

Restore data

MongoDB's **mongorestore** command is used to restore binary backup created by mongodump. The mongorestore can restore either an entire database backup or a subset of the backup. Restore can be performed on the same system or on another system at same location or at different location. It will restore from all the .bson files from dump directory by default. We may copy the data backup to the dump directory and system will restore from that.

Syntax

1. mongorestore

Will restore all databases from the dump folder by default

2. mongorestore <path-of-dumped-database>

command is used to store from specific path

Example : Restoring from d:\dump folder

mongorestore d:\dump

```

Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore
2020-06-04T12:07:53.014+0530 using default 'dump' directory
2020-06-04T12:07:53.016+0530 try 'mongorestore --help' for more information
2020-06-04T12:07:53.017+0530 Failed: mongorestore target 'dump' invalid: CreateFile dump: The system cannot find the
file specified.
2020-06-04T12:07:53.017+0530 0 document(s) restored successfully. 0 document(s) failed to restore.

C:\Program Files\MongoDB\Server\4.2\bin>mongorestore d:\dump
2020-06-04T12:08:14.762+0530 preparing collections to restore from
2020-06-04T12:08:14.768+0530 restoring to existing collection abc.school without dropping
2020-06-04T12:08:14.769+0530 reading metadata for abc.school from d:\dump\abc\school.metadata.json
2020-06-04T12:08:14.770+0530 restoring to existing collection abc.marks without dropping
2020-06-04T12:08:14.771+0530 restoring to existing collection test.inventory without dropping
2020-06-04T12:08:14.771+0530 restoring to existing collection abc.store without dropping
2020-06-04T12:08:14.772+0530 reading metadata for abc.marks from d:\dump\abc\marks.metadata.json
2020-06-04T12:08:14.772+0530 restoring abc.school from d:\dump\abc\school.bson
2020-06-04T12:08:14.772+0530 reading metadata for abc.store from d:\dump\test\inventory.metadata.json
2020-06-04T12:08:14.775+0530 reading metadata for abc.store from d:\dump\abc\store.metadata.json
2020-06-04T12:08:14.775+0530 restoring test.inventory from d:\dump\test\inventory.bson
2020-06-04T12:08:14.777+0530 restoring abc.marks from d:\dump\abc\marks.bson
2020-06-04T12:08:14.777+0530 restoring abc.store from d:\dump\abc\store.bson
2020-06-04T12:08:14.830+0530 continuing through error: E11000 duplicate key error collection: abc.store index: _id
dup key: { _id: ObjectId('5ebd64f24dd36225ea3a4076') }
2020-06-04T12:08:14.831+0530 continuing through error: E11000 duplicate key error collection: abc.store index: _id
dup key: { _id: ObjectId('5ebd65f64dd36225ea3a4078') }
2020-06-04T12:08:14.831+0530 continuing through error: E11000 duplicate key error collection: abc.store index: _id
dup key: { _id: ObjectId('5ebd66b54dd36225ea3a4079') }
2020-06-04T12:08:14.834+0530 restoring indexes for collection abc.store from metadata
2020-06-04T12:08:14.842+0530 finished restoring abc.store (0 documents, 3 failures)
2020-06-04T12:08:14.842+0530 restoring to existing collection abc.result without dropping
2020-06-04T12:08:14.843+0530 reading metadata for abc.result from d:\dump\abc\result.metadata.json
2020-06-04T12:08:14.846+0530 restoring abc.result from d:\dump\abc\result.bson
2020-06-04T12:08:14.879+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebced72c8f756b82a99743e') }
2020-06-04T12:08:14.880+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebced91c8f756b82a99743f') }
2020-06-04T12:08:14.881+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebcedac8f756b82a997440') }
2020-06-04T12:08:14.883+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebcf231c8f756b82a99744a') }
2020-06-04T12:08:14.886+0530 restoring indexes for collection abc.result from metadata
3 items 1 item selected

