

Concepts Review

True/False Questions

Each of the following statements is either true or false. Indicate your choice by circling T or F.

- T F 1. A lookup field lets you select a value from a list instead of keying the value.
- T F 2. When you clear the Relationships window, you also delete the relationships.
- T F 3. The set of database rules for relationships is known as validating norms.
- T F 4. A subdatasheet is a datasheet linked within another datasheet containing related data.
- T F 5. Values in a lookup field are always listed in ascending order.
- T F 6. Deleting the join line between two field lists in the Relationships window deletes the corresponding tables.
- T F 7. The Relationships window can display more than one relationship at a time.
- T F 8. Normalization is the process of restructuring a relational database for the purposes of organizing data efficiently, eliminating field redundancy, and improving data consistency.

Short Answer Questions

Write the correct answer in the space provided.

1. What graphic represents the relationship between two tables in the Relationships window?

2. How do you delete a relationship in the Relationships window?

3. When the common field is a primary key in one table, what does it become in the other table?

4. In a One-To-Many relationship with referential integrity, how can you identify the table on the “many” side of the relationship?

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5. Referential integrity cannot be set for what type of relationship?

6. What type of lookup field can store more than one value per record?

7. What analyzing tool provides recommendations for restructuring a relational database for the purposes of organizing data efficiently, eliminating field redundancy, and improving data consistency?

8. What is an association placed upon an object requiring the existence of another object known as?

Critical Thinking



Answer these questions on a separate page. There are no right or wrong answers. Support your answers with examples from your own experience, if possible.

1. The One-To-Many relationship is the most commonly used relationship in business databases. Why do you think this is true?
2. Multi-valued lookup fields can be very useful for most types of data; however, some fields should not have more than one value. When shouldn't a field contain more than one value?

Skills Review





Exercise 5-18

Create a relationship in the Relationships window. Print a Relationship report.

1. Open a database by following these steps:
 - a. Locate and open the **Lesson 05** folder.
 - b. Make a copy of **CC05** and rename it to *[your initials]-CC05*.
 - c. Open and enable content for *[your initials]-CC05*.
2. Create a relationship by following these steps:
 - a. From the **Database Tools** tab, in the **Show/Hide** group, click the Relationships command .
 - b. From the **Design** tab, in the **Tools** group, click the Clear Layout command . Click **Yes** to save the changes.







- c. From the **Design** tab, in the **Relationships** group, click the Show Table command .
 - d. From the **Show Table** dialog box, double-click **tblStuffedAnimals** and **tblInvoiceLineItems**.
 - e. Click **Close**.
 - f. Resize the field lists so you can see every field.
 - g. From the **tblStuffedAnimals** field list, click and drag the **ProductID** field to the **ProductID** field in the **tblInvoiceLineItems** field list.
 - h. In the **Edit Relationships** dialog box, click **Create**.
3. Print/Save the Relationship report by following these steps:
 - a. From the **Design** tab, in the **Tools** group, click the Relationship Report command .
 - b. From the **Print Preview** tab, in the **Page Layout** group, click **Margins** and choose the Wide command  from the menu.
 - c. Save the report as **05-18-03d**, and click the Close button .
 - d. Print/Save the report **05-18-03d**.
 - e. Close the report
 - f. Close the Relationships window.



Exercise 5-19

Insert a subdatasheet. Modify a relationship to include Referential Integrity.

1. Insert a subdatasheet by following these steps:
 - a. Open and enable content for **[your initials]-CC05**.
 - b. Open **tblStuffedAnimals** in Datasheet View.
 - c. From the **Home** tab, in the **Records** group, click **More**. Choose **Subdatasheet**, then **Subdatasheet** from the menu.
 - d. From the list, select **tblKitAssembly** with the **Child** and **Master** fields **ProductID**.
 - e. Click **OK**. Click **Yes** to create a new relationship.
 - f. Close the table, and save the changes.
2. Set Enforce Referential Integrity by following these steps:
 - a. From the **Database Tools** tab, in the **Show/Hide** group, click the Relationships command .
 - b. From the **Design** tab, in the **Tools** group, click the Clear Layout command .
 - c. Click **Yes** to confirm the change.
 - d. From the Navigation Pane, click and drag the tables **tblStuffedAnimals** and **tblKitAssembly** into the Relationships window.
 - e. Resize the field lists so you can see all field names.



