

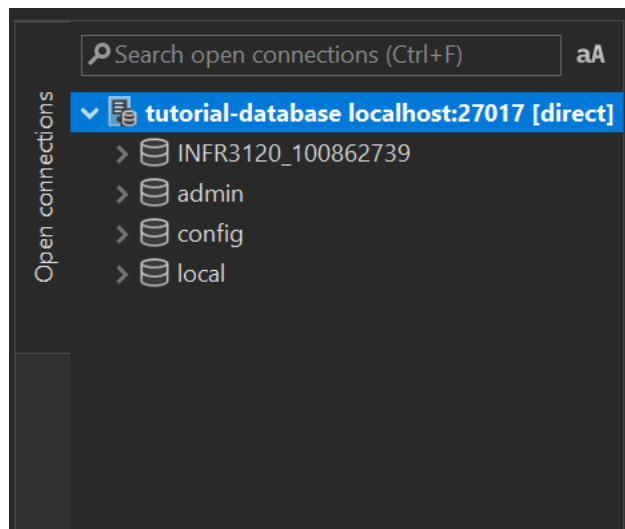
# Web and Scripting Programming

## Tutorial-Activity-2

Due: 1<sup>st</sup> November 2023 02:00PM

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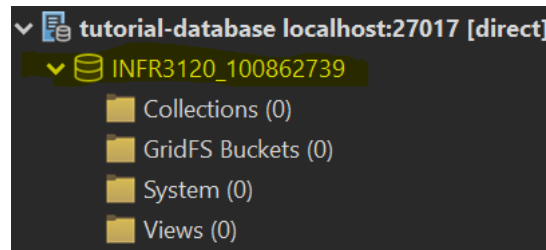
1. Launch the MongoDB Server and connect the Robo3T client to the server (show us through screenshot). 2 Marks