```

3. Drop option

- If we have already restored or database is existing, then duplicate key error will occur as shown below.

```

Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore d:\dump
2020-06-04T12:23:26.782+0530 preparing collections to restore from
2020-06-04T12:23:26.789+0530 restoring to existing collection abc.school without dropping
2020-06-04T12:23:26.790+0530 restoring to existing collection test.inventory without dropping
2020-06-04T12:23:26.791+0530 reading metadata for abc.school from d:\dump\abc\school.metadata.json
2020-06-04T12:23:26.794+0530 restoring to existing collection abc.marks without dropping
2020-06-04T12:23:26.797+0530 restoring to existing collection abc.store without dropping
2020-06-04T12:23:26.800+0530 reading metadata for test.inventory from d:\dump\test\inventory.metadata.json
2020-06-04T12:23:26.804+0530 restoring abc.school from d:\dump\abc\school.bson
2020-06-04T12:23:26.809+0530 reading metadata for abc.marks from d:\dump\abc\marks.metadata.json
2020-06-04T12:23:26.833+0530 reading metadata for abc.store from d:\dump\abc\store.metadata.json
2020-06-04T12:23:26.834+0530 restoring abc.store from d:\dump\abc\store.bson
2020-06-04T12:23:26.834+0530 restoring test.inventory from d:\dump\test\inventory.bson
2020-06-04T12:23:26.838+0530 restoring abc.marks from d:\dump\abc\marks.bson
2020-06-04T12:23:26.854+0530 continuing through error: E11000 duplicate key error collection: abc.marks index: _id
dup key: { _id: ObjectId('5ec103443b6e4f8f5b4f1148') }
2020-06-04T12:23:26.855+0530 continuing through error: E11000 duplicate key error collection: abc.marks index: _id
dup key: { _id: ObjectId('5ec103583b6e4f8f5b4f1149') }
2020-06-04T12:23:26.856+0530 continuing through error: E11000 duplicate key error collection: abc.marks index: _id
dup key: { _id: ObjectId('5ec1036c3b6e4f8f5b4f114a') }
2020-06-04T12:23:26.859+0530 continuing through error: E11000 duplicate key error collection: abc.store index: _id
up key: { _id: ObjectId('5ebd64f24dd36225ea3a4076') }
2020-06-04T12:23:26.861+0530 continuing through error: E11000 duplicate key error collection: abc.school index: _id
dup key: { _id: ObjectId('5eb97ae983a89f15e9b7e13e') }
2020-06-04T12:23:26.864+0530 continuing through error: E11000 duplicate key error collection: test.inventory index:
id_dup key: { _id: ObjectId('5eb8e3340132bb4da6110626') }
2020-06-04T12:23:26.868+0530 continuing through error: E11000 duplicate key error collection: abc.marks index: _id
up key: { _id: ObjectId('5ec103913b6e4f8f5b4f114b') }
2020-06-04T12:23:26.871+0530 continuing through error: E11000 duplicate key error collection: abc.store index: _id
up key: { _id: ObjectId('5ebd65f64dd36225ea3a4078') }
2020-06-04T12:23:26.874+0530 continuing through error: E11000 duplicate key error collection: abc.school index: _id
dup key: { _id: ObjectId('5eb97afd83a89f15e9b7e13f') }
2020-06-04T12:23:26.877+0530 continuing through error: E11000 duplicate key error collection: test.inventory index:
id_dup key: { _id: ObjectId('5eb8e3340132bb4da6110627') }
2020-06-04T12:23:26.880+0530 continuing through error: E11000 duplicate key error collection: abc.marks index: _id
up key: { _id: ObjectId('5ec103a33b6e4f8f5b4f114c') }
2020-06-04T12:23:26.883+0530 continuing through error: E11000 duplicate key error collection: abc.store index: _id
up key: { _id: ObjectId('5ebd66b54dd36225ea3a4079') }
2020-06-04T12:23:26.886+0530 continuing through error: E11000 duplicate key error collection: abc.school index: _id
dup key: { _id: ObjectId('5eb97b0b83a89f15e9b7e140') }
2020-06-04T12:23:26.889+0530 continuing through error: E11000 duplicate key error collection: test.inventory index:
id_dup key: { _id: ObjectId('5eb8e3340132bb4da6110628') }

