

Introduction to MongoDB

Task 1 – Set up your MongoDB account

With the help of the video on Moodle and the walkthrough from CMS support

<https://blogs.gre.ac.uk/cmssupport/application-development/databases/mongodb/>

set up your account, remember you will need to use your userid in all 3 boxes.

The database details are:

Host:	mongo.cms.gre.ac.uk
Port:	27017
Database:	userid i.e. ab1234c
Username:	userid i.e. ab1234c
Password:	userid i.e. ab1234c

Task 2: MongoDB tutorials

Refer to slide 6 of the 2nd lecture.

Go to <https://studio3t.com/academy/courses/mongodb-101-getting-started/>

From the right-hand menu complete the following tasks:

<https://studio3t.com/academy/lessons/introduction-to-mongodb/>

<https://studio3t.com/academy/lessons/mongodb-basics/>

All 7 Topics

<https://studio3t.com/academy/lessons/aggregation-in-mongodb/>

All 3 Topics

<https://studio3t.com/academy/lessons/mongodb-import-export/>

Topics 1 and 2

The files you need are also on Moodle or you can download them from the tutorial site.

Task 2 is part of your assessment. It is worth up to 5%, append it to your report.

Below are the **4 screen shots you need to provide** for this week and which exercise they are for

Do not create a new database as the instructions say and do not drop any database as it suggests, **we are not dropping databases !!!!**

Just do everything in the main collection folder in your named database.

End of lesson 4 exercise 1 – note I created the new collection in my pm76 database

I need to see your userid as your database name on the left and the welsh_pubs collection tab

Search Open Connections (Ctrl+F) ... Quickstart x welsh_pubs x

pm76 (pm76@mongo.cms.gre.ac.uk:27017) > pm76 > welsh_pubs

Query {}

Projection {} Sort {}

Skip Limit

Result Query Code Explain

50 Documents 1 to 50

welsh_pubs

_id	fsa_id	name	address	location
5d34c59c098c00...	523718	1 Town Hall Sq...	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	522955	1209 Branch C...	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	499241	147 Club	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	499245	4th Glamorgan...	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	519221	5th Welch Old ...	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	495966	A Touch of Class	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	502502	ABADAM ARMS	{ 4 fields }	{ 4 fields }
5d34c59c098c00...	497849	Aber & Senghe...	{ 4 fields }	{ 4 fields }

End of lesson 4 exercise 3 – note it is showing 14 documents at the bottom of the window.

Search Open Connections (Ctrl+F) ... Quickstart x welsh_pubs x

pm76 (pm76@mongo.cms.gre.ac.uk:27017) > pm76 > welsh_pubs

Query { "name": /.*/snooker.*/i, "local_authority": { \$not: /.*/Caerphilly.*/i } }

Projection { "fsa_id": 1, "name": 1, "address.city": 1, "local_authority": 1 } Sort { "address.city": 1 }

