Implementation of Live Updates from MongoDB Server in Spring boot app

Step 1: Installation of MongoDB Server

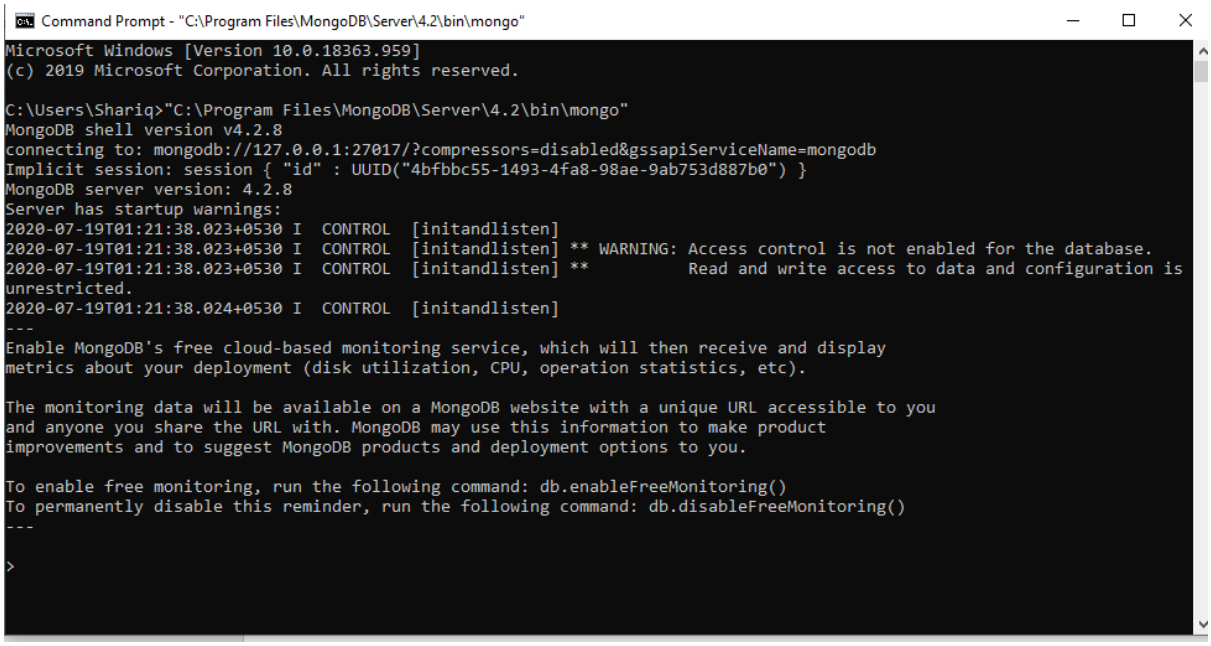
Go to https://www.mongodb.com/try/download/community and follow instructions.

Step 2: Start the server in normal mode

Assuming installation in C drive of Windows OS

Copy the path “C:\Program Files\MongoDB\Server\4.2\bin\mongo”

In command prompt like this



At this stage server is already started you can create db and collections as per your need.

Also to see visually install MongoDB Compass from here
https://www.mongodb.com/try/download/compass

Note: default port is 27017

https://docs.mongodb.com/manual/reference/command/

Follow this to learn commands

Step 3: The change stream

Change stream is a utlility in MongoDB which provides lives updates on certain DDL commands of the selected Collection or DB.

