

NAME: AHMED ALI
ROLL NO: P19-0042
SECTION: 4B

1) Create a database named your rollno_section (i.e. 18P0014_6B).

```
test> use P190042_AhmedAli  
switched to db P190042_AhmedAli  
P190042_AhmedAli> db  
P190042_AhmedAli
```

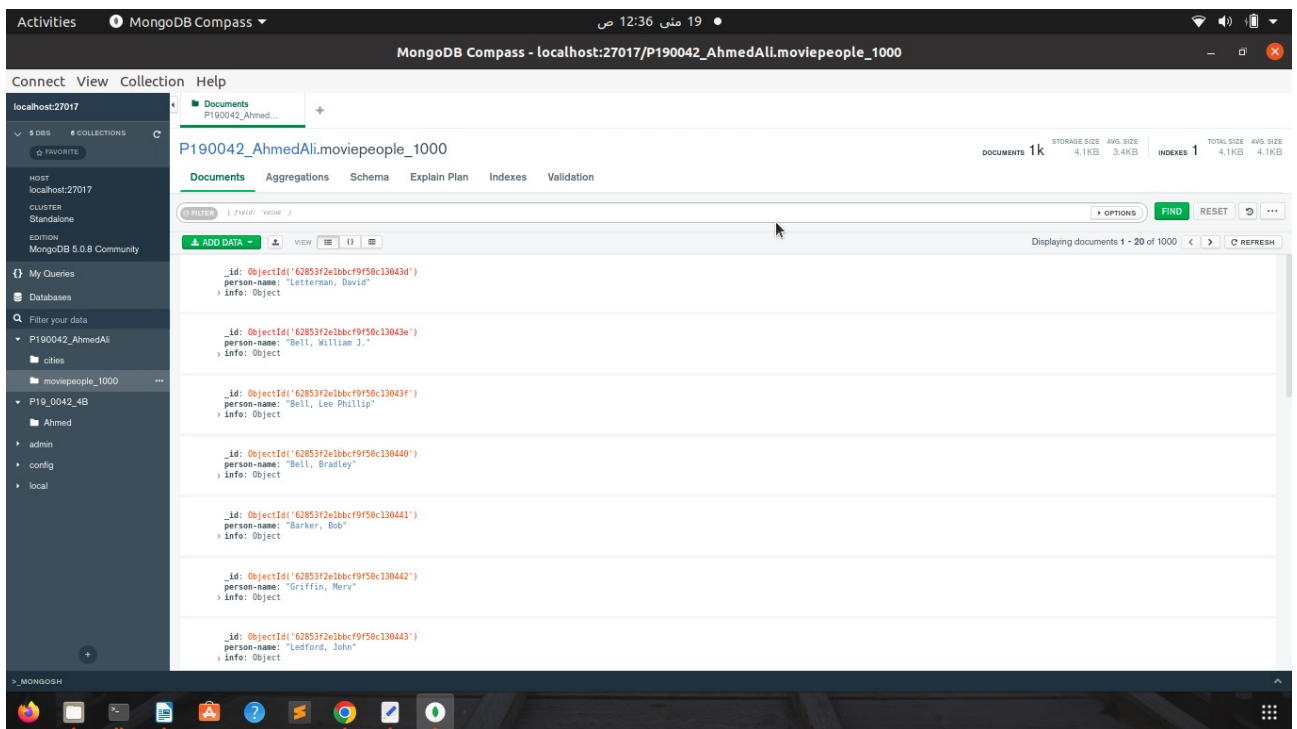
