Sprint 1 Report

Team:
MatchYa

Members:
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Introduction

We have set up the devices and systems, researching for the papers that are related to the divide and conquer counting inversions and Elo rating algorithm, and exploring the datasets that work for our project.

Setup the MongoDB database

MacOS:
>>Install MongoDB Community Edition on MacOS
reference:
https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-os-x/

```
brew tap mongodb/brew
brew update
```

error:

```
Error:
  homebrew-core is a shallow clone.
To `brew update`, first run:
  git -C /usr/local/Homebrew/Library/Taps/homebrew/homebrew-core fetch --unshallow
```

fix/solution:

```
git -C /usr/local/Homebrew/Library/Taps/homebrew/homebrew-core fetch --unshallow
```

```
(base) yuxiu:~ $ git -C /usr/local/Homebrew/Library/Taps/homebrew/homebrew-core fetch --unshallow
```

```
(base) yuxiu:~ $ brew update
```

```
brew install mongodb-community@6.0
```

```
(base) yuxiu:~ $ brew install mongodb-community@6.0
```

>>Run MongoDB Community Edition:

```
brew services start mongodb-community@6.0
```

```
(base) yuxiu:~ $ brew services start mongodb-community@6.0
```

or

```
To start mongodb/brew/mongodb-community now and restart at login:
  brew services start mongodb/brew/mongodb-community
```

-> mongoDB started successfully:

```
==> Successfully started `mongodb-community` (label: homebrew.mxcl.mongodb-community)
```

Leave this terminal and let the server stays at the started status
open a new terminal and start the mongo shell:

`mongosh`

```
(base) yuxiu:~ $ mongosh
Current Mongosh Log ID: 6359bd25e0a61afbbb334430
Connecting to:          mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&app
Name=mongosh+1.6.0
Using MongoDB:          6.0.1
Using Mongosh:          1.6.0
```

show the databases:

`show dbs`

```
test> show dbs
admin      40.00 KiB
config     72.00 KiB
local      40.00 KiB
matchyaDB  40.00 KiB
```

`use matchyaDB`

```
test> use matchyaDB
switched to db matchyaDB
```

`db.user.find()`

```
matchyaDB> db.user.find()
[
  {
    _id: ObjectId("6357881c9f15d5acaa7516f1"),
    name: 'Ada Lovelace',
    age: 25
  }
]
```

`use user`

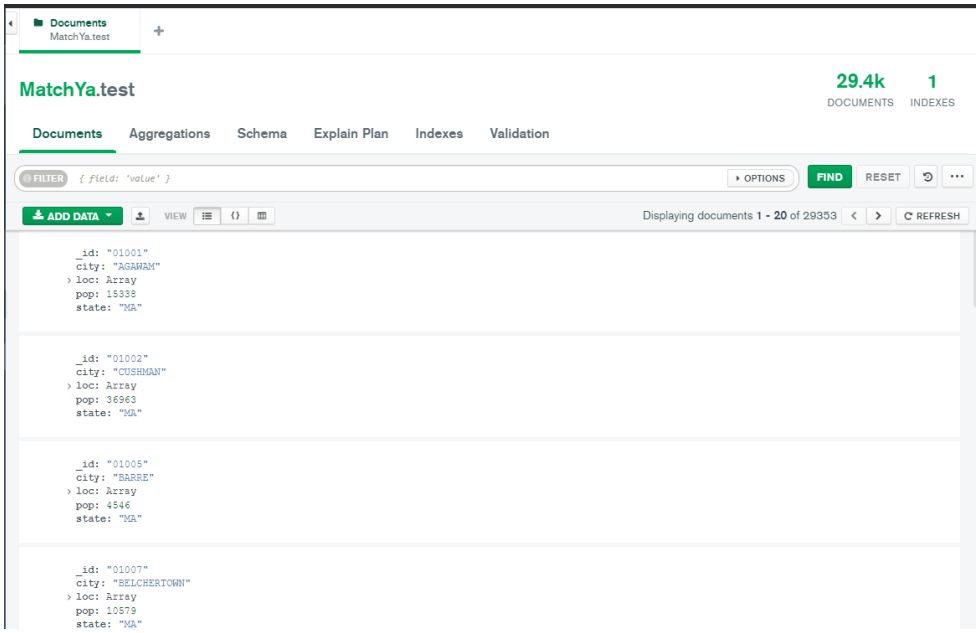
```
matchyaDB> use user
switched to db user
```

Windows:
Installed MongoDB Community Edition on Windows
Reference:
https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-windows/

Then installed MongoDB Compass
Reference: https://www.mongodb.com/products/compass

Was able to create a local host and databases though Compass

Also was able to import a dataset by selecting ‘add data’ and importing a file.



