauses.
- **%/\$ør**
- Joins query clauses with a logical OR returns all documents that match the conditions of either clause.



Logical

Implicit AND

```
> db.Books.find ( { name : "Java" , price : 100 } )
{ "_id" : ObjectId("5d396a90d32253611cc71a5c"), "name" : "Java", "price" : 100 }
{ "_id" : ObjectId("5d396aa5d32253611cc71a5e"), "name" : "Java", "price" : 100 }
>
```

OR

```
> db.Books.find ( { $or : [ { name : "Java" } , { price : 200 } ] } )
{ "_id" : ObjectId("5d396a90d32253611cc71a5c"), "name" : "Java", "price" : 100 }
{ "_id" : ObjectId("5d396a9ed32253611cc71a5d"), "name" : "C++", "price" : 200 }
{ "_id" : ObjectId("5d396aa5d32253611cc71a5e"), "name" : "Java", "price" : 100 }
{ "_id" : ObjectId("5d396aadd32253611cc71a5f"), "name" : "Java", "price" : 150 }
>
```

DE3ETE

db.collection.deleteOne()

Delete at most a single document that match a speciough multiple documents may match the specified filter..

db.collection.deleteMany()

Delete all documents that match

db.collection.remove()

Delete a single do



Remove all documents that match a condition.

```
> db.Books.find()
 "_id" : ObjectId("5d39412f05d762dcceaaa5f4"), "name" : "Java", "price" : 200 }
 "id": ObjectId("5d39418305d762dcceaaa5f5"), "name": "C++", "price": 100 }
 " id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
  " id" : ObjectId("5d39428205d762dcceaaa5f7"), "name" : "Angular", "price" : 200 }
  " id" : ObjectId("5d39434805d762dcceaaa5f8"), "name" : "Oracle", "price" : 200 }
  " id" : ObjectId("5d39434805d762dcceaaa5f9"), "name" : "MongoDB", "price" : 300 }
 "id": ObjectId("5d39449805d762dcceaaa5fb"), "name": "Java", "author": "xyz", "address": { "city": "Chennai", "State": "Tamil Nadu" }, "price"
 100 }
 "_id" : ObjectId("5d39480f05d762dcceaaa5fc"), "name" : "Oracle", "price" : 200 }
 " id" : ObjectId("5d39480f05d762dcceaaa5fd"), "name" : "MongoDB", "price" : 300 }
> db.Books.remove( { name : "Oracle" } )
WriteResult({ "nRemoved" : 2 })
> db.Books.find()
 "id": ObjectId("5d39412f05d762dcceaaa5f4"), "name": "Java", "price": 200 }
  " id" : ObjectId("5d39418305d762dcceaaa5f5"), "name" : "C++", "price" : 100 }
  " id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
  "_id" : ObjectId("5d39428205d762dcceaaa5f7"), "name" : "Angular", "price" : 200 }
 "id": ObjectId("5d39434805d762dcceaaa5f9"), "name": "MongoDB", "price": 300 }
 "id": ObjectId("5d39449805d762dcceaaa5fb"), "name": "Java", "author": "xyz", "address": { "city": "Chennai", "State": "Tamil Nadu" }, "price"
 100 }
```

DESETE...

nove all documents that match a condition.

```
> db.Books.remove ( { price : { $gt : 200 } } )
WriteResult({ "nRemoved" : 2 })
WriteResult({ "nRemoved" : 1 })
>
```

```
> db.Books.remove ( { } )
WriteResult({ "nRemoved" : 3 })
> db.Books.find ()
```



