Database Query

Problem: Querying an Access database.

1. Download the Begon Pest Control database from the web and save it in your “My Documents” folder then double click it to open it.

Displaying records from the tables
2. Create a new Select Query by selecting the Queries object and then double click on Create query in Design view.
3. In the Show Table window, select the Customer table and click the Add button. Then click the Close button.
4. In the Select Query window, click on the Field row in the first column, click the down arrow, and then select the Customer.* field.

5. Click on the Run button to execute the query. You have just created a query that retrieves all of the records and displays all of the fields from the Customer table. The asterisk (*) in the field name means everything, in this case, it means to display all of the fields in the customer table. Compare this with the Customer table and you should see that all of the data are the same.

6. Click on the Design view button to modify the query.
7. Instead of displaying all of the fields from the Customer table, display only the Customer Number, Name, and Technician Number. You do this by selecting the field that you want to display in the Field row; one field name per column as shown below. Make sure that there is a green check mark in the Show box for that column. Click on the Run button again to see the result.
8. If you want to see only the top 5 records, you can click on the top values from the tool bar and select 5. You will see this selection only from the design view. Remember to click the Run button after each change. This will only show the first five records. When you have seen it, change back to All.

Searching for matching data
9. If you want to see only the clients whose technician number is 210 then type “210” in the Criteria row under the Technician Number column. Click Run. Compare the result from this query with the data in the Customer table to make sure that it is correct. There should be 5 records.

- If you put more than one condition in different columns but in the same Criteria row, then the conditions are ANDed together, i.e., all of the conditions has to be true for a match. If you put more than one condition on different Criteria rows, then the conditions are ORed together, i.e., only one of the condition has to be true for a match.

10. Modify the query so that it will only show the client records whose technician number is 210 AND their city is Kady. Compare the result from this query with the data in the Customer table to make sure that it is correct. There should be 3 records.

11. Modify the query so that it will only show the client records whose technician number is 210 OR their city is Kady. Compare the result from this query with the data in the Customer table to make sure that it is correct. There should be 6 records.

12. Modify the query so that it will find ONLY those clients who have an address on Fletcher. Use the * symbol for the wildcard character, i.e., type *Fletcher in the criteria field.

Modifying the data in the tables

13. Lets say that technician number 214 left the company and all his clients are given to technician 203, so we need to change all of the records for technician number from 214 to 203. Before you actually perform an update query, first look at the Customer table and note the records whose technician number is 214.

14. Select Query from the menu and select Update Query. Under the Technician Number column, type 214 for the Criteria, and type 203 for the Update To information. This will tell Access to search for all records with the Technician Number equal to 214 and change it to 203. Click the Run button. Access will display a message about the update. Click Yes to perform the change.

15. Now go look at the Customer table again and see that all the 214’s have been changed to 203.

16. Create a new Update Query that will change all of the customer balance from $0 to $134. Make sure that you run this query. After you have executed the query, go look at the Customer table to make sure that the changes were made correctly.

Creating queries for reports

17. Create a new Select Query with the Customer table join with the Technician table via the Technician Number. Add the Technician Number, First Name and Last Name fields from the Technician table, and the Customer Number, Name, Address and Balance fields from the Customer table. Display only those customers whose balance is < 350 OR the address is on Fletcher. Sort the records in ascending order by Customer Number. Save this query as “Query 2”.

18. Create a report based on Query 2 that you have saved in the previous step. Select just the Technician Number for the Grouping Level in the Report Wizard. After the Wizard exits, go to report design and move the Technician’s First and Last name data fields up into the Technician Number section. Your report should look similar to the following. (Note that yours will have a few more records.) Print this report out to turn in.
19. Create a Crosstab Query as follows.

- Do Insert | Query.
- In the New Query window, select Crosstab Query Wizard.
- Select the Customer table, and click Next.
- For the row heading, select City. Click Next.
- For the column heading, select Technician Number. Click Next.
- For the calculation, select field Balance and function Sum.
- The result from the query should look something similar to the following. Do you know why your result is different from this sample?\(^1\)

<table>
<thead>
<tr>
<th>Technician</th>
<th>Customer Name</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>Miguel Estevaz</td>
<td>$134.00</td>
</tr>
<tr>
<td></td>
<td>PV63 Prime Video</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MC10 Moss Carpet</td>
<td>$388.00</td>
</tr>
<tr>
<td></td>
<td>CJ45 C Joe Diner</td>
<td>$134.00</td>
</tr>
<tr>
<td>210</td>
<td>Rachel Hillsdale</td>
<td>$290.00</td>
</tr>
<tr>
<td></td>
<td>BL35 Blanton Sho</td>
<td></td>
</tr>
</tbody>
</table>

- Save the query as Query 3.
- Create a report based on Query 3. Put the title of the report as “Lab 13 Report 2” and put your name on the report similar to the last report.
- **Print this report out to turn in.**

\(^1\) Because you changed all the 214’s to 203’s.