Create Collection

cust> db.createCollection("posts")

{ ok: 1 }

Insert Documents

cust> db.posts.insertOne({

...   title: "Post Title 1",

...   body: "Body of post.",

...   category: "News",

...   likes: 1,

...   tags: ["news", "events"],

...   date: Date()

... })

{

  acknowledged: true,

  insertedId: ObjectId('69576d8557323074bbcc898d')

}

cust> db.posts.insertMany([

...   {

...   title: "Post Title 2",

...   body: "Body of post.",

...   category: "Event",

...   likes: 2,

...   tags: ["news", "events"],

...   date: Date()

...   },

...   {

...   title: "Post Title 3",

...   body: "Body of post.",

...   category: "Technology",

...   likes: 3,

```
...     tags: ["news", "events"],
...     date: Date()
...   },
...   {
...     title: "Post Title 4",
...     body: "Body of post.",
...     category: "Event",
...     likes: 4,
...     tags: ["news", "events"],
...     date: Date()
...   }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('69576f0657323074bbcc898e'),
    '1': ObjectId('69576f0657323074bbcc898f'),
    '2': ObjectId('69576f0657323074bbcc8990')
  }
}
```

Find Data

```
cust> db.posts.find()
[
  {
    _id: ObjectId('69576d8557323074bbcc898d'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 1,
    tags: [ 'news', 'events' ],
```

```
      date: 'Fri Jan 02 2026 12:32:29 GMT+0530 (India Standard Time)'
    },
    {
      _id: ObjectId('69576f0657323074bbcc898e'),
      title: 'Post Title 2',
      body: 'Body of post.',
      category: 'Event',
      likes: 2,
      tags: [ 'news', 'events' ],
      date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
    },
    {
      _id: ObjectId('69576f0657323074bbcc898f'),
      title: 'Post Title 3',
      body: 'Body of post.',
      category: 'Technology',
      likes: 3,
      tags: [ 'news', 'events' ],
      date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
    },
    {
      _id: ObjectId('69576f0657323074bbcc8990'),
      title: 'Post Title 4',
      body: 'Body of post.',
      category: 'Event',
      likes: 4,
      tags: [ 'news', 'events' ],
      date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
    }
  ]
cust> db.posts.find( {category: "News"} )
```

```
[
  {
    _id: ObjectId('69576d8557323074bbcc898d'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 1,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:32:29 GMT+0530 (India Standard Time)'
  }
]
```

