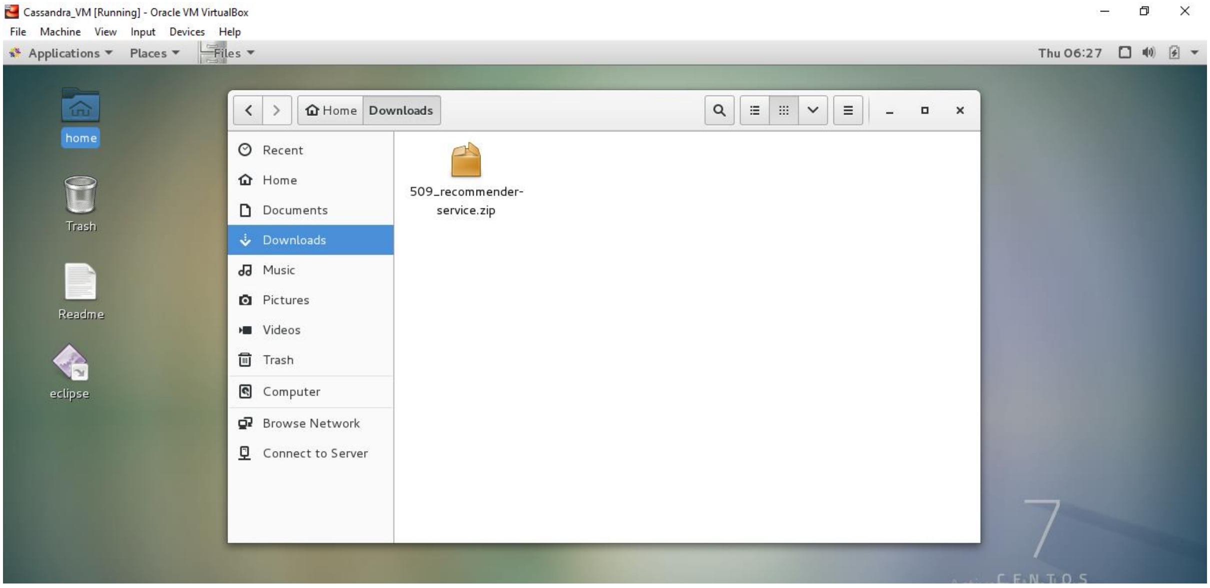
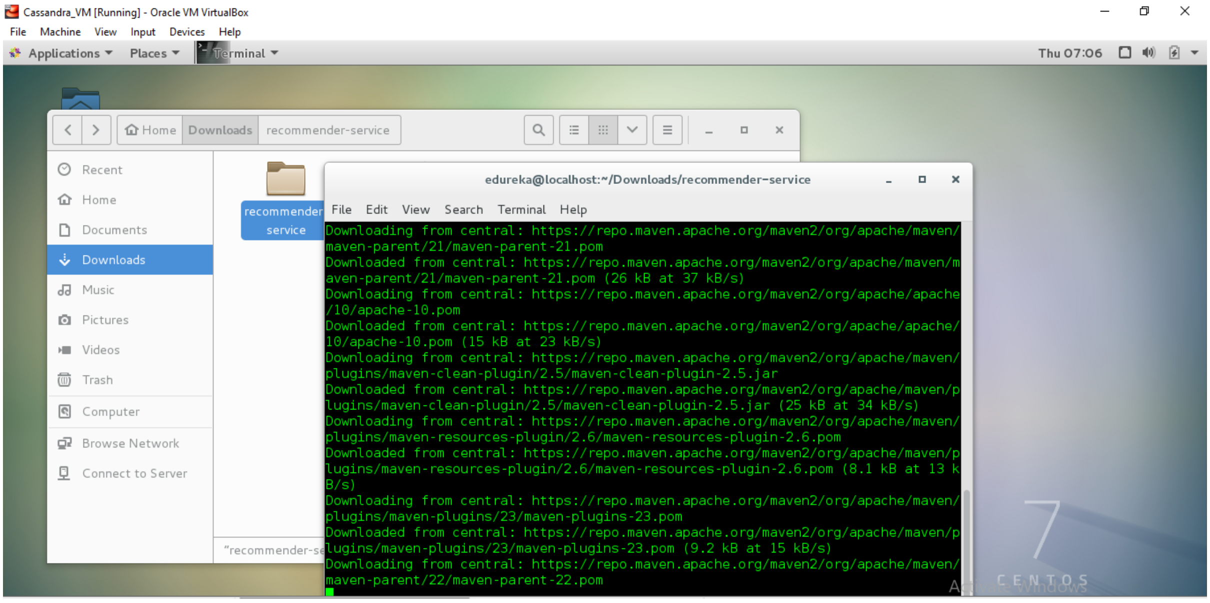
# Apache Cassandra Certification Training