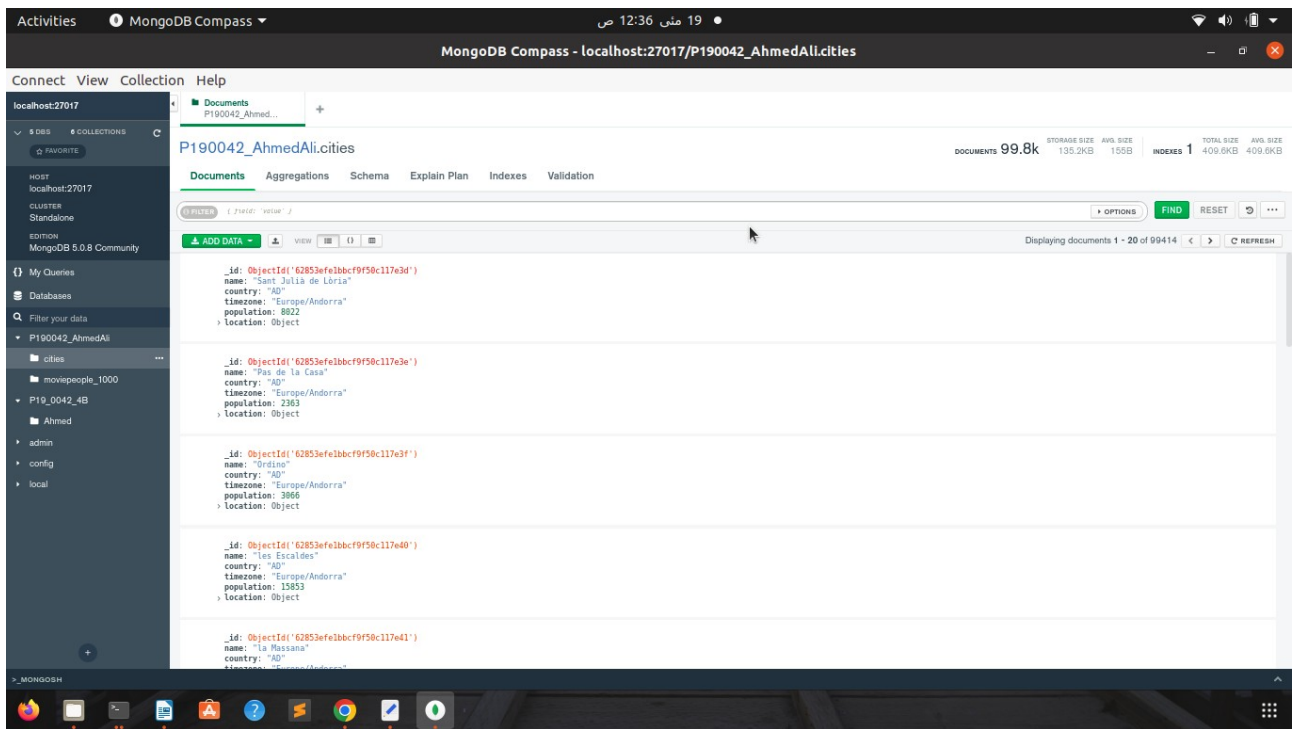
2) Create collections named cities and moviepeople_1000.

```
P190042_AhmedAli> db.createCollection("cities")  
{ ok: 1 }  
P190042_AhmedAli> db.createCollection("moviepeople_1000")  
{ ok: 1 }  
P190042_AhmedAli> show collections  
cities  
moviepeople_1000
```