Update Document

```
cust> db.posts.updateOne({'title':'Post Title 1'},{$set:{likes:2}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
cust> db.posts.find()
[
  {
    _id: ObjectId('69576d8557323074bbcc898d'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 2,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:32:29 GMT+0530 (India Standard Time)'
  },
```

```
  {
    _id: ObjectId('69576f0657323074bbcc898e'),
    title: 'Post Title 2',
    body: 'Body of post.',
    category: 'Event',
    likes: 2,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69576f0657323074bbcc898f'),
    title: 'Post Title 3',
    body: 'Body of post.',
    category: 'Technology',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69576f0657323074bbcc8990'),
    title: 'Post Title 4',
    body: 'Body of post.',
    category: 'Event',
    likes: 4,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
  }
]
cust> db.posts.updateMany({}, { $inc: { likes: 1 } })
{
  acknowledged: true,
```

```
  insertedId: null,
  matchedCount: 4,
  modifiedCount: 4,
  upsertedCount: 0
}
cust> db.posts.find()
[
  {
    _id: ObjectId('69576d8557323074bbcc898d'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:32:29 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69576f0657323074bbcc898e'),
    title: 'Post Title 2',
    body: 'Body of post.',
    category: 'Event',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69576f0657323074bbcc898f'),
    title: 'Post Title 3',
    body: 'Body of post.',
    category: 'Technology',
    likes: 4,
```

```
    tags: [ 'news', 'events' ],

    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'

  },

  {

    _id: ObjectId('69576f0657323074bbcc8990'),

    title: 'Post Title 4',

    body: 'Body of post.',

    category: 'Event',

    likes: 5,

    tags: [ 'news', 'events' ],

    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'

  }

]

cust> db.posts.updateMany({}, { $inc: { likes: 1 } })

{

  acknowledged: true,

  insertedId: null,

  matchedCount: 4,

  modifiedCount: 4,

  upsertedCount: 0

}

cust> db.posts.find()

[

  {

    _id: ObjectId('69576d8557323074bbcc898d'),

    title: 'Post Title 1',

    body: 'Body of post.',

    category: 'News',

    likes: 4,

    tags: [ 'news', 'events' ],

    date: 'Fri Jan 02 2026 12:32:29 GMT+0530 (India Standard Time)'
```

```
    },
    {
      _id: ObjectId('69576f0657323074bbcc898e'),
      title: 'Post Title 2',
      body: 'Body of post.',
      category: 'Event',
      likes: 4,
      tags: [ 'news', 'events' ],
      date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
    },
    {
      _id: ObjectId('69576f0657323074bbcc898f'),
      title: 'Post Title 3',
      body: 'Body of post.',
      category: 'Technology',
      likes: 5,
      tags: [ 'news', 'events' ],
      date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
    },
    {
      _id: ObjectId('69576f0657323074bbcc8990'),
      title: 'Post Title 4',
      body: 'Body of post.',
      category: 'Event',
      likes: 6,
      tags: [ 'news', 'events' ],
      date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'
    }
]
cust> db.posts.updateMany({}, { $set: { likes: 1 } })
{
```

```
  acknowledged: true,

  insertedId: null,

  matchedCount: 4,

  modifiedCount: 4,

  upsertedCount: 0

}
cust> db.posts.find()

[

 {

   _id: ObjectId('69576d8557323074bbcc898d'),

   title: 'Post Title 1',

   body: 'Body of post.',

   category: 'News',

   likes: 1,

   tags: [ 'news', 'events' ],

   date: 'Fri Jan 02 2026 12:32:29 GMT+0530 (India Standard Time)'

 },

 {

   _id: ObjectId('69576f0657323074bbcc898e'),

   title: 'Post Title 2',

   body: 'Body of post.',

   category: 'Event',

   likes: 1,

   tags: [ 'news', 'events' ],

   date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'

 },

 {

   _id: ObjectId('69576f0657323074bbcc898f'),

   title: 'Post Title 3',

   body: 'Body of post.',

   category: 'Technology',
```

```
    likes: 1,

    tags: [ 'news', 'events' ],

    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'

  },

  {

    _id: ObjectId('69576f0657323074bbcc8990'),

    title: 'Post Title 4',

    body: 'Body of post.',

    category: 'Event',

    likes: 1,

    tags: [ 'news', 'events' ],

    date: 'Fri Jan 02 2026 12:38:54 GMT+0530 (India Standard Time)'

  }

]

cust> db.posts.aggregate([

...   // Stage 1: Only find documents that have more than 1 like

...   {

...     $match: { likes: { $gt: 1 } }

...   },

...   // Stage 2: Group documents by category and sum each categories likes

...   {

...     $group: { _id: "$category", totalLikes: { $sum: "$likes" } }

...   }

... ])


cust> use blog

switched to db blog

blog> db.createCollection("posts")

{ ok: 1 }

blog> db.posts.insertOne(object)

ReferenceError: object is not defined
```

insertOne

```
blog> db.posts.insertOne({
... title: "Post Title 1",
... body: "Body of post.",
... category: "News",
... likes: 1,
... tags: ["news", "events"],
... date: Date()
... })
{
  acknowledged: true,
  insertedId: ObjectId('69579db857323074bbcc8991')
}
blog>
```