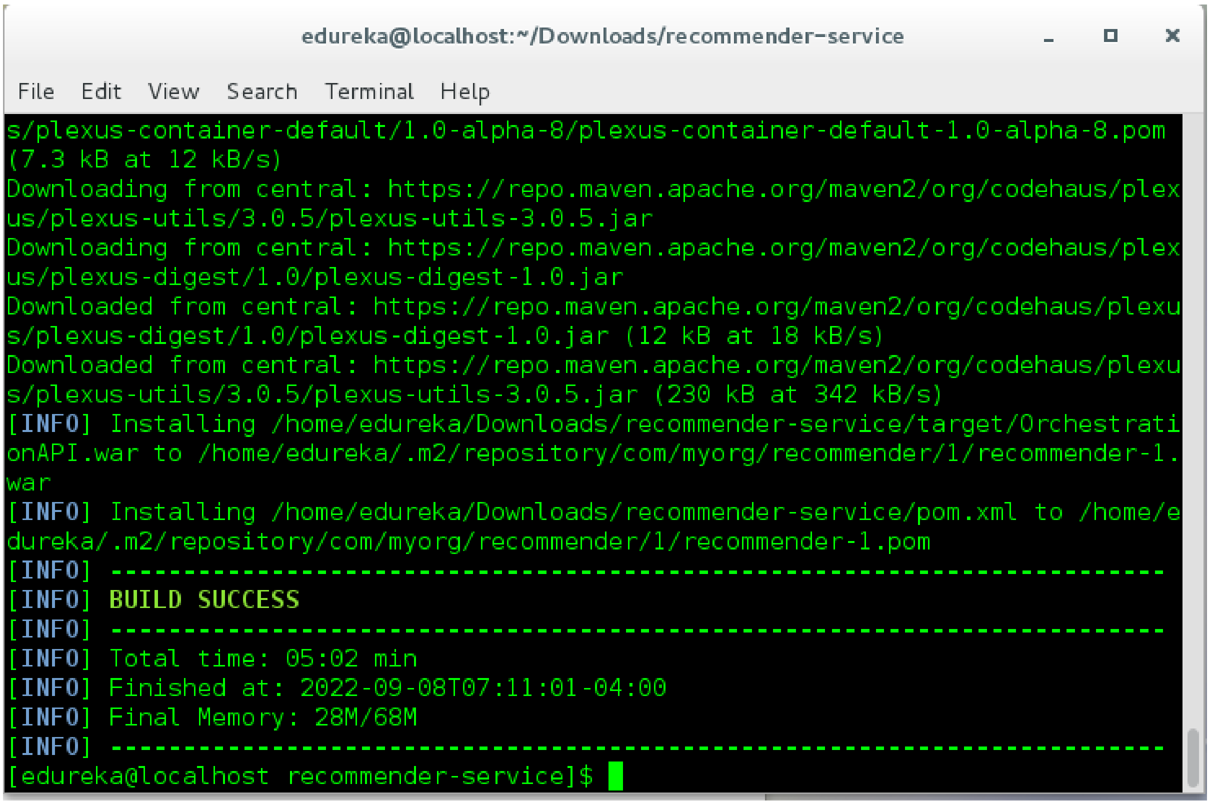


## Movie Recommendation Engine

1. Extract the codebase and go to the project root folder i.e. recommender-service folder.
2. Open a command prompt in this location.
3. Build codebase from command prompt.
4. **mvn clean install.**