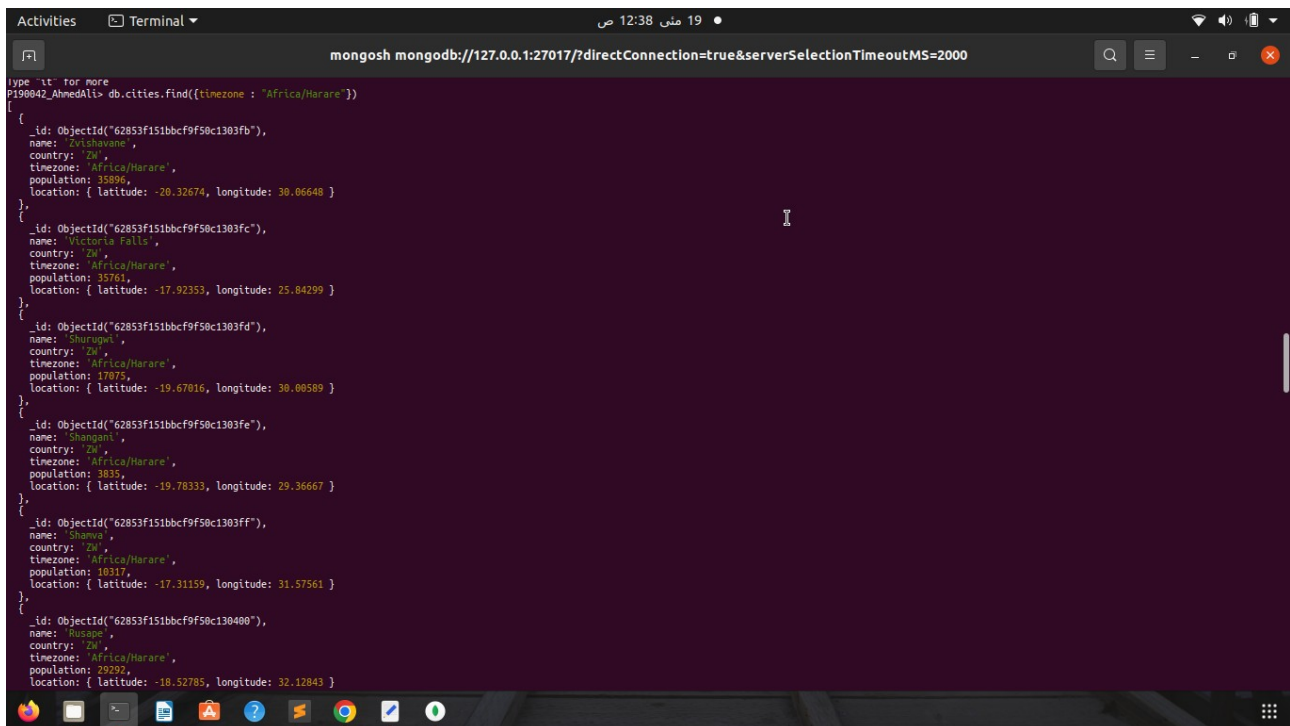
3) Import the documents cities.jsonl and moviepeople-1000.jsonl into the cities and moviepeople collection respectively by issuing the following command.

