



Access 2021 In Practice - Ch 3 Independent Project 3-5



Independent Project 3-5

The New York Department of Motor Vehicles wants to create four queries. The first query provides summary data on the number of tickets by city and violation. The second query summarizes the total tickets by violation. The third query provides summary data for the total fines assessed against each driver who has had a ticket. Use *Design* view to create the summary queries. Edit these queries to add fields, aggregate functions, and sorting. Save and run the queries. Finally, create a crosstab query to count the number of tickets by primary factor in each city. To ensure consistency, the starting file is provided for you.

[Student Learning Outcomes 3.2, 3.4, 3.8, 3.9]

File Needed: **NewYorkDMV-03.accdb** (Available from the Start File link.)

Completed Project File Name: **[First Name.Last Name]-NewYorkDMV-03.accdb**

Skills Covered in This Project

- Create a summary query in *Design* view.
- Edit a query in *Design* view.
- Add fields to a query.
- Execute a query.
- Save a query.
- Sort query results.
- Add aggregate functions.
- Create a crosstab query.

Steps to complete This Project

Mark the steps as checked when you complete them.

1. ☐ Open the **NewYorkDMV-03.accdb** database start file.
2. ☐ The file will be renamed automatically to include your name. Change the project file name if directed to do so by your instructor.
3. ☐ Enable content in the database.
4. Create a new summary query in *Design* view. The query counts the number of tickets issued by city and violation.
 - a. ☐ Add the *Tickets* table into the *Query Design* window.
 - b. ☐ Increase the size of the table object to display all of the fields.
 - c. ☐ Add the following fields into the query: **City**, **PrimaryFactor**, and **TicketNumber**.
 - d. ☐ Add the **Total** row to the query.
 - e. ☐ **Group By** the *City* and *PrimaryFactor* fields and **Count** the *TicketNumber* field.
5. ☐ Save the query as **TicketCountByCityAndFactor**.
6. ☐ Run the query. The datasheet should display 22 records.
7. ☐ Adjust the field column widths using **AutoFit** or **Best Fit**. The datasheet should be similar to Figure 3-116.
8. ☐ Save the changes to the query.
9. ☐ Save a copy of the query as **TicketCountByFactor**.



10. Edit the *TicketCountByFactor* query in *Design* view. The query should show the total ticket issued for each violation factor, sorted in descending order by count.

- ☐ Delete the *City* field.
- ☐ Sort the *TicketNumber* field in descending order.

11. ☐ Save and run the query. The datasheet should match Figure 3-117.

12. ☐ Close the query.

13. Create a new summary query in *Design* view. The query provides summary data on the total fines assessed against each driver.

- ☐ Add both tables into the *Query Design* window.
- ☐ Increase the size of the table objects to display all of the fields.
- ☐ Add the following fields into the query: **LicenseNumber**, **FirstName**, **LastName**, **Fine**, and **TicketNumber**.
- ☐ Add the **Total** row to the query.
- ☐ **Group By** the *LicenseNumber*, *FirstName*, and *LastName* fields, **Sum** the *Fine* field and **Count** the *TicketNumber* field.
- ☐ Sort the *Fine* field in descending order.

14. ☐ Save the query as **TicketsByDriver**.

15. ☐ Run the query. The datasheet should display 23 drivers who have received tickets, sorted in descending order by the total dollar amount of their fines (Figure 3-118).

16. ☐ Close the query.

17. Create a crosstab query to count the number of tickets by city and primary factor.

- ☐ Launch the *Query Wizard*, select **Crosstab Query Wizard** and click **OK**. Refer back to *SLO 3.9: Understanding and Building a Crosstab Query* if you need additional guidance.
- ☐ Select the **Tickets** table, on the first page of the wizard, because that contains the data you want to summarize.
- ☐ Move the **PrimaryFactor** field to the *Selected Fields* window, on the second page of the wizard, to use as the row headings.
- ☐ Select the **City** field, on the third page of the wizard, to use as the column headings.
- ☐ Select the **TicketNumber** field and the **Count** aggregate function, on the fourth page of the wizard. Leave the *Yes, include row sums* check box selected.
- ☐ Enter **TicketsFactorCityCrosstab** as the query name on the last page of the wizard. Click **Finish** to execute the query. The results should match those shown in Figure 3-119.

City	PrimaryFactor	CountOfTicketNumber
Albany	Alcohol	1
Albany	Passing/Lane Violations	1
Albany	Turning Improperly	2
Albany	Unsafe Speed	3
Buffalo	Alcohol	1
Buffalo	Unsafe Speed	3
New York	Alcohol	1
New York	Passing/Lane Violations	1
New York	Unsafe Speed	3
Syracuse	Alcohol	2
Syracuse	Driver Distraction	1
Syracuse	Traffic Control Disregarded	1
Syracuse	Turning Improperly	1
Syracuse	Unsafe Speed	1
Utica	Expired Registration	1
Utica	Failure to Keep Right	1
Utica	Improper Equipment	1
Utica	Passing/Lane Violations	1
Utica	Turning Improperly	2
Utica	Unsafe Speed	7
Yonkers	Alcohol	5
Yonkers	Traffic Control Disregarded	1

Figure 3-116 Summary query results counting tickets by city and factor

PrimaryFactor	CountOfTicketNumber
Unsafe Speed	17
Alcohol	10
Turning Improperly	5
Passing/Lane Violations	3
Traffic Control Disregarded	2
Improper Equipment	1
Failure to Keep Right	1
Expired Registration	1
Driver Distraction	1

Figure 3-117 Summary query results counting tickets by factor

LicenseNumber	FirstName	LastName	SumOfFine	CountOfTicketNumber
15500786	Brian	Shin	\$1,040.00	4
12348692	Michael	Finch	\$845.00	3
10004387	Miranda	Jones	\$800.00	2
15503625	Corey	Norman	\$800.00	2
39989780	Kevin	Nguyen	\$625.00	4
12389049	Bonnie	Hirshman	\$530.00	2
12344537	Austin	Davis	\$520.00	2
12348279	Sharon	Altier	\$495.00	3
39998181	Ellie	Nassiri	\$400.00	1
10001422	Ricardo	Juarez	\$345.00	3
39992366	Mark	Watson	\$180.00	1
39998182	Susanna	Orga	\$175.00	2
12346123	Claudia	Schooler	\$150.00	1
10003086	Wayne	Moreno	\$120.00	1
12345838	Eric	Wilson	\$120.00	1
18957217	Jessica	Healy	\$105.00	2
18955806	Nancy	Smith	\$90.00	1
12394163	Jake	Harvey	\$90.00	1
12388795	Caroline	Doiron	\$90.00	1
15500914	Michelle	Taylor	\$90.00	1
10004372	Caterina	Malek	\$90.00	1
12345678	Emily	Garcia	\$60.00	1
10001786	Rosie	Hendrick	\$60.00	1

Figure 3-118 Summary query results of tickets by driver

PrimaryFactor	Total Of TicketNumber	Albany	Buffalo	New York	Syracuse	Utica	Yonkers
Alcohol	10	1	1	1	2		5
Driver Distraction	1				1		
Expired Registration	1					1	
Failure to Keep Right	1					1	
Improper Equipment	1					1	
Passing/Lane Violations	3	1		1		1	
Traffic Control Disregarded	2				1		1
Turning Improperly	5	2			1	2	
Unsafe Speed	17	3	3	3	1	7	

Figure 3-119 Crosstab query results showing tickets by primary factor in each city, including row sums

- ☐ Save and close the query.

18. ☐ Close the database.

19. ☐ Upload and save your project file.

20. ☐ Submit project for grading.

