

## Assignment: GridFS

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1. Using GridFS insert some files in your database. Display the information of your files using fs.files and fs.chunks.

Insert files in GridFS

```
g62231tx:~$ # list files
g62231tx:~$ cd Documents/; ls -lh
total 92M
-rw-r--r-- 1 raman raman 21M Oct 22 10:56 anthem.txt
-rw-r--r-- 1 raman raman 19M Oct 22 10:19 namaste.webm
-rw-r--r-- 1 raman raman 27M Oct 22 13:23 records.csv
-rw-r--r-- 1 raman raman 3.2M Oct 22 10:20 rhythms.mp3
-rw-r--r-- 1 raman raman 3.4K Oct 22 10:28 svddiag.gif
-rw-r--r-- 1 raman raman 23M Oct 22 10:21 tutorial.mp4
-rw-r--r-- 1 raman raman 73K Oct 22 10:22 wordle.png
g62231tx:~$ # store files in MongoDB database: assignment
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:36:13.121+0000 connected to: mongodb://localhost/
2020-10-22T13:36:13.121+0000 adding gridFile: anthem.txt
2020-10-22T13:36:13.322+0000 added gridFile: anthem.txt
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:36:37.200+0000 connected to: mongodb://localhost/
2020-10-22T13:36:37.200+0000 adding gridFile: namaste.webm
2020-10-22T13:36:37.316+0000 added gridFile: namaste.webm
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:36:45.764+0000 connected to: mongodb://localhost/
2020-10-22T13:36:45.764+0000 adding gridFile: records.csv
2020-10-22T13:36:46.037+0000 added gridFile: records.csv
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:36:59.701+0000 connected to: mongodb://localhost/
2020-10-22T13:36:59.701+0000 adding gridFile: rhythms.mp3
2020-10-22T13:36:59.725+0000 added gridFile: rhythms.mp3
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:37:09.667+0000 connected to: mongodb://localhost/
2020-10-22T13:37:09.667+0000 adding gridFile: svddiag.gif
2020-10-22T13:37:09.671+0000 added gridFile: svddiag.gif
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:37:23.796+0000 connected to: mongodb://localhost/
2020-10-22T13:37:23.796+0000 adding gridFile: tutorial.mp4
2020-10-22T13:37:23.962+0000 added gridFile: tutorial.mp4
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-22T13:37:35.980+0000 connected to: mongodb://localhost/
2020-10-22T13:37:35.980+0000 adding gridFile: wordle.png
2020-10-22T13:37:35.985+0000 added gridFile: wordle.png
g62231tx:~$
```

List files in GridFS

```
g62231tx:~$ # list files in bash shell
g62231tx:~$ cd Documents/; ls -l
total 93724
-rw-r--r-- 1 raman raman 21783082 Oct 22 10:56 anthem.txt
-rw-r--r-- 1 raman raman 19880728 Oct 22 10:19 namaste.webm
-rw-r--r-- 1 raman raman 27811781 Oct 22 13:23 records.csv
-rw-r--r-- 1 raman raman 3284866 Oct 22 10:20 rhythms.mp3
-rw-r--r-- 1 raman raman 3407 Oct 22 10:28 svddiag.gif
-rw-r--r-- 1 raman raman 23195011 Oct 22 10:21 tutorial.mp4
-rw-r--r-- 1 raman raman 73855 Oct 22 10:22 wordle.png
g62231tx:~$ # list files in mongodb gridfs database: assignment
g62231tx:~$ mongo --useGridFS --username=raman --password=raman --authenticationDatabase=admin --port=27017
2020-10-23T07:39:11.488+0000 connected to: mongodb://localhost/
anthem.txt 21783082
namaste.webm 19880728
records.csv 27811781
rhythms.mp3 3284866
svddiag.gif 3407
tutorial.mp4 23195011
wordle.png 73855
g62231tx:~$
```