```

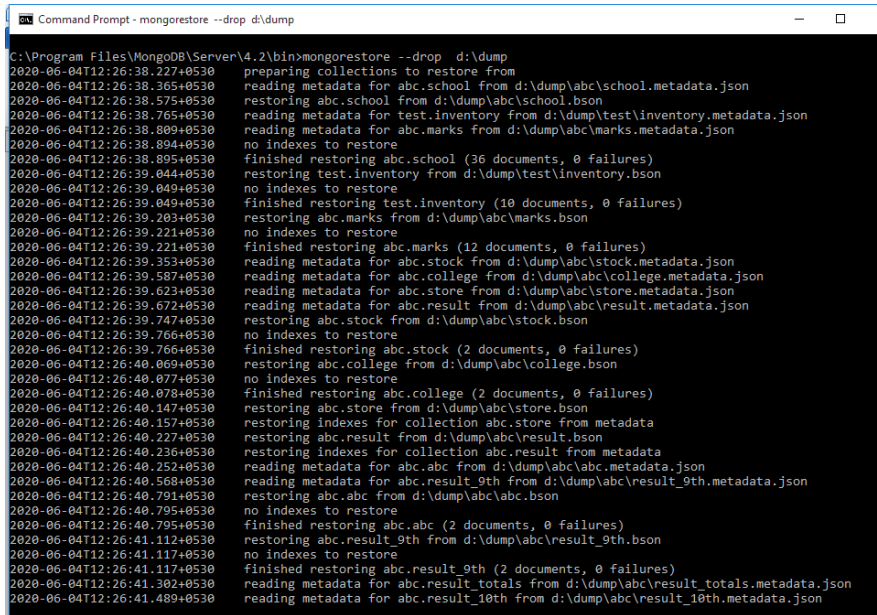
- To overcome this issue, drop option is used. Drop is necessary if we are replacing an existing database.

Syntax

mongorestore --drop <path-of-dumped-database>

Example:

mongorestore --drop d:\dump



```
Command Prompt - mongorestore --drop d:\dump
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore --drop d:\dump
2020-06-04T12:26:38.227+0530   preparing collections to restore from
2020-06-04T12:26:38.365+0530   reading metadata for abc.school from d:\dump\abc\school.metadata.json
2020-06-04T12:26:38.575+0530   restoring abc.school from d:\dump\abc\school.bson
2020-06-04T12:26:38.765+0530   reading metadata for test.inventory from d:\dump\test\inventory.metadata.json
2020-06-04T12:26:38.809+0530   reading metadata for abc.marks from d:\dump\abc\marks.metadata.json
2020-06-04T12:26:38.894+0530   no indexes to restore
2020-06-04T12:26:38.895+0530   finished restoring abc.school (36 documents, 0 failures)
2020-06-04T12:26:39.044+0530   restoring test.inventory from d:\dump\test\inventory.bson
2020-06-04T12:26:39.049+0530   no indexes to restore
2020-06-04T12:26:39.049+0530   finished restoring test.inventory (10 documents, 0 failures)
2020-06-04T12:26:39.203+0530   restoring abc.marks from d:\dump\abc\marks.bson
2020-06-04T12:26:39.221+0530   no indexes to restore
2020-06-04T12:26:39.221+0530   finished restoring abc.marks (12 documents, 0 failures)
2020-06-04T12:26:39.353+0530   reading metadata for abc.stock from d:\dump\abc\stock.metadata.json
2020-06-04T12:26:39.587+0530   reading metadata for abc.college from d:\dump\abc\college.metadata.json
2020-06-04T12:26:39.623+0530   reading metadata for abc.store from d:\dump\abc\store.metadata.json
2020-06-04T12:26:39.672+0530   reading metadata for abc.result from d:\dump\abc\result.metadata.json
2020-06-04T12:26:39.747+0530   restoring abc.stock from d:\dump\abc\stock.bson
2020-06-04T12:26:39.766+0530   no indexes to restore
2020-06-04T12:26:39.766+0530   finished restoring abc.stock (2 documents, 0 failures)
2020-06-04T12:26:40.009+0530   restoring abc.college from d:\dump\abc\college.bson
2020-06-04T12:26:40.077+0530   no indexes to restore
2020-06-04T12:26:40.077+0530   finished restoring abc.college (2 documents, 0 failures)
2020-06-04T12:26:40.078+0530   restoring abc.store from d:\dump\abc\store.bson
2020-06-04T12:26:40.147+0530   restoring indexes for collection abc.store from metadata
2020-06-04T12:26:40.157+0530   restoring abc.result from d:\dump\abc\result.bson
2020-06-04T12:26:40.227+0530   restoring indexes for collection abc.result from metadata
2020-06-04T12:26:40.236+0530   reading metadata for abc.abc from d:\dump\abc\abc.metadata.json
2020-06-04T12:26:40.252+0530   reading metadata for abc.result_9th from d:\dump\abc\result_9th.metadata.json
2020-06-04T12:26:40.568+0530   restoring abc.abc from d:\dump\abc\abc.bson
2020-06-04T12:26:40.791+0530   no indexes to restore
2020-06-04T12:26:40.795+0530   finished restoring abc.abc (2 documents, 0 failures)
2020-06-04T12:26:41.112+0530   restoring abc.result_9th from d:\dump\abc\result_9th.bson
2020-06-04T12:26:41.117+0530   no indexes to restore
2020-06-04T12:26:41.117+0530   finished restoring abc.result_9th (2 documents, 0 failures)
2020-06-04T12:26:41.302+0530   reading metadata for abc.result_totals from d:\dump\abc\result_totals.metadata.json
2020-06-04T12:26:41.489+0530   reading metadata for abc.result_10th from d:\dump\abc\result_10th.metadata.json
```

