**CS-5513 Advance Database Management**

**Homework 3**

**Submitted By**

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1. **This dataset should have a size of at least 50 entries. Once you generate this dataset, print out its first 5 entries.**

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1. **write a program ‘txt\_parser’ that takes your dataset file movieData.txt as input, and then generates a MongoDB script named ‘dataInsertion.js’ that contains the “MongoDB commands” to create the collection(s) that implement the database**

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1. **Populate your MongoDB database by running ‘dataInsertion.js’ at the MongoDB shell.**

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1. **Implement the five queries (1-5)**

**Query 1:**

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**Query 2:**

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**Query 3:**

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**Query 4:**

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**Query 5:**

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1. **Implement the change by inserting two new movies into the existing MongoDB collection with their complete information along with the names of their actors**

**Inserting first movie:**

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**Inserting second movie:**

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1. **Design a suitable replication scheme to answer your queries.**

In this case three machines are used for replications namely [gpel9.cs.nor.ou.edu](mailto:gpel9@cs.nor.ou.edu), [gpel10.cs.nor.ou.edu](mailto:gpel10.cs.nor.ou.edu), [gpel11.cs.nor.ou.edu](mailto:gpel11@cs.nor.ou.edu) . The gpel 9 machine is the primary node whereas gpel 10 and 11 is the secondary node.

The method to do this replication is as follows

1. mkdir -p ~/data/gpel9 at gpel9 machine.
2. mkdir -p ~/data/gpel10 at gpel10 machine.
3. mkdir -p ~/data/gpel11 at gpel11 machine.
4. chown mura0007 ~/data/gpel9
5. chown mura0007 ~/data/gpel10
6. chown mura0007 ~/data/gpel11
7. mongod --fork --dbpath ~/data/gpel9/ --port 25983 --logpath mongodb.log --replSet myDBReplicaSet --bind\_ip\_all
8. mongod --fork --dbpath ~/data/gpel10/ --port 25983 --logpath mongodb.log --replSet myDBReplicaSet --bind\_ip\_all
9. mongod --fork --dbpath ~/data/gpel11/ --port 25983 --logpath mongodb.log --replSet myDBReplicaSet --bind\_ip\_all
10. Now in the primary instance in this case gpel 9 these commands are executed which is

Mongo -host gpel9.cs.nor.ou.edu –port 25983 mydb

> rs.initiate({ \_id: "myDBReplicaSet", version: 1, members: [{ \_id: 0, host : "gpel9.cs.nor.ou.edu:25983" }, { \_id: 1, host : "gpel10.cs.nor.ou.edu:25983" }, { \_id: 2, host : "gpel11.cs.nor.ou.edu:25983" }]})

11. Now type rs.status() in the secondary replica set.

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1. **Simple simulation of the failure of the primary node**

In this experiment I have gpel 10 as the primary code and other two nodes as secondary namely 9 and 11. To kill the primary process the following command is executed on primary machine in my case is gpel 10.

mongod --shutdown --dbpath ~/data/gpel10/ --port 25983

Text

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The rs.status() after shutdown is done.

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The execution of all 5 queries:

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