## Files collection

```
> db // print working database
test
> show databases // list databases
admin      0.000GB
assignment 0.075GB
config     0.000GB
local      0.000GB
module     0.000GB
> // select database: assignment
> use assignment
switched to db assignment
> show collections // list collections in database: assignment
Schedule
ZipCode
fs.chunks
fs.files
> // retrieval of files
> db.fs.files.find({}, {uploadDate: 1, filename: 1}).pretty()
{
  "_id" : ObjectId("5f918acd34169f1a1717d1ef"),
  "uploadDate" : ISODate("2020-10-22T13:36:13.322Z"),
  "filename" : "anthem.txt"
}
{
  "_id" : ObjectId("5f918ae5d092a0dd20a1bf9f"),
  "uploadDate" : ISODate("2020-10-22T13:36:37.315Z"),
  "filename" : "namaste.webm"
}
{
  "_id" : ObjectId("5f918aed7f603150f720b197"),
  "uploadDate" : ISODate("2020-10-22T13:36:46.037Z"),
  "filename" : "records.csv"
}
{
  "_id" : ObjectId("5f918afd7eb8ba5340126ee"),
  "uploadDate" : ISODate("2020-10-22T13:36:59.725Z"),
  "filename" : "rhythms.mp3"
}
{
  "_id" : ObjectId("5f918b05d7be68d17d4813b4"),
  "uploadDate" : ISODate("2020-10-22T13:37:09.670Z"),
  "filename" : "svdiag.gif"
}
{
  "_id" : ObjectId("5f918b1292643080268ced279"),
  "uploadDate" : ISODate("2020-10-22T13:37:23.961Z"),
  "filename" : "tutorial.mp4"
}
{
  "_id" : ObjectId("5f918b1fc1237d4dc6cf6e21"),
  "uploadDate" : ISODate("2020-10-22T13:37:35.984Z"),
  "filename" : "wordle.png"
}
> █
```

## Chunks collection

```
> // count all documents in files collection
> db.fs.files.countDocuments({})
7
>
> // count all documents in chunks collection
> db.fs.chunks.countDocuments({})
371
>
> // chunks collection
> db.fs.chunks.find({}, {files_id: 1, n: 1}).limit(20)
{ "_id" : ObjectId("5f918acd34169f1a1717d1f0"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 0 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f1"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 1 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f2"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 2 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f3"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 3 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f4"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 4 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f5"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 5 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f6"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 6 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f7"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 7 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f8"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 8 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1f9"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 9 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1fa"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 10 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1fb"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 11 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1fc"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 12 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1fd"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 13 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1fe"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 14 }
{ "_id" : ObjectId("5f918acd34169f1a1717d1ff"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 15 }
{ "_id" : ObjectId("5f918acd34169f1a1717d200"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 16 }
{ "_id" : ObjectId("5f918acd34169f1a1717d201"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 17 }
{ "_id" : ObjectId("5f918acd34169f1a1717d202"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 18 }
{ "_id" : ObjectId("5f918acd34169f1a1717d203"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 19 }
> db.fs.chunks.find({}, {files_id: 1, n: 1}).skip(20).limit(20)
{ "_id" : ObjectId("5f918acd34169f1a1717d204"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 20 }
{ "_id" : ObjectId("5f918acd34169f1a1717d205"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 21 }
{ "_id" : ObjectId("5f918acd34169f1a1717d206"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 22 }
{ "_id" : ObjectId("5f918acd34169f1a1717d207"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 23 }
{ "_id" : ObjectId("5f918acd34169f1a1717d208"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 24 }
{ "_id" : ObjectId("5f918acd34169f1a1717d209"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 25 }
{ "_id" : ObjectId("5f918acd34169f1a1717d20a"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 26 }
{ "_id" : ObjectId("5f918acd34169f1a1717d20b"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 27 }
{ "_id" : ObjectId("5f918acd34169f1a1717d20c"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 28 }
{ "_id" : ObjectId("5f918acd34169f1a1717d20d"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 29 }
{ "_id" : ObjectId("5f918acd34169f1a1717d20e"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 30 }
{ "_id" : ObjectId("5f918acd34169f1a1717d20f"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 31 }
{ "_id" : ObjectId("5f918acd34169f1a1717d210"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 32 }
{ "_id" : ObjectId("5f918acd34169f1a1717d211"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 33 }
{ "_id" : ObjectId("5f918acd34169f1a1717d212"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 34 }
{ "_id" : ObjectId("5f918acd34169f1a1717d213"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 35 }
{ "_id" : ObjectId("5f918acd34169f1a1717d214"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 36 }
{ "_id" : ObjectId("5f918acd34169f1a1717d215"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 37 }
{ "_id" : ObjectId("5f918acd34169f1a1717d216"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 38 }
{ "_id" : ObjectId("5f918acd34169f1a1717d217"), "files_id" : ObjectId("5f918acd34169f1a1717d1ef"), "n" : 39 }
> █
```