MongoDB
Database , Collection & Documents

Team Emertxe

Database

Database

In MongoDB database hold collection of documents.

Create Database

The following command will create new database if it does not exist otherwise it will return existing database.

> use database name

Check the database list

> show dbs

To check currently selected database

>db

Drop Database

The db.dropDatabase() command is used to drop a existing database .

Example

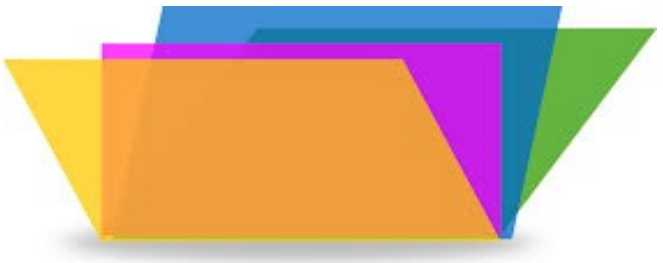
```
> use db
> db.dropDataBase()
```

Collection

Collection

Collections store number of documents . Collections are analogous to tables in the relational database.

- A collection may have zero or more documents
- MongoDB does not need any pre-defined data schema.
- Every document in a collection could have different data .



Creating Collection

Syntax :

db.createCollection(name ,options)

name : is a String type specify the name of collection .

options : is a document type specifies the memory size and indexing of the collection. It is optional parameter.

Collection
(list of options)

Field	Type	Description
Capped	Boolean	Capped collections is a fixed size collection that automatically overwrites its oldest entries when it reaches maximum size. If you specify true you need to specify parameter also.
autoIndexID	Boolean	Default value is false . If true automatically creates index on_id field.
size	number	Specifies maximum size in bytes for a capped collections.
max	number	Specifies the maximum number of documents allowed in the capped collection.

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Creating Collection
Example

```
> use db1
> db.createCollection(“Student”)
```

To see the collection

```
> show collections
```

To insert documents

```
>db.Student.insert( { name : “John”})
```

Example

```
> show dbs
admin  0.078GB
db1    0.078GB
local  0.078GB
> use db1
switched to db db1
> db.createCollection("student");
{ "ok" : 1 }
> db.student.insert( { name : "john" });
WriteResult({ "nInserted" : 1 })
```

Creating Collections (Example with options)

db.createCollection (“Emp” , {capped : true , autoIndexId :true , size : 56 , max : 45 })

To see the list of all collections

> show collections

Copy Collection

The db.collection.copyTo() method is used to copy the documents from one collection to new collection.

- Syntax :

  db.collection.copyTo(newCollection)

Exercise

- Create a database Mydb .
- Create Collection Employee.
- Display the list of all database.

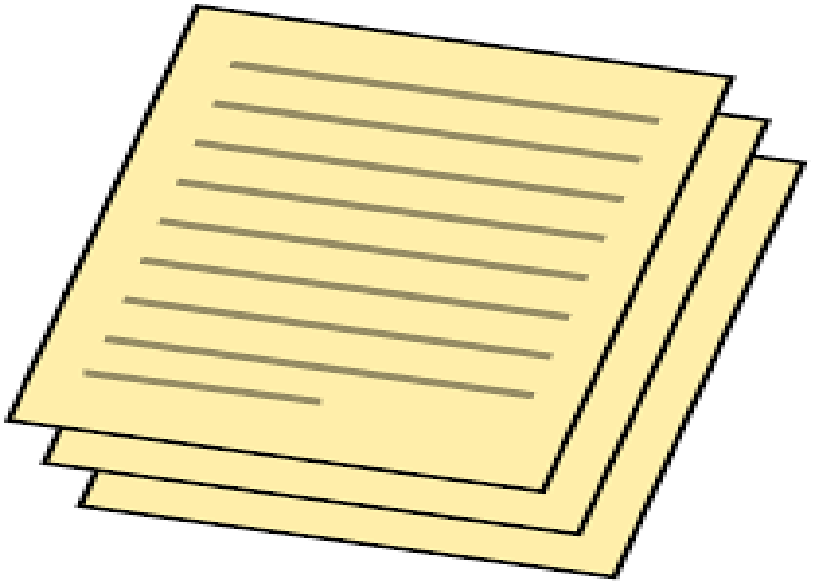
Drop Collection

The db.collection.drop() is used to drop a collection from database .

It completely removes a collection from the database and does not leave any indexes associated with the dropped collections.

Syntax :

db.collection_name.drop()



Documents

Documents

The document is the unit of storing data in a MongoDB database. Documents are analogous to records in the relational database.

- MongoDB documents are similar to JSON objects.
- The value of fields may include other documents , array and arrays of documents .

Documents structure

```
{
field 1 : value1 ,
field 2 : value 2 ,
field 3 : value 3,
.....
field N : value N
}
```

In MongoDB documents structure is a list of key-value pairs.

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Documents
Example

```
{
name     : “Smith”  ,
Id       :  01   ,
dept     : [ “ECE” , “CSE” ]
}
```

Field Name

Documents have following restrictions on field name :

- The field name _id is reserved for use as a primary key ,its value must be unique in the collections , is immutable and may be of any type other than array.
- The field name cannot start with ($) dollar character.
- The field name cannot contain the (.) dot character.
- The field name cannot contain the null character.

References

- https://www.wikimedia.org/
- https://docs.mongodb.com/manual/

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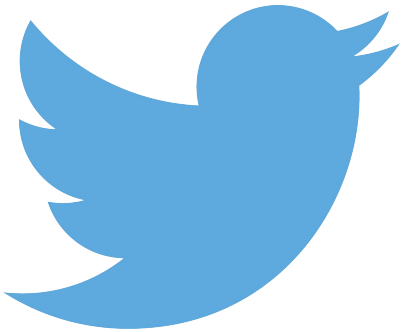

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Thank You