


TextBook

Comments for Premiere Assignments
Chapter 1-6

PMA Import: premiereCreate
<https://cim.saddleback.edu/~premiere>

MySQL Textbook 1



Viewgraph Outline

- 1) Chapter 1 Premiere
 - Setting Up Database & Foreign Key Constraints
 - Create and Compare Schema
 - Chapter 1 page 21, assignment p21.sql
 - Joining More than 2 or More Tables p21.sql #9 & #10

Chapter 1 Quiz Covers Premiere, Henry & Alexamara
Assignment One Quiz Covers Premiere Page 21 i.e, p21.sql

- 2) Chapter 1 Henry Book DB, setup DB, Constraints, & page 22
- 3) Chapter 1 Alexamara Boat/Dock DB, page 22-23
- 4) Chapter 2-4 textbook premiere assignments
- 5) Chapter 5 Multi-table Joins
- 6) Chapter 6 Table Updates

SQL Textbook 2

P1: Database Script Site



- <https://cim.saddleback.edu/~premiere>
 - Has All Database Creations Scripts
 - Data Contents, Data Dictionary, Schema
 - Chapter 1 Solutions Henry & Alexamara
 - textbook database has read access
 - Premiere no Prefix (Uppercase underscore)
 - Alexamara A_ prefix
 - Henry H_ prefix, common to add DB prefixes
- PhpMyAdmin import dbCreate.sql

P2: Set Premiere Database



1. Clear out one of your Databases
 - Select one of your DB0, or DB1 or DB2,
 - select tables; PMA drop at bottom
 - Double Drop Table (may have constraints)
 - Can Import fruitPurge.sql
2. PMA Import premiereCreate.sql
3. Goal Create Graphic Schema
 - Check Structure/Schema
 - Check Out Schema

<http://cim.saddleback.edu/~premiere>
<http://cim.saddleback.edu/~premiere/index.html#premiere>

P3: Set Keys/Constraints



- Make Sure Primary Keys are Set
 - If not, PMA select table structure
 - Look for primary key icon, click to add change
 - ALTER TABLE `ORDERS`
DROP PRIMARY KEY,
ADD PRIMARY KEY(`ORDER_NUM`, `CUSTOMER_NUM`);
- Select tables w Foreign Keys
 - Click Structure
 - Click Relational view
 - Set Foreign keys, reference primary key

P4. Check out Schema



- Click DB
- Click Designer
 - GUI Interface Click and Drag (can Save)
 - Should see relationships
- <https://cim.saddleback.edu/~premiere>
- <https://cim.saddleback.edu/~premiere/index.html#premiere>

Chapter 1- Page 21 Premiere



- Complete p21.sql on paper
- Canvas Assignment Quiz One
 - It has all queries.
 - Historically students complete pmaView (all three videos, assignment and quiz)
Book is easy to read
- Canvas take chapter 1 Quiz
- Submit p21.sql
Premiere Page 21 Textbook

Chapter 1 P21.sql #1 - #8

<https://www.saddleback.edu/faculty/tdedonno/cimw105/assignment.p>



- #1 List names of all customers that have credit limit of 7500 or less; remember table and field names upper case.
- #2 List order numbers for orders placed by customer number 608 on 10/23/2007
- #3 List part number, description and value (price of part * quantity on hand) as "On-hand Value" of all parts in item class SG.
- #4 List part number and description of all parts in class HW
- #5 How many customers have a balance that exceeds their credit limit?
- #6 What is part number, description and price for least expensive part in DB
- #7 For each order, list order number, order date, customer number and customer name.
- #8 For each order placed on October 21, 2007 list order number, customer number and customer name.

P21 #9 and #10

Joining More than 2 Tables



#9 p21 List sales rep number and sales rep last name for every sales rep who represents at least one customer with credit limit of \$10,000.00

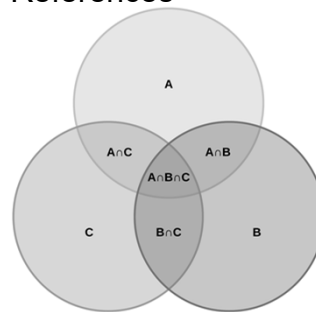
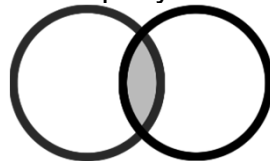
#10 p21 For each order placed on October 21, 2007 list the order number, part number, part description, and item class for each part ordered

