

Day - 5 MongoDB Assignment

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>
```