Skip Limit

Result Query Code Explain

50 Documents 1 to 14

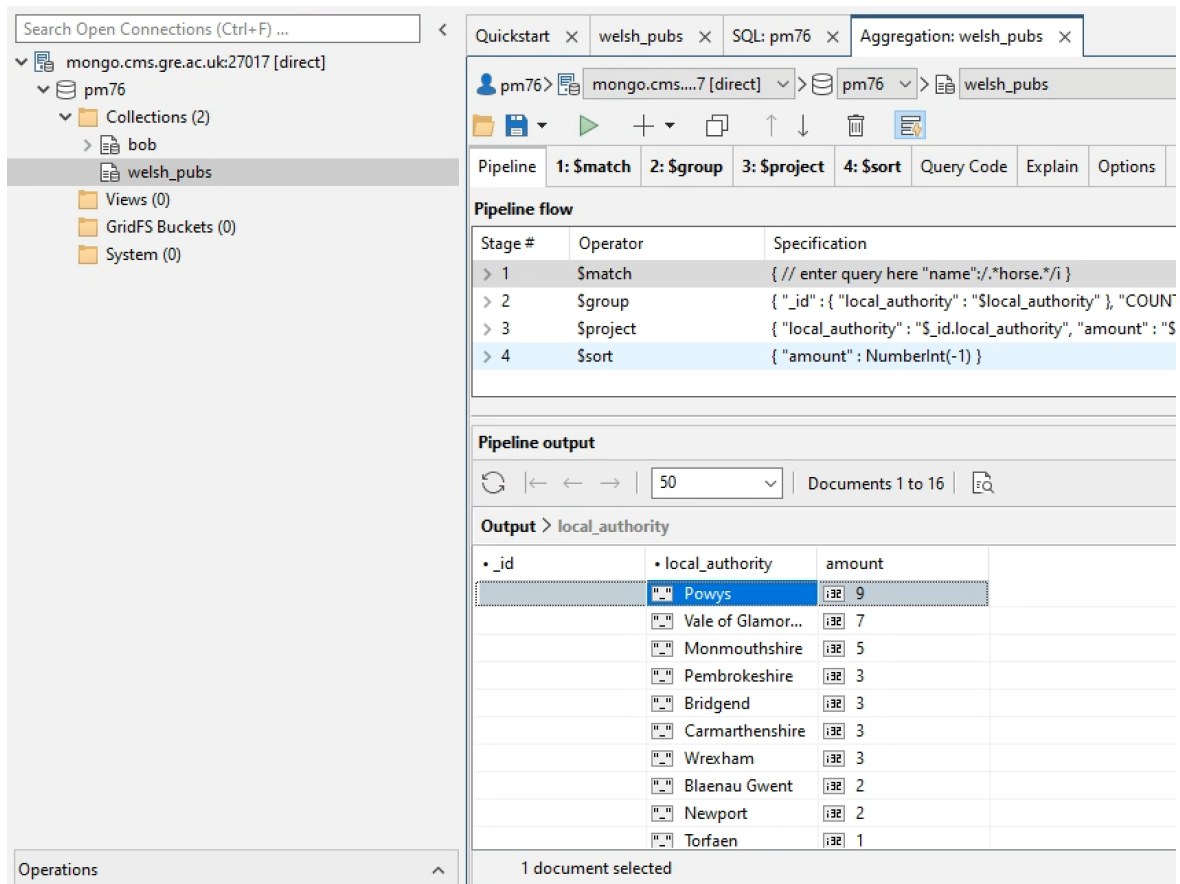
Table View

welsh_pubs > name

_id	fsa_id	name	address	city (address.city)	local_authority
5d34c59f098c00...	519623	Cue Snooker C...	{ 1 fields }	Aberdare	Rhondda Cyno...
5d34c59f098c00...	505774	Cues Snooker ...	{ 1 fields }	Abergele	Conwy
5d34c5ae098c00...	503823	SNOOKER WO...	{ 1 fields }	Ammanford	Cardiganshire
5d34c59d098c00...	496704	Brackla Snooke...	{ 1 fields }	Bridgend	Bridgend
5d34c5aa098c00...	524471	Penarth Road S...	{ 1 fields }	Cardiff	Cardiff
5d34c5ab098c00...	523504	Redz Snooker ...	{ 1 fields }	Cwmbran	Torfaen
5d34c5ae098c00...	506555	Snooker 147 Ltd	{ 1 fields }	Llandudno	Conwy
5d34c5b4098c00...	503923	TERRY GRIFFIT...	{ 1 fields }	Llanelli	Cardiganshire
5d34c5ac098c00...	511630	Scala Pool And...	{ 1 fields }	Merthyr Tydfil	Merthyr Tydfil
5d34c5ad098c00...	513462	Skewen Snook...	{ 1 fields }	Neath	Neath Port Tal...
5d34c5a1098c00...	519791	Frames Snooke...	{ 1 fields }	Pontyclun	Rhondda Cyno...
5d34c5a7098c00...	513206	Mackworth Sn...	{ 1 fields }	Port Talbot	Neath Port Tal...
5d34c5ae098c00...	520608	Snooker and C...	{ 1 fields }	Porth	Rhondda Cyno...