insertMany

```
blog> db.posts.insertMany([
... {
... title: "Post Title 2",
... body: "Body of post.",
... category: "Event",
... likes: 2,
... tags: ["news", "events"],
... date: Date()
... },
... {
... title: "Post Title 3",
... body: "Body of post.",
... category: "Technology",
... likes: 3,
```

```
...     tags: ["news", "events"],
...     date: Date()
...   },
...   {
...     title: "Post Title 4",
...     body: "Body of post.",
...     category: "Event",
...     likes: 4,
...     tags: ["news", "events"],
...     date: Date()
...   }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('69579dc657323074bbcc8992'),
    '1': ObjectId('69579dc657323074bbcc8993'),
    '2': ObjectId('69579dc657323074bbcc8994')
  }
}
blog> db.posts.find()
[
  {
    _id: ObjectId('69579db857323074bbcc8991'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 1,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'
  },
```

```
  {
    _id: ObjectId('69579dc657323074bbcc8992'),
    title: 'Post Title 2',
    body: 'Body of post.',
    category: 'Event',
    likes: 2,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8993'),
    title: 'Post Title 3',
    body: 'Body of post.',
    category: 'Technology',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8994'),
    title: 'Post Title 4',
    body: 'Body of post.',
    category: 'Event',
    likes: 4,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  }
]
blog> db.posts.findOne()
{
  _id: ObjectId('69579db857323074bbcc8991'),
```

```
  title: 'Post Title 1',

  body: 'Body of post.',

  category: 'News',

  likes: 1,

  tags: [ 'news', 'events' ],

  date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'

}
blog> db.posts.find( {category: "News"} )

[

 {

   _id: ObjectId('69579db857323074bbcc8991'),

   title: 'Post Title 1',

   body: 'Body of post.',

   category: 'News',

   likes: 1,

   tags: [ 'news', 'events' ],

   date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'

 }

]
blog> db.posts.find({}, {title: 1, date: 1})

[

 {

   _id: ObjectId('69579db857323074bbcc8991'),

   title: 'Post Title 1',

   date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'

 },

 {

   _id: ObjectId('69579dc657323074bbcc8992'),

   title: 'Post Title 2',

   date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'

 },
```

```
  {
    _id: ObjectId('69579dc657323074bbcc8993'),
    title: 'Post Title 3',
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8994'),
    title: 'Post Title 4',
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  }
]
blog> db.posts.find({}, {_id: 0, title: 1, date: 1})
[
  {
    title: 'Post Title 1',
    date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'
  },
  {
    title: 'Post Title 2',
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    title: 'Post Title 3',
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    title: 'Post Title 4',
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  }
]
blog> db.posts.find({}, {category: 0})
```

```
[
  {
    _id: ObjectId('69579db857323074bbcc8991'),
    title: 'Post Title 1',
    body: 'Body of post.',
    likes: 1,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8992'),
    title: 'Post Title 2',
    body: 'Body of post.',
    likes: 2,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8993'),
    title: 'Post Title 3',
    body: 'Body of post.',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8994'),
    title: 'Post Title 4',
    body: 'Body of post.',
    likes: 4,
    tags: [ 'news', 'events' ],
```

```
      date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  }
]
blog> db.posts.find({}, {title: 1, date: 0})
MongoServerError[Location31254]: Cannot do exclusion on field date in inclusion projection
blog> db.posts.find({}, {title: 1, date: 0})
MongoServerError[Location31254]: Cannot do exclusion on field date in inclusion projection
blog> db.posts.find( { title: "Post Title 1" } )
[
  {
    _id: ObjectId('69579db857323074bbcc8991'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 1,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'
  }
]
blog> db.posts.updateOne( { title: "Post Title 1" }, { $set: { likes: 2 } } )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
blog> db.posts.find( { title: "Post Title 1" } )
[
  {
    _id: ObjectId('69579db857323074bbcc8991'),
```

```
    title: 'Post Title 1',

    body: 'Body of post.',

    category: 'News',

    likes: 2,

    tags: [ 'news', 'events' ],

    date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'

  }

]
blog> db.posts.updateOne(

...   { title: "Post Title 5" },

...   {

...     $set:

...       {

...         title: "Post Title 5",

...         body: "Body of post.",

...         category: "Event",

...         likes: 5,

...         tags: ["news", "events"],

...         date: Date()

...       }

...   },

...   { upsert: true }

... )

{

  acknowledged: true,

  insertedId: ObjectId('69579eda20cbc21198d563e1'),

  matchedCount: 0,

  modifiedCount: 0,

  upsertedCount: 1

}

blog> db.posts.updateMany({}, { $inc: { likes: 1 } })
```

```
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 5,
  modifiedCount: 5,
  upsertedCount: 0
}
blog> db.posts.deleteOne({ title: "Post Title 5" })
{ acknowledged: true, deletedCount: 1 }
blog> db.posts.deleteMany({ category: "Technology" })
{ acknowledged: true, deletedCount: 1 }
blog> db.posts.find()
[
  {
    _id: ObjectId('69579db857323074bbcc8991'),
    title: 'Post Title 1',
    body: 'Body of post.',
    category: 'News',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:08 GMT+0530 (India Standard Time)'
  },
  {
    _id: ObjectId('69579dc657323074bbcc8992'),
    title: 'Post Title 2',
    body: 'Body of post.',
    category: 'Event',
    likes: 3,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  },
```

```
  {
    _id: ObjectId('69579dc657323074bbcc8994'),
    title: 'Post Title 4',
    body: 'Body of post.',
    category: 'Event',
    likes: 5,
    tags: [ 'news', 'events' ],
    date: 'Fri Jan 02 2026 15:58:22 GMT+0530 (India Standard Time)'
  }
]
```

