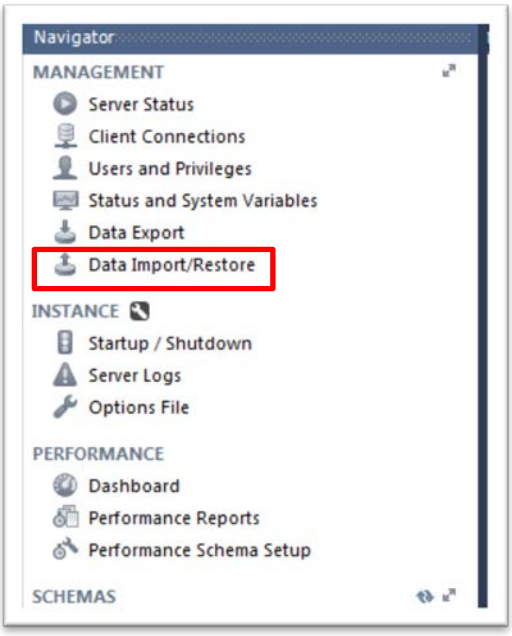
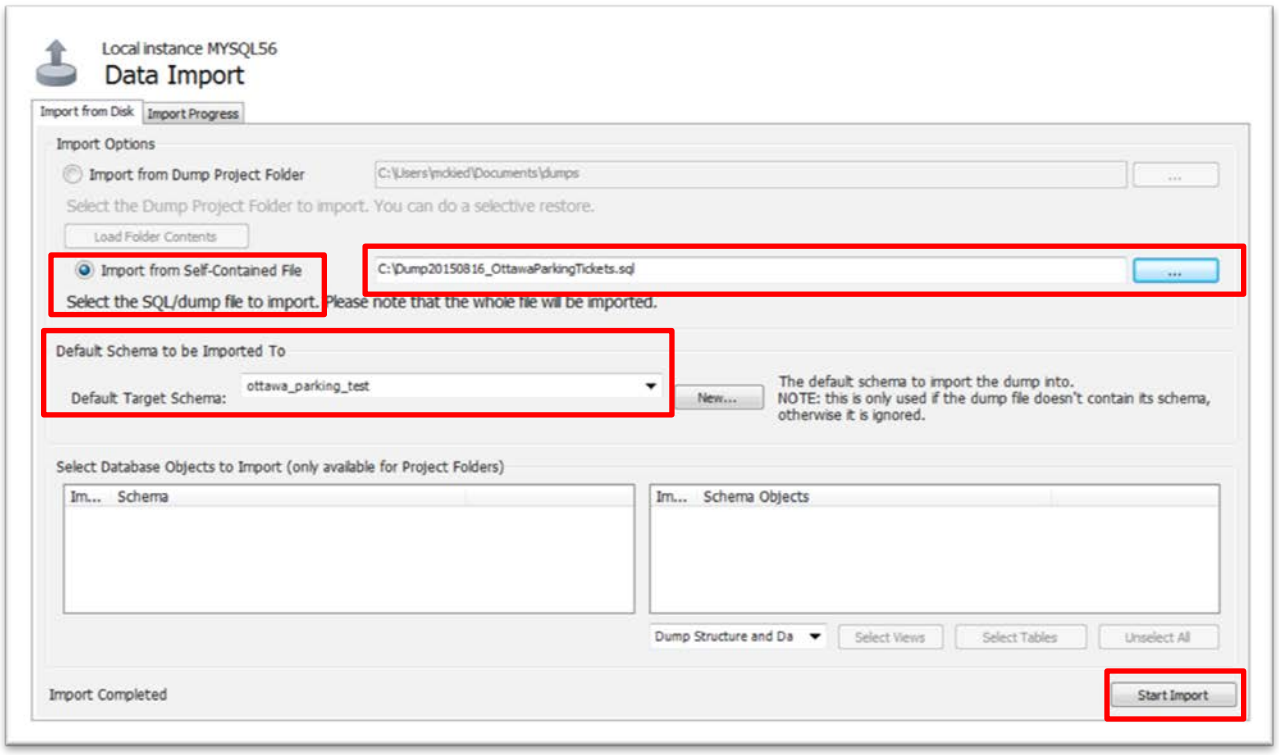
Tips working with the city of Ottawa parking ticket data