14 documents 00:00:00.014

End of lesson 5 exercise 3, I can see a list of local authorities with an amount column



Search Open Connections (Ctrl+F) ...

mongo.cms.gre.ac.uk:27017 [direct]

pm76

Collections (2)

bob

welsh_pubs

Views (0)

GridFS Buckets (0)

System (0)

Quickstart x welsh_pubs x SQL: pm76 x Aggregation: welsh_pubs x

pm76 > mongo.cms....7 [direct] > pm76 > welsh_pubs

Pipeline

1: \$match 2: \$group 3: \$project 4: \$sort Query Code Explain Options

Pipeline flow

Stage #	Operator	Specification
> 1	\$match	{ // enter query here "name": /. "horse."/i }
> 2	\$group	{ "_id": { "local_authority": "\$local_authority", "COUNT": "\$count" } }
> 3	\$project	{ "local_authority": "\$_id.local_authority", "amount": "\$count" }
> 4	\$sort	{ "amount": NumberInt(-1) }

Pipeline output

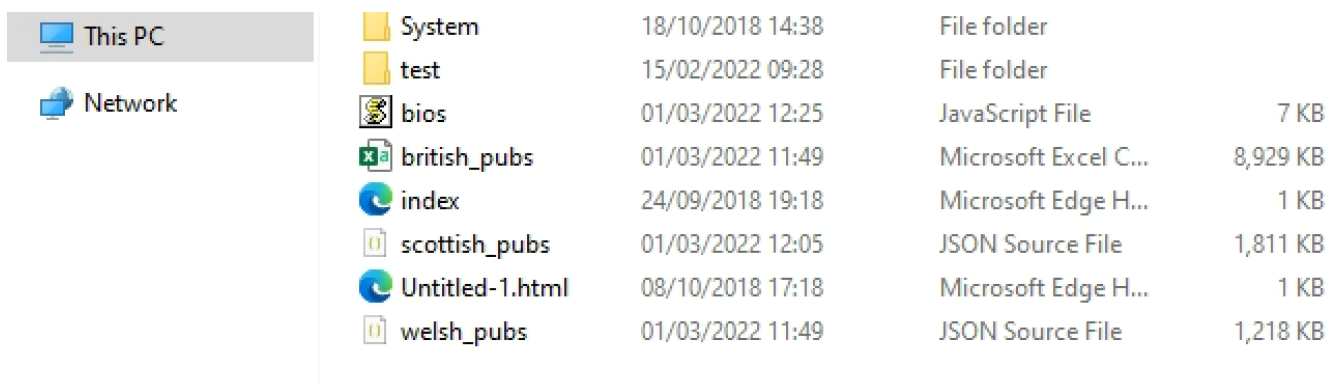
Documents 1 to 16

Output > local_authority

_id	local_authority	amount
" "	Powys	9
" "	Vale of Glamor...	7
" "	Monmouthshire	5
" "	Pembrokeshire	3
" "	Bridgend	3
" "	Carmarthenshire	3
" "	Wrexham	3
" "	Blaenau Gwent	2
" "	Newport	2
" "	Torfaen	1

1 document selected

End of lesson 6 exercise 2 – if you do exercise 1 and 2 here you will end up with an exported Scottish pubs JSON file as shown below.



Name	Date modified	Type	Size
This PC			
Network			
System	18/10/2018 14:38	File folder	
test	15/02/2022 09:28	File folder	
bios	01/03/2022 12:25	JavaScript File	7 KB
british_pubs	01/03/2022 11:49	Microsoft Excel C...	8,929 KB
index	24/09/2018 19:18	Microsoft Edge H...	1 KB
scottish_pubs	01/03/2022 12:05	JSON Source File	1,811 KB
Untitled-1.html	08/10/2018 17:18	Microsoft Edge H...	1 KB
welsh_pubs	01/03/2022 11:49	JSON Source File	1,218 KB

In addition to these 4 screen shots provide a 200-300 word explanation of what you have understood about NoSQL and MongoDB.