

```

db.users.insertMany([
  { "user_id": 1, "name": "John", "age": 30, "city": "New York", "interests": ["coding", "sports"],
    "salary": 70000 },
  { "user_id": 2, "name": "Alice", "age": 25, "city": "Los Angeles", "interests": ["reading", "music"],
    "salary": 50000 },
  { "user_id": 3, "name": "Bob", "age": 35, "city": "Chicago", "interests": ["traveling", "sports"],
    "salary": 90000 },
  { "user_id": 4, "name": "Eve", "age": 28, "city": "San Francisco", "interests": ["cooking",
    "reading"], "salary": 60000 },
  { "user_id": 5, "name": "Charlie", "age": 40, "city": "New York", "interests": ["music",
    "gardening"], "salary": 100000 },
  { "user_id": 6, "name": "Sophia", "age": 30, "city": "Chicago", "interests": ["sports", "traveling"],
    "salary": 75000 }
])

```

1. Count

Count the number of users who live in Chicago and are interested in "sports."

```
db.users.countDocuments({ city: "Chicago", interests: "sports" })
```

2. Sort

Sort users by `salary` in descending order, and then by `age` in ascending order (in case of ties).

```
db.users.find().sort({ salary: -1, age: 1 })
```

3. Limit and Skip

Fetch the third and fourth highest-paid users:

```
db.users.find().sort({ salary: -1 }).skip(2).limit(2)
```

4. Aggregation

Query 1: Average Salary by City

Find the average salary of users grouped by city:

```

db.users.aggregate([
  { $group: { _id: "$city", avgSalary: { $avg: "$salary" } } },
  { $sort: { avgSalary: -1 } }
])

```

Query 2: Users Interested in "Sports" with Total Salary

Find users who are interested in "sports" and calculate their total salary:

```
db.users.aggregate([
```

```

    { $match: { interests: "sports" } },
    { $group: { _id: null, totalSalary: { $sum: "$salary" } } }
  ])

```

Query 3: List Users with Selected Fields

Return only the name, age, and salary fields of users, sorted by age in ascending order:

```

db.users.aggregate([
  { $project: { _id: 0, name: 1, age: 1, salary: 1 } },
  { $sort: { age: 1 } }
])

```

5. Complex Filter: Multiple Conditions

Find users who are:

- Above 30 years old
- Living in "Chicago" or "New York"
- Interested in "sports"

```

db.users.find({
  age: { $gt: 30 },
  city: { $in: ["Chicago", "New York"] },
  interests: "sports"
})

```

6. Add a New Field to Users

- Add a new field called `status` that labels users as either "High Earner" (salary \geq 75000) or "Low Earner":

```

db.users.aggregate([
  {
    $addFields: {
      status: { $cond: { if: { $gte: ["$salary", 75000] }, then: "High Earner", else: "Low Earner" } }
    }
  }
])

```