Module 4

GridFS

Step 1: first using gridfs command save the image in the required database. Like I want to store my image in a collection named **student** in database **newdb.**

So this is my student collection inside **newdb**

```
> use newdb
switched to db newdb
> db.student.insert({"name" : "mary", "class" : "fifth" , "section" : "A"})
WriteResult({ "nInserted" : 1 })
> show collections
student
system.indexes
> db.student.find().pretty()
{
        "_id" : ObjectId("54cc8ae0a89f0f2f12b9894c"),
        "name" : "mary",
        "class" : "fifth",
        "section" : "A"
}
>
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```

Step 2: now store the picture using gridfs command in the database newdb

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\admin>cd\mongodb\bin

C:\mongodb\bin>mongofiles.exe -d newdb put "C:\Users\Public\Pictures\Sample Pict
ures\Koala.jpg"
connected to: 127.0.0.1
added file: { _id: ObjectId('54cc8cc004a6289889e59d9c'), filename: "C:\Users\Pub
lic\Pictures\Sample Pictures\Koala.jpg", chunkSize: 261120, uploadDate: new Date
(1422691520517), md5: "2b04df3ecc1d94afddff082d139c6f15", length: 780831 }
done!

C:\mongodb\bin>
```

This step shows that my image is saved in my database newdb

Step 3: Now through show collections we will see to two new collection automatically created in the database **newdb.**

```
> show collections
fs.chunks
fs.files
student
system.indexes
>
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```

Step 4 : when we search this **fs.files** collection the object id of the image is displayed. As shown in the screenshot:

```
> db.fs.files.find().pretty()
{
        "_id" : ObjectId("54cc8cc004a6289889e59d9c"),
        "filename" : "C:\\Users\\Public\\Pictures\\Sample Pictures\\Koala.jpg",
        "chunkSize" : 261120,
        "uploadDate" : ISODate("2015-01-31T08:05:20.517Z"),
        "md5" : "2b04df3ecc1d94afddff082d139c6f15",
        "length" : 780831
}
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```

Step 5: now to save this image in our student collection we have to use reference.

In two ways we can do references first is manual.

To make manual reference the steps is shown in the screenshot

```
> db.student.update({"name" : "mary"},{$set:{ "image" : ObjectId("54cc8cc004a628
9889e59d9c")}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.student.find()
{ "_id" : ObjectId("54cc8ae0a89f0f2f12b9894c"), "name" : "mary", "class" : "fift
h", "section" : "A", "image" : ObjectId("54cc8cc004a6289889e59d9c") }
> db.student.find().pretty()
{
        "_id" : ObjectId("54cc8ae0a89f0f2f12b9894c"),
        "name" : "mary",
        "class" : "fifth",
        "section" : "A",
        "image" : ObjectId("54cc8cc004a6289889e59d9c")
}
>
>
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>
```

The second method is through DBRef

So we have created DBRef also in the same document with the command shown in screen.

```
> db.student.update({"name" : "mary"},{$set:{ "imageDB" :{"$ref" : "fs.files","$
id": ObjectId("54cc8cc004a6289889e59d9c")}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.student.find().pretty()
{
        "_id" : ObjectId("54cc8ae0a89f0f2f12b9894c"),
        "name" : "mary",
        "class" : "fifth",
        "section" : "A",
        "image" : ObjectId("54cc8cc004a6289889e59d9c"),
        "imageDB" : DBRef("fs.files", ObjectId("54cc8cc004a6289889e59d9c"))
}
>
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>
>
```

Now this document have the student information as well as image stored with it.

Now to retrieve the document containing this image you can follow these steps.

Step 6: To see the image document using manual reference, follow the commands.

```
> db.fs.files.find({"_id" : ObjectId("54cc8cc004a6289889e59d9c")}).pretty()
{
        "_id" : ObjectId("54cc8cc004a6289889e59d9c"),
        "filename" : "C:\\Users\\Public\\Pictures\\Sample Pictures\\Koala.jpg",
        "chunkSize" : 261120,
        "uploadDate" : ISODate("2015-01-31T08:05:20.517Z"),
        "md5" : "2b04df3ecc1d94afddff082d139c6f15",
        "length" : 780831
}
>
>
>
>
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>
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>
>
```

To retrieve the document using DBRef.

```
>
> var re = db.student.findOne({"name" : "mary"})
> var dbRef = re.imageDB
> db[dbRef.$ref].findOne({"_id" : (dbRef.$id)})
{
        "_id" : ObjectId("54cc8cc004a6289889e59d9c"),
        "filename" : "C:\\Users\\Public\\Pictures\\Sample Pictures\\Koala.jpg",
        "chunkSize" : 261120,
        "uploadDate" : ISODate("2015-01-31T08:05:20.517Z"),
        "md5" : "2b04df3ecc1d94afddff082d139c6f15",
        "length" : 780831
}
>
>
>
```