cities				
Storage size: 135.17 kB	Documents: 100 K	Avg. document size: 155.00 B	Indexes: 1	Total index size: 409.60 kB

moviepeople_1000				
Storage size: 4.10 kB	Documents: 1 K	Avg. document size: 3.35 kB	Indexes: 1	Total index size: 4.10 kB

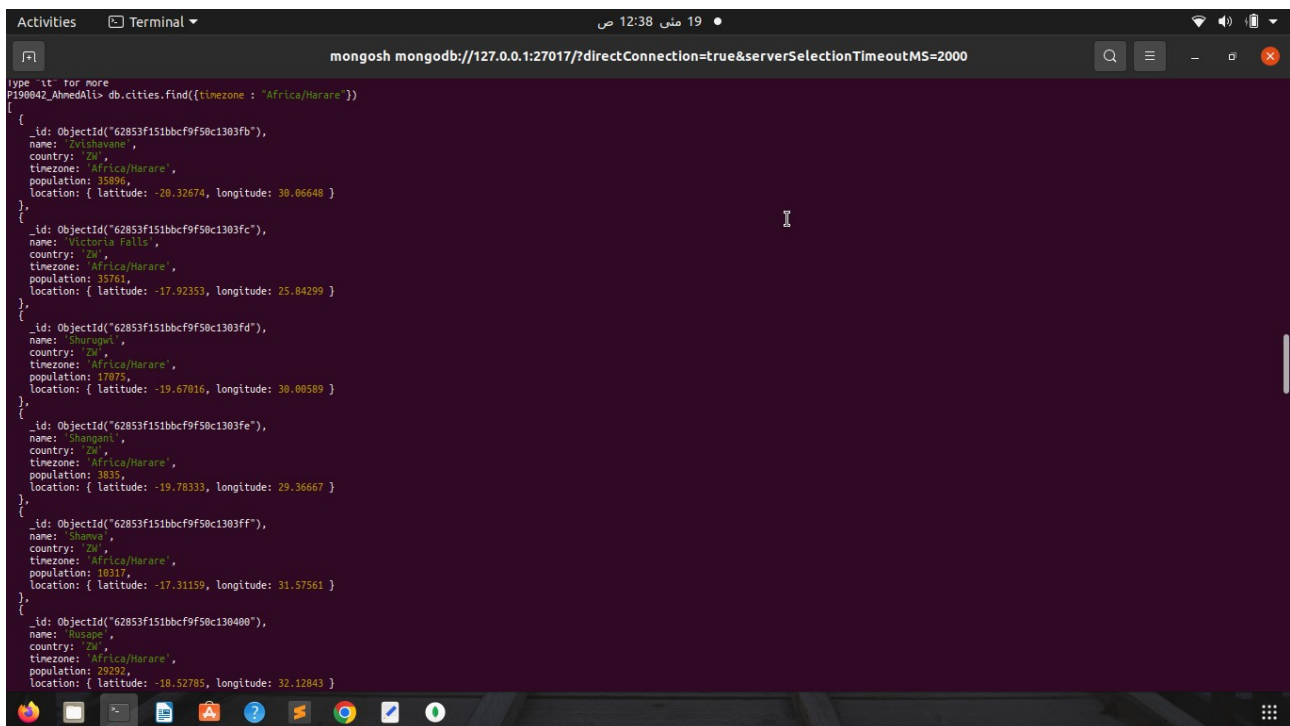


- 4) In the mongo shell client, write queries for finding: (hint: use cities collection)
- i. All those cities whose time zone is Africa/Harare.



A terminal window titled 'Terminal' with a dark background. The title bar shows 'Activities', 'Terminal', and a clock '12:38 م١٩'. The terminal content shows a mongo shell prompt 'P190042_AhmedAli>' followed by the command 'db.cities.find({timezone : 'Africa/Harare'})'. The output is a JSON array of city documents. The first document is for 'Zvishavane' with population 35896. The second is for 'Victoria Falls' with population 35761. The third is for 'Shurugwi' with population 17075. The fourth is for 'Shangani' with population 3035. The fifth is for 'Shamva' with population 10317. The sixth is for 'Buzape' with population 29292. Each document includes an _id, name, country ('ZW'), timezone ('Africa/Harare'), population, and location (latitude and longitude).

```
type 'it' for more
P190042_AhmedAli> db.cities.find({timezone : 'Africa/Harare'})
[
  {
    _id: ObjectId("62853f151bbc9f9f50c1303fb"),
    name: 'Zvishavane',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 35896,
    location: { latitude: -20.32674, longitude: 30.06648 }
  },
  {
    _id: ObjectId("62853f151bbc9f9f50c1303fc"),
    name: 'Victoria Falls',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 35761,
    location: { latitude: -17.92353, longitude: 25.84299 }
  },
  {
    _id: ObjectId("62853f151bbc9f9f50c1303fd"),
    name: 'Shurugwi',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 17075,
    location: { latitude: -19.67016, longitude: 30.00589 }
  },
  {
    _id: ObjectId("62853f151bbc9f9f50c1303fe"),
    name: 'Shangani',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 3035,
    location: { latitude: -19.78333, longitude: 29.36667 }
  },
  {
    _id: ObjectId("62853f151bbc9f9f50c1303ff"),
    name: 'Shamva',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 10317,
    location: { latitude: -17.31159, longitude: 31.57561 }
  },
  {
    _id: ObjectId("62853f151bbc9f9f50c130400"),
    name: 'Buzape',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 29292,
    location: { latitude: -18.52785, longitude: 32.12843 }
  }
]
```



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    _id: ObjectId("62853f151bbc9f9f50c130400"),
    name: 'Buzape',
    country: 'ZW',
    timezone: 'Africa/Harare',
    population: 29292,
    location: { latitude: -18.52785, longitude: 32.12843 }
  }
]
```

ii. All those cities whose population is greater than 12985000.

```
P190042_AhmedAli> db.cities.find({population:{$gt : 12985000} })
[
  {
    _id: ObjectId("62853efe1bbcf9f50c118120"),
    name: 'Buenos Aires',
    country: 'AR',
    timezone: 'America/Argentina/Buenos_Aires',
    population: 13076300,
    location: { latitude: -34.61315, longitude: -58.37723 }
  },
  {
    _id: ObjectId("62853f011bbcf9f50c11a511"),
    name: 'Shanghai',
    country: 'CN',
    timezone: 'Asia/Shanghai',
    population: 14608512,
    location: { longitude: 31.22222, latitude: 121.45806 }
  }
]
```

iii. A city whose longitude equals to -58.37723. Your query should return location and population fields only. (hint: use projection)

