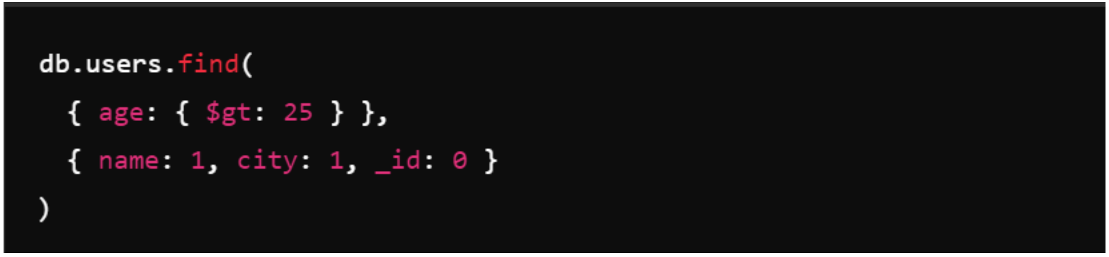
MongoDB

‘Projection’, ‘limit’, ‘Selectors’:

1. Projection

Projection in MongoDB allows you to specify which fields to include or exclude in the result set of a query.

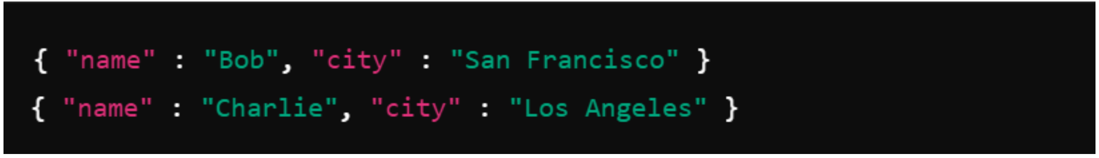
Include Specific Fields:



```
db.users.find(
  { age: { $gt: 25 } },
  { name: 1, city: 1, _id: 0 }
)
```

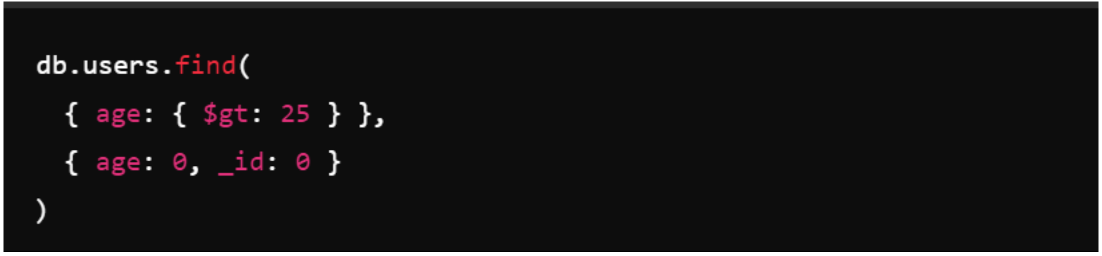
Explanation: This query finds all users older than 25 and returns only the `name` and `city` fields, excluding the `_id` field.

Output:



```
{ "name" : "Bob", "city" : "San Francisco" }
{ "name" : "Charlie", "city" : "Los Angeles" }
```

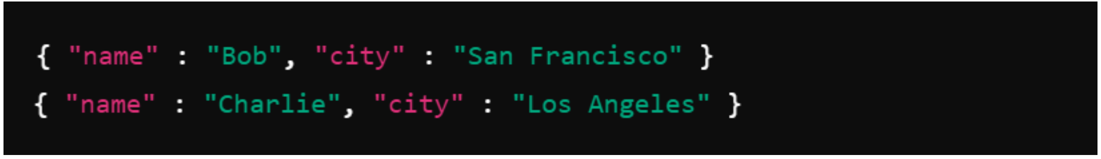
Exclude Specific Fields:



```
db.users.find(
  { age: { $gt: 25 } },
  { age: 0, _id: 0 }
)
```

Explanation: This query finds all users older than 25 and returns all fields except `age` and `_id`.

Output:

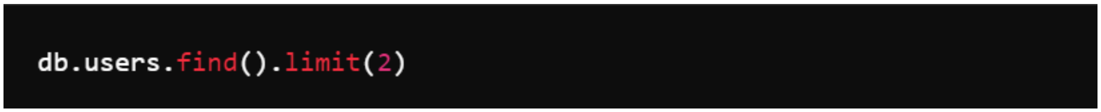


```
{ "name" : "Bob", "city" : "San Francisco" }
{ "name" : "Charlie", "city" : "Los Angeles" }
```

2. Limit

The `limit` method is used to specify the maximum number of documents the query should return.

Limit the Number of Results:



```
db.users.find().limit(2)
```

Explanation: This query returns only the first two documents from the `users` collection.

