MongoDB Crash Course

ComputeFest

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Installation

OS X: https://www.youtube.com/watch?v=G--uGbOFF9E

(you may need to add "sudo" as a prefix to every installation command)

Windows: https://www.youtube.com/watch?v=K_5mj3-_uJQ

Starting MongoDB

Commands to run are in blue

Start server. Open terminal window and run:

mkdir DB

mongod --dbpath DB

Start client. Open different terminal and run:

mongo

Looks like this:

Server window   Client window

Create a Collection (in client)

Create a database entry

       var customer = {name: "bob", balance: 100}

       db.customers.insert(customer)

We now have one collection of customers

       show collections

In the collection, we have one customer

       db.customers.find()

Pretty Printing

Print things nicely

db.customers.find().pretty()

Note that each document within a collection has a unique ID that is created automatically

Filtering

Create another customer

```
var customer2 = {name: "sara", balance: 200}

db.customers.insert(customer2)
```

Again, list all customers:

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

List customers called Sara

```
db.customers.find({name: "sara"}).pretty()
```

List customers with balance greater than 150

```
db.customers.find( { balance: { $gt: 150} } ).pretty()
```

Updating Documents

Give bob a surname

db.customers.update(

{name : "bob"}, {$set : {surname: "Dylan"} })

Add 50 to Bob's account

db.customers.update({name : "bob"},

{$inc : {balance: 50} })

Check outcome

db.customers.find().pretty()

Copying a Document

Create a copy of Bob

var cust = db.customers.findOne({name : "bob"})

Print the surname of the copy

cust["surname"]

Change the surname of the copy

cust["surname"] = "Marley"

Saving a Copy to the Database

Try to save the copy in the database (won't work)

db.customers.insert(cust)

Generate a new object ID

var o = ObjectId()

Assign the new ID to the copy

cust["_id"] = o

Now try to insert again

db.customers.insert(cust)

Aggregation

Find sum of all account balances

db.customers.aggregate([{ $group: {

_id: null, total: { $sum: "$balance" } }])

Shut down server

Shut down the server and quit client

    use admin

    db.shutdownServer()

    exit

Thanks!