Always relate tables by Foreign Key References

Use and to combine tables

Can always have table subqueries

Can use in with subquery where



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Henry 2nd Textbook Example

Database Scripts/Schema/Data for Class

<https://cim.saddleback.edu/~premiere>

phpMyAdmin Import

We added H_ tableName Preface

Chapter 1 Quiz Has Basic Henry Questions

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MySQL Textbook

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Henry Book Outline



- Load Henry Database on PMA, H_
- Analyze Tables in Database (Use left navigator)
- Set Referential Integrity
- Create Graphic Schema
 - Also at <https://cim.saddleback.edu/~premiere>
- Complete Henry Assignment Page 22
 - <https://cim.saddleback.edu/~premiere> has Data
 - Create Queries for Assignment

phpMyAdmin

- H_BOOK
 - Columns
 - BOOK_CODE (PRI, char)
 - PAPERBACK (char, NULL, nullable)
 - PRICE (decimal, NULL, nullable)
 - PUBLISHER_CODE (char, NULL, nullable)
 - TITLE (char, NULL, nullable)
 - TYPE (char, NULL, nullable)
 - Indexes
- H_BRANCH
 - Columns
 - BRANCH_LOCATION (char, NULL, nullable)
 - BRANCH_NAME (char, NULL, nullable)
 - BRANCH_NUM (PRI, decimal)
 - NUM_EMPLOYEES (decimal, NULL, nullable)
 - Indexes
- H_INVENTORY
 - Columns
 - BOOK_CODE (PRI, char)
 - BRANCH_NUM (PRI, decimal)
 - ON_HAND (decimal, NULL, nullable)
 - Indexes
- H_PUBLISHER
- H_WROTE

Optional Henry's Book

- PMA select DB
- PMA Import henryTextBook.sql
- Tables set to H_ prefix Book doesn't use prefix
- PMA Use left NavBar Explore Structure
- Suffix CODE and NUM Primary Keys
- Some Tables Have Two Foreign as Primary

Henry's Set Referential Integrity



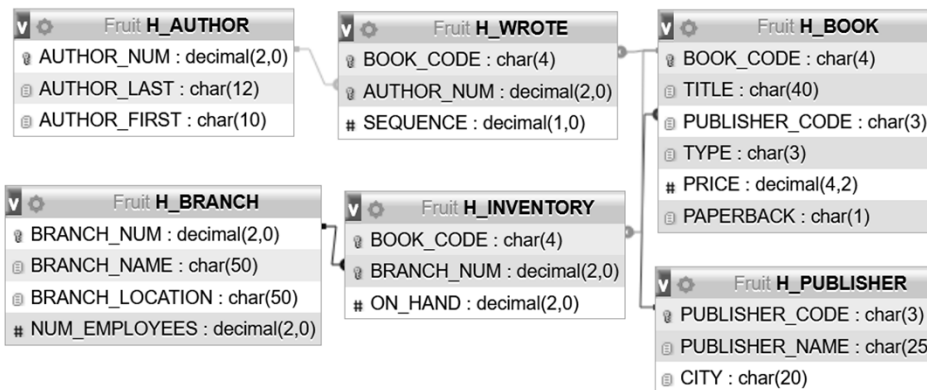
- Analyze DB Structure Keys
 - INVENTORY points to BRANCH and BOOK
 - INVENTORY Structure (Relational View)
 - Check all Tables Repeat for WROTE

© 6/21 Prof. Add constraint

Create Schema



- Referential Integrity sets Links Graphic Schema
- Reorganize Tables (Save Snap shot)



Henry Books 1-5 Page 22

Solutions: <https://cim.saddleback.edu/~premier>



- “Henry Books Answer each of the following questions using the Henry Books data shown in Figures 1-4 through 1-7. No computer work is required.
 1. List the name of each publisher that is located in New York.
 2. List the name of each branch that has at least nine employees.
 3. List the book code and title of each book that has the type FIC.
 4. List the book code and title of each book that has the type FIC and that is in paperback.
 5. List the book code and title of each book that has the type FIC or whose publisher code is SC.

Henry Books 6-9 Page 22

Solutions: <https://cim.saddleback.edu/~premier>



- “6. List the book code and title of each book that has the type MYS and a price of less than \$20.00.
- 7. Customers who are part of a special program get a 10 percent discount off regular book prices. For the first five books in the BOOK table, list the book code, title, and discounted price. (Use the PRICE column to calculate the discounted price.)
- 8. Find the name of each publisher containing the word and.
- 9. List the book code and title of each book that has the type FIC, MYS, or ART.”