1) The parking ticket data have been loaded as six slightly-cleaned-up, separate tables from 2010 to June 8, 2015
2) As we in the second tutorial working with the city of Ottawa's restaurant inspection tables, we created a view to make queries more efficient.
3) All told, the total number of records for each year comes in at just under two million.
4) To make it easier, you'll be able to download the MySQL file that already contains the six tables and the view. You can download the zipped folder that contains the MySQL file by clicking here.
5) Create a schema for the file you're about the import.
6) Save the zipped file to an easily accessible folder, extract it, and use MySQL Workbench's "Data Import/Restore" option to retrieve your data.

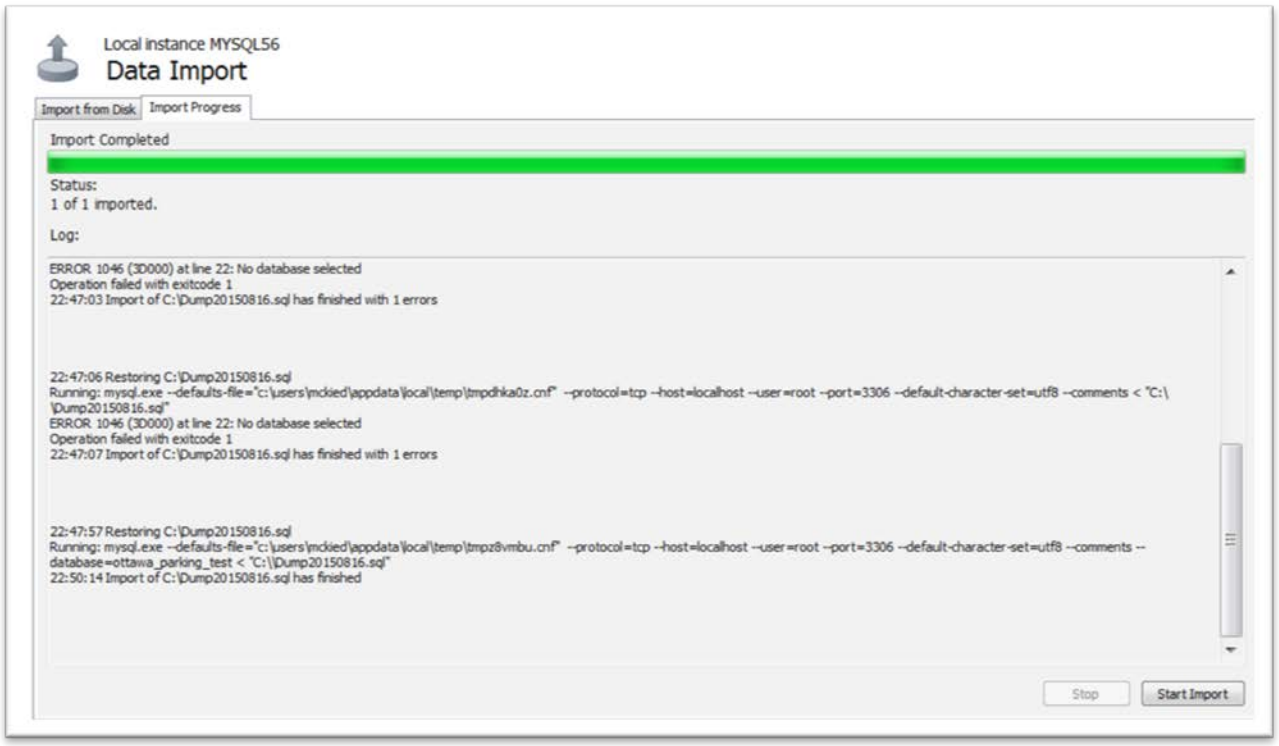


7) Selecting the import option produces “Data Import” dialog box.