```
P190042_AhmedAli> db.cities.find({"location.longitude":{$eq :-58.37723}} , {location:1,population:1}). pretty()
[
  {
    _id: ObjectId("62853efe1bbcf9f50c118120"),
    population: 13076300,
    location: { latitude: -34.61315, longitude: -58.37723 }
  }
]
```

5) Write a query to update the population from 35000 to 55000 whose country is PK and a location latitude of 73.2122. (hint: use cities collection)

```
P190042_AhmedAli> db.cities.updateMany({country:"PK" , "location.latitude":73.2122}, {$set : {population:55000}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
```

6) Write a query to delete the document whose timezone is Asia/Karachi and a country is PK. (hint: use cities collection)

```
P190042_AhmedAli> db.cities.deleteMany({timezone: "Asia/Karachi", country:"PK"})
{ acknowledged: true, deletedCount: 424 }
P190042_AhmedAli>
```

7) Write a query for finding the document whose birthname name array contains (“Freeman, Crispin McDougal”) as a value. (hint: use moviepeople collection)

```
mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000

2 |
P190042_AhmedAli> db.moviepeople_1000.find({"info.birthname" : "Freeman, Crispin McDougal"}).pretty()
[
  {
    _id: ObjectId("62853f2e1bbcf9f59c13081d"),
    person-name : 'Freeman, Crispin',
    info: {
      quotes: [
        "On advice to aspiring voice-over actors: For myself, I'm in the favor of the more versatile kind of voice who can do all sorts of roles and transform. But to do that you have to have chops, and the best way to get them is through the classics, especially Shakespeare. It teaches you a lot about breathing, and idea and intention and rhythm. He's written the characters into the very poetry of the language, and if you try to get into and match his poetry it will take you out of your normal language patterns and that's the beginning of creating a character, not playing your mundane, everyday self. It's so verbally based, and in voice-acting, all you've got is your voice."
      ],
      trivia: [
        "Said he was a little nervous about taking on the role of Zeldadis in Slayers because the character had already been voiced by someone else. When it came to reinterpreting the character, he said he thought that Zeldadis had more of an axe to grind.",
        "Fluent in English and Spanish.",
        "Is a big fan of authors 'William Shakespeare (I)' (qv), 'J.R.R. Tolkien' (qv), 'Joseph Campbell (III)' (qv), 'Marshall McLuhan' (qv), and 'William Gibson (II)' (qv).",
        "Is a big fan of anime creators 'Hayao Miyazaki' (qv) and 'Osamu Tezuka (I)' (qv).",
        "Frequently does voice overs for various union and non-union voice production companies for some video games and mostly animes.",
        "Has a younger brother, 'Clark Freeman' (qv), and a younger sister, 'Cassidy Freeman' (qv).",
        "Graduated from Williams College with a B.A. in theater & a minor in computer science",
        "Graduated from Columbia University with an M.F.A. in acting",
        "Is one of the only English-speaking voice actors to voice the same character of all Xenosaga video game series. Crispin was the only voice actor to provide the English voice of Albedo and Gaignun Kukal of the series.",
        "On August 11, 2007, he married 'Izobel Carol' (qv) on The Big Island of Hawaii.",
        "He and Veronica Taylor both came to the anime Slayers series as replacements - she replaced Joani Baker as Amelia and he replaced Daniel Cronin as Zeldadis."
      ],
      mini-biography: [
        "Crispin is the oldest of three. He has a younger brother, Clark, and youngest sister, Cassidy. All three attended the Latin School of Chicago, where Crispin graduated in a class of 60 in 1990. Crispin had a Mac in 1985. To this day he is still an avid computer geek. He played no official team sports in school, but participated in ad hoc football played in Lincoln Park. Crispin was an active participant in many school plays both on and behind stage. He's also a genuinely nice and humble person."
      ],
      birthnotes: [ 'Chicago, Illinois, USA' ],
      birthdate: [ '9 February 1972' ],
      height: [ '6' 2" ],
      spouse: [ "'Izobel Carol' (qv) (11 August 2007 - present)" ],
      birthname: [ 'Freeman, Crispin McDougal' ]
    }
  }
]
P190042_AhmedAli>
```