Aggregation Pipelines

```
blog> db.posts.aggregate([

...   // Stage 1: Only find documents that have more than 1 like

...   {

...     $match: { likes: { $gt: 1 } }

...   },

...   // Stage 2: Group documents by category and sum each categories likes

...   {

...     $group: { _id: "$category", totalLikes: { $sum: "$likes" } }

...   }

... ])
[ { _id: 'News', totalLikes: 3 }, { _id: 'Event', totalLikes: 8 } ]
blog> db.listingsAndReviews.aggregate(

...    [ { $group : { _id : "$property_type" } } ]

... )


blog> db.movies.aggregate([ { $limit: 1 } ])


blog> db.restaurants.aggregate([
```

```
...   {
...     $project: {
...       "name": 1,
...       "cuisine": 1,
...       "address": 1
...     }
...   },
...   {
...     $limit: 5
...   }
... ])

blog> use blog
already on db blog
blog>

blog> db.createCollection("listingsAndReviews")
{ ok: 1 }
blog> db.createCollection("movies")
{ ok: 1 }
blog> db.createCollection("restaurants")
{ ok: 1 }
blog> db.listingsAndReviews.insertMany([
...   {
...     name: "Cozy Apartment in City Center",
...     property_type: "Apartment",
...     room_type: "Entire home/apt",
...     price: 2500,
...     address: { street: "MG Road", city: "Bengaluru", country: "India" },
...     host: { name: "Ravi", is_superhost: true }
...   },
```

```
...   {
...     name: "Budget Private Room",
...     property_type: "House",
...     room_type: "Private room",
...     price: 900,
...     address: { street: "Ameerpet", city: "Hyderabad", country: "India" },
...     host: { name: "Ramesh", is_superhost: false }
...   },
...   {
...     name: "Luxury Villa with Pool",
...     property_type: "Villa",
...     room_type: "Entire home/apt",
...     price: 12000,
...     address: { street: "Candolim", city: "Goa", country: "India" },
...     host: { name: "Rahul", is_superhost: true }
...   },
...   {
...     name: "Peaceful Farm Stay",
...     property_type: "Farm stay",
...     room_type: "Entire home/apt",
...     price: 4500,
...     address: { street: "Shamirpet", city: "Hyderabad", country: "India" },
...     host: { name: "Raghu", is_superhost: false }
...   }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('6957a07f57323074bbcc8995'),
    '1': ObjectId('6957a07f57323074bbcc8996'),
    '2': ObjectId('6957a07f57323074bbcc8997'),
```

```
   '3': ObjectId('6957a07f57323074bbcc8998')
  }
}
```