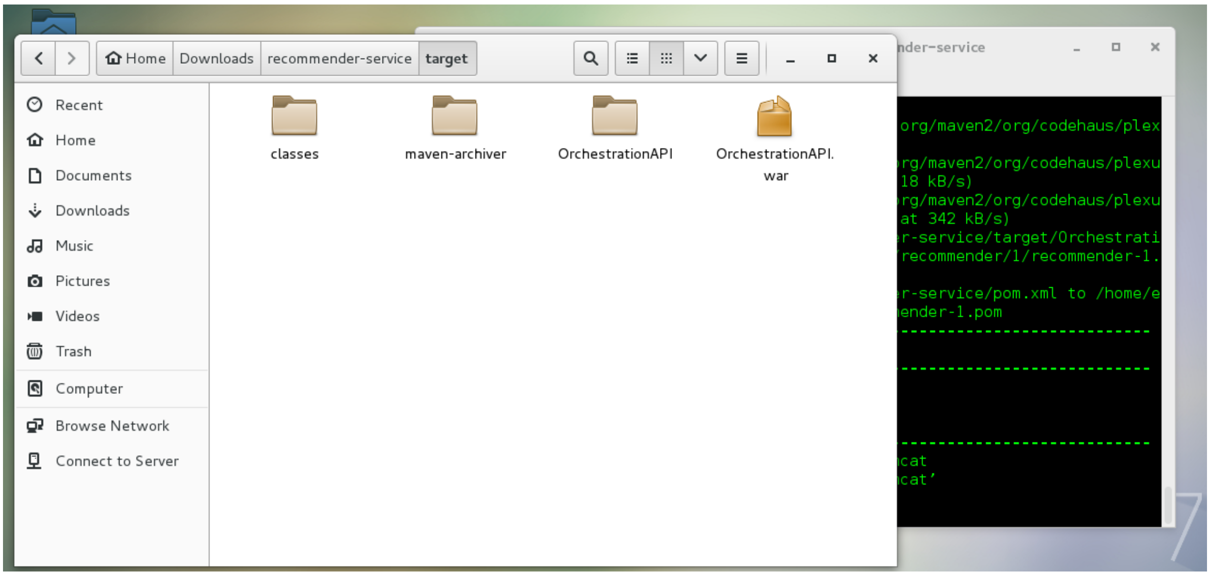

Cassandra_VM [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Thu 07:06
Home Downloads recommender-service
Recent
Home
Documents
Downloads
Music
Pictures
Videos
Trash
Computer
Browse Network
Connect to Server
recommender-service
"recommender-se
edureka@localhost:~/Downloads/recommender-service
File Edit View Search Terminal Help
7
CENTOS

```
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/
maven-parent/21/maven-parent-21.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/m
aven-parent/21/maven-parent-21.pom (26 kB at 37 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache
/10/apache-10.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/
10/apache-10.pom (15 kB at 23 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/
plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/p
lugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar (25 kB at 34 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/
plugins/maven-resources-plugin/2.6/maven-resources-plugin-2.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/p
lugins/maven-resources-plugin/2.6/maven-resources-plugin-2.6.pom (8.1 kB at 13 k
B/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/
plugins/maven-plugins/23/maven-plugins-23.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/p
lugins/maven-plugins/23/maven-plugins-23.pom (9.2 kB at 15 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/
maven-parent/22/maven-parent-22.pom
```


edureka@localhost:~/Downloads/recommender-service
File Edit View Search Terminal Help

