

# NYUPoly

## Enterprise Data Systems 2016

**Alice in Unstructured World**

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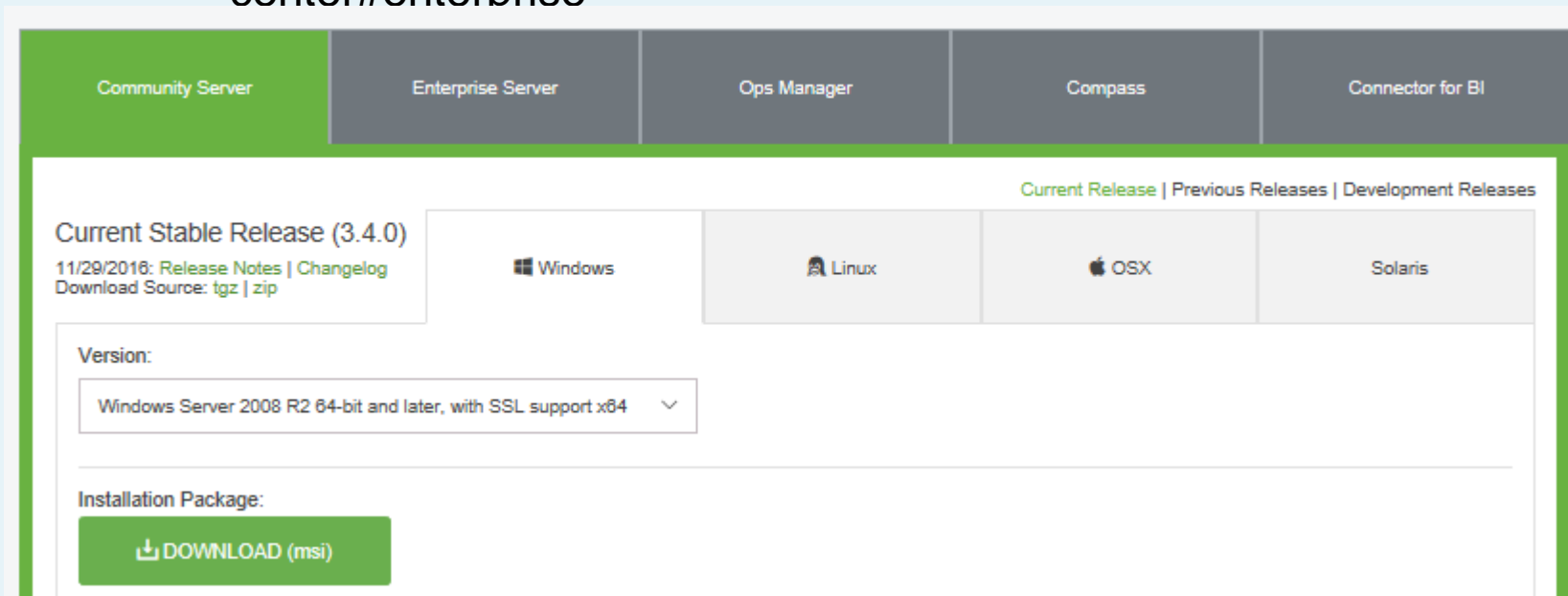
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Thursdays 6PM

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# Download and install

<https://www.mongodb.com/download-center#enterprise>



<https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/>

[https://university.mongodb.com/courses/M034/about?\\_ga=1.221676888.1920181545.1480608720](https://university.mongodb.com/courses/M034/about?_ga=1.221676888.1920181545.1480608720)

