MongoDB Day 1

Go through slides.

Boot up mongodb. Show

Select All Documents in a Collection

To select all documents in the collection, pass an empty document as the query filter parameter to the find method. The query filter parameter determines the select criteria:

USE ADDRESSES FIRST

Tell class--: suppose we want to store a simple address book. Every person has a first name, last name, email, state, dob, and num of children.

DEMO:

db.addresses.find( {} )

## Specify Equality Condition

To specify equality conditions, use <field>:<value> expressions in the [query filter document](https://docs.mongodb.com/manual/core/document/#document-query-filter):

{ <field1>: <value1>, ... }

**db.addresses.find( { “first”: “Rebecca” } )**

**db.addresses.find( { state: “DC” } )**

This operation corresponds to the following SQL statement:

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**SELECT** \* **FROM** inventory **WHERE** status = "D"

## Specify Conditions Using Query Operators

A [query filter document](https://docs.mongodb.com/manual/core/document/#document-query-filter) can use the [query operators](https://docs.mongodb.com/manual/reference/operator/query/#query-selectors) to specify conditions in the following form:

{ <field1>: { <operator1>: <value1> }, ... }

**(AND STMT) EXAMPLE: { state: DC, children: 0 }**

The following example retrieves all documents from the inventory collection where status equals either "A" or "D":

db.inventory.find( { status: { $in: [ "A", "D" ] } } )

**(OR STMT ) EXAMPLE:**

state**:**

**{**

$in**:** **[**"DC"**,** "TX"**]**

**},**

children**:** 0

**NOTE**

Although you can express this query using the [$or](https://docs.mongodb.com/manual/reference/operator/query/or/#op._S_or) operator, use the [$in](https://docs.mongodb.com/manual/reference/operator/query/in/#op._S_in) operator rather than the [$or](https://docs.mongodb.com/manual/reference/operator/query/or/#op._S_or)operator when performing equality checks on the same field.

The operation corresponds to the following SQL statement:

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**SELECT** \* **FROM** inventory **WHERE** status **in** ("A", "D")

Refer to the [Query and Projection Operators](https://docs.mongodb.com/manual/reference/operator/query/) document for the complete list of MongoDB query operators.

## Specify AND Conditions

A compound query can specify conditions for more than one field in the collection’s documents. Implicitly, a logical AND conjunction connects the clauses of a compound query so that the query selects the documents in the collection that match all the conditions.

The following example retrieves all documents in the inventory collection where the status equals "A"**and** qty is less than ([$lt](https://docs.mongodb.com/manual/reference/operator/query/lt/#op._S_lt)) 30:

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db.inventory.find( { status: "A", qty: { $lt: 30 } } )

The operation corresponds to the following SQL statement:

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**SELECT** \* **FROM** inventory **WHERE** status = "A" **AND** qty < 30

See [comparison operators](https://docs.mongodb.com/manual/reference/operator/query-comparison/#query-selectors-comparison) for other MongoDB comparison operators.

## Specify OR Conditions

Using the [$or](https://docs.mongodb.com/manual/reference/operator/query/or/#op._S_or) operator, you can specify a compound query that joins each clause with a logical ORconjunction so that the query selects the documents in the collection that match at least one condition.

The following example retrieves all documents in the collection where the status equals "A" **or** qty is less than ([$lt](https://docs.mongodb.com/manual/reference/operator/query/lt/#op._S_lt)) 30:

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db.inventory.find( { $or: [ { status: "A" }, { qty: { $lt: 30 } } ] } )

The operation corresponds to the following SQL statement:

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**SELECT** \* **FROM** inventory **WHERE** status = "A" **OR** qty < 30

**NOTE**

Queries which use [comparison operators](https://docs.mongodb.com/manual/reference/operator/query-comparison/#query-selectors-comparison) are subject to [Type Bracketing](https://docs.mongodb.com/manual/reference/method/db.collection.find/#type-bracketing).

### Specify AND as well as OR Conditions

In the following example, the compound query document selects all documents in the collection where the status equals "A" **and** either qty is less than ([$lt](https://docs.mongodb.com/manual/reference/operator/query/lt/#op._S_lt)) 30 or item starts with the character p:

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db.inventory.find( {

status: "A",

$or: [ { qty: { $lt: 30 } }, { item: /^p/ } ]

} )

The operation corresponds to the following SQL statement:

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**SELECT** \* **FROM** inventory **WHERE** status = "A" **AND** ( qty < 30 **OR** item **LIKE** "p%")

**NOTE**

MongoDB supports regular expressions [$regex](https://docs.mongodb.com/manual/reference/operator/query/regex/#op._S_regex) queries to perform string pattern matches.