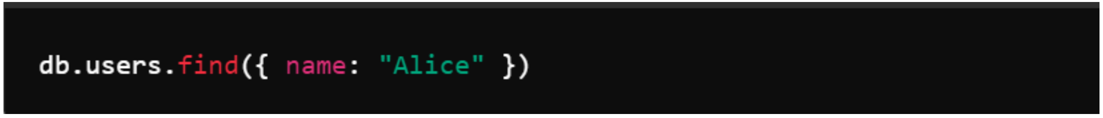
Output:

```
{ "_id" : ObjectId("60d1f68ee5c15c1b5f13d8f9"), "name" : "Alice", "age" : 25, "city" : "New York" }
{ "_id" : ObjectId("60d1f6c9e5c15c1b5f13d8fa"), "name" : "Bob", "age" : 30, "city" : "San Francisco" }
```

3. Selectors

Selectors (also known as query operators) allow for more complex querying.

Equality Selector:

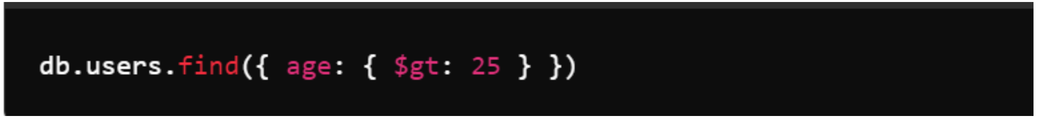


```
db.users.find({ name: "Alice" })
```

Explanation: This query finds all users with the name "Alice".

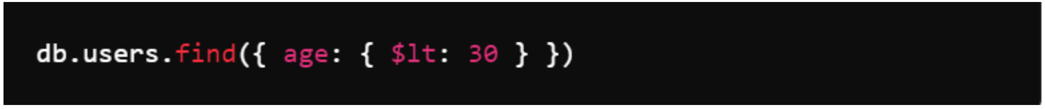
Comparison Selectors:

Greater Than (`$gt`):



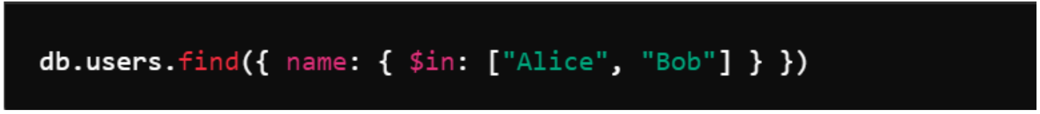
```
db.users.find({ age: { $gt: 25 } })
```

Less Than (`$lt`):



```
db.users.find({ age: { $lt: 30 } })
```

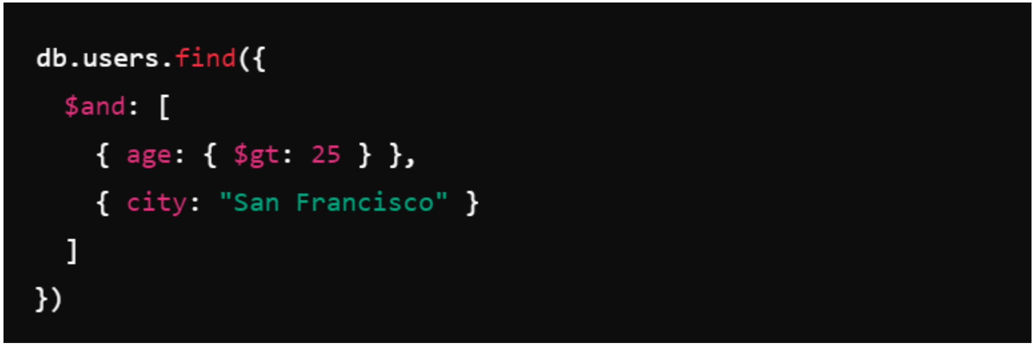
In Array (`$in`):



```
db.users.find({ name: { $in: ["Alice", "Bob"] } })
```

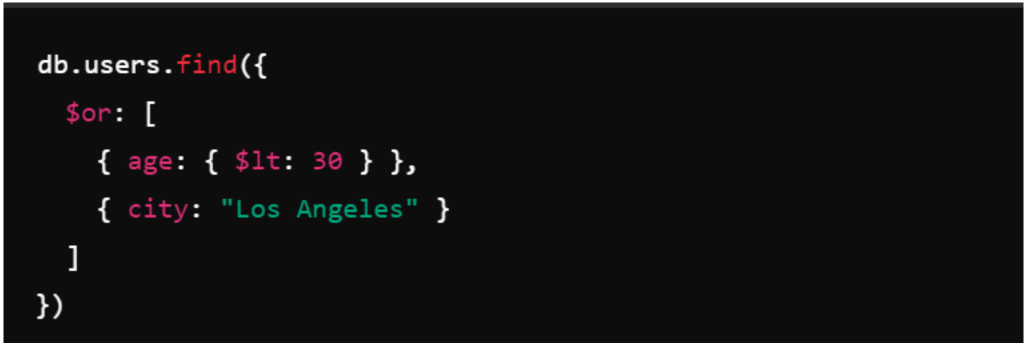
Logical Selectors:

AND (`$and`):



```
db.users.find({
  $and: [
    { age: { $gt: 25 } },
    { city: "San Francisco" }
  ]
})
```

OR (`$or`):



```
db.users.find({
  $or: [
    { age: { $lt: 30 } },
    { city: "Los Angeles" }
  ]
})
```