<https://university.mongodb.com/>

# config:data dir

```
Directory of c:\mongodb\3.4.0\data

12/01/2016  03:44 PM    <DIR>          .
12/01/2016  03:44 PM    <DIR>          ..
12/01/2016  12:30 PM             16,384 collection-0-1533475572753672555.wt
12/01/2016  12:30 PM             16,384 collection-2-1533475572753672555.wt
12/01/2016  03:43 PM             36,864 collection-5-1533475572753672555.wt
12/01/2016  12:27 PM    <DIR>          db
12/01/2016  05:19 PM    <DIR>          diagnostic.data
12/01/2016  12:30 PM             16,384 index-1-1533475572753672555.wt
12/01/2016  12:30 PM             16,384 index-3-1533475572753672555.wt
12/01/2016  12:30 PM             16,384 index-4-1533475572753672555.wt
12/01/2016  01:41 PM             36,864 index-6-1533475572753672555.wt
12/01/2016  12:29 PM    <DIR>          journal
12/01/2016  12:29 PM              6 mongod.lock
12/01/2016  03:43 PM             36,864 sizeStorer.wt
12/01/2016  12:29 PM              95 storage.bson
12/01/2016  12:29 PM              46 WiredTiger
12/01/2016  12:29 PM              0 WiredTiger.lock
12/01/2016  03:44 PM             969 WiredTiger.turtle
12/01/2016  03:44 PM            53,248 WiredTiger.wt
12/01/2016  12:29 PM             4,096 WiredTigerLAS.wt
12/01/2016  12:39 PM            32,768 _mdb_catalog.wt
                16 File(s)          283,740 bytes
                5 Dir(s)  234,693,148,672 bytes free
```

# Starting the server

```
Administrator: Command Prompt - .\mongod.exe --dbpath c:\mongodb\3.4.0\data

1 dir(s) moved.

c:\mongodb\3.4.0\bin>.\mongod.exe --dbpath c:\mongodb\3.4.0\data
2016-12-01T12:29:28.191-0500 I CONTROL [initandlisten] MongoDB starting : pid=12792 port=27017 dbpath=c:\mongodb\3.4.0\
data 64-bit host=LAPTOP-6NF1E065
2016-12-01T12:29:28.193-0500 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2016-12-01T12:29:28.195-0500 I CONTROL [initandlisten] db version v3.4.0
2016-12-01T12:29:28.200-0500 I CONTROL [initandlisten] git version: f4240c60f005be757399042dc12f6addbc3170c1
2016-12-01T12:29:28.200-0500 I CONTROL [initandlisten] OpenSSL version: OpenSSL 1.0.1t-fips 3 May 2016
2016-12-01T12:29:28.202-0500 I CONTROL [initandlisten] allocator: tcmalloc
2016-12-01T12:29:28.203-0500 I CONTROL [initandlisten] modules: none
2016-12-01T12:29:28.206-0500 I CONTROL [initandlisten] build environment:
2016-12-01T12:29:28.208-0500 I CONTROL [initandlisten]     distmod: 2008plus-ssl
2016-12-01T12:29:28.209-0500 I CONTROL [initandlisten]     distarch: x86_64
2016-12-01T12:29:28.216-0500 I CONTROL [initandlisten]     target_arch: x86_64
2016-12-01T12:29:28.217-0500 I CONTROL [initandlisten] options: { storage: { dbPath: "c:\mongodb\3.4.0\data" } }
2016-12-01T12:29:28.234-0500 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=3544M,session_max=2000
0,eviction=(threads_max=4),config_base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=sn
appy),file_manager=(close_idle_time=100000),checkpoint=(wait=60,log_size=2GB),statistics_log=(wait=0),
2016-12-01T12:29:29.484-0500 I CONTROL [initandlisten]
2016-12-01T12:29:29.484-0500 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2016-12-01T12:29:29.487-0500 I CONTROL [initandlisten] **      Read and write access to data and configuration is u
nrestricted.
```