Henry's Book 10-13 Page 22



- 10. How many books have the type SFI?
- 11. Calculate the average price for books that have the type ART.
- 12. For each book published by Penguin USA, list the book code and title.
- 13. List the book code, book title, and units on hand for each book in branch number 3.

Alexamara 3rd Textbook Example



Database Scripts/Schema/Data for Class
<https://cim.saddleback.edu/~premiere>

phpMyAdmin Import

We added A_tableName Preface
 Chapter 1 Quiz Has Basic Alexamara
 Questions

<https://cim.saddleback.edu/~permiere>
Graphic Schema Added A_ Prefix

alexamara

textbook_A_SERVICE_CATEGORY

- CATEGORY_NUM : decimal(4,0)
- CATEGORY_DESCRIPTION : char(255)

textbook_A_SERVICE_REQUEST

- SERVICE_ID : decimal(4,0)
- SLIP_ID : decimal(4,0)
- CATEGORY_NUM : decimal(4,0)
- DESCRIPTION : char(255)
- STATUS : char(255)
- EST_HOURS : decimal(4,2)
- SPENT_HOURS : decimal(4,2)
- NEXT_SERVICE_DATE : date

textbook_A_MARINA_SLIP

- SLIP_ID : decimal(4,0)
- MARINA_NUM : char(4)
- SLIP_NUM : char(4)
- LENGTH : decimal(4,0)
- RENTAL_FEE : decimal(8,2)
- BOAT_NAME : char(50)
- BOAT_TYPE : char(50)
- OWNER_NUM : char(4)

textbook_A_MARINA

- MARINA_NUM : char(4)
- NAME : char(20)
- ADDRESS : char(15)
- CITY : char(15)
- STATE : char(2)
- ZIP : char(5)

textbook_A_OWNER

- OWNER_NUM : char(4)
- LAST_NAME : char(50)
- FIRST_NAME : char(20)
- ADDRESS : char(15)
- CITY : char(15)
- STATE : char(2)
- ZIP : char(5)

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Alexamara #1-6 Page 22
Solutions: <https://cim.saddleback.edu/~permiere>

- #1. List the owner number, last name, and first name of every boat owner.
- #2. List the last name and first name of every owner located in Bowton
- #3. List the marina number and slip number for every slip whose length is equal to or less than 30 feet.
- #4. List the marina number and slip number for every boat with the type Dolphin 28
- #5. List the slip number for every boat with the type Dolphin 28 that is located in marina 1.
- #6. List the boat name for each boat located in a slip whose length is between 25 and 30 feet.

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Alexamara #7-10 Page 22




- #7. List the slip number for every slip in marina 1 whose annual rental fee is less than \$3,000.00.
- #8. Labor is billed at the rate of \$60.00 per hour. List the slip ID, category number, estimated hours, and estimated labor cost for every service request. To obtain the estimated labor cost, multiply the estimated hours by 60. Use the column name ESTIMATED_COST for the estimated labor cost.
- #9. List the marina number and slip number for all slips containing a boat with the type Sprite 4000, Sprite 3000, or Ray 4025.
- #10. How many Dolphin 25 boats are stored at both marina

Alexamara 11-13 Page 23




- #11. For every boat, list the marina number, slip number, boat name, owner number, owner's first name, and owner's last name.
- #12. For every service request for routine engine maintenance, list the slip ID, the description, and the status.
- #13. For every service request for routine engine maintenance, list the slip ID, marina number, slip number, estimated hours, spent hours, owner number, and owner's last name.



Chapter 2-6 Premiere Assingments

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Chapter 2 p58.sql #1-#7

1. Display names of all the premiere database tables;
2. Display the number of customers you have.
Hint functions names are always lowercase
3. List the contents of the CUSTOMER table.
4. Describe the REP table.
5. List the contents of the ORDERS table.
6. List contents of REP table, sorted by highest commission first.
7. Display customer name with highest credit limit, hint select customer_name, order by, limit 1;