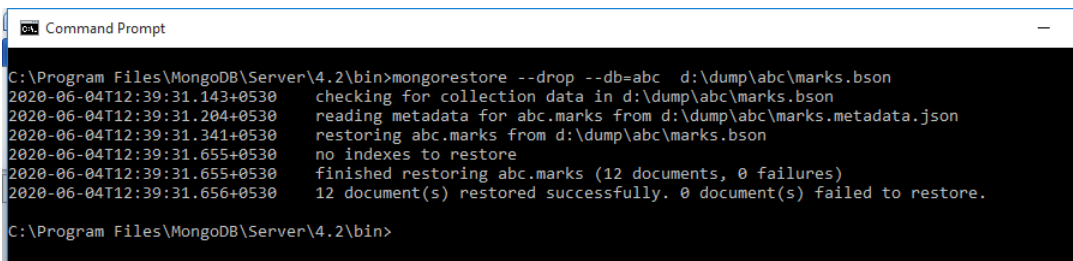
4. Restoring Specific Database from a .bson file

Mongorestore --db=<name-your-database-want-to-restore-as> <Name-and-path-of-dumped-database-bson-file/>

The command is used to store any specific database from the dump bson file. Drop is optional.

Example

mongorestore --drop --db=abc d:\dump\abc\marks.bson



```
Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore --drop --db=abc d:\dump\abc\marks.bson
2020-06-04T12:39:31.143+0530   checking for collection data in d:\dump\abc\marks.bson
2020-06-04T12:39:31.204+0530   reading metadata for abc.marks from d:\dump\abc\marks.metadata.json
2020-06-04T12:39:31.341+0530   restoring abc.marks from d:\dump\abc\marks.bson
2020-06-04T12:39:31.655+0530   no indexes to restore
2020-06-04T12:39:31.655+0530   finished restoring abc.marks (12 documents, 0 failures)
2020-06-04T12:39:31.656+0530   12 document(s) restored successfully. 0 document(s) failed to restore.

C:\Program Files\MongoDB\Server\4.2\bin>
```

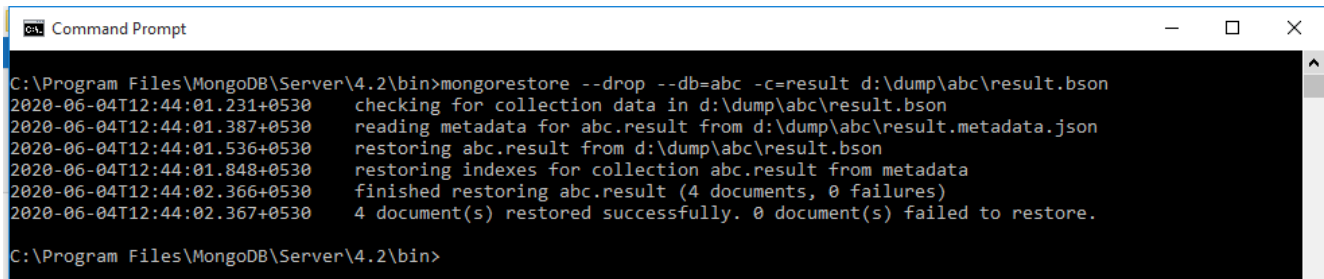
5. Restoring Specific collection Database from a .bson file