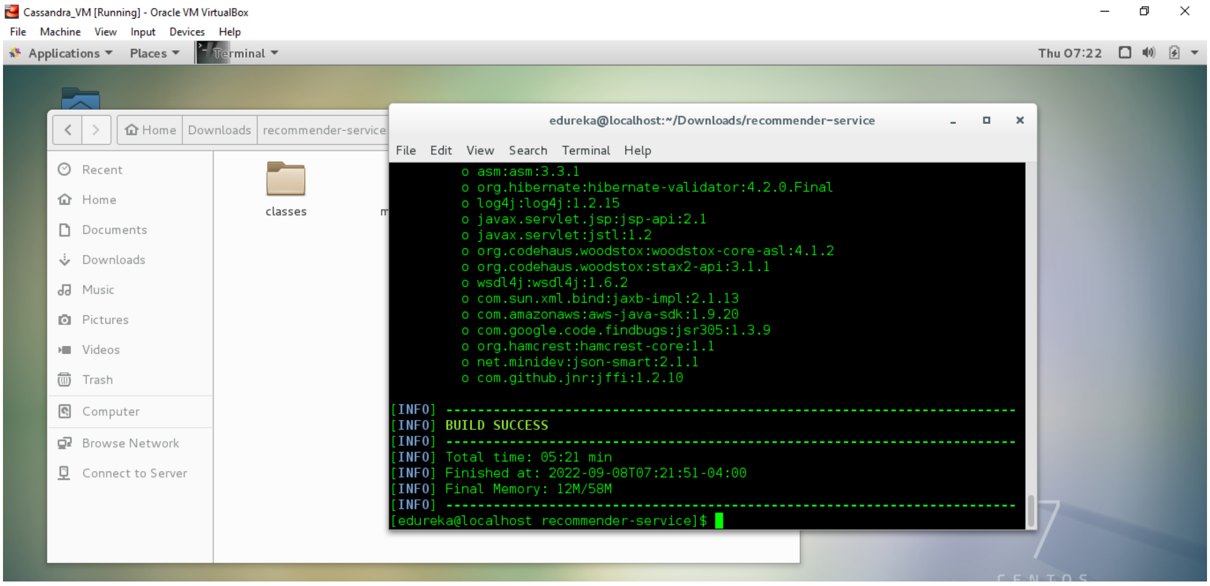
```
s/plexus-container-default/1.0-alpha-8/plexus-container-default-1.0-alpha-8.pom
(7.3 kB at 12 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plex
us/plexus-utils/3.0.5/plexus-utils-3.0.5.jar
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plex
us/plexus-digest/1.0/plexus-digest-1.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexu
s/plexus-digest/1.0/plexus-digest-1.0.jar (12 kB at 18 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexu
s/plexus-utils/3.0.5/plexus-utils-3.0.5.jar (230 kB at 342 kB/s)
[INFO] Installing /home/edureka/Downloads/recommender-service/target/Orchestrati
onAPI.war to /home/edureka/.m2/repository/com/myorg/recommender/1/recommender-1.
war
[INFO] Installing /home/edureka/Downloads/recommender-service/pom.xml to /home/e
dureka/.m2/repository/com/myorg/recommender/1/recommender-1.pom
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 05:02 min
[INFO] Finished at: 2022-09-08T07:11:01-04:00
[INFO] Final Memory: 28M/68M
[INFO] ------------------------------------------------------------------------
[edureka@localhost recommender-service]$ 
```

5. **Install Tomcat**
6. **Deploy the war file created in target folder of project directory into Tomcat.**



7.
8. Create an Eclipse project for the  codebase by using following command in command prompt: **mvn eclipse:eclipse.**

# Apache Cassandra Certification Training


Cassandra_VM [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Thu 07:22
Home Downloads recommender-service
Recent
Home
Documents
Downloads
Music
Pictures
Videos
Trash
Computer
Browse Network
Connect to Server
classes
edureka@localhost:~/Downloads/recommender-service
File Edit View Search Terminal Help

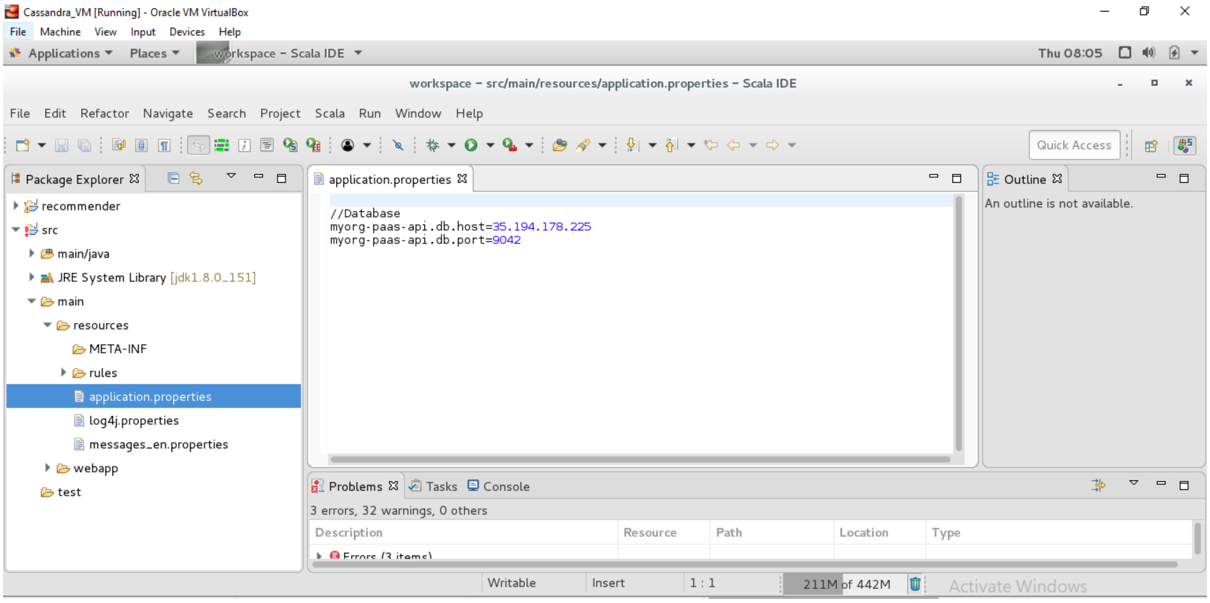
```
         o asm:asm:3.3.1
         o org.hibernate:hibernate-validator:4.2.0.Final
         o log4j:log4j:1.2.15
         o javax.servlet.jsp:jsp-api:2.1
         o javax.servlet:jstl:1.2
         o org.codehaus.woodstox:woodstox-core-asl:4.1.2
         o org.codehaus.woodstox:stax2-api:3.1.1
         o wsdl4j:wsdl4j:1.6.2
         o com.sun.xml.bind:jaxb-impl:2.1.13
         o com.amazonaws:aws-java-sdk:1.9.20
         o com.google.code.findbugs:jsr305:1.3.9
         o org.hamcrest:hamcrest-core:1.1
         o net.minidev:json-smart:2.1.1
         o com.github.jnr:jffi:1.2.10

[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 05:21 min
[INFO] Finished at: 2022-09-08T07:21:51-04:00
[INFO] Final Memory: 12M/58M
[INFO] ------------------------------------------------------------------------
[edureka@localhost recommender-service]$
```

