Advanced Database Programming Portfolio 2 - MongoDB

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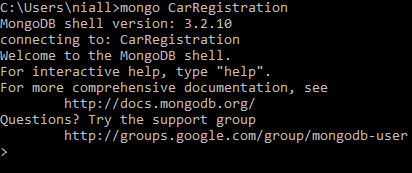
# Q1 - Implementing My Own CouchDB Database

## Introduction:

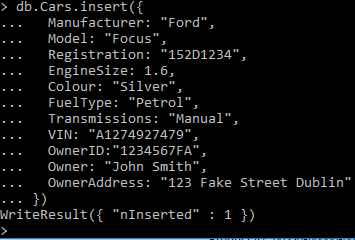
## Vision:

## Creating the Database:

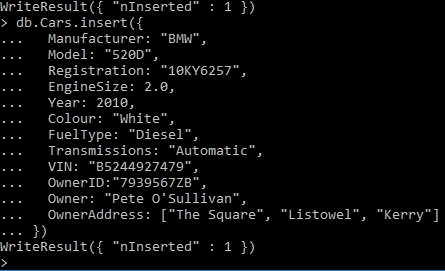
To create the Database, the same command is used as to connect to it



Creating a collection is also uses the same command as is used to add a document to a collection



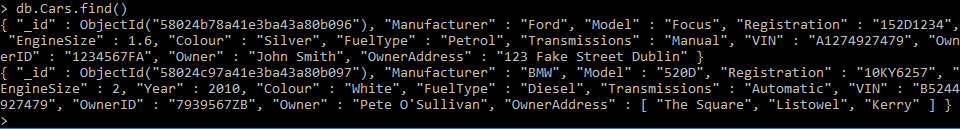
I inserted another document but instead of having a single string for address I created a array



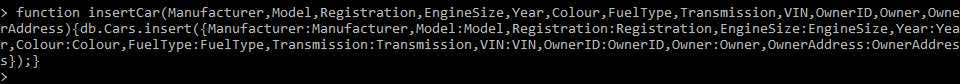
To view all collections in the database just use the simple command – “show collections”



To view all the documents in a collection



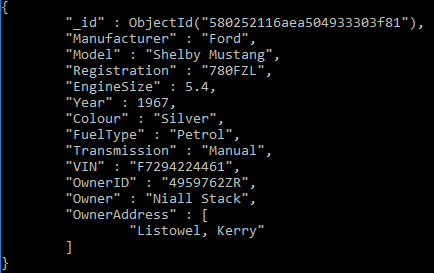
MongoDB allows for functions to be created that can speed up the population process



Using this function I can add a document to the collection with a more simplified insert



Which could then be seen in the collection



## Reading From the Database:

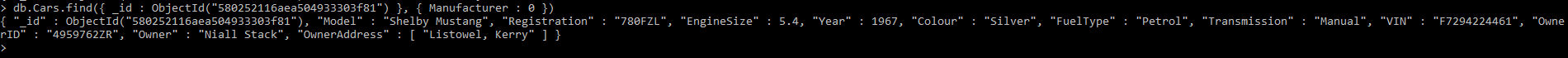
To make it easier to read add .pretty()



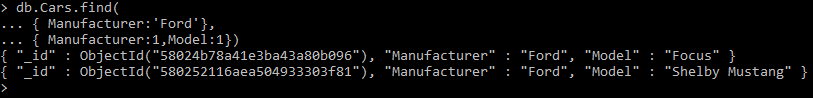
It is also possible to just view one field with the ID by setting it to one



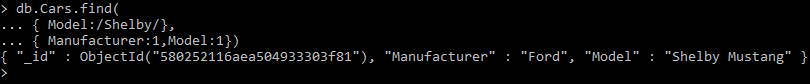
Then by turning changing it to zero you get all fields except that one



You can also search for exact values



Also by partial values

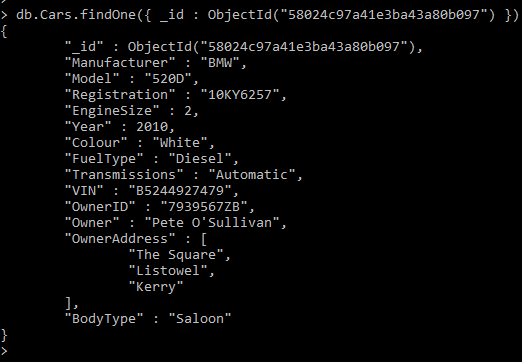


## Updating the Database

In Mongo it is simply to update an existing document for example by adding a field



We can check this with the findOne command



Not only can we use $set we can use $inc to increment a number, like the year

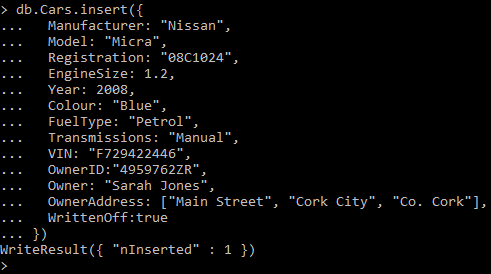


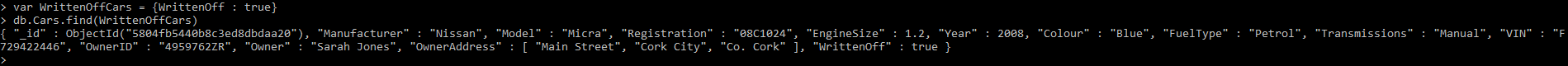
You can do many other operations with the update directives even removing with unset which I used after accidently creating a field called 2010 when I was meant to increment the Year



## Deleting from the Database

To delete a document from mongo there is a simple remove() function but we can use an $elemMatch to search for certain queries and then remove them based on that. For this I decided to add a field about if a car was written off in a crash when I added a new vehicle



I then created a WrittenOffCars variable that I saved all cars where the field WrittenOff = true

Then to remove all cars that are written off I did the following

