MongoDB in 30 minutes

In terminal to get the mongodb shell

```
$ mongo
```

> show dbs

to get new database called mycustomers

```
> use mycutomers
```

to see what database your in 'db'

```
> db
```

To Create users

```
> db.createUser({ ..JSON.. });
```

To create a collection, these hold the documents roughly similar to SQL tables

> db.createCollection('customers');

to show the collections

```
> show collections
```

Insert a document into collection

```
> db.customers.insert({first_name:"Tom", last_name:"Ormiston"});
```

To find the documents

```
> db.customers.find();
```

In mongodb we don't have create an ID field, making it auto increment setting primary keys etc..

BUT WE CAN JUST ADD FIELDS! Don't have to mess about with tables

```
> db.customers.insert([{first_name:"Sheila", last_name:"Ormiston"},
{food:"cheese"},{pet :"dog"}]);
```

To make the JSON look pretty, then use pretty!

```
> db.customers.find().pretty();
```

To update a field

```
> db.customers.update({first_name:"Tom"}, {"first_name" : "Tom", "last_name"
: "Ormiston", pet:"dog"});
```

So we have **to re assert the old data** when updating too.

To get round this we use the **'set' operator**

```
> db.customers.update({first_name:"Sue"}, {$set:{pet:"cat"}});
```

We can decrement/increment values

If age of Sheila is 21 , thus

> db.customers.update({first_name:"Sheila"}, {**$set:{age:21}});**
…

to increment Sheilas age by 3 years use {$inc:{age:3}}

```
> db.customers.update({first_name:"Sheila"}, {$inc:{age:3}});
```

To delete a field we can unset eg $unset:{pet:3}}

```
> db.customers.update({first_name:"Sue"}, {$unset:{pet:3}}});
```

…

Can also Update and Insert at the same time with ' upsert '

```
> db.customers.update({first_name:"Bob"},{first_name:"Bob",
last_name:"Monkhouse"},{upsert: true});
```

Can rename field titles with update eg from 'gender' to 'sex'

```
> db.customers.insert({first_name: "Jenny", gender:"female"});
```

Now if we wish to change the title 'gender' to 'sex'

```
db.customers.update({first_name:"Jenny"}, {$rename:{"gender":"sex"}});
```

To remove documents

```
> db.customers.remove({first_name:"Jenny"});
```

More complex queries using Find();

```
> db.customers.find({first_name:"Sue"}, {first_name:"Mark"});
```

Age less than 40 {age:{$lt:40}}

```
> db.customers.find({age:{$lt:40}}).pretty();
```

Query for several JSON levels

```
> db.customers.find({"address.city":"Chester"});
```

Sorting Ascending and descending

Ascending

```
> db.customers.find().sort({last_name:1}).pretty();
```

Descending

```
> db.customers.find().sort({last_name:-1}).pretty();
```

Counting

Counting age > 30

```
> db.customers.find().count({age:{$gt:30}}).pretty();
```

Limit

To just get the first 4 result say

```
> db.customers.find().limit(4);
```

Limit + sort

```
> db.customers.find().limit(4).sort({last_name:1});
```

For Each iteration

```
> db.customers.find().forEach(function(doc){
      print("customer name: "+doc.first_name")
      });
```

---

version `$ mongo --version`

Start `$ sudo service mongod start`

Stop `$ sudo service mongod stop`

(or CTRL+C in mongodb shell)

Re-start `$ sudo service mongod restart`

mongo shell `$ mongo`

To Remove mongodb

```
$ sudo service mongod stop

$ sudo apt-get purge mongodb-org*

$ sudo rm -r /var/log/mongodb

$ sudo rm -r /var/lib/mongodb
```

To Install mongodb (https://docs.mongodb.com/master/tutorial/install-mongodb-on-ubuntu/)

```
$ sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv
0C49F3730359A14518585931BC711F9BA15703C6

$ echo "deb [ arch=amd64,arm64 ] http://repo.mongodb.org/apt/ubuntu
xenial/mongodb-org/3.4 multiverse" | sudo tee
/etc/apt/sources.list.d/mongodb-org-3.4.list

$ sudo apt-get update

$ sudo apt-get install -y mongodb-org
```