9.

10. **In the codebase open application.properties and set DB host and port:**

**Example: myorg-paas-api.db.host=35.194.178.225**

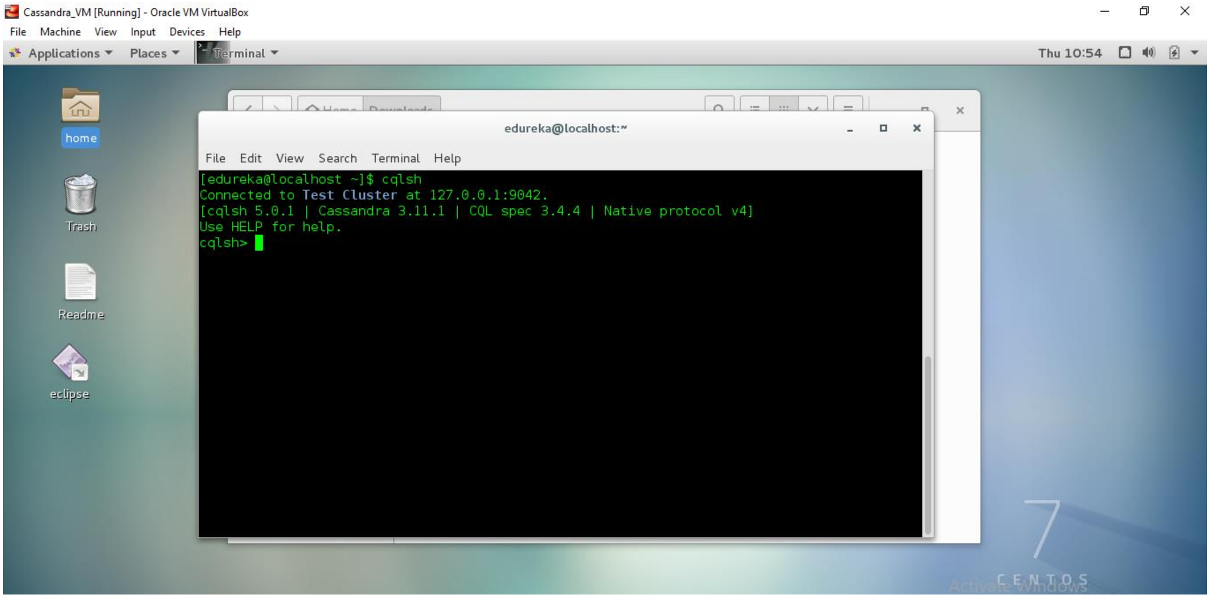
**myorg-paas-api.db.port=9042**


Cassandra_VM [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places workspace - Scala IDE
Thu 08:05
workspace - src/main/resources/application.properties - Scala IDE
File Edit Refactor Navigate Search Project Scala Run Window Help
Quick Access
Package Explorer
recommender
src
main/java
JRE System Library [jdk1.8.0_151]
main
resources
META-INF
rules
application.properties
log4j.properties
messages_en.properties
webapp
test
application.properties
Outline
An outline is not available.
Problems Tasks Console
3 errors, 32 warnings, 0 others
Description Resource Path Location Type
Errors (3 items)
Writable Insert 1 : 1 211M of 442M
Activate Windows

```
//Database
myorg-paas-api.db.host=35.194.178.225
myorg-paas-api.db.port=9042
```

