

Practical No 4

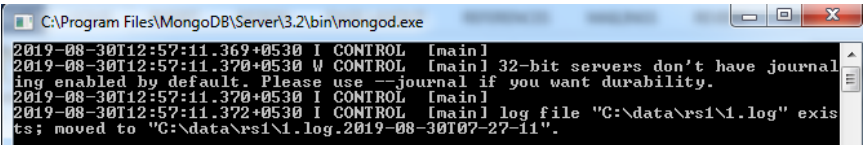
4 Replication, Backup and Restore

a Write a Mongo DB query to create Replica of existing database.

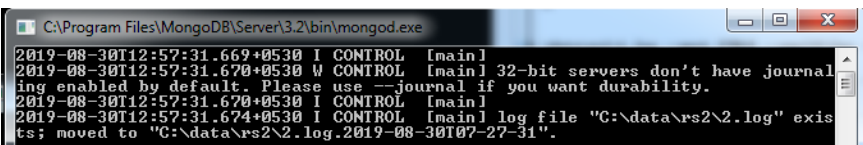
```
C:\Users\INDIA.IT23>start mongod --replSet s1 --dbpath \data\rs1 --logpath \data\rs1\1.log --port 27018 --smallfiles --oplogSize 64 --storageEngine=mmapv1
```

```
C:\Users\INDIA.IT23>start mongod --replSet s1 --dbpath \data\rs2 --logpath \data\rs2\2.log --port 27019 --smallfiles --oplogSize 64 --storageEngine=mmapv1
```

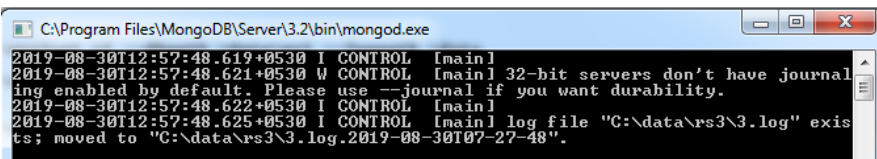
```
C:\Users\INDIA.IT23>start mongod --replSet s1 --dbpath \data\rs3 --logpath \data\rs3\3.log --port 27020 --smallfiles --oplogSize 64 --storageEngine=mmapv1
```



```
C:\Program Files\MongoDB\Server\3.2\bin>mongod.exe
2019-08-30T12:57:11.369+0530 I CONTROL [main]
2019-08-30T12:57:11.370+0530 W CONTROL [main] 32-bit servers don't have journal
ing enabled by default. Please use --journal if you want durability.
2019-08-30T12:57:11.370+0530 I CONTROL [main]
2019-08-30T12:57:11.372+0530 I CONTROL [main] log file "C:\data\rs1\1.log" exists; moved to "C:\data\rs1\1.log.2019-08-30T07-27-11".
```



```
C:\Program Files\MongoDB\Server\3.2\bin>mongod.exe
2019-08-30T12:57:31.669+0530 I CONTROL [main]
2019-08-30T12:57:31.670+0530 W CONTROL [main] 32-bit servers don't have journal
ing enabled by default. Please use --journal if you want durability.
2019-08-30T12:57:31.670+0530 I CONTROL [main]
2019-08-30T12:57:31.674+0530 I CONTROL [main] log file "C:\data\rs2\2.log" exists; moved to "C:\data\rs2\2.log.2019-08-30T07-27-31".
```



```
C:\Program Files\MongoDB\Server\3.2\bin>mongod.exe
2019-08-30T12:57:48.619+0530 I CONTROL [main]
2019-08-30T12:57:48.621+0530 W CONTROL [main] 32-bit servers don't have journal
ing enabled by default. Please use --journal if you want durability.
2019-08-30T12:57:48.622+0530 I CONTROL [main]
2019-08-30T12:57:48.625+0530 I CONTROL [main] log file "C:\data\rs3\3.log" exists; moved to "C:\data\rs3\3.log.2019-08-30T07-27-48".
```

```
s1:SECONDARY> rs.slaveOk()
s1:SECONDARY> show dbs
emp 0.031GB
local 0.156GB
s1:SECONDARY> db.emp.find()
s1:SECONDARY> db.emp.find()
s1:SECONDARY> use emp
switched to db emp
s1:SECONDARY> db.emp.find()
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d75"), "id" : 0, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d76"), "id" : 1, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d77"), "id" : 2, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d78"), "id" : 3, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d79"), "id" : 4, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d7a"), "id" : 5, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d7b"), "id" : 6, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d7c"), "id" : 7, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d7d"), "id" : 8, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d7e"), "id" : 9, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d7f"), "id" : 10, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d80"), "id" : 11, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d81"), "id" : 12, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d82"), "id" : 13, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d83"), "id" : 14, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d84"), "id" : 15, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d85"), "id" : 16, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d86"), "id" : 17, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d87"), "id" : 18, "name" : "abc" }
{ "_id" : ObjectId("5d68ca9aa12ef9555fbc1d88"), "id" : 19, "name" : "abc" }
Type "it" for more
```