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f. Right-click the sloping part of the join line between **tblStuffedAnimals** and **tblKitAssembly**. Choose **Edit Relationships**.

g. Click the check box to select **Enforce Referential Integrity** and click **OK**.




h. From the Quick Access Toolbar, click the Save button .

i. Close the Relationships window.

3. Print/Save the Database Documenter by following these steps:



a. From the **Database Tools** tab, in the **Analyze** group, click the Database Documenter command .


b. From the **Documenter** dialog box, click the **tblStuffedAnimals** check box.

c. Click **Options**.

d. Only include **Properties** and **Relationships** for tables and nothing else. Click **OK**.

e. Click **OK** to go to Print Preview.



f. From the **Print Preview** tab, in the **Page Layout** group, click **Margins** and choose the Wide command  from the menu.

g. Print/Save the report.



h. Close Print Preview.


Exercise 5-20

Create and use a lookup field. Print a Relationship report. Identify Object Dependency.

1. Delete a relationship by following these steps:

a. Open and enable content for *[your initials]-CC05*.



b. From the **Database Tools** tab, in the **Show/Hide** group, click the Relationships command .



c. From the **Design** tab, in the **Relationships** group, click the Show Table command .


d. From the **Show Table** dialog box, double-click **tblAssets** and **tblServiceRecords**. Click **Close**.

e. If there is no join line between **tblAssets** and **tblServiceRecords**, skip to step 1h.

f. Right-click the join line between the two tables and choose **Delete**.

g. Click **Yes** to verify the deletion of the relationship.



h. From the **Design** tab, in the **Relationships** group, click the Close command .


i. Click **No** to discard the layout changes.

j. Open **tblServiceRecords** in Datasheet View, and select the field **Asset**.




k. Press **Delete**. Click **Yes** twice to verify the field deletion.

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


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2. Create a lookup field by following these steps:
 - a. Select the field **Service Date**.
 - b. From the **Datasheet** tab, in the **Fields & Columns** group, click the **Lookup Column** command .
 - c. In the **Lookup Wizard** dialog box, click **Next**.
 - d. From the list of tables, select **Table: tblAssets** and click **Next**.
 - e. In the **Available Fields** area, double-click **AssetID**, **AssetNum**, and **AssetName**.
 - f. Click **Next**. Click the drop-down arrow and choose **AssetName**.
 - g. Click **Next**. Resize the **Asset ID** and **Asset Name** columns so all data can be seen.
 - h. Click **Next**. Name the field **Asset Name**.
 - i. Click **Finish**.








3. Add data using a lookup field by following these steps:
 - a. For the **Asset Name** field in the first record, click the drop-down arrow and choose **DC307**.
 - b. Press . Click the drop-down arrow and choose **CD701**.
 - c. Press . Click the drop-down arrow and choose **CP303**.
 - d. Press . Click the drop-down arrow and choose **LP201**.
 - e. Close the table.

4. Print/Save a datasheet by following these steps:

- a. Click the Office Button . From the **Print** option, choose **Print Preview** .
- b. From the **Print Preview** tab, in the **Page Layout** group, click the **Landscape** command .
- c. From the **Print Preview** tab, in the **Page Layout** group, click **Margins** and choose the **Wide** command  from the menu.
- d. Print/Save the table.
- e. Close **Print Preview** and the table.

5. Print/Save a relationship by following these steps:


- a. From the **Database Tools** tab, in the **Show/Hide** group, click the **Relationships** command .
- b. From the **Design** tab, in the **Tools** group, click the **Clear Layout** command .
- c. From the **Navigation Pane**, click and drag the tables **tblServiceRecords** and **tblAssets** into the **Relationships** window.
- d. Resize the field lists so you can see all field names.
- e. From the **Design** tab, in the **Tools** group, click the **Relationship Report** command .
- f. From the **Print Preview** tab, in the **Page Layout** group, click **Margins** and choose the **Wide** command  from the menu.
- g. Save the report as **05-20-05e** and click the **Close** button .
- h. Print/Save the report **05-20-05e**.
- i. Close the report and the **Relationships** window.