# Apache Cassandra Certification Training

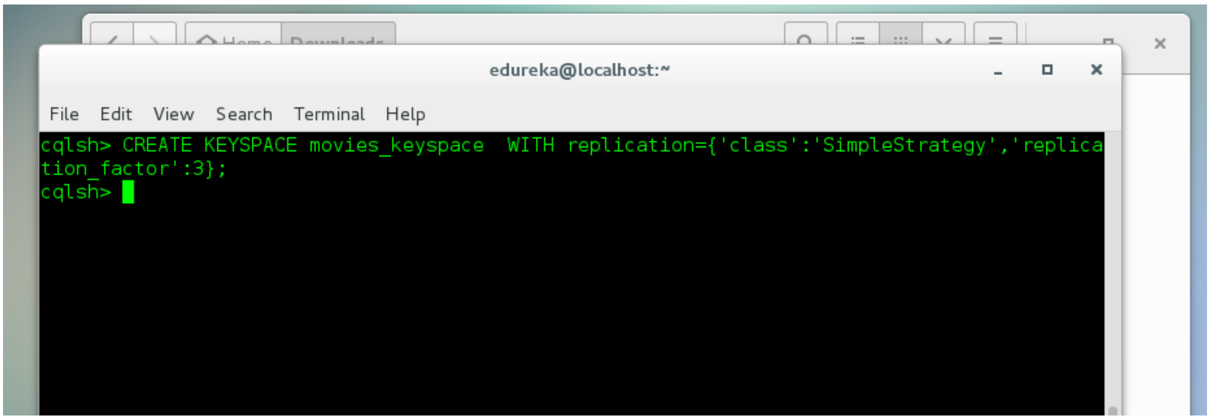
## Connected the Cassandra Test Cluster with cqlsh command

11. 

Cassandra_VM [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Thu 10:54
home
Trash
Readme
eclipse
edureka@localhost:~
File Edit View Search Terminal Help
7 CENTOS
Activate Windows

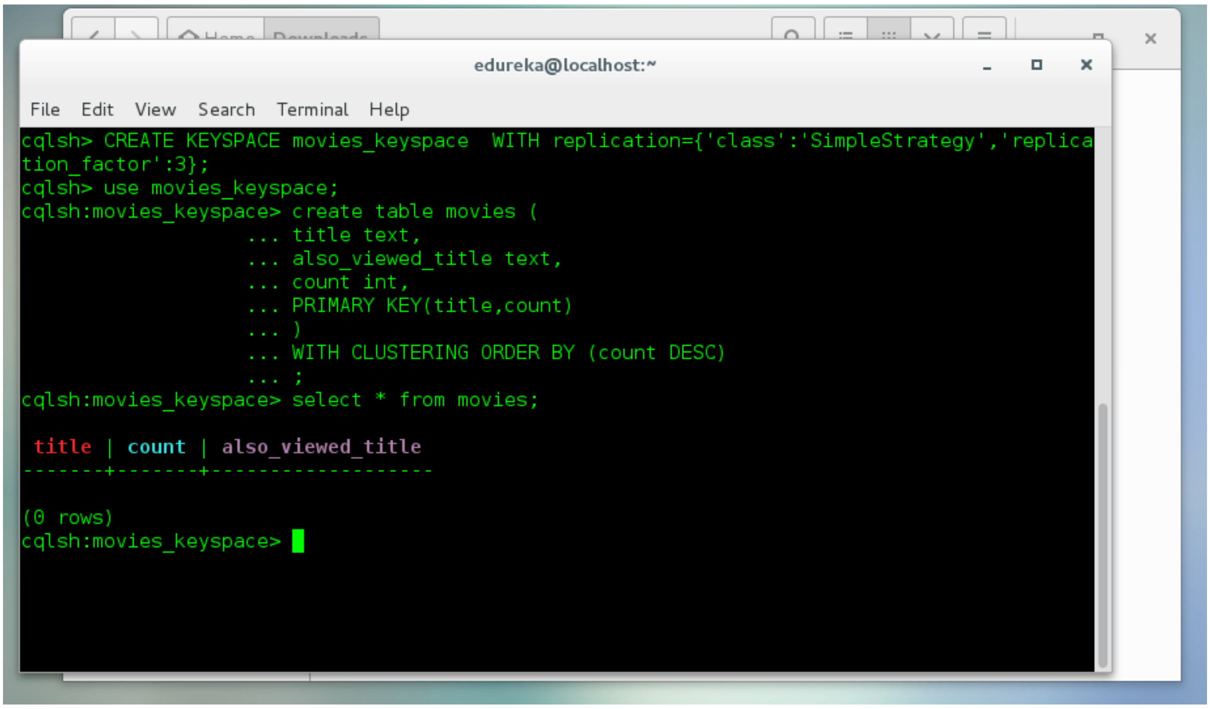
```
[edureka@localhost ~]$ cqlsh
Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.1 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
cqlsh>
```