Mongorestore --db=<name-your-database-want-to-restore-as> --c collection_name <Name-and-path-of-dumped-database-bson-file/>

The command is used to store any specific collection from database from the dump bson file. Drop is optional.

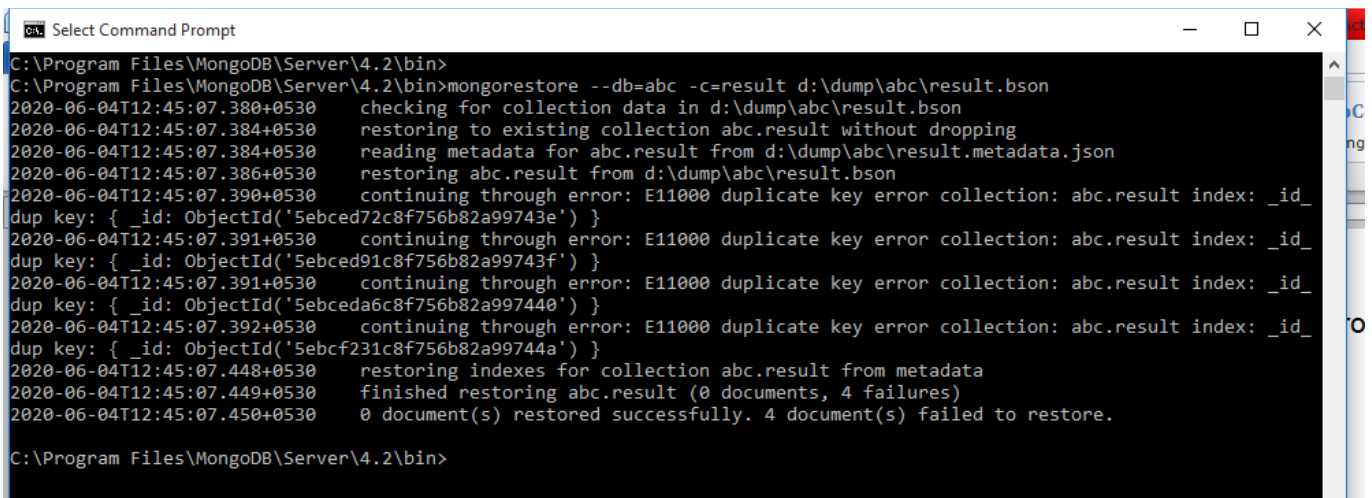
Example

```
mongorestore --drop --db=abc -c=result d:\dump\abc\result.bson
```