# Start the client

– in a sep  
cmd shell

```

C:\> Select Command Prompt - mongo

Directory of c:\mongodb\3.4.0\bin

12/01/2016  12:29 PM    <DIR>          .
12/01/2016  12:29 PM    <DIR>          ..
11/26/2016  01:56 PM             7,342,012  bsondump.exe
09/02/2016  02:25 PM             1,998,336  libeay32.dll
11/26/2016  02:09 PM             11,249,664  mongo.exe
11/26/2016  02:13 PM             26,959,360  mongod.exe
11/26/2016  02:13 PM             257,347,584  mongod.pdb
11/26/2016  01:58 PM             9,452,494  mongodump.exe
11/26/2016  01:57 PM             7,595,582  mongoexport.exe
11/26/2016  01:57 PM             7,517,729  mongofiles.exe
11/26/2016  01:57 PM             7,699,555  mongoimport.exe
11/26/2016  01:59 PM             7,342,596  mongooplog.exe
11/26/2016  02:14 PM             22,927,360  mongoperf.exe
11/26/2016  01:58 PM             10,789,806  mongorestore.exe
11/26/2016  02:13 PM             13,456,896  mongos.exe
11/26/2016  02:13 PM             126,758,912  mongos.pdb
11/26/2016  01:56 PM             7,669,925  mongostat.exe
11/26/2016  01:59 PM             7,476,490  mongotop.exe
09/02/2016  02:25 PM              325,120  ssleay32.dll
               17 File(s)      533,909,421 bytes
               2 Dir(s)      234,584,985,600 bytes free

c:\mongodb\3.4.0\bin>mongo
MongoDB shell version v3.4.0
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.4.0
Welcome to the MongoDB shell.
For interactive help, type "help".
```

# CRUD operations

A record in mySQL (Relational) is a document

A table in mySQL is a Collection

Select PROJECTION from TABLE where <conditions>

db.<collection\_name>.insert() //insert

db.<collection\_name>.find() //select

```
> db
test
> use rk1750
switched to db rk1750
> show dbs
admin  0.000GB
local  0.000GB
> use test
switched to db test
```

# More...

```
> db
test
> use rk1750
switched to db rk1750
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Dennis"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.findAll()
2016-12-01T12:39:33.757-0500 E QUERY    [main] TypeError: db.fall2016.findAll is not a function :
@(shell):1:1
> db.fall2016.find()
{ "_id" : ObjectId("58406045fb5b21eb007eb8d2"), "course" : "7173", "dept" : "MOT", "name" : "Dennis" }
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Ankur"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Aditya"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Yasin"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Jiemini"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Jungmin"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Donglin"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Marlen"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Jingcheng"})
WriteResult({ "nInserted" : 1 })
> db.fall2016.insert({"course":"7173", "dept":"MOT", "name":"Akanksha"})
WriteResult({ "nInserted" : 1 })
```



# Select - 01

```
> db.fall2016.find({"course":"9223"})
> db.fall2016.find({"course":"7173"})
{ "_id" : ObjectId("58406045fb5b21eb007eb8d2"), "course" : "7173", "dept" : "MOT", "name" : "Dennis" }
{ "_id" : ObjectId("58406ca6fb5b21eb007eb8d3"), "course" : "7173", "dept" : "MOT", "name" : "Ankur" }
{ "_id" : ObjectId("58406cb2fb5b21eb007eb8d4"), "course" : "7173", "dept" : "MOT", "name" : "Aditya" }
{ "_id" : ObjectId("58406cbafb5b21eb007eb8d5"), "course" : "7173", "dept" : "MOT", "name" : "Yasin" }
{ "_id" : ObjectId("58406d04fb5b21eb007eb8d6"), "course" : "7173", "dept" : "MOT", "name" : "Jiemin" }
{ "_id" : ObjectId("58406d1cfb5b21eb007eb8d7"), "course" : "7173", "dept" : "MOT", "name" : "Jungmin" }
{ "_id" : ObjectId("58406d3dfb5b21eb007eb8d8"), "course" : "7173", "dept" : "MOT", "name" : "Donglin" }
{ "_id" : ObjectId("58406d58fb5b21eb007eb8d9"), "course" : "7173", "dept" : "MOT", "name" : "Marlen" }
{ "_id" : ObjectId("58406d78fb5b21eb007eb8da"), "course" : "7173", "dept" : "MOT", "name" : "Jingcheng" }
{ "_id" : ObjectId("58406ec3fb5b21eb007eb8db"), "course" : "7173", "dept" : "MOT", "name" : "Akanksha" }
> db.fall2016.find({"course":"7173"}, {"_id":0})
{ "course" : "7173", "dept" : "MOT", "name" : "Dennis" }
{ "course" : "7173", "dept" : "MOT", "name" : "Ankur" }
{ "course" : "7173", "dept" : "MOT", "name" : "Aditya" }
{ "course" : "7173", "dept" : "MOT", "name" : "Yasin" }
{ "course" : "7173", "dept" : "MOT", "name" : "Jiemin" }
{ "course" : "7173", "dept" : "MOT", "name" : "Jungmin" }
{ "course" : "7173", "dept" : "MOT", "name" : "Donglin" }
{ "course" : "7173", "dept" : "MOT", "name" : "Marlen" }
{ "course" : "7173", "dept" : "MOT", "name" : "Jingcheng" }
{ "course" : "7173", "dept" : "MOT", "name" : "Akanksha" }
```