12. **In Cassandra DB create a keyspace: movies_keyspace**



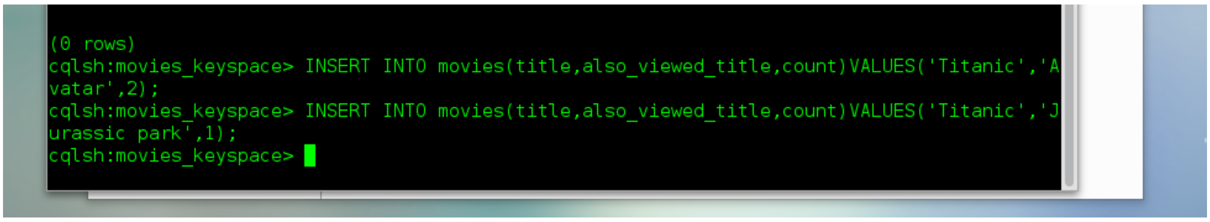
```
cqlsh> CREATE KEYSPACE movies_keyspace  WITH replication={'class':'SimpleStrategy','replica
tion_factor':3};
cqlsh>
```

13. **Create a table movies with 3 columns using cluster by:**

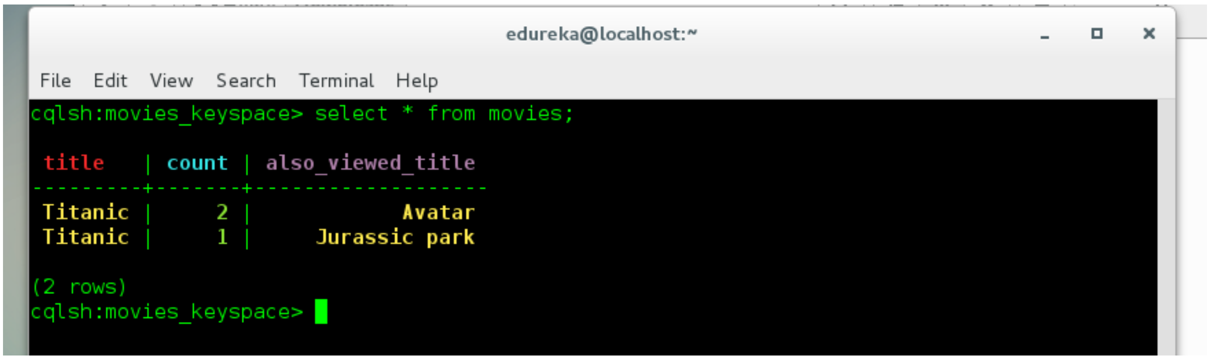


```
cqlsh> CREATE KEYSPACE movies_keyspace  WITH replication={'class':'SimpleStrategy','replica
tion_factor':3};
cqlsh> use movies_keyspace;
cqlsh:movies_keyspace> create table movies (
                   ... title text,
                   ... also_viewed_title text,
                   ... count int,
                   ... PRIMARY KEY(title,count)
                   ... )
                   ... WITH CLUSTERING ORDER BY (count DESC)
                   ... ;
cqlsh:movies_keyspace> select * from movies;

 title | count | also_viewed_title
-------+-------+-------------------

(0 rows)
cqlsh:movies_keyspace> 
```

14. **Insert data as follows:**
    **INSERT INTO movies (title,also_viewed_title,count) VALUES ('Titanic','Avatar',2) ;**
    **INSERT INTO movies (title,also_viewed_title,count) VALUES ('Titanic','Jurassic park',1) ;**