Remove a single document that match a condition

```
> db.Books.find()
{ "_id" : ObjectId("5d39418305d762dcceaaa5f5"), "name" : "C++", "price" : 100 }
{ " id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
{ " id" : ObjectId("5d39428205d762dcceaaa5f7"), "name" : "Angular", "price" : 200 }
{ " id" : ObjectId("5d39434805d762dcceaaa5f9"), "name" : "MongoDB", "price" : 300 }
{    " id" : ObjectId("5d39480f05d762dcceaaa5fd"),    "name" : "MongoDB",    "price" : 300 }
{ "id": ObjectId("5d3949d305d762dcceaaa5ff"), "name": "Java", "author": "xyz", "address": { "city": "Chennai", "State": "Tamil Nadu" }, "price"
: 100 }
> db.Books.remove ( { name : "Java" } , 1)
WriteResult({ "nRemoved" : 1 })
> db.Books.find()
{ "_id" : ObjectId("5d39418305d762dcceaaa5f5"), "name" : "C++", "price" : 100 }
{ "_id" : ObjectId("5d39418305d762dcceaaa5f6"), "name" : "C", "price" : 50 }
{ "id": ObjectId("5d39434805d762dcceaaa5f9"), "name": "MongoDB", "price": 300 }
{ "id": ObjectId("5d39480f05d762dcceaaa5fd"), "name": "MongoDB", "price": 300 }
{ "id": ObjectId("5d3949d305d762dcceaaa5ff"), "name": "Java", "author": "xyz", "address": { "city": "Chennai", "State": "Tamil Nadu" }, "price"
: 100 }
```

Note: 1 is true, To enable single remove. And 0 is false to disable single remove. By default is 0. Also, Instead of 1 / 0 we can use true /

UPI4 TE

In MongoDB, update() method is used to update or modify the existing documents of a collection

Syntax

db.COLLECTION NAME.update(SELECTION CRITERIA, UPDATED DATA

```
> db.Books.find()
{ "_id" : ObjectId("5d397359d32253611cc71a62"), "name" : "Java", "price" : 100 }
> db.Books.update ( { name : "Java" } , { $set : { price : 200 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Books.find()
{ "_id" : ObjectId("5d397359d32253611cc71a62"), "name" : "Java", "price" : 200 }
>
```

LIMITING RECORDS



To limit the records in MongoDB, you need to use limit() method. The method accepts one number type argument, which is the number of documents that you want to be displayed.

Syntax

db.COLLECTION NAME.find().limit(NUMBER)

S2IP

Apart from limit() method, there is one more method skip() which also accepts number type argument and is used to skip the number of documents.

Syntax:

db COLLECTION: NAME find() skip(NUMBER

```
> db.Books.find()
{ "_id" : ObjectId("5d397882d32253611cc71a68"), "name" : "Java", "price" : 100 }
{ "_id" : ObjectId("5d397885d32253611cc71a69"), "name" : "Java", "price" : 200 }
{ "_id" : ObjectId("5d397889d32253611cc71a6a"), "name" : "Java", "price" : 300 }
} db.Books.find( { name : "Java" } ).skip(2)
{ "_id" : ObjectId("5d397889d32253611cc71a6a"), "name" : "Java", "price" : 300 }
> db.Books.find()
{ "_id" : ObjectId("5d397882d32253611cc71a68"), "name" : "Java", "price" : 100 }
{ "_id" : ObjectId("5d397885d32253611cc71a69"), "name" : "Java", "price" : 200 }
{ "id" : ObjectId("5d397889d32253611cc71a6a"), "name" : "Java", "price" : 300 }
> db.Books.find( { name : "Java" } ).limit(2).skip(1)
{ "_id" : ObjectId("5d397885d32253611cc71a6a"), "name" : "Java", "price" : 200 }
{ "_id" : ObjectId("5d397885d32253611cc71a6a"), "name" : "Java", "price" : 300 }
```

SORTING RECORDS

SORT

- The sorting order is specified as 1 or -1.
 It is used for ascending order sorting.
 It is used for descending order sorting.

Syntax:
db.COLLECTION_NAME.find().sort({KEY:1})

SORT...

```
> db.Books.find()
  id" : ObjectId("5d397882d32253611cc71a68"), "name" : "Java", "price" : 100 }
  id" : ObjectId("5d397885d32253611cc71a69"), "name" : "Java", "price" : 200 }
 <u>" id" : ObjectId("5d397889d32253611cc71a6a")</u>, "name" : "Java", "price" : 300 }
 db.Books.find().sort( { price : 1 } )
 <u>" id" : ObjectId("5d397889d32253611cc71a6a")</u>, "name" : "Java", "price" : 300 }
 db.Books.find().sort( { price : -1 } )
 " id" : ObjectId("5d397885d32253611cc71a69"), "name" : "Java", "price" : 200 }
 " id" : ObjectId("5d397882d32253611cc71a68"), "name" : "Java", "price" : 100 }
```