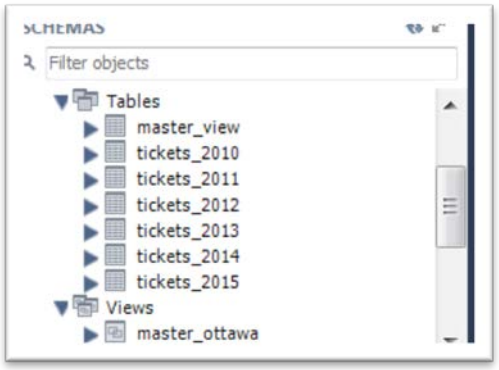
8) Select the radio button to the left of “Import from Self-Contained File”.
9) Browse for the sql file you’ve exported and saved from the zip folder, which you can see highlighted in red to the right in the screen shot above.
10) Be sure that your “Default Target Schema” is the one that you created in step five and wait for a few minutes while MySQL imports the file.

11) Once it is completed, your dialog box should look like this.



12) You might have to refresh your schema to see the tables.

13) Your schema should look like this.



14) To make querying all the tables easier, simply use the view, as we did in the second restaurant tutorial.

15) The first thing you should do is get a look at the records in the view, but don't load all the contents, just the first 100 rows, and order the Date field in descending order to obtain the most

recent records.

```
6  select *
7  from master_ottawa
8  order by Issue_Date desc
9  limit 100;
10
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id_Column	Issue_No	Issue_Date	Issue_Time	Agency	Officer_Badge	Beat	VIOCode	VIODescr
147418	H0768727	2015-06-08	10:24:00	PARKING CONTROL	440	13	2003-530 21 (B)	PARK IN F
147419	H0768729	2015-06-08	10:37:00	PARKING CONTROL	440	13	2003-530 21 (B)	PARK IN F
147420	H0768726	2015-06-08	10:19:00	PARKING CONTROL	440	13	2003-530 21 (D)	PARK IN F
147421	H0768728	2015-06-08	10:30:00	PARKING CONTROL	440	13	2003-530 21 (D)	PARK IN F
147422	H0746913	2015-06-08	10:12:00	PARKING CONTROL	117	19D	2003-530 10	PARK IN N
147423	H9313595	2015-06-08	00:20:00	RESPONSE SECURITY	5398		2003-530 112	UNAUTHC
147424	H9313596	2015-06-08	00:53:00	RESPONSE SECURITY	5398		2003-530 112	UNAUTHC
147425	H9313597	2015-06-08	01:12:00	RESPONSE SECURITY	5398		2003-530 112	UNAUTHC
147426	H9313598	2015-06-08	03:52:00	RESPONSE SECURITY	5398		2003-530 112	UNAUTHC

16) The key fields for analyzing could be the “Agency” that handed out the ticket. So click in the “Agency” label to sort the names in descending order.

```
5
6  select *
7  from master_ottawa
8  order by Issue_Date desc
9  limit 100;
10
11 select *
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

id_Column	Issue_No	Issue_Date	Issue_Time	Agency	Officer_Badge	Beat	VIOCode	VIODescr
147498	H9148197	2015-06-08	09:15:00	LA CITE COLLEGIALE	5306		2003-530 112	UNAUTHC
147499	H9148198	2015-06-08	09:17:00	LA CITE COLLEGIALE	5306		2003-530 112	UNAUTHC
147500	H9148199	2015-06-08	09:22:00	LA CITE COLLEGIALE	5306		2003-530 112	UNAUTHC
147501	H9148400	2015-06-08	09:23:00	LA CITE COLLEGIALE	5306		2003-530 112	UNAUTHC
147502	H9148401	2015-06-08	09:41:00	LA CITE COLLEGIALE	5306		2003-530 112	UNAUTHC

