Gafur Mammadov

Part 1

Q1

```
SWCompany> db.Employees.find(
|       {  $and: [
|                       {Salary:{$gte:80000}},
|                       {Salary:{$lte:100000}}
|                       ]
|       },
|       {    FullName:1, Email:1, _id:0 }
[| )
[
  { FullName: 'John Walters', Email: 'kathy51@example.com' },
  { FullName: 'Martha Brown', Email: 'erin71@example.net' },
  { FullName: 'Norma Gibson', Email: 'murphydaniel@example.com' },
  { FullName: 'Tammy Jacobs', Email: 'brownkatelyn@example.net' },
  { FullName: 'Stephen Hayes', Email: 'rebecca22@example.com' },
  { FullName: 'Jordan Harris', Email: 'jarvistodd@example.org' }
]
SWCompany>
```

Q2

```
SWCompany> db.Employees.find(
|    {
|      $or: [
|        { "Address.state": { $eq: "Indiana" } },
|        { "Address.state": { $eq: "Illinois" } }
|      ]
|    },
|    {
|      Address: 1,
|      Salary: 1
|    }
| ).sort({ Salary: 1 });
[|
[
  {
    _id: '66396f75aa6dfb47cc84f220',
    Salary: 67303,
    Address: {
      street: '172 Michael Mountain Apt. 051',
      city: 'Annetteview',
      state: 'Indiana'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f21e',
    Salary: 89206,
    Address: {
      street: '7840 Gallagher Lodge Suite 243',
      city: 'Anthonybury',
      state: 'Indiana'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f228',
    Salary: 89758,
    Address: {
      street: '5242 Allen Plaza',
      city: 'Costachester',
      state: 'Illinois'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f221',
    Salary: 92361,
    Address: {
      street: '294 Shelby Square',
      city: 'Lake Kevin',
      state: 'Indiana'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f21c',
    Salary: 102093,
    Address: {
      street: '854 Catherine Parks Apt. 405',
      city: 'New Deborahchester',
```

```
  },
  {
    _id: '66396f75aa6dfb47cc84f21c',
    Salary: 102093,
    Address: {
      street: '854 Catherine Parks Apt. 405',
      city: 'New Deborahchester',
      state: 'Indiana'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f227',
    Salary: 104538,
    Address: { street: '8314 Adam Parks', city: 'West Juan', state: 'Illinois' }
  },
  {
    _id: '66396f75aa6dfb47cc84f223',
    Salary: 106778,
    Address: {
      street: '289 Don Valleys',
      city: 'Andrewsburgh',
      state: 'Indiana'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f229',
    Salary: 117061,
    Address: {
      street: '1732 Amanda Spring',
      city: 'Port James',
      state: 'Illinois'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f22a',
    Salary: 117532,
    Address: {
      street: '549 Estes Crest Apt. 386',
      city: 'Port Gwendolyn',
      state: 'Illinois'
    }
  },
  {
    _id: '66396f75aa6dfb47cc84f21d',
    Salary: 117766,
    Address: {
      street: '6892 Adams Neck Apt. 098',
      city: 'New Herbertland',
      state: 'Indiana'
    }
  }
]
[SWCompany>
```

Q 3

```
SWCompany> db.Employees.find(
|       { $and: [
|                     {skills:{$eq:"Python"}},
|                     {skills:{$eq:"MongoDB"}}
|                     ]
|       }
[| )
[
  {
    _id: '66396f75aa6dfb47cc84f21f',
    FullName: 'Lauren Arnold',
    Email: 'qescobar@example.org',
    Salary: 113057,
    Project: 'Frontend',
    StartDate: { month: 7, year: 2023 },
    Address: {
      street: '17311 Harrison Court',
      city: 'Lake Curtisland',
      state: 'Michigan'
    },
    skills: [ 'Python', 'PostgreSQL', 'JavaScript', 'MongoDB' ]
  },
  {
    _id: '66396f75aa6dfb47cc84f229',
    FullName: 'Nathan Mcdonald',
    Email: 'brianna19@example.net',
    Salary: 117061,
    Project: 'ServerSide',
    StartDate: { month: 7, year: 2022 },
    Address: {
      street: '1732 Amanda Spring',
      city: 'Port James',
      state: 'Illinois'
    },
    skills: [ 'MySQL', 'SQL', 'Python', 'MongoDB' ]
  }
]
SWCompany>
```

Q4

```
SWCompany> db.Employees.find(
|       {  $and: [
|                       {Project:{$eq:"Frontend"}},
|                       {"StartDate.year":{$eq:2022}}
|                       ]
|       }
| )
|
[
  {
    _id: '66396f75aa6dfb47cc84f224',
    FullName: 'Michele Hood',
    Email: 'mrichardson@example.org',
    Salary: 77631,
    Project: 'Frontend',
    StartDate: { month: 1, year: 2022 },
    Address: {
      street: '703 Collins Village',
      city: 'Port David',
      state: 'Michigan'
    },
    skills: [ 'Node.js', 'Python' ]
  }
]
SWCompany>
```
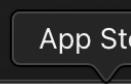
Part 2

Q1

```
newTaxi> db.Trips.find(
|    { origin_city: "Detroit, Michigan" },
|    { fare_amount_usd: 1, trip_time: 1, destination_city: 1 }
| ).sort({ fare_amount_usd: 1 });
[|
[
  {
    _id: '66399a6857184314658edfff',
    destination_city: 'Cleveland, Ohio',
    fare_amount_usd: 73.48,
    trip_time: '2024-04-23'
  },
  {
    _id: '66399a6857184314658edff0',
    destination_city: 'Milwaukee, Wisconsin',
    fare_amount_usd: 105.89,
    trip_time: '2024-04-27'
  }
]
newTaxi> █
```