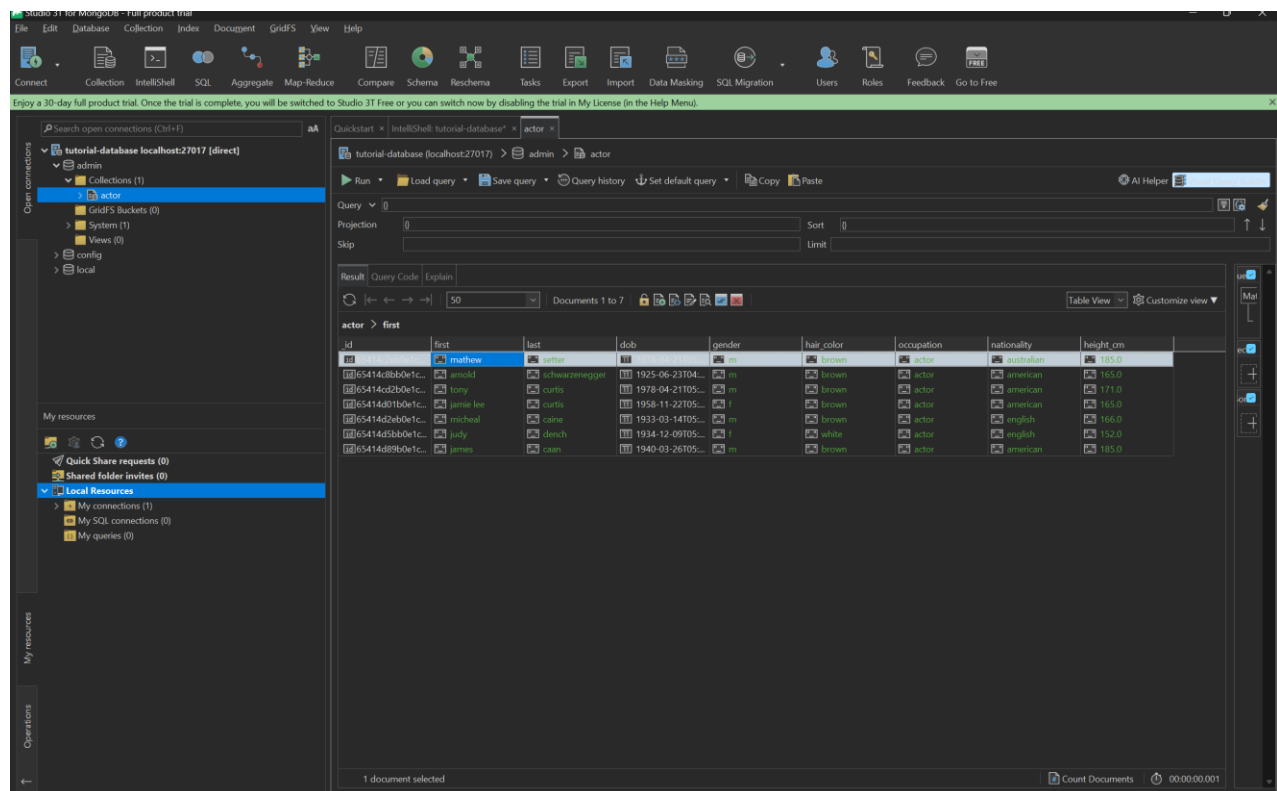
```
Microsoft Windows [Version 10.0.22621.2428]
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C:\Users\vesped> C:\Program Files\MongoDB\Server\7.0\bin
C:\Program Files\MongoDB\Server\7.0\bin>color a
C:\Program Files\MongoDB\Server\7.0\bin>mongo
{"t":{"$date":"2023-10-31T14:21:50.484-04:00"},"s":"I",  "c":"CONTROL",  "id":23285,   "ctx":"thread1","msg":"Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}}
{"t":{"$date":"2023-10-31T14:21:51.343-04:00"},"s":"I",  "c":"NETWORK",  "id":4915701, "ctx":"thread1","msg":"Initialized wire specification","attr":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":21},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":21},"outgoing":{"minWireVersion":6,"maxWireVersion":21},"isInternalClient":true}}}}
{"t":{"$date":"2023-10-31T14:21:51.346-04:00"},"s":"I",  "c":"NETWORK",  "id":4648602, "ctx":"thread1","msg":"Implicit TCP FastOpen in use."}}
{"t":{"$date":"2023-10-31T14:21:51.347-04:00"},"s":"I",  "c":"REPL",       "id":5123908, "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationDonorService","namespace":"config.tenantMigrationDonors"}}}
{"t":{"$date":"2023-10-31T14:21:51.347-04:00"},"s":"I",  "c":"REPL",       "id":5123908, "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationRecipientService","namespace":"config.tenantMigrationRecipients"}}}
{"t":{"$date":"2023-10-31T14:21:51.347-04:00"},"s":"I",  "c":"CONTROL",  "id":5945603, "ctx":"thread1","msg":"Multi threading initialized"}}
{"t":{"$date":"2023-10-31T14:21:51.347-04:00"},"s":"I",  "c":"TENANT_M",  "id":7091600, "ctx":"thread1","msg":"Starting TenantMigrationAccessBlockerRegistry"}}
{"t":{"$date":"2023-10-31T14:21:51.348-04:00"},"s":"I",  "c":"CONTROL",  "id":4615611, "ctx":"initandlisten","msg":"MongoDB starting","attr":{"pid":11480,"port":27017,"dbPath":"C:/data/db/","architecture":"64-bit","host":"Envy"}}}
{"t":{"$date":"2023-10-31T14:21:51.348-04:00"},"s":"I",  "c":"CONTROL",  "id":23398,   "ctx":"initandlisten","msg":"Target operating system minimum version","attr":{"targetMinOS":"Windows 7/Windows Server 2008 R2"}}}
{"t":{"$date":"2023-10-31T14:21:51.348-04:00"},"s":"I",  "c":"CONTROL",  "id":23483,   "ctx":"initandlisten","msg":"Build Info","attr":{"buildInfo":{"version":"7.0.2","gitVersion":"02b3cd55c1302209ef046ddad3ef67094d0b62a","modules":[],"allocator":"tcmalloc","environment":{"distmod":"windows","distarch":"x86_64","target_arch":"x86_64"}}}}}
{"t":{"$date":"2023-10-31T14:21:51.348-04:00"},"s":"I",  "c":"CONTROL",  "id":51765,   "ctx":"initandlisten","msg":"Operating System","attr":{"os":{"name":"Microsoft Windows 10","version":"10.0 (build 22621)"}}}}
{"t":{"$date":"2023-10-31T14:21:51.348-04:00"},"s":"I",  "c":"CONTROL",  "id":21951,   "ctx":"initandlisten","msg":"Options set by command line","attr":{"options":{}}}}
{"t":{"$date":"2023-10-31T14:21:51.349-04:00"},"s":"I",  "c":"STORAGE",  "id":22270,   "ctx":"initandlisten","msg":"Storage engine to use detected by data files","attr":{"dbpath":"C:/data/db/","storageEngine":"wiredTiger"}}}
{"t":{"$date":"2023-10-31T14:21:51.349-04:00"},"s":"I",  "c":"STORAGE",  "id":22315,   "ctx":"initandlisten","msg":"Opening WiredTiger","attr":{"config":"create,cache_size=7489M,session_max=33000,eviction=(threads_min=4,threads_max=4),config_base=false,statistics=(fast),log=(enabled=true,remove=true,path=journal,compressor=snappy),builtin_extension_config=(zstd=(compression_level=6)),file_manager=(close_idle_time=600,close_scan_interval=10,close_handle_minimum=2000),statistics_log=(wait=0),json_output=(error,message),verbose=[recovery_progress:1,checkpoint_progress:1,compact_progress:1,backup:0,checkpoint:0,compact:0,evict:0,history_store:0,recovery:0,rts:0,salvage:0,tiered:0,timestamp:0,transaction:0,verify:0,log:0]"}}}}
{"t":{"$date":"2023-10-31T14:21:51.611-04:00"},"s":"I",  "c":"STORAGE",  "id":4795906, "ctx":"initandlisten","msg":"WiredTiger opened","attr":{"durationMillis":262}}}
{"t":{"$date":"2023-10-31T14:21:51.611-04:00"},"s":"I",  "c":"RECOVERY",  "id":23987,   "ctx":"initandlisten","msg":"WiredTiger recoveryTimestamp","attr":{"recoveryTimestamp":{"timestamp":"0","i":0}}}}}
{"t":{"$date":"2023-10-31T14:21:51.617-04:00"},"s":"W",    "c":"CONTROL",  "id":22120,   "ctx":"initandlisten","msg":"Access control is not enabled for the database. Read and write access to data and configuration is unrestricted","tags":["startupWarnings"]}}
{"t":{"$date":"2023-10-31T14:21:51.618-04:00"},"s":"W",    "c":"CONTROL",  "id":22140,   "ctx":"initandlisten","msg":"This server is bound to localhost. Remote systems will be unable to connect to this server. Start the server with --bind_ip <address> to specify which IP addresses it should serve responses from, or with --bind_ip_all to bind to all interfaces. If this behavior is desired, start the server with --bind_ip 127.0.0.1 to disable this warning","tags":["startupWarnings"]}}
{"t":{"$date":"2023-10-31T14:21:51.619-04:00"},"s":"I",  "c":"NETWORK",  "id":4915702, "ctx":"initandlisten","msg":"Updated wire specification","attr":{"oldSpec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":21},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":21},"outgoing":{"minWireVersion":6,"maxWireVersion":21},"isInternalClient":true},"newSpec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":21},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":21},"outgoing":{"minWireVersion":21,"maxWireVersion":21},"isInternalClient":true}}}}
{"t":{"$date":"2023-10-31T14:21:51.619-04:00"},"s":"I",  "c":"REPL",       "id":5853300, "ctx":"initandlisten","msg":"Current featureCompatibilityVersion value","attr":{"featureCompatibilityVersion":"7.0","context":"startup"}}}
{"t":{"$date":"2023-10-31T14:21:51.619-04:00"},"s":"I",  "c":"STORAGE",  "id":5871100, "ctx":"initandlisten","msg":"Closing temp directory"}}
```