Aggregation $group

```
blog> db.listingsAndReviews.aggregate([{ $group: { _id: "$property_type" } }])
[
  { _id: 'House' },
  { _id: 'Villa' },
  { _id: 'Farm stay' },
  { _id: 'Apartment' }
]
blog> db.movies.insertMany([
...  {
...    title: "Inception",
...    year: 2010,
...    genres: ["Action", "Sci-Fi", "Thriller"],
...    runtime: 148,
...    imdb: { rating: 8.8, votes: 2000000 }
...  },
...  {
...    title: "Interstellar",
...    year: 2014,
...    genres: ["Adventure", "Drama", "Sci-Fi"],
...    runtime: 169,
...    imdb: { rating: 8.7, votes: 1900000 }
...  },
...  {
...    title: "3 Idiots",
...    year: 2009,
...    genres: ["Comedy", "Drama"],
```

```
...     runtime: 170,

...     imdb: { rating: 8.4, votes: 450000 }

...   }

... ])

{

  acknowledged: true,

  insertedIds: {

    '0': ObjectId('6957a08e57323074bbcc8999'),

    '1': ObjectId('6957a08e57323074bbcc899a'),

    '2': ObjectId('6957a08e57323074bbcc899b')

  }

}
```

Aggregation $limit

```
blog> db.movies.aggregate([{ $limit: 1 }])

[

  {

    _id: ObjectId('6957a08e57323074bbcc8999'),

    title: 'Inception',

    year: 2010,

    genres: [ 'Action', 'Sci-Fi', 'Thriller' ],

    runtime: 148,

    imdb: { rating: 8.8, votes: 2000000 }

  }

]

blog> db.restaurants.insertMany([

... {

...     name: "Paradise Biryani",

...     cuisine: "Indian",

...     address: {
```

```
...       building: "12",
...       street: "MG Road",
...       city: "Hyderabad",
...       zipcode: "500003"
...     }
...   },
...   {
...     name: "Taco Fiesta",
...     cuisine: "Mexican",
...     address: {
...       building: "88",
...       street: "Church Street",
...       city: "Bengaluru",
...       zipcode: "560001"
...     }
...   },
...   {
...     name: "Sushi Zen",
...     cuisine: "Japanese",
...     address: {
...       building: "5A",
...       street: "Bandra West",
...       city: "Mumbai",
...       zipcode: "400050"
...     }
...   },
...   {
...     name: "Spice Hub",
...     cuisine: "Indian",
...     address: {
...       building: "44",
```

```
...     street: "Ameerpet",

...     city: "Hyderabad",

...     zipcode: "500016"

...    }

...   },

...   {

...     name: "Pasta Corner",

...     cuisine: "Italian",

...     address: {

...       building: "21",

...       street: "Koramangala",

...       city: "Bengaluru",

...       zipcode: "560034"

...      }

...    },

...    {

...      name: "Dragon Wok",

...      cuisine: "Chinese",

...      address: {

...        building: "9",

...        street: "Park Street",

...        city: "Kolkata",

...        zipcode: "700016"

...       }

...     }

... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('6957a0d957323074bbcc899c'),
    '1': ObjectId('6957a0d957323074bbcc899d'),
```

```
    '2': ObjectId('6957a0d957323074bbcc899e'),

    '3': ObjectId('6957a0d957323074bbcc899f'),

    '4': ObjectId('6957a0d957323074bbcc89a0'),

    '5': ObjectId('6957a0d957323074bbcc89a1')

  }

}
```

Aggregation $project

```
 { $project: { name: 1, cuisine: 1, address: 1 } },

...   { $limit: 5 }

... ])

Uncaught:

SyntaxError: Missing semicolon. (1:32)


> 1 |   { $project: { name: 1, cuisine: 1, address: 1 } },

  |                           ^

 2 |   { $limit: 5 }

 3 | ])

 4 |


blog> db.restaurants.aggregate([

...   { $project: { name: 1, cuisine: 1, address: 1 } },

...   { $limit: 5 }

... ])

[

 {

   _id: ObjectId('6957a0d957323074bbcc899c'),

   name: 'Paradise Biryani',

   cuisine: 'Indian',

   address: {
```

```
      building: '12',

      street: 'MG Road',

      city: 'Hyderabad',

      zipcode: '500003'

    }

  },

  {

    _id: ObjectId('6957a0d957323074bbcc899d'),

    name: 'Taco Fiesta',

    cuisine: 'Mexican',

    address: {

      building: '88',

      street: 'Church Street',

      city: 'Bengaluru',

      zipcode: '560001'

    }

  },

  {

    _id: ObjectId('6957a0d957323074bbcc899e'),

    name: 'Sushi Zen',

    cuisine: 'Japanese',

    address: {

      building: '5A',

      street: 'Bandra West',

      city: 'Mumbai',

      zipcode: '400050'

    }

  },

  {

    _id: ObjectId('6957a0d957323074bbcc899f'),

    name: 'Spice Hub',
```

```
    cuisine: 'Indian',

    address: {

      building: '44',

      street: 'Ameerpet',

      city: 'Hyderabad',

      zipcode: '500016'

    }

  },

  {

    _id: ObjectId('6957a0d957323074bbcc89a0'),

    name: 'Pasta Corner',

    cuisine: 'Italian',

    address: {

      building: '21',

      street: 'Koramangala',

      city: 'Bengaluru',

      zipcode: '560034'

    }

  }

]
```