b Write a Mongo DB query to create a backup of existing database.

```
C:\Program Files\MongoDB\Server\3.2\bin>mongodump
2019-09-20T12:56:36.266+0530 writing school1.system.indexes to
2019-09-20T12:56:36.267+0530 done dumping school1.system.indexes (1 document)
2019-09-20T12:56:36.268+0530 writing Demo.system.indexes to
2019-09-20T12:56:36.269+0530 done dumping Demo.system.indexes (1 document)
2019-09-20T12:56:36.270+0530 writing company.system.indexes to
2019-09-20T12:56:36.270+0530 done dumping company.system.indexes (2 documents)
2019-09-20T12:56:36.271+0530 writing demo_collection.system.indexes to
2019-09-20T12:56:36.272+0530 done dumping demo_collection.system.indexes (1 document)
2019-09-20T12:56:36.273+0530 writing employee.system.indexes to
2019-09-20T12:56:36.273+0530 done dumping employee.system.indexes (1 document)
2019-09-20T12:56:36.274+0530 writing school.system.indexes to
2019-09-20T12:56:36.275+0530 done dumping school.system.indexes (2 documents)
2019-09-20T12:56:36.291+0530 writing company.emp10 to
2019-09-20T12:56:36.292+0530 writing company.emp1 to
2019-09-20T12:56:36.292+0530 writing employee.mycol to
2019-09-20T12:56:36.293+0530 writing Demo.col to
2019-09-20T12:56:36.348+0530 done dumping company.emp10 (8 documents)
2019-09-20T12:56:36.349+0530 done dumping company.emp1 (3 documents)
2019-09-20T12:56:36.349+0530 writing school.stud to
2019-09-20T12:56:36.350+0530 done dumping employee.mycol (4 documents)
2019-09-20T12:56:36.351+0530 writing school1.student to
2019-09-20T12:56:36.351+0530 writing demo_collection.col1 to
2019-09-20T12:56:36.351+0530 done dumping Demo.col (4 documents)
2019-09-20T12:56:36.352+0530 writing school.student to
2019-09-20T12:56:36.369+0530 done dumping school.student (0 documents)
2019-09-20T12:56:36.370+0530 done dumping school.stud (3 documents)
2019-09-20T12:56:36.375+0530 done dumping school1.student (3 documents)
2019-09-20T12:56:36.379+0530 done dumping demo_collection.col1 (0 documents)
```