2. Create a NoSQL Database in MongoDB named "INFR3120\_StudentNumber" (show us through screenshot). 2 Marks



3. Insert the following data into the INFR3120\_StudentNumber database created in the previous step. (Show us through screenshot, you can show 1 or 2 queries, it's not mandatory to show the queries of all the data) 3 Marks.



```

1 db.actor.insert({
2   first: "james",
3   last: "caan",
4   dob: new Date ('March 26, 1940'),
5   gender: "m",
6   hair_color: "brown",
7   occupation: "actor",
8   nationality: "american",
9   height_cm: "185.0"
10 });

```

first	last	dob	gender	hair_colour	occupation	nationality	height_cm
matthew	setter	1978-04-21	m	brown	actor	australian	185.0
arnold	schwarzenegger	1925-06-03	m	brown	actor	american	165.0
tony	curtis	1978-04-21	m	brown	actor	american	171.0
jamie lee	curtis	1958-11-22	f	brown	actor	american	165.0
michael	caine	1933-03-14	m	brown	actor	english	166.0
judi	dench	1934-12-09	f	white	actor	english	152.0
james	caan	1940-03-26	M	brown	actor	american	185.0

4. Searching data in MongoDB. (Write down the queries for below problems in Robo3T and share screenshot) 9 Marks.

a. Find all female actors.

```
5. db.actor.find({gender:"f"});
```

a. Find all male American actors.

```
6. db.actor.find({gender:"m", nationality:"american"});
```

a. Find actors that are either male or American actors.

```
7. db.actor.find({$or:[{gender:"m"}, {nationality:"american"}]});
```

a. Find all male actors who are either English or American.

```
8. db.actor.find({gender:"m", $or:[{nationality:"english"}, {nationality:"american"}]});
```

a. Find and display only the first name and height of actors.

```
9. db.actor.find({first:1, height_cm:1});
```

a. List the height of all the actors in the order of tallest to shortest.

```
10. db.actor.find().sort({ height_cm: -1 });
```

a. List all the actors who have a height less than 170 cm.

b. Find the shortest male and female actors.

```
db.actor.aggregate([{$group:"$gender", min_height: { $min: "$height_cm" }}]);
```

c. Find the average height of all the actors.

```
11. db.actor.aggregate([{$group: {_id: null, min_height: { $min: "$height_cm" }}}]);
```

12. Updating data in MongoDB. (Write down the queries for below problems) 4 Marks.

a. Update the hair color of James Caan to grey.

b. Delete the James Caan information from the database.

Show the work to TA and then Submit pdf file on CANVAS.