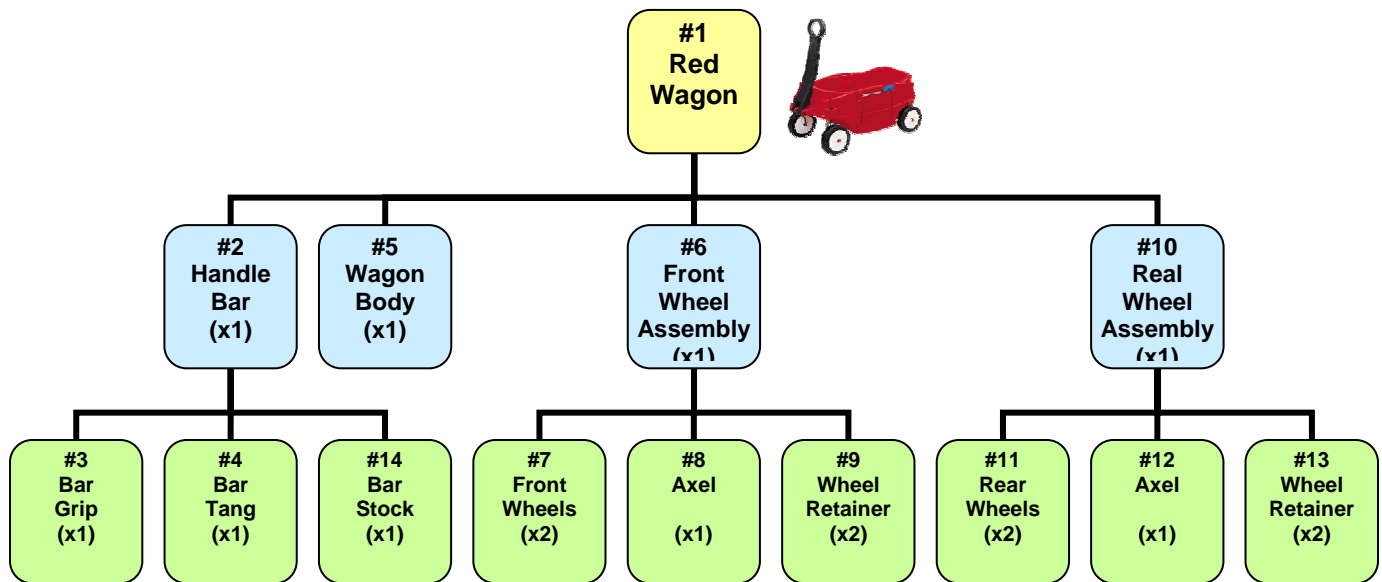


## HTM 304 Intro to MIS

### Lab Exercise: Create a BOM in Access

This Lab is to create a sample of bill of materials, as shown in the book exercise 7-22 (page 222).

The company producing the child's red wagon needs to keep tracking inventory of the final product (the red wagon) and all the parts used to assemble the wagon.



The idea is to store this chart in a database to manage. That is, for each part, we link what the part is made of (called its master part). The final result is the one shown in book Figure 7-8, page 203.

Step 1: Create a table named **PART** with the following columns:

- PartNumber (type: Number).
- Level (type: Number)
- Description (type: Text)
- Quantity Required (type: Number)
- PartOf (type: Number) ← this column is to document the master part of this material. For example, the value of this field for part #3 Bar Grip should be “2”, indicating that Bar Grip is used to assemble Handle Bar.

After creating all the columns, set the Primary Key for the table.

Question: which column should be the Key?

Close the table, name it “**PART**”.

Double click to open the **PART** table and insert all the record based on the information shown in the above chart. Your table should look like the following.

PartNumber	Level	Description	QuantityRequired	PartOf
1	1	Child's Red Wagon	1	0
10	2	Rear Wheel Ass	1	1
6	2	Front Wheel Ass	1	1
5	2	Wagon Body, M	1	1
2	2	Handle Bar	1	1
14	3	Bar Stock	1	2
13	3	Wheel Retainer	2	10
12	3	Axel	1	10
11	3	Rear Wheels	2	10
9	3	Wheel Retainer	2	6
8	3	Axel	1	6
7	3	Front Wheels	2	6
4	3	Bar Tang	1	2
3	3	Bar Grip	1	2
*	0		0	0

Step 2: Use the wizard to create a query that has **all columns** of PART table. Name the query **Level 1**. Use the design view to add criteria to restrict the view to rows having a value of 1 for Level column.

Field:	PartNumber	Level	Description	QuantityRequired	PartOf
Table:	PART	PART	PART	PART	PART
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:		"1"			

Double click the query **Level 1**, you should see only the level 1 part(s). Here, there is only one part “the red wagon”.

Step 3: Create two more queries named **Level 2** and **Level 3**. Adding restrictions to show only level 2 and 3 parts, respectively.

Step 4: Use the wizard to create a form that contains columns PartNumber, Level, and Description from query **Level 1**. Name the form **Bill of Materials**.

Step 5: Right click the form **Bill of Materials** and go to the design view. You will find the “toolbox” which provides options to edit the form. Find the “subform” tool. Use it to add a subform in part detail. (make sure not to add the subform in the footer).



If you cannot find the toolbox, go to the menu → view → “toolbox”.

After you click to add the subform, a popup wizard will guide you through the creation of the subform. Choose to use all the columns of query **Level 2**. In the next step, choose to “Design my own” link. Link the master form column “PartNumber” to the child form column “PartOf”. (Why?)

Close the form **Bill of Materials**.

Step 6. Open the design view of the subform level 2 and create a subform including the query **Level 3**. (the procedure is quite similar to above). Link the column “PartNumber” from the master form to the column “PartOf” from the child form. Close this form.

Step 7. Double click to open the form **Bill of Materials**. It should appear as in Figure 7-8. And that’s when you create the BOM successfully!

Step 8. Go to the original table and add one more record:

“15 3 Wagon Body Frame 1 5”

Open the **Bill of Material** form to observe the change.