<https://www.saddleback.edu/faculty/tdedonno/cimw105/assignment.php#p58>

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Chapter 3 p87.sql; #1-10



1. #Display the first five rows in ORDER_LINE table.
2. # Display all your customer names along with their city and state.
3. #How many salesman do you have? Column header is count(*)
4. # 87-4 Display the contents of PART Table
5. # Describe the PART table
6. # display contents of PART table ordered by increasing price
7. # what is the total value of all orders, display as "Top Line Revenue"
8. # what is price of most expensive part display as "Highest Priced Item"
9. # display REP Last Name, Customer Name, Balance and credit limit, for all customers sort lexicographically by reps last name, then by customer name
- 10.# display order number and order date associated with Juan Perez, order by order numbers descending

Full tables at <http://cim.saddleback.edu/~premiere>

Chap 4 (21 Total Queries) p125.sql #1-#8



- "1. List the part number, description, and price for all parts.
- 2. List all rows and columns for the complete ORDERS table.
- 3. List the names of customers with credit limits of \$7,500 or less.
- 4. List the order number for each order placed by customer number 148 on 10/20/2007.
- (Hint: If you need help, use the discussion of the DATE data type in Figure 3-11 in Chapter 3.)
- 5. List the number and name of each customer represented by sales rep 35 or sales rep 65.
- 6. List the part number and part description of each part that is not in item class SG.
- 7. List the part number, description, and number of units on hand for each part that has between 10 and 25 units on hand, including both 10 and 25. Do this one way. "
From page 125 of TextBook

P125.sql #8-#13




- “8. List the part number, part description, and on-hand value (units on hand * unit price) of each part in item class AP. (On-hand value is really units on hand * cost, but there is no COST column in the PART table.) Assign the name ON_HAND_VALUE to the computation.
- 9. List the part number, part description, and on-hand value for each part whose on-hand value is at least \$7,500. Assign the name ON_HAND_VALUE to the computation.
- 10. Use the IN operator to list the part number and part description of each part in item class AP or SG.
- 11. Find the number and name of each customer whose name begins with the letter “K.”
- 12. List all details about all parts. Order the output by part description.
- 13. List all details about all parts. Order the output by part number within item class. (That is, order the output by item class and then by part number)” From textbook page 125

P125.sql #14-#21



- # 14 how many customers have balances greater than their credit limits?
- # 15 Find the total of the balances for all customers represented
- # by sales rep 65 with balances that are less than their credit limits.
- # 16 List the part number, part description, and on-hand value of each part whose number of units on hand is more than the average number of units on hand for all parts. (Hint: Use a subquery.)
- # 17 what is the price of most expensive part in the database
- # 18 What is the part number, description, and price of the most expensive part in the database? (Hint: Use a subquery.)
- # 19 List the rep number and sum of the balances of all customers for each sales rep. # Order and group the results by sales rep number
- # 20 List the rep number and sum of balances for each sales rep, but restrict the output to sales reps w sum over \$10,000, sort REP_NUM
- # 21 List part number of any part with an unknown description




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Chapter 5

Multi-table Joins
page 157
submit p157.sql

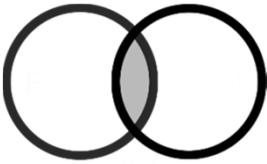
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Fruit Review



- List all Fruit w Inventory
 - Intersection F, I
- List all Fruit w/out Inventory
 - Left join where Inventory is Null

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Joining Two Tables in Premiere



- Examine the Premiere Schema
 - Tables related by Foreign Key Primary Key Relationship
- Example 1M: List Customer Info and REP's 1st & Last Name
 - Can use alias from Customer c, REP r
 - Customer has Foreign Key REP_NUM
- Example 4: Display Description part order number 21610
 - Standard Table intersection
 - where operand in (subquery or expression)
- Example 5: Order Number and Date for Part Number DR93
 - Use in operator

Where exists (subquery)



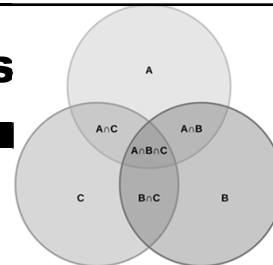
- Subquery exists is true when
 - Subquery returns nonempty set or when column exists
- Exists is faster than in Stops on True
- Repeat Example 5:
Order Number and Date for Part Number DR93
- Select ORDER_NUM, ORDER_DATE from ORDERS o
where exists (select 1 from ORDER_LINE ol where
ol.ORDER_NUM=o.ORDER_NUM and PART_NUM =
"DR93")