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6. Identify Object Dependency by following these steps:




- a. Select **tblServiceRecords**.
- b. From the **Database Tools** tab, in the **Show/Hide** group, click the Object Dependencies command .
- c. Create a Word document called **[your initials]-Skills-05-20**, and record the answers to the following questions:
- d. Select **Objects that depend on me**. What objects depend on **tblServiceRecords**?
- e. Select **Objects that I depend on**. On what objects does **tblServiceRecords** depend?
- f. Include your name, class information, and today's date on your answer sheet.
- g. Close the Object Dependency Pane.



7. Print/Save the Word file **[your initials]-Skills-05-20**.

Exercise 5-21










Create and use a lookup field. Print/Save a relationship. Analyze performance of a table.

1. Create a lookup field by following these steps:
 - a. Open and enable content for **[your initials]-CC05**.
 - b. Open **tblStuffedAnimals** in Datasheet View, and select the field **Product Group**.
 - c. From the **Datasheet** tab, in the **Fields & Columns** group, click the Lookup Column command .
 - d. In the **Lookup Wizard** dialog box, click **Next**.
 - e. From the list of tables, select **Table: tblProductLines** and click **Next**.
 - f. In the **Available Fields** area, double-click **ProductGroup** and **ProductLine**.
 - g. Click **Next**. Click the drop-down arrow and choose **ProductLine**. Click **Next**.
 - h. Resize the **Name of Product Group** column so all data can be seen. Click **Next**.
 - i. Name the field **Product**.
 - j. Click **Finish**.
2. Add data using a lookup field by following these steps:
 - a. For the **Product** field in the first record, click the drop-down arrow and choose **Cats & Dogs**.
 - b. Press . Key **c**.
 - c. Do step 2b for every record that has the **Product Group** "C."
 - d. Press . Key **d**.



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- e. Do step 2d for every record that has the **Product Group** “D.”
 - f. Press . Key **e**.
 - g. Do step 2f for every record that has the **Product Group** “E.”
 - h. Press . Key **f**.
 - i. Do step 2h for every record that has the **Product Group** “F.”
 - j. Press . Key **t**.
 - k. Do step 2j for every record that has the **Product Group** “T.”
3. Delete a column in Datasheet View by following these steps:
 - a. Click the column header for **Product Group** to select the column.
 - b. From the **Datasheet** tab, in the **Fields & Columns** group, click the Delete command . Click **Yes** in response to the warning messages.
 4. Rename a column in Datasheet View by following these steps:
 - a. Select the column header for the field **Product** field.
 - b. From the **Datasheet** tab, in the **Fields & Columns** group, click the Rename command  and key **Product Group**.
 5. Print/Save a Datasheet View by following these steps:
 - a. Click the Office Button . From the **Print** option, choose Print Preview .
 - b. From the **Print Preview** tab, in the **Page Layout** group, click **Margins** and choose the Wide command  from the menu.
 - c. Print/Save the table.
 - d. Close Print Preview and the table. Save the changes.
 6. Analyze a table by following these steps:
 - a. From the **Database Tools** tab, in the **Analyze** group, click the Analyze Performance command .
 - b. Click the **All Object Types** tab and click **Select All**. Click **OK**.
 - c. Create a Word document called *[your initials]-Skills-05-21* and record the answers to the following questions:
 - d. What are the Performance Analyzer’s suggestions for the table **tblStuffedAnimals**?
 - e. Include your name, class information, and today’s date on your answer sheet.
 - f. Print/Save the Word file *[your initials]-Skills-05-21*.
 - g. Click the suggestion for **tblStuffedAnimals** and click **Optimize**.
 - h. Close the Performance Analyzer window.
 - i. Compact and close the database.



Lesson Applications

Exercise 5-22

Create a relationship between tables. Set referential integrity. Print/Save a relationship.

1. Open *[your initials]-CC05*.
2. Open the Relationships window and clear the layout.
3. Add **tblInvoices** and **tblCarriers** to the window. Size the field lists and identify the common field.
4. Create a One-To-Many relationship with referential integrity between the tables. Save and close the layout.
5. Print/Save the Relationship report for these two tables.
6. Save the report as **05-22-05**. Close the report.
7. Save and close the Relationships window.