c Write a Mongo DB query to restore database from the backup.

```

C:\Program Files\MongoDB\Server\3.2\bin>mongorestore
2019-09-20T12:58:14.074+0530 using default 'dump' directory
2019-09-20T12:58:14.075+0530 building a list of dbs and collections to restore from dump dir
2019-09-20T12:58:14.109+0530 reading metadata for company.emp10 from dump\company\emp10.metadata.json
2019-09-20T12:58:14.109+0530 reading metadata for employee.mycol from dump\employee\mycol.metadata.json
2019-09-20T12:58:14.111+0530 reading metadata for Demo.col from dump\Demo\col.metadata.json
2019-09-20T12:58:14.111+0530 restoring company.emp10 from dump\company\emp10.bson
2019-09-20T12:58:14.113+0530 reading metadata for school.stud from dump\school\stud.metadata.json
2019-09-20T12:58:14.113+0530 restoring school.stud from dump\school\stud.bson
2019-09-20T12:58:14.113+0530 restoring employee.mycol from dump\employee\mycol.bson
2019-09-20T12:58:14.114+0530 restoring Demo.col from dump\Demo\col.bson
2019-09-20T12:58:14.127+0530 error: multiple errors in bulk operation:
- E11000 duplicate key error index: employee.mycol.$_id dup key: { : ObjectId('5d4527a47d6c24074438bc87') }
- E11000 duplicate key error index: employee.mycol.$_id dup key: { : ObjectId('5d4527a47d6c24074438bc88') }
- E11000 duplicate key error index: employee.mycol.$_id dup key: { : ObjectId('5d4527a47d6c24074438bc89') }
- E11000 duplicate key error index: employee.mycol.$_id dup key: { : ObjectId('5d4527a47d6c24074438bc8a') }
2019-09-20T12:58:14.127+0530 restoring indexes for collection employee.mycol from metadata
2019-09-20T12:58:14.128+0530 error: multiple errors in bulk operation:
- E11000 duplicate key error index: Demo.col.$_id dup key: { : ObjectId('5d43d88798ef559da3a0c89d') }
- E11000 duplicate key error index: Demo.col.$_id dup key: { : ObjectId('5d43dcfb98ef559da3a0c89f') }
- E11000 duplicate key error index: Demo.col.$_id dup key: { : ObjectId('5d43dd0d98ef559da3a0c8a0') }
- E11000 duplicate key error index: Demo.col.$_id dup key: { : ObjectId('5d43dd1498ef559da3a0c8a1') }
2019-09-20T12:58:14.129+0530 restoring indexes for collection Demo.col from metadata
2019-09-20T12:58:14.133+0530 error: multiple errors in bulk operation:
- E11000 duplicate key error index: school.stud.$_id dup key: { : ObjectId('5d677d615d18f409ac72f660') }
- E11000 duplicate key error index: school.stud.$_id dup key: { : ObjectId('5d677d615d18f409ac72f661') }
- E11000 duplicate key error index: school.stud.$_id dup key: { : ObjectId('5d677d615d18f409ac72f662') }
2019-09-20T12:58:14.137+0530 restoring indexes for collection school.stud from metadata
2019-09-20T12:58:14.141+0530 error: multiple errors in bulk operation:
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad0') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad1') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad2') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad3') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad4') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad5') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad6') }
- E11000 duplicate key error index: company.emp10.$_id dup key: { : ObjectId('5d43ee5833c722055c356ad7') }
2019-09-20T12:58:14.149+0530 restoring indexes for collection company.emp10 from metadata
2019-09-20T12:58:14.150+0530 finished restoring employee.mycol (4 documents)
2019-09-20T12:58:14.150+0530 finished restoring school.stud (3 documents)
2019-09-20T12:58:14.160+0530 finished restoring Demo.col (4 documents)
2019-09-20T12:58:14.164+0530 finished restoring company.emp10 (8 documents)
2019-09-20T12:58:14.172+0530 reading metadata for school1.student from dump\school1\student.metadata.json
2019-09-20T12:58:14.173+0530 reading metadata for company.emp1 from dump\company\emp1.metadata.json
2019-09-20T12:58:14.173+0530 reading metadata for company.emp1 from dump\company\emp1.metadata.json
2019-09-20T12:58:14.176+0530 reading metadata for school.student from dump\school\student.metadata.json
2019-09-20T12:58:14.181+0530 reading metadata for demo_collection.col1 from dump\demo_collection\col1.metadata.json
2019-09-20T12:58:14.185+0530 restoring school1.student from dump\school1\student.bson
2019-09-20T12:58:14.190+0530 restoring company.emp1 from dump\company\emp1.bson
2019-09-20T12:58:14.205+0530 restoring school.student from dump\school\student.bson
2019-09-20T12:58:14.216+0530 restoring demo_collection.col1 from dump\demo_collection\col1.bson
2019-09-20T12:58:14.217+0530 restoring indexes for collection school1.student from metadata
2019-09-20T12:58:14.218+0530 error: multiple errors in bulk operation:
- E11000 duplicate key error index: school1.student.$_id dup key: { : ObjectId('5d32b25c20c5f09357949745') }
- E11000 duplicate key error index: school1.student.$_id dup key: { : ObjectId('5d32b25c20c5f09357949746') }
- E11000 duplicate key error index: school1.student.$_id dup key: { : ObjectId('5d32b25c20c5f09357949748') }
2019-09-20T12:58:14.222+0530 restoring indexes for collection school1.student from metadata
2019-09-20T12:58:14.234+0530 error: multiple errors in bulk operation:
- E11000 duplicate key error index: company.emp1.$_id dup key: { : ObjectId('5d564c7271551d0a3502c736') }
- E11000 duplicate key error index: company.emp1.$_id dup key: { : ObjectId('5d564c8571551d0a3502c737') }
- E11000 duplicate key error index: company.emp1.$_id dup key: { : ObjectId('5d564c9871551d0a3502c738') }
2019-09-20T12:58:14.235+0530 restoring indexes for collection company.emp1 from metadata
2019-09-20T12:58:14.235+0530 finished restoring school1.student (3 documents)
2019-09-20T12:58:14.239+0530 restoring indexes for collection demo_collection.col1 from metadata
2019-09-20T12:58:14.243+0530 finished restoring school.student (0 documents)
2019-09-20T12:58:14.247+0530 finished restoring company.emp1 (3 documents)
2019-09-20T12:58:14.251+0530 finished restoring demo_collection.col1 (0 documents)
2019-09-20T12:58:14.255+0530 done

```