La Cite Collegiale pops to the top, suggesting that this column could tell us the number of parking tickets at La Cite Collegiale, Algonquin College, Carleton University and the University of Ottawa. Performing GROUP BY query which filters for those four institutions might yield interesting information about the sheer numbers of tickets handed out at colleges and universities every

year.

```
17
18 • select year(Issue_Date) as Year,
19   format(count(id_Column),0) as NumberOfTickets,
20   format(sum(total_fines_and_fees),0)
21   from master_ottawa
22   where Agency like '%La Cite Collegiale%'
23   or Agency like'%Carleton Parking%'
24   or Agency like'% Univeristy of Ottawa%'
25   or Agency like'%Algonquin College%'
26   group by Year
27   order by NumberOfTickets desc;
```

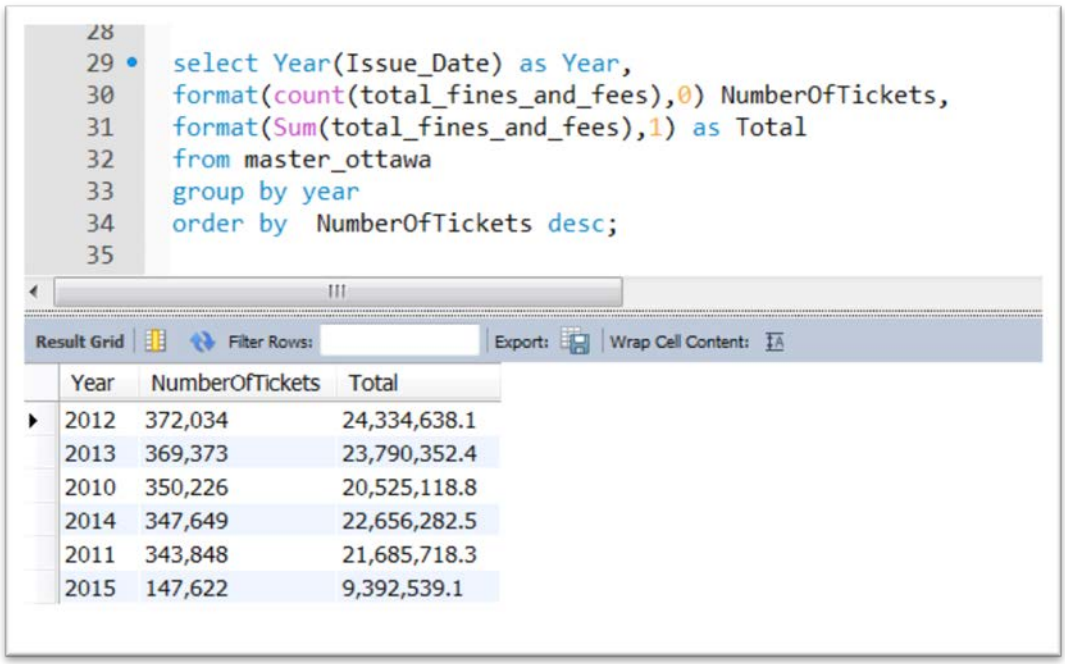
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Year	NumberOfTickets	format(sum(total_fines_and_fees),0)
2011	7,619	534,174
2015	6,165	413,734
2010	5,452	400,873
2013	13,972	1,005,338
2014	13,723	988,254
2012	12,686	937,273

17) Another interesting field is the “VIODescription”, short for violation description. Performing a GROUP query by year, and then filtering for certain violations could also produce interesting results.

18) In order to determine the sheer number and cost of tickets issued each year, we could count the ID numbers in the select statement, use the “Year” function to pull the year out of the “Issue_Date” field, and SUM the values in the “total_fines_and_fees” column. To make the table easier to read, be sure to give the two fields aliases. After specifying that you want the fields from the “master_ottawa” view, you could group