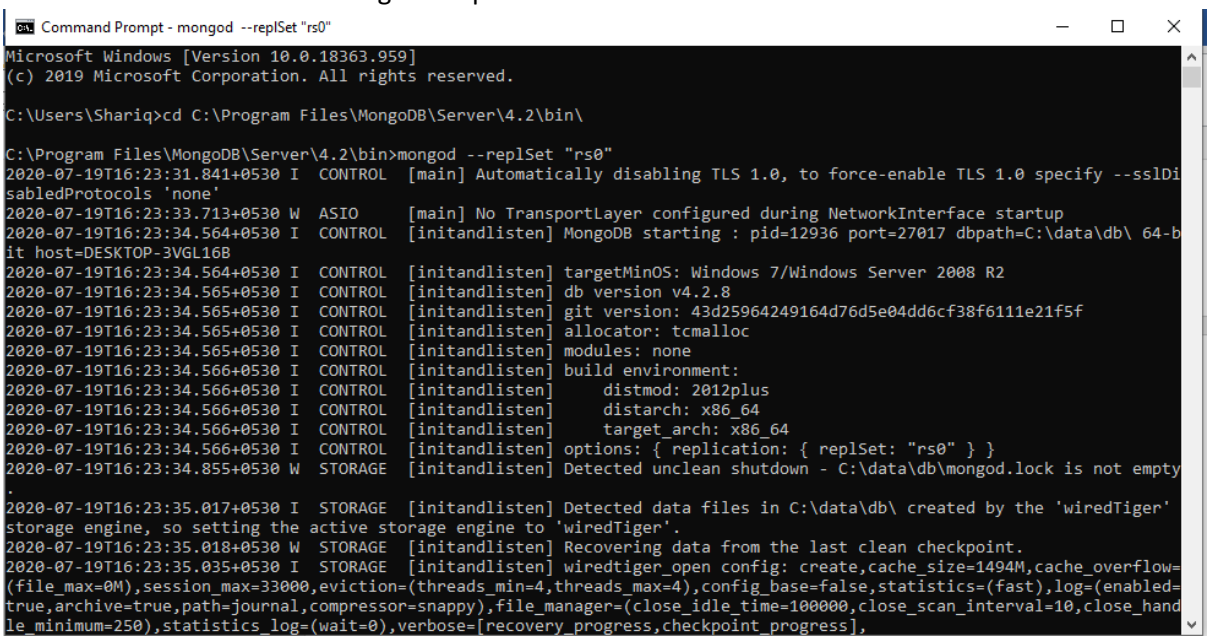
Change stream, required the Replica of primary node of the server to operate. Change stream reads the OpLog of the mongo operations for live updates.

To create replica:

https://docs.mongodb.com/manual/tutorial/convert-standalone-to-replica-set/

Other way:

1. Start the mongoDB server as in Step 2
2. Open a separate window of Command Prompt
   And navigate to the bin folder of MongoDB
   And enter this Command <mongod --replSet "rs0" >



   If server doesnot replicate do this:
   1. In the server 1st window of CMD enter this command:
      db.admicCommand({shutdown:1})
      it will start restart the server and replication window will show positive oup

So far this is what I have learnt and some coding in Spring boot too.

1. Code for Changestream live updates:

```
import java.lang.reflect.Array;
import java.util.Arrays;
import java.util.List;

import org.bson.Document;
import org.bson.conversions.Bson;

import com.mongodb.Block;
import com.mongodb.client.ChangeStreamIterable;
import com.mongodb.client.MongoClient;
import com.mongodb.client.MongoClients;
import com.mongodb.client.MongoCollection;
import com.mongodb.client.MongoDatabase;
import com.mongodb.client.model.Aggregates;
import com.mongodb.client.model.Filters;
import com.mongodb.client.model.changestream.ChangeStreamDocument;
```

```
import com.mongodb.client.model.changestream.FullDocument;

public class MondoChangeStream {

	public static void main(String[] args) {
		MongoClient mongoClient = 
MongoClients.create("mongodb://localhost:27017");
		MongoDatabase database = mongoClient.getDatabase("userdb");
		MongoCollection<Document> collection = 
database.getCollection("tasks");



//		Block<ChangeStreamDocument<Document>> printBlock = new 
Block<ChangeStreamDocument<Document>>() {
//			@Override
//			public void apply(final ChangeStreamDocument<Document> 
changeStreamDocument) {
//				System.out.println(changeStreamDocument);
//			}
//		};

		ChangeStreamIterable<Document> changes = 
collection.watch(Arrays.asList(
				Aggregates.match( Filters.and( Arrays.asList(
					Filters.in("operationType", 
Arrays.asList("insert", "update", "replace", "delete")),
					Filters.eq("fullDocument.even", 1L)))
				)));

//		changes.forEach(new Block<ChangeStreamDocument<Document>>() {
//				@Override
//				public void apply(ChangeStreamDocument<Document> t) {
//				  System.out.println("received: " + t.getFullDocument());
//				  }
//			});

		changes.iterator().forEachRemaining(
				change -> System.out.println("received: " + 
change.getFullDocument())
		);
	}



		}
```

Maven Dependencies:

```
  <dependency>
  <groupId>org.mongodb</groupId>
  <artifactId>mongodb-driver-legacy</artifactId>
  <version>4.1.0-rc0</version>
    </dependency>
```