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Innovation.doc

The major innovation for this module is consolidation the entire project submission into a code friendly markup language driven document that is context sensitive to MySQL, mongoDB, JSON and python code syntax. The stylesheets behind the documenting system was customized to include JSON and MongoDB support and matching syntax color set in the style sheets behind the code using knowledge gained from the Web development module for this semester.

The document is generated in HTML, exported as PDF using stylesheets for export and converted into a word document for reference an portability. See the Two documents attached for the project.

Python code related innovations.

Some minor innovation were applied to the python code part of the project.

The first part is in the men code barely noticeable except if the queries are slow to execute.

The message will be displayed "Running query, please wait" and on completion of the query the line will be erase and replace with a new message, for example "View 15 cities". This is achieved by applying two parameters to the print statement.

```
print('\rrunning query, please wait ..... ',end='')
result = mysql_query(query)
print('\rView 15 Cities                ')
```

This ocde above causes the firts message to be displayed as long as the query rungs and raplaces that with the second message when the query completes.

The second innovation in the python code is the printing of all the query results in Ascii tabular format similar to the native output formats for MySQL. This output format is applied for both MySQL as well as mongoDB tables.

View 15 Cities

ID	Name	CountryCode	District	Population	latitude	longitude
1	Kabul	AFG	Kabol	1780000	None	None
2	Qandahar	AFG	Qandahar	237500	None	None
3	Herat	AFG	Herat	186800	None	None
4	Mazar-e-Sharif	AFG	Balkh	127800	None	None
5	Amsterdam	NLD	Noord-Holland	731200	None	None
6	Rotterdam	NLD	Zuid-Holland	593321	None	None
7	Haag	NLD	Zuid-Holland	440900	None	None
8	Utrecht	NLD	Utrecht	234323	None	None
9	Eindhoven	NLD	Noord-Brabant	201843	None	None
10	Tilburg	NLD	Noord-Brabant	193238	None	None
11	Groningen	NLD	Groningen	172701	None	None
12	Breda	NLD	Noord-Brabant	160398	None	None
13	Apeldoorn	NLD	Gelderland	153491	None	None
14	Nijmegen	NLD	Gelderland	152463	None	None
15	Enschede	NLD	Overijssel	149544	None	None

Press space to continue ...

Car by enginesize

_id	car_reg	car_engineSize	addresses
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```
+-----+-----+-----+
| 1.0 | 191-G-123 | 1.5 | | ['G', 'WH'] |
| 2.0 | 11-LM-988 | 1.3 | | ['LM'] |
| 3.0 | 142-G-28 | 1.0 | | ['MO', 'G', 'WH'] |
| 6.0 | 152-MO-134 | 1.5 | | ['MO'] |
| 5.0 | 05-D-1234 | 1.4 | | ['D', 'G'] |
| 7 | 99-D-69674 | 1.0 | | |
| 9 | 09-WW-5475957 | 1.8 | | |
+-----+-----+-----+
Press space to continue ...
```

Input data entered by users are optimised and checked where possible, capitalised and for example when a car reg is entered in lower case without dashes they're capitalised and dashes added.

I also added function "c" to check for dependant modules required to run the code. So if any of the include libraries are not installed they will be highlighted as missing.

Last update: **2019/05/11 10:45**