

Lab 12 Task

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BSCS4A

1:

```
test> use P200119_4A
```

```
switched to db P200119_4A
```

2:

```
P200119_4A> db.createCollection("cities")
```

```
{ ok: 1 }
```

```
P200119_4A> db.createCollection("moviepeople_1000")
```

```
{ ok: 1 }
```

3:

The screenshot shows the MongoDB Compass web interface. On the left sidebar, the database 'p200119_4A' is selected, and the 'cities' collection is highlighted. The main panel shows the 'Documents' tab for 'p200119_4A.cities'. It displays document statistics: 99.8k documents, 4.1KB storage size, and 1 index. Below the statistics, there are tabs for Documents, Aggregations, Schema, Explain Plan, Indexes, and Validation. A filter bar is present with the text '{ field: 'value' }'. Below the filter, there are buttons for 'ADD DATA', 'VIEW', and 'REFRESH'. The document list shows three documents with the following details:

- Document 1: `{ "_id": ObjectId("62813c57577fb707bd206e9b"), "name": "Sant Julià de Lòria", "country": "AD", "timezone": "Europe/Andorra", "population": 8022, "location": Object }`
- Document 2: `{ "_id": ObjectId("62813c57577fb707bd206e9c"), "name": "Pas de la Casa", "country": "AD", "timezone": "Europe/Andorra", "population": 2363, "location": Object }`
- Document 3: `{ "_id": ObjectId("62813c57577fb707bd206e9d"), "name": "Ordino", "country": "AD", "timezone": "Europe/Andorra", "population": 3066, "location": Object }`

4(iii)

```
p200119_4A> db.cities.find({"location.longitude":{ $eq: -58.37723}}, {location:1,population:1})
[
  {
    _id: ObjectId("62813c57577fb707bd20717e"),
    population: 13076300,
    location: { latitude: -34.61315, longitude: -58.37723 }
  }
]
```

4(i)

```
mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS... x abdul@abdul-HP-EliteBook-840-G4: ~
p200119_4A> db.cities.find( { timezone: "Africa/Harare" })
[
  {
    _id: ObjectId("62813c5e577fb707bd21f459"),
    name: 'Zvishavane',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 35896,
    location: { latitude: -20.32674, longitude: 30.06648 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f45a"),
    name: 'Victoria Falls',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 35761,
    location: { latitude: -17.92353, longitude: 25.84299 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f45b"),
    name: 'Shurugwi',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 17075,
    location: { latitude: -19.67016, longitude: 30.00589 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f45c"),
    name: 'Shangani',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 3835,
    location: { latitude: -19.78333, longitude: 29.36667 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f45d"),
    name: 'Shamva',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 10317,
    location: { latitude: -17.31159, longitude: 31.57561 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f468"),
    name: 'Mvuma',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 4331,
    location: { latitude: -19.27924, longitude: 30.52828 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f469"),
    name: 'Mutoko',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 9532,
    location: { latitude: -17.39699, longitude: 32.22677 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f46a"),
    name: 'Mutare',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 184205,
    location: { latitude: -18.9707, longitude: 32.67086 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f46b"),
    name: 'Murehwa',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 8559,
    location: { latitude: -17.64322, longitude: 31.784 }
  },
  {
    _id: ObjectId("62813c5e577fb707bd21f46c"),
    name: 'Mount Darwin',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 6349,
    location: { latitude: -16.77251, longitude: 31.58381 }
  }
]
Type "it" for more
p200119_4A> █
```

4(ii)

```
p200119_4A> db.cities.find( { population: { $gt: 12985000 } })
[
  {
    _id: ObjectId("62813c57577fb707bd20717e"),
    name: 'Buenos Aires',
    country: 'AR',
    timezone: 'America/Argentina/Buenos_Aires',
    population: 13076300,
    location: { latitude: -34.61315, longitude: -58.37723 }
  },
  {
    _id: ObjectId("62813c58577fb707bd20956f"),
    name: 'Shanghai',
    country: 'CN',
    timezone: 'Asia/Shanghai',
    population: 14608512,
    location: { longitude: 31.22222, latitude: 121.45806 }
  }
]
p200119_4A> █
```

5:

```
p200119_4A> db.cities.updateMany({country:"PK","location.longitude":{$eq:73.2122}}, {$set:{"population":"55000"}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
p200119_4A> █
```

6:

```
p200119_4A> db.cities.deleteMany(
... {
.... timezone:"Asia/Karachi",
.... country:"PK",
.... }
... )
{ acknowledged: true, deletedCount: 424 }
p200119_4A> █
```