the year.



```
28
29 • select Year(Issue_Date) as Year,
30   format(count(total_fines_and_fees),0) NumberOfTickets,
31   format(Sum(total_fines_and_fees),1) as Total
32   from master_ottawa
33   group by year
34   order by  NumberOfTickets desc;
35
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Year	NumberOfTickets	Total
2012	372,034	24,334,638.1
2013	369,373	23,790,352.4
2010	350,226	20,525,118.8
2014	347,649	22,656,282.5
2011	343,848	21,685,718.3
2015	147,622	9,392,539.1

19) The four address fields (“Street”, “a_between”, “a_and”, “side_of_street”) are also good places to mine. At step 21 of the second Ottawa restaurant inspections data tutorial, we used the concatenation function to combine columns.

20) In this tutorial, we would use the In the select statement, to choose the following fields: “Issue_Date”, “concat_ws(‘,’,Street,’between’,a_between,’and’,a_and,’and’,side_of_street’”), “total_fines_and_fees” as fines, “VIODescription. Select from the “master_ottawa” view, and order the fines by fines. Feel free to give aliases to the awkwardly named fields like the new fields that is concatenated, as we have done in this query. AND LIMIT THE NUMBER OF ROWS IN THE QUERY TO 1000, either using the “Limit 1000” query at the end of your select statement, or selecting some of the limiting options from the “Don’t Limit” box the centre of the icons just under the browser tabs. If you don’t limit the number of rows, it will take too long to

load nearly two million records. This query might take a few minutes. So be patient.

```
36 • select Issue_Date,
37   concat_ws(' ',Street,'between',a_between,'and',a_and,'and',side_of_street) Address,
38   total_fines_and_fees as fines, VIODescription
39   from master_ottawa
40   order by fines desc
41   limit 1000;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Issue_Date	Address	fines	VIODescription
2012-06-09	2231 WALKLEY RD between and and	98.5	PARKED IN A DESIGNATED FIRE ROUTE
2012-09-23	GLADSTONE AVE between BANK ST and O'CONNOR ST and S	98.5	STOP IN A BUS ZONE
2013-06-08	1725 AMBROSE ST between and and	98.5	UNAUTHORIZED PARKING ON PRIVATE PROPERTY
2014-01-19	4266 CARVER PLACE between and and	98.5	PARKED IN A DESIGNATED FIRE ROUTE
2010-02-12	DELAWARE AVE between CARTIER ST and QUEEN ELIZABETH DR and SS	97.75	STOP ON SIDEWALK
2010-03-25	IN FRONT OF 196 OSGOODE ST between and and	97.75	STOP OVER SIDEWALK
2010-04-29	ST. PATRICK ST between ISLAND LODGE RD and FORSEY ST and N	97.75	STOP ON OUTER BOULEVARD
2010-05-11	HAZEL ST between GLENORA ST and MAIN ST and S	97.75	STOP VEHICLE ON HIGHWAY - OBSTRUCT
2010-05-27	MORISSET AVE between CALDWELL AVE and MERIVALE RD and N	97.75	STOP ON SIDEWALK
2011-03-03	NORMAN ST between PRESTON ST and DEAD END and S	97.75	STOP VEHICLE ON HIGHWAY - OBSTRUCT
2012-01-14	BAY ST between MACLAREN ST and GILMOUR ST and W	97.75	PARK BETWEEN 1:00 A.M. AND 7:00 A.M.
2012-01-14	WOODMOUNT CRES between CHESTERTON DR and CHESTERTON DR a...	97.75	PARK BETWEEN 1:00 A.M. AND 7:00 A.M.
2012-01-14	CHARLOTTE ST between LAFRAMBOISE PL and CLARENCE ST and E	97.75	PARK BETWEEN 1:00 A.M. AND 7:00 A.M.
2012-01-14	ROTHBURY CRES between PROVENDER AVE and PROVENDER AVE and	97.75	PARK BETWEEN 1:00 A.M. AND 7:00 A.M.
2012-01-18	ACROSS FROM 412 STATEWOOD DR between and and	97.75	PARK BETWEEN 1:00 A.M. AND 7:00 A.M.

Result Grid | Form Editor | Field Types | Query Stats | Execution Plan

21) These are just a sampling of the queries you can perform. Use the previous tutorials and the book to get more ideas.

22) Be sure to save all your working queries in one browser, allowing you to go back and forth.

23) You can also save the queries we've used for this tutorial, by right clicking here.