Q 2

```
newTaxi> db.Trips.find(
        {
                $or: [
                                {'car.make':{$eq:'Toyota'}},
                                {'car.make':{$eq:'Ford'}}
                        ]
        },
        {
                'driver.name': 1,
                'driver.rating': 1
        }
).sort({'driver.rating':  -1})
[
  {
    _id: '66399a6857184314658edffb',
    driver: { name: 'Paula Carter', rating: 4.7 }
  },
  {
    _id: '66399a6857184314658edff4',
    driver: { name: 'Claudia Raymond', rating: 4.2 }
  },
  {
    _id: '66399a6857184314658edff5',
    driver: { name: 'Ronald Peters', rating: 3.4 }
  },
  {
    _id: '66399a6857184314658edffe',
    driver: { name: 'Kurt Harrington', rating: 3.2 }
  },
  {
    _id: '66399a6857184314658ee002',
    driver: { name: 'Mary Estrada', rating: 3 }
  },
  {
    _id: '66399a6857184314658edff8',
    driver: { name: 'James Torres', rating: 2.7 }
  },
  {
    _id: '66399a6857184314658edff7',
    driver: { name: 'Mark West', rating: 1.8 }
  },
  {
    _id: '66399a6857184314658edfff',
    driver: { name: 'Nathaniel Boyd', rating: 1.2 }
  }
]
newTaxi>
```

Q 3

```
newTaxi> db.Trips.countDocuments(
        {
                $and: [
                                {'payment_method':{$eq:'credit_card'}},
                                {'destination_city':{$eq:'Omaha, Nebraska'}}
        ]           } )
1
newTaxi>
```

Q 4

```
newTaxi> db.Trips.countDocuments(
        {'car.year':{$gte:2020}}
  )
10
newTaxi>
```

Q 5

```
newTaxi> db.Trips.find(
  |        {'trip_rating':{$lte:2}},
  |        {
  |                'driver.name': 1,
  |                'driver.rating': 1,
  |                origin_city: 1
  |        }
b2 | ).sort({'trip_rating':  1})
[
  {
    _id: '66399a6857184314658edff3',
    origin_city: 'Omaha, Nebraska',
    driver: { name: 'Christopher Ross', rating: 2.8 }
  },
  {
    _id: '66399a6857184314658edffc',
    origin_city: 'Cleveland, Ohio',
    driver: { name: 'Joseph Marquez', rating: 1.4 }
  },
si {
    _id: '66399a6857184314658ee000',
    origin_city: 'Minneapolis, Minnesota',
    driver: { name: 'Stephanie Williams', rating: 3.3 }
  },
  {
    _id: '66399a6857184314658edff0',
    origin_city: 'Detroit, Michigan',
    driver: { name: 'Kimberly Kim', rating: 2.3 }
  },
  {
    _id: '66399a6857184314658edff2',
    origin_city: 'St. Louis, Missouri',
    driver: { name: 'Deborah Fox', rating: 4.7 }
  },
  {
    _id: '66399a6857184314658edff4',
    origin_city: 'Indianapolis, Indiana',
    driver: { name: 'Claudia Raymond', rating: 4.2 }
  },
  {
    _id: '66399a6857184314658ee002',
    origin_city: 'Omaha, Nebraska',
    driver: { name: 'Mary Estrada', rating: 3 }
  }
]
newTaxi>
```

Q 6

```
newTaxi> db.Trips.find(
|    { weather_conditions: { $in: ["Rainy", "Snowy"] } },
|    { _id: 1, origin_city: 1, destination_city: 1 }
| );
[
[
  {
    _id: '66399a6857184314658edfef',
    origin_city: 'Cleveland, Ohio',
    destination_city: 'Kansas City, Missouri'
  },
  {
    _id: '66399a6857184314658edff1',
    origin_city: 'Milwaukee, Wisconsin',
    destination_city: 'Cleveland, Ohio'
  },
  {
    _id: '66399a6857184314658edff3',
    origin_city: 'Omaha, Nebraska',
    destination_city: 'Omaha, Nebraska'
  },
  {
    _id: '66399a6857184314658edff5',
    origin_city: 'Cincinnati, Ohio',
    destination_city: 'Indianapolis, Indiana'
  },
  {
    _id: '66399a6857184314658edff7',
    origin_city: 'Cleveland, Ohio',
    destination_city: 'Kansas City, Missouri'
  },
  {
    _id: '66399a6857184314658edff9',
    origin_city: 'Cleveland, Ohio',
    destination_city: 'Detroit, Michigan'
  },
  {
    _id: '66399a6857184314658edffa',
    origin_city: 'Cincinnati, Ohio',
    destination_city: 'Cincinnati, Ohio'
  },
  {
    _id: '66399a6857184314658ee000',
    origin_city: 'Minneapolis, Minnesota',
    destination_city: 'Milwaukee, Wisconsin'
  }
]
newTaxi>
```

Q 7

```
newTaxi> db.Trips.countDocuments({
|    $and: [
|       { tripDate: { $gte: new Date("2024-03-01") } },
|       { tripDate: { $lte: new Date("2024-04-25") } }
|    ]
| });
[|
 0
newTaxi> ▮
```

News