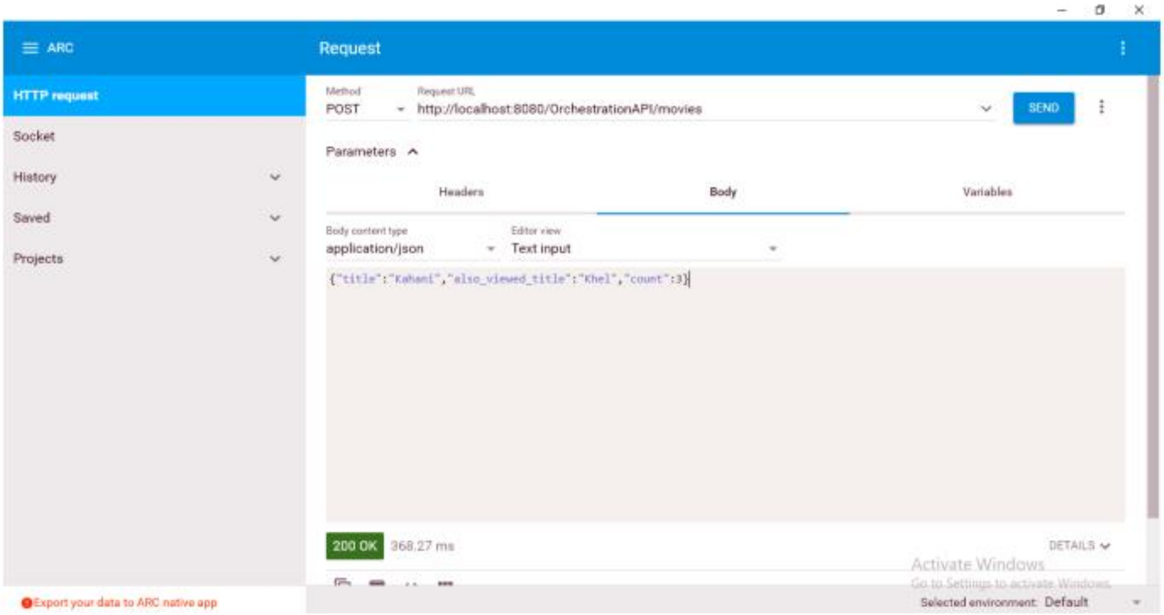
```
(0 rows)
cqlsh:movies_keyspace> INSERT INTO movies(title,also_viewed_title,count)VALUES('Titanic','A
vatar',2);
cqlsh:movies_keyspace> INSERT INTO movies(title,also_viewed_title,count)VALUES('Titanic','J
urassic park',1);
cqlsh:movies_keyspace> 
```



```
cqlsh:movies_keyspace> select * from movies;

 title   | count | also_viewed_title
---------+-------+-------------------
 Titanic |     2 |            Avatar
 Titanic |     1 |     Jurassic park

(2 rows)
cqlsh:movies_keyspace> 
```

15. **Install Advanced REST Client as an extension of Chrome browser from following link:**
    [https://chrome.google.com/webstore/detail/advanced-rest-client/hgmloofddffdnphfgcellkdfbfbjeloo](https://chrome.google.com/webstore/detail/advanced-rest-client/hgmloofddffdnphfgcellkdfbfbjeloo)
16. **Use the following URL in REST client to get all data in Cassandra**
    [http://localhost:8080/OrchestrationAPI/movies](http://localhost:8080/OrchestrationAPI/movies)
    **This will list existing records in Cassandra in JSON format.**

17. Create some records using JSON POST call through REST client as shown below:



Method: POST

Request URL: http://localhost:8080/OrchestrationAPI/movies

Body content type: application/json

Editor view: Text input

```
{"title":"Kahani","also_viewed_title":"Khel","count":3}
```

200 OK 368.27 ms

Selected environment: Default

18. Get the recommendation using the following URL: http://localhost:8080/OrchestrationAPI/recommendations/Titanic
19. The code uses Spring REST API framework. Controller folder in the codebase is the starting point of code flow where we create the endpoint URL. DAO folder creates the DB connectivity.
20. CassandraConnectionBuilderImpl.java creates the connection object through Spring bin while deploying to Tomcat App server. This ensures one connection object for the all DB calls.
21. TestCassandraConnection.java can be used to test Cassandra connection during development.