Aggregation $sort

```
blog> db.listingsAndReviews.aggregate([

... {

...   $sort: { "accommodates": -1 }

... },

... {

...   $project: {

...     "name": 1,

...     "accommodates": 1
```

```
...    }
...  },
...  {
...    $limit: 5
...  }
... ])
[
 {
   _id: ObjectId('6957a07f57323074bbcc8995'),
   name: 'Cozy Apartment in City Center'
 },
 {
   _id: ObjectId('6957a07f57323074bbcc8996'),
   name: 'Budget Private Room'
 },
 {
   _id: ObjectId('6957a07f57323074bbcc8997'),
   name: 'Luxury Villa with Pool'
 },
 {
   _id: ObjectId('6957a07f57323074bbcc8998'),
   name: 'Peaceful Farm Stay'
 }
]
```

Aggregation $match

```
blog> db.listingsAndReviews.aggregate([
...  { $match : { property_type : "House" } },
...  { $limit: 2 },
...  { $project: {
```

```
...     "name": 1,

...     "bedrooms": 1,

...     "price": 1

...   }}

... ])

[

 {

   _id: ObjectId('6957a07f57323074bbcc8996'),

   name: 'Budget Private Room',

   price: 900

 }

]
```

Aggregation $addFields

```
blog> db.restaurants.aggregate([

... {

...   $addFields: {

...     avgGrade: { $avg: "$grades.score" }

...   }

... },

... {

...   $project: {

...     "name": 1,

...     "avgGrade": 1

...   }

... },

... {

...   $limit: 5

...   }

... ])
```

```
[
  {
    _id: ObjectId('6957a0d957323074bbcc899c'),
    name: 'Paradise Biryani',
    avgGrade: null
  },
  {
    _id: ObjectId('6957a0d957323074bbcc899d'),
    name: 'Taco Fiesta',
    avgGrade: null
  },
  {
    _id: ObjectId('6957a0d957323074bbcc899e'),
    name: 'Sushi Zen',
    avgGrade: null
  },
  {
    _id: ObjectId('6957a0d957323074bbcc899f'),
    name: 'Spice Hub',
    avgGrade: null
  },
  {
    _id: ObjectId('6957a0d957323074bbcc89a0'),
    name: 'Pasta Corner',
    avgGrade: null
  }
]
blog> db.restaurants.find()
[
  {
    _id: ObjectId('6957a0d957323074bbcc899c'),
```

```
    name: 'Paradise Biryani',

    cuisine: 'Indian',

    address: {

      building: '12',

      street: 'MG Road',

      city: 'Hyderabad',

      zipcode: '500003'

    }

  },

  {

    _id: ObjectId('6957a0d957323074bbcc899d'),

    name: 'Taco Fiesta',

    cuisine: 'Mexican',

    address: {

      building: '88',

      street: 'Church Street',

      city: 'Bengaluru',

      zipcode: '560001'

    }

  },

  {

    _id: ObjectId('6957a0d957323074bbcc899e'),

    name: 'Sushi Zen',

    cuisine: 'Japanese',

    address: {

      building: '5A',

      street: 'Bandra West',

      city: 'Mumbai',

      zipcode: '400050'

    }

  },
```

```
{
  _id: ObjectId('6957a0d957323074bbcc899f'),
  name: 'Spice Hub',
  cuisine: 'Indian',
  address: {
    building: '44',
    street: 'Ameerpet',
    city: 'Hyderabad',
    zipcode: '500016'
  }
},
{
  _id: ObjectId('6957a0d957323074bbcc89a0'),
  name: 'Pasta Corner',
  cuisine: 'Italian',
  address: {
    building: '21',
    street: 'Koramangala',
    city: 'Bengaluru',
    zipcode: '560034'
  }
},
{
  _id: ObjectId('6957a0d957323074bbcc89a1'),
  name: 'Dragon Wok',
  cuisine: 'Chinese',
  address: {
    building: '9',
    street: 'Park Street',
    city: 'Kolkata',
    zipcode: '700016'
```

```
      }
    }
]
blog> db.restaurants.updateMany(
...   { grades: { $exists: false } },
...   {
...     $set: {
...       grades: [
...         { date: new Date("2025-01-10"), grade: "A", score: 12 },
...         { date: new Date("2025-03-12"), grade: "B", score: 18 },
...         { date: new Date("2025-05-21"), grade: "A", score: 9 }
...       ]
