

MONGO-DB UNVEILED:

MASTERING THE FUNDAMENTALS FOR EFFECTIVE DATA MANAGEMENT



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AGENDA

- Introduction to mongo DB
- Advantages of mongo DB
- Getting Started with mongo DB
- Art of Creation in mongo DB
- Queries in mongo DB



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INTRODUCTION



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**Faster Access
to Data**



Advantages of MongoDB



Agility



**Supported
Platform**

N★SQL

Easy on USE



GETTING STARTED WITH MONGODB

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SOFTWARE REQUIREMENTS

- Operating System: MongoDB supports a wide range of operating systems, including Windows, macOS, Linux, and several Unix-like systems.
- System Architecture: MongoDB runs on both 32-bit and 64-bit systems.
Processor: MongoDB requires a 64-bit processor.
- Memory (RAM): The minimum recommended RAM size is 4 GB, but the actual requirement depends on the data size and workload.
- Storage: MongoDB relies on disk storage for data persistence. You should ensure that you have enough disk space to accommodate your data and indexes. SSDs or other high-performance storage options are preferable for optimal performance
- **MONGOSH – Connection between Server and Database.**

ART OF CREATION IN MONGO DB

```
C:\Program Files\MongoDB\mongosh-1.10.1-win32-x64\bin>mongosh
Current Mongosh Log ID: 64ae3fc7f558d59449ecb694
Connecting to:      mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+1.10.1
Using MongoDB:      6.0.7
Using Mongosh:      1.10.1

For mongosh info see: https://docs.mongodb.com/mongosh-shell/

-----
  The server generated these startup warnings when booting
  2023-07-12T00:28:52.620+05:30: Access control is not enabled for the database. Read and write access to data and configuration is
unrestricted
-----

test> show dbs
admin      40.00 KiB
config     60.00 KiB
local      72.00 KiB
recipe     72.00 KiB
recipies   16.00 KiB
test> use recipe_database
switched to db recipe_database
recipe_database> db.createCollection("recipe")
{ ok: 1 }
```


INSERT IN ELEMENTS INTO COLLECTION

Basic Syntax to insert values in collections:

- Single Values:-

```
db.collection.insertOne(  
  <document>,  
  {  
    writeConcern: <document>,  
    bypassDocumentValidation: <boolean>  
  }  
)
```

- Multiple Values:-

```
db.collection.insertMany(  
  [<document1>, <document2>, ...],  
  {  
    writeConcern: <document>,  
    ordered: <boolean>,  
    bypassDocumentValidation: <boolean>  
  }  
)
```

ORDER ID

```
recipe_database> db.recipes.insertOne({'title': 'Spaghetti Bolognese', 'ingredients': ['spaghetti', 'ground beef', 'onion', 'garlic', 'tomato sauce'], 'instructions': '1. Cook spaghetti according to package instructions. 2. In a pan, brown the ground beef with chopped onions and minced garlic. 3. Add tomato sauce and simmer for 15 minutes. 4. Serve the sauce over cooked spaghetti.', 'duration': 45, 'difficulty': 'Intermediate'})
{
  acknowledged: true,
  insertedId: ObjectId("64ae4049f558d59449ecb695")
}
recipe_database> db.recipes.insertOne({'title': 'Chocolate Chip Cookies', 'ingredients': ['flour', 'sugar', 'butter', 'chocolate chips'], 'instructions': '1. Preheat oven to 350°F (175°C). 2. In a mixing bowl, cream together butter and sugar until light and fluffy. 3. Beat in eggs, one at a time, then stir in vanilla. 4. Gradually add flour and mix well. 5. Fold in chocolate chips. 6. Drop rounded tablespoons of dough onto ungreased baking sheets. 7. Bake for 10-12 minutes or until edges are golden brown. 8. Allow cookies to cool on baking sheets for 5 minutes before transferring to wire racks to cool completely.', 'duration': 30, 'difficulty': 'Easy'})
{
  acknowledged: true,
  insertedId: ObjectId("64ae4058f558d59449ecb696")
}
```