All other connections are done through IntelliJ

Installed extensions MongoDB(Database) and Mayven (Java)

One error I ran into was

JAVA_HOME not found in your environment

I had to add JAVA_HOME in System properties> environment variables> new system variable.

Connect Java project with MongoDB

Intellij:

create a Maven project from scratch in Intellij.

After the creation, edit pom.xml:

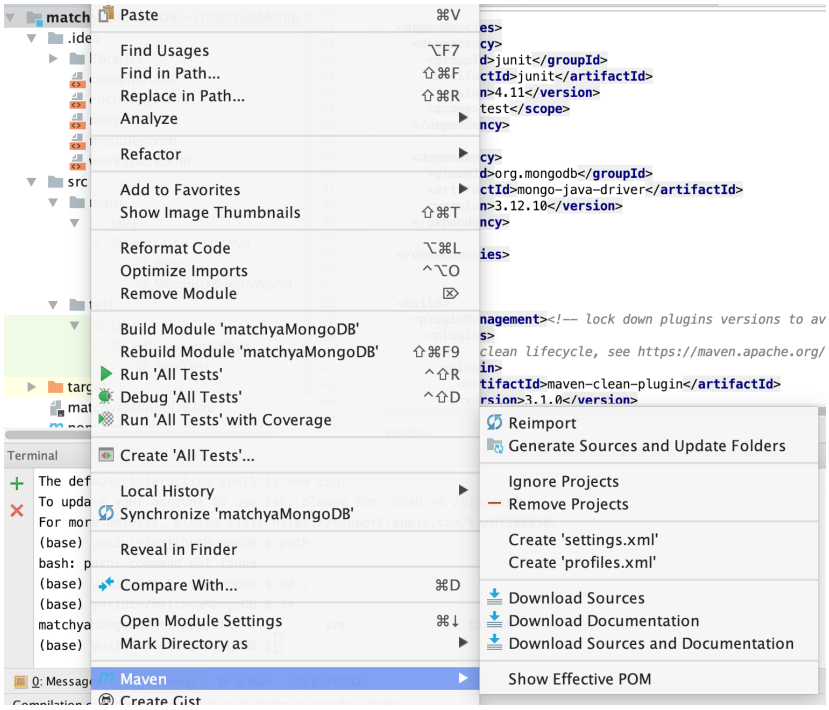
```
<dependency>
    <groupId>org.mongodb</groupId>
    <artifactId>mongo-java-driver</artifactId>
    <version>3.12.10</version>
</dependency>
```

error:

can't find org.mongodb module

solution:

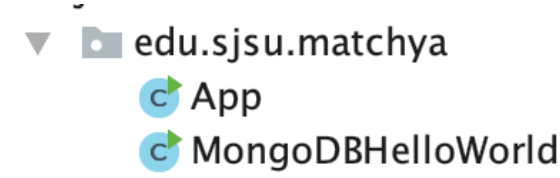
build or import the dependency manually.



click reimport

then everything will be good

create a java class




```java
package edu.sjsu.matchya;

import com.mongodb.*;
import com.mongodb.client.FindIterable;
import com.mongodb.client.MongoCollection;
import com.mongodb.client.MongoDatabase;
import org.bson.Document;

import java.util.Objects;

public class MongoDBHelloWorld {
    public static void main(String[] args) {
        // Creates a new instance of MongoDBClient and connect to localhost
        // port 27017.
        MongoClient client = new MongoClient(
                new ServerAddress( host: "localhost",  port: 27017));

        // Gets the peopledb from the MongoDB instance.
        MongoDatabase database = client.getDatabase( databaseName: "matchyaDB");

        // Gets the persons collections from the database.
        MongoCollection<Document> collection = database.getCollection( s: "user");

        // Gets a single document / object from this collection.
        Document document = collection.find().first();

        // Prints out the document.
        System.out.println(Objects.requireNonNull(document).toJson());
    }
}
```

the databaseName should be the same as you created in the mongoDB, such as “mathcyaDB” collection is the collection you created in the database, such as “user”.

Run the java program:
successfully connected

```
Oct 27, 2022 11:56:27 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:2, serverValue:47}] to localhost:27017
{"_id": {"$oid": "6357881c9f15d5acaa7516f1"}, "name": "Ada Lovelace", "age": 25}
```

Paper and resource Research

Browsing the paper and conferences in the SJSU King Library database that related to the counting inversions and the elo rating systems. For example:
Using Elo ratings for match result prediction in association football.

Datasets Research

We wanted to import a public dataset that will be used for a project. We found a site that provides a free data set, Kaggle, and we used one data set that had interest and the user's ranking of those interests out of 5. This data set did not provide users, their gender and their preference in gender for match so installed and used that data from Hinge.