...     }
...   }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 6,
  modifiedCount: 6,
  upsertedCount: 0
}
blog> db.restaurants.findOne({}, { name: 1, grades: 1 })
{
  _id: ObjectId('6957a0d957323074bbcc899c'),
  name: 'Paradise Biryani',
  grades: [
    {
      date: ISODate('2025-01-10T00:00:00.000Z'),
      grade: 'A',
      score: 12
```

```
  },
  {
    date: ISODate('2025-03-12T00:00:00.000Z'),
    grade: 'B',
    score: 18
  },
  { date: ISODate('2025-05-21T00:00:00.000Z'), grade: 'A', score: 9 }
 ]
}
blog> db.restaurants.updateOne(
...  { name: "Paradise Biryani" },
...  {
...    $set: {
...      grades: [
...        { date: new Date("2025-01-02"), grade: "A", score: 10 },
...        { date: new Date("2025-03-05"), grade: "B", score: 17 },
...        { date: new Date("2025-06-18"), grade: "A", score: 8 }
...      ]
...    }
...  }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
blog> db.restaurants.updateOne(
...  { name: "Taco Fiesta" },
...  {
```

```
...     $set: {

...       grades: [

...         { date: new Date("2025-02-10"), grade: "B", score: 20 },

...         { date: new Date("2025-04-14"), grade: "A", score: 11 },

...         { date: new Date("2025-07-01"), grade: "B", score: 19 }

...       ]

...     }

...   }

... )

{

  acknowledged: true,

  insertedId: null,

  matchedCount: 1,

  modifiedCount: 1,

  upsertedCount: 0

}

blog> db.restaurants.updateOne(

...   { name: "Sushi Zen" },

...   {

...     $set: {

...       grades: [

...         { date: new Date("2025-01-20"), grade: "A", score: 7 },

...         { date: new Date("2025-05-02"), grade: "A", score: 9 },

...         { date: new Date("2025-08-11"), grade: "A", score: 6 }

...       ]

...     }

...   }

... )

{

  acknowledged: true,

  insertedId: null,
```

```
  matchedCount: 1,

  modifiedCount: 1,

  upsertedCount: 0

}

blog> db.restaurants.updateOne(

...   { name: "Spice Hub" },

...   {

...     $set: {

...       grades: [

...         { date: new Date("2025-02-01"), grade: "C", score: 26 },

...         { date: new Date("2025-04-10"), grade: "B", score: 18 },

...         { date: new Date("2025-06-22"), grade: "B", score: 16 }

...       ]

...     }

...   }

... )

{

  acknowledged: true,

  insertedId: null,

  matchedCount: 1,

  modifiedCount: 1,

  upsertedCount: 0

}

blog> db.restaurants.updateOne(

...   { name: "Pasta Corner" },

...   {

...     $set: {

...       grades: [

...         { date: new Date("2025-03-09"), grade: "B", score: 15 },

...         { date: new Date("2025-05-30"), grade: "A", score: 10 },

...         { date: new Date("2025-09-05"), grade: "B", score: 14 }
```

```
...      ]
...    }
...  }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
blog> db.restaurants.aggregate([
...   { $addFields: { avgGrade: { $avg: "$grades.score" } } },
...   { $project: { name: 1, avgGrade: 1 } },
...   { $limit: 5 }
... ])
[
 {
   _id: ObjectId('6957a0d957323074bbcc899c'),
   name: 'Paradise Biryani',
   avgGrade: 11.666666666666666
 },
 {
   _id: ObjectId('6957a0d957323074bbcc899d'),
   name: 'Taco Fiesta',
   avgGrade: 16.666666666666668
 },
 {
   _id: ObjectId('6957a0d957323074bbcc899e'),
   name: 'Sushi Zen',
   avgGrade: 7.333333333333333
```

```
  },
  {
    _id: ObjectId('6957a0d957323074bbcc899f'),
    name: 'Spice Hub',
    avgGrade: 20
  },
  {
    _id: ObjectId('6957a0d957323074bbcc89a0'),
    name: 'Pasta Corner',
    avgGrade: 13
  }
]
```