FIND FUNCTION

```
recipe_database> db.recipes.findOne({ title: 'Chocolate Chip Cookies' });
{
  _id: ObjectId("64ae4058f558d59449ecb696"),
  title: 'Chocolate Chip Cookies',
  ingredients: [ 'flour', 'sugar', 'butter', 'chocolate chips' ],
  instructions: '1. Preheat oven to 350°F (175°C). 2. In a mixing bowl, cream together butter and sugar until light and fluffy. 3. Beat in eggs, one at a time, then stir in vanilla. 4. Gradually add flour and mix well. 5. Fold in chocolate chips. 6. Drop rounded tablespoons of dough onto ungreased baking sheets. 7. Bake for 10-12 minutes or until edges are golden brown. 8. Allow cookies to cool on baking sheets for 5 minutes before transferring to wire racks to cool completely.',
  duration: 30,
  difficulty: 'Easy'
}
```

```

recipe_database> db.recipes.find()
[
  {
    _id: ObjectId("64ae4049f558d59449ecb695"),
    title: 'Spaghetti Bolognese',
    ingredients: [ 'spaghetti', 'ground beef', 'onion', 'garlic', 'tomato sauce' ],
    instructions: '1. Cook spaghetti according to package instructions. 2. In a pan, brown the ground beef with chopped onions and minced garlic. 3. Add tomato sauce and simmer for 15 minutes. 4. Serve the sauce over cooked spaghetti.',
    duration: 45,
    difficulty: 'Intermediate'
  },
  {
    _id: ObjectId("64ae4058f558d59449ecb696"),
    title: 'Chocolate Chip Cookies',
    ingredients: [ 'flour', 'sugar', 'butter', 'chocolate chips' ],
    instructions: '1. Preheat oven to 350°F (175°C). 2. In a mixing bowl, cream together butter and sugar until light and fluffy. 3. Beat in eggs, one at a time, then stir in vanilla. 4. Gradually add flour and mix well. 5. Fold in chocolate chips. 6. Drop rounded tablespoons of dough onto ungreased baking sheets. 7. Bake for 10-12 minutes or until edges are golden brown. 8. Allow cookies to cool on baking sheets for 5 minutes before transferring to wire racks to cool completely.',
    duration: 30,
    difficulty: 'Easy'
  },
  {
    _id: ObjectId("64ae4069f558d59449ecb697"),
    title: 'Chicken Stir-Fry',
    ingredients: [
      'chicken breast',
      'bell peppers',
      'onion',
      'soy sauce',
      'vegetable oil'
    ]
  }
]

```

DELETING ENTRIES

```
recipe_database> db.recipes.deleteOne({ title: 'Spaghetti Carbonara' });  
{ acknowledged: true, deletedCount: 0 }  
recipe_database> db.recipe.deleteOne({ title: 'Spaghetti Carbonara' });  
{ acknowledged: true, deletedCount: 0 }  
recipe_database> db.recipe.deleteOne({ title: 'Spaghetti Bolognese' });  
{ acknowledged: true, deletedCount: 0 }  
recipe_database> db.recipes.deleteOne({ title: 'Spaghetti Bolognese' });  
{ acknowledged: true, deletedCount: 1 }
```

localhost:27017

My Queries

Databases

Search

- admin
- config
- local
- recipe_database
 - recipes
- recipie
 - recipes
- recipies
 - dbms
 - recipes

My Queries Databases Performance

+ Create database Refresh

View Sort by Database Name

admin	Storage size: 20.48 kB	Collections: 0	Indexes: 1
config	Storage size: 36.86 kB	Collections: 0	Indexes: 2
local	Storage size: 36.86 kB	Collections: 1	Indexes: 1
recipe_database	Storage size:	Collections:	Indexes:
recipie			

MongoDB Compass - localhost:27017/recipe_database

Connect Edit View Help

localhost:27017

My Queries

Databases

Search

admin

config

local

recipe_database

recipes

recipie

recipes

recipies

dbms

recipes

Collections

+ Create collection

Refresh

View

Sort by

Collection Name

recipes

Storage size: 20.48 kB	Documents: 4	Avg. document size: 641.00 B	Indexes: 1	Total index size: 36.86 kB
----------------------------------	------------------------	--	----------------------	--------------------------------------

>_MONGOSH

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localhost:27017

Documents
recipe_database....

My Queries

Databases



Search

admin

config

local

recipe_database

recipes

recipe

recipes

recipies

dbms

recipes

recipe_database.recipes

4
DOCUMENTS1
INDEXES

Documents

Aggregations

Schema

Indexes

Validation

Filter



Type a query: { field: 'value' }

Explain

Reset

Find



Options

ADD DATA

EXPORT DATA

1 - 4 of 4



```
_id: ObjectId('64ae4058f558d59449ecb696')
title: "Chocolate Chip Cookies"
ingredients: Array (4)
instructions: "1. Preheat oven to 350°F (175°C). 2. In a mixing bowl, cream together ..."
duration: 30
difficulty: "Easy"
```

```
_id: ObjectId('64ae4069f558d59449ecb697')
title: "Chicken Stir-Fry"
ingredients: Array (5)
instructions: "1. Slice chicken breast into thin strips. 2. Heat vegetable oil in a p..."
duration: 25
difficulty: "Easy"
```

```
_id: ObjectId('64ae4079f558d59449ecb698')
title: "Caprese Salad"
ingredients: Array (5)
```


The background features a light beige field. On the left, there are several overlapping geometric shapes: a green semi-circle at the top, a blue quarter-circle below it, a green rectangle below that, and a pink triangle at the bottom left. A red triangle is also visible at the bottom center. In the top left corner, there are several concentric white circles of varying radii.

**“MONGODB: WHERE DATA FINDS A
COZY NOSQL NEST TO CALL HOME,
WITHOUT ANY SQL-TERATIONS!. ”**



THANK YOU

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