# Select - 02

```

C:\> Select Command Prompt - mongo
{ "course" : "7173", "dept" : "MOT", "name" : "Jingcheng" }
{ "course" : "7173", "dept" : "MOT", "name" : "Akanksha" }
> db.fall2016.find({"course":"7173"},{"_id":0,"name":1})
{ "name" : "Dennis" }
{ "name" : "Ankur" }
{ "name" : "Aditya" }
{ "name" : "Yasin" }
{ "name" : "Jiemin" }
{ "name" : "Jungmin" }
{ "name" : "Donglin" }
{ "name" : "Marlen" }
{ "name" : "Jingcheng" }
{ "name" : "Akanksha" }
> db.fall2016.find({"course":"7173"},{"name":1})
{ "_id" : ObjectId("58406045fb5b21eb007eb8d2"), "name" : "Dennis" }
{ "_id" : ObjectId("58406ca6fb5b21eb007eb8d3"), "name" : "Ankur" }
{ "_id" : ObjectId("58406cb2fb5b21eb007eb8d4"), "name" : "Aditya" }
{ "_id" : ObjectId("58406cbafb5b21eb007eb8d5"), "name" : "Yasin" }
{ "_id" : ObjectId("58406d04fb5b21eb007eb8d6"), "name" : "Jiemin" }
{ "_id" : ObjectId("58406d1cfb5b21eb007eb8d7"), "name" : "Jungmin" }
{ "_id" : ObjectId("58406d3dfb5b21eb007eb8d8"), "name" : "Donglin" }
{ "_id" : ObjectId("58406d58fb5b21eb007eb8d9"), "name" : "Marlen" }
{ "_id" : ObjectId("58406d78fb5b21eb007eb8da"), "name" : "Jingcheng" }
{ "_id" : ObjectId("58406ec3fb5b21eb007eb8db"), "name" : "Akanksha" }

```

# Select - 03

```
> db.fall2016.find({"course":"7173","name":"Yasin"},{"_id":"1"})
{ "_id" : ObjectId("58406cbafb5b21eb007eb8d5") }
> db.fall2016.update({"_id" : ObjectId("58406cbafb5b21eb007eb8d5") },{"name":"Yasi"})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.fall2016.find({"_id" : ObjectId("58406cbafb5b21eb007eb8d5") },{"_id":"0"})
{ "_id" : ObjectId("58406cbafb5b21eb007eb8d5") }
> db.fall2016.find({"_id" : ObjectId("58406cbafb5b21eb007eb8d5") },{"_id":0})
{ "name" : "Yasi" }
> db.fall2016.find()
{ "_id" : ObjectId("58406045fb5b21eb007eb8d2"), "course" : "7173", "dept" : "MOT", "name" : "Dennis" }
{ "_id" : ObjectId("58406ca6fb5b21eb007eb8d3"), "course" : "7173", "dept" : "MOT", "name" : "Ankur" }
{ "_id" : ObjectId("58406cb2fb5b21eb007eb8d4"), "course" : "7173", "dept" : "MOT", "name" : "Aditya" }
{ "_id" : ObjectId("58406cbafb5b21eb007eb8d5"), "name" : "Yasi" }
{ "_id" : ObjectId("58406d04fb5b21eb007eb8d6"), "course" : "7173", "dept" : "MOT", "name" : "Jiemin" }
{ "_id" : ObjectId("58406d1cfb5b21eb007eb8d7"), "course" : "7173", "dept" : "MOT", "name" : "Jungmin" }
{ "_id" : ObjectId("58406d3dfb5b21eb007eb8d8"), "course" : "7173", "dept" : "MOT", "name" : "Donglin" }
```