Aggregation $count

```
blog> db.restaurants.aggregate([
... {
...    $match: { "cuisine": "Chinese" }
... },
... {
...    $count: "totalChinese"
... }
... ])
[ { totalChinese: 1 } ]
```

Aggregation $lookup

```
blog> db.comments.aggregate([
... {
...    $lookup: {
...      from: "movies",
```

```
...     localField: "movie_id",

...     foreignField: "_id",

...     as: "movie_details",

...    },

...   },

...   {

...    $limit: 1

...   }

... ])


blog> use blog

already on db blog

blog> db.comments.countDocuments()

0

blog> db.movies.findOne({}, { _id: 1, title: 1 })

{ _id: ObjectId('6957a08e57323074bbcc8999'), title: 'Inception' }

blog> const m1 = db.movies.findOne({ title: "Inception" }, { _id: 1 })


blog> const m2 = db.movies.findOne({ title: "Interstellar" }, { _id: 1 })


blog>


blog> db.comments.insertMany([

...   {

...    name: "Nanda",

...    email: "nanda@example.com",

...    text: "Amazing movie!",

...    date: new Date(),

...    movie_id: m1._id

...   },

...   {
```

```
...     name: "Ravi",
...     email: "ravi@example.com",
...     text: "Mind-blowing visuals.",
...     date: new Date(),
...     movie_id: m1._id
...   },
...   {
...     name: "Rahul",
...     email: "rahul@example.com",
...     text: "Loved the soundtrack.",
...     date: new Date(),
...     movie_id: m2._id
...   }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('6957ad7657323074bbcc89a2'),
    '1': ObjectId('6957ad7657323074bbcc89a3'),
    '2': ObjectId('6957ad7657323074bbcc89a4')
  }
}
blog> db.comments.aggregate([
...   {
...     $lookup: {
...       from: "movies",
...       localField: "movie_id",
...       foreignField: "_id",
...       as: "movie_details"
...     }
...   },
```

```
...   { $limit: 1 }
... ])
[
  {
    _id: ObjectId('6957ad7657323074bbcc89a2'),
    name: 'Nanda',
    email: 'nanda@example.com',
    text: 'Amazing movie!',
    date: ISODate('2026-01-02T11:35:18.811Z'),
    movie_id: ObjectId('6957a08e57323074bbcc8999'),
    movie_details: [
      {
        _id: ObjectId('6957a08e57323074bbcc8999'),
        title: 'Inception',
        year: 2010,
        genres: [ 'Action', 'Sci-Fi', 'Thriller' ],
        runtime: 148,
        imdb: { rating: 8.8, votes: 2000000 }
      }
    ]
  }
]
blog> db.comments.findOne({}, { movie_id: 1 })
{
  _id: ObjectId('6957ad7657323074bbcc89a2'),
  movie_id: ObjectId('6957a08e57323074bbcc8999')
}
blog> db.movies.findOne({}, { _id: 1 })
{ _id: ObjectId('6957a08e57323074bbcc8999') }
blog> db.comments.updateMany(
...   { movie_id: { $type: "string" } },
```

```
...   [{ $set: { movie_id: { $toObjectId: "$movie_id" } } }]
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
blog>
```