Exercise 5-23

Insert a subdatasheet. Print a Database Documenter report.

1. Open *[your initials]-CC05*.
2. Open **tblCustomers** in Design View.
3. Set the Subdatasheet **Name** property to **tblInvoices**.
4. Print/Save a Database Documenter report for **tblCustomers**. For **Include for Table**, select **Properties** and **Relationships**. For **Include for Fields**, select **Nothing**. For **Include for Indexes**, select **Nothing**.



Exercise 5-24

Create a multi-value lookup field. Set referential integrity. Determine object dependencies. Print a Database Documenter report.

1. Open *[your initials]-CC05*.
2. Open **tblCarriers** in Datasheet View.
3. Create a multi-value lookup field called **Delivery Type** that links to **tblDeliveryType**.

4. In **tblCarriers**, complete the following records.

Southtown Transportation	Freight – Air
	Freight – Ground
Federal Parcel Systems	Ground
	Ground Express
Bell Shipping	Ground
	Ground Express
	Freight – Air
	Freight – Ground

5. Set Referential Integrity for the relationship between **tblCarriers** and **tblDeliveryType**.



6. Print/Save a Database Documenter report for **tblCarriers**. For **Include for Table**, select **Properties** and **Relationships**. For **Include for Fields**, select **Names, Data Types, Sizes, and Properties**. For **Include for Indexes**, select **Nothing**.
7. Create a Word document called *[your initials]-Apps-05*, and record the answers to the following questions:

8. What queries, forms, and reports depend on **tblCarriers**?
9. On what queries, forms, and reports does **tblCarriers** depend?
10. Include your name, class information, and date.



11. Print/Save the Word file *[your initials]-Apps-05*.

Exercise 5-25 ♦ Challenge Yourself

Analyze a table. Create a table. Create a relationship. Print/Save a datasheet. Print/Save a Relationship report.

1. Open *[your initials]-CC05*.
2. Using the Table Analyzer Wizard, select **tblCustomers**.
3. Create a new table named **tblStates** by dragging the **State** field out of **Table1**.
4. In **tblStates**, add records to include all 50 states and Washington DC.
5. Rename **Table1** to **tblCust**.
6. In **tblCust**, rename the Lookup field to **State**.
7. In Design View, move the **State** field between **City** and **PostalCode**.
8. Verify that **tblCust** has a lookup field listing all 51 options.



9. Print/Save the datasheet for **tblStates** on one page. Make certain that the records are sorted by State in ascending order.



TIP

Do not let the wizard decide the fields and tables.

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10. Print/Save the Relationship report displaying only **tblCust** and **tblStates**.
11. Save the report as **05-25-10**.
12. Close the report and the Relationships window.
13. Compact, repair, and close the database.

On Your Own

In these exercises, you work on your own, as you would in a real-life work environment. Use the skills you've learned to accomplish the task—and be creative.

Exercise 5-26

Review the designs for the three databases you created in Exercises 4-29 through 4-31. Select one of the three databases to continue developing. Identify two additional tables you might need to make your database designs more useful. The relationships between the main table and the two additional tables should be One-To-Many. On a blank sheet of paper, list the field names, data types, field sizes, and attributes for the two new tables. Identify the common fields among the three tables. Continue to Exercise 5-27.

Exercise 5-27

Create the two tables you designed in Exercise 5-26. Add appropriate field properties to each table to make your design more useful. Create One-To-Many relationships with referential integrity between the tables. Test the referential integrity of the tables. Add at least five records to each empty table. Print the datasheet and a Database Documenter report for each table. Continue to Exercise 5-28.

Exercise 5-28

Search the Internet for images or graphics you might wish to use in your database. Design and create a new table to store the images. Create an appropriate relationship between this new table and the main table. Insert the images into the new table. Print a Relationship report displaying all four tables. Submit to your instructor the printouts from Exercises 5-27 through 5-28, along with your field list from 5-26. Keep a copy of the database you modified in this exercise. You will use it for the “On Your Own” exercises in subsequent lessons.