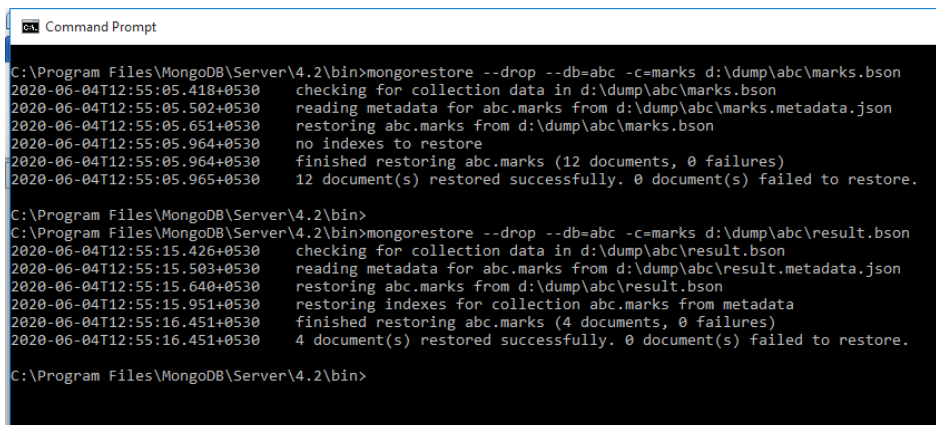
```
Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore --drop --db=abc -c=result d:\dump\abc\result.bson
2020-06-04T12:44:01.231+0530 checking for collection data in d:\dump\abc\result.bson
2020-06-04T12:44:01.387+0530 reading metadata for abc.result from d:\dump\abc\result.metadata.json
2020-06-04T12:44:01.536+0530 restoring abc.result from d:\dump\abc\result.bson
2020-06-04T12:44:01.848+0530 restoring indexes for collection abc.result from metadata
2020-06-04T12:44:02.366+0530 finished restoring abc.result (4 documents, 0 failures)
2020-06-04T12:44:02.367+0530 4 document(s) restored successfully. 0 document(s) failed to restore.
C:\Program Files\MongoDB\Server\4.2\bin>
```

➤ And if – drop option is not specified, it will show duplicate error.



```
Select Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore --db=abc -c=result d:\dump\abc\result.bson
2020-06-04T12:45:07.380+0530 checking for collection data in d:\dump\abc\result.bson
2020-06-04T12:45:07.384+0530 restoring to existing collection abc.result without dropping
2020-06-04T12:45:07.384+0530 reading metadata for abc.result from d:\dump\abc\result.metadata.json
2020-06-04T12:45:07.386+0530 restoring abc.result from d:\dump\abc\result.bson
2020-06-04T12:45:07.390+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebced72c8f756b82a99743e') }
2020-06-04T12:45:07.391+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebced91c8f756b82a99743f') }
2020-06-04T12:45:07.391+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebceda6c8f756b82a997440') }
2020-06-04T12:45:07.392+0530 continuing through error: E11000 duplicate key error collection: abc.result index: _id
dup key: { _id: ObjectId('5ebcf231c8f756b82a99744a') }
2020-06-04T12:45:07.448+0530 restoring indexes for collection abc.result from metadata
2020-06-04T12:45:07.449+0530 finished restoring abc.result (0 documents, 4 failures)
2020-06-04T12:45:07.450+0530 0 document(s) restored successfully. 4 document(s) failed to restore.
C:\Program Files\MongoDB\Server\4.2\bin>
```

➤ And specifying the collection, we may restore data from any other collection to the specified collection.



```
Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore --drop --db=abc -c=marks d:\dump\abc\marks.bson
2020-06-04T12:55:05.418+0530 checking for collection data in d:\dump\abc\marks.bson
2020-06-04T12:55:05.502+0530 reading metadata for abc.marks from d:\dump\abc\marks.metadata.json
2020-06-04T12:55:05.651+0530 restoring abc.marks from d:\dump\abc\marks.bson
2020-06-04T12:55:05.964+0530 no indexes to restore
2020-06-04T12:55:05.964+0530 finished restoring abc.marks (12 documents, 0 failures)
2020-06-04T12:55:05.965+0530 12 document(s) restored successfully. 0 document(s) failed to restore.
C:\Program Files\MongoDB\Server\4.2\bin>
C:\Program Files\MongoDB\Server\4.2\bin>mongorestore --drop --db=abc -c=marks d:\dump\abc\result.bson
2020-06-04T12:55:15.426+0530 checking for collection data in d:\dump\abc\result.bson
2020-06-04T12:55:15.503+0530 reading metadata for abc.marks from d:\dump\abc\result.metadata.json
2020-06-04T12:55:15.640+0530 restoring abc.marks from d:\dump\abc\result.bson
2020-06-04T12:55:15.951+0530 restoring indexes for collection abc.marks from metadata
2020-06-04T12:55:16.451+0530 finished restoring abc.marks (4 documents, 0 failures)
2020-06-04T12:55:16.451+0530 4 document(s) restored successfully. 0 document(s) failed to restore.
C:\Program Files\MongoDB\Server\4.2\bin>
```

Assignment

1. What is Backup and Restore?
2. How is Restore done in MongoDB?