Self Joins



- Self Join – Join Same Table Twice
- Example 9 – List all Customers Same City
 - from Customer first, Customer second
 - Where $f.city = s.city$
 - But Don't want to List Same Customer Twice
 - $f.CUSTOMER_NUM < s.CUSTOMER_NUM$
 - Order by $f.CUSTOMER_NUM, s.CUSTOMER_NUM$

Joining 3 or More Tables



- Determine which Tables have Required Info
- Look at Schema relate Foreign/Primary
- Example 10M: for parts on orders, list part number, number ordered, order number, order date, customer number, customer name,
 - Need ORDERS o, ORDER_LINE ol, CUSTOMER c
 - $o.ORDER_NUM = ol.ORDER_NUM$ and $c.CUSTOMER_NUM = o$

Table	Primary	Foreign
CUSTOMER	CUSTOMER_NUM	REP_NUM
REP	REP_NUM	
ORDERS	ORDER_NUM	CUSTOMER_NUM
ORDER_LINE	(ORDER_NUM,PART_NUM)	ORDER_NUM, PART_NUM
PART	PART_NUM	

Example 10



- Example 10M: for parts on orders, list part number, number ordered, order number, order date, customer number, customer name, & **last name of sales rep**
 - Which Tables O, OL, C, R (sales rep last name)
- Example 10M: for parts on orders, list part number, **part description**, number ordered, order number, order date, customer number, customer name, & last name of sales rep

Where Summary



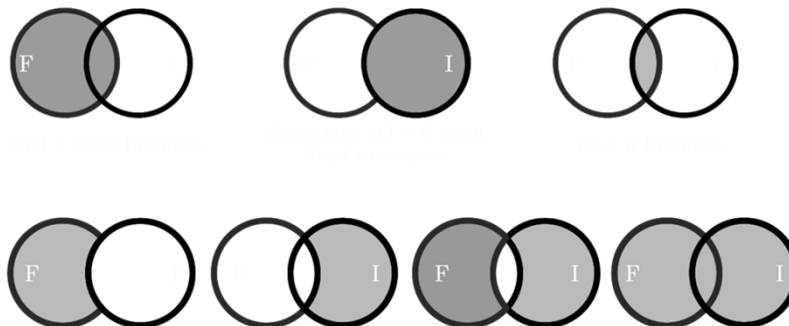
- Where standard Conditional Statement
 - where price conditional_operator 2.0
 - Conditional operator read left to right
>, <, >=, <=, !=
- Where quantity is null
- Where quantity is not null

Join Summary



- Work with Sets
 - Where set in set Of Data
 - , > any, comparison operator All
- Comma inner join, Intersection
- F left join I; and F right Join I
- Not in MySQL in outer joins, full joins
- We do these with Union Operator
(select * ...) union (select * ...)

Sample of All Venn Diagrams



Chapter 5 p157.sql #1-#5 of 20



- Remember we relate tables by primary to foreign keys
Can always use subquery with in, exists, any and all
- #1. For each order, list the order number and order date along with the number and name of the customer that placed the order.
- #2. For each order placed on October 21, 2007, list the order number along with the number and name of the customer that placed the order.
- #3. For each order, list the order number, order date, part number, number of units ordered, and quoted price for each order line that makes up the order.
- #4. Use the IN operator to find the number and name of each customer that placed an order on October 21, 2007.
- #5. Repeat Exercise 4, but this time use the EXISTS operator in your answer. subqueries must only return one column, multiple column outputs are logically incorrect and hang phpMyAdmin and submit at the mariaDB level

Chap 4 p157.sql



- #6. Find the number and name of each customer that did not place an order on October 21, 2007.
- #7. For each order, list the order number, order date, part number, part description, and item class for each part that makes up the order.
- #8. Repeat Exercise #7, but this time order the rows by item class and then by order number, and finally by part_num
- #9. Use a subquery to find the rep number, last name, and first name of each sales rep who represents at least one customer with a credit limit of \$5,000. List each sales rep only once in the results.
- #10. Repeat Exercise #9, but this time do not use a subquery. (do have distinct function)
- #11. Find the number and name of each customer that currently has an order on file for a Gas Range.

Chap 5 p157.sql #12-#16




- #12 List the part number, part description, for first item, then part number, part description for second item, then item class, for each pair of parts that are in the same item class. . (For example, one such pair would be Part AT94 and part FD21, because the item class for both parts is HW). pairs should appear only once, and don't match to same part twice. So display AT94 with DL71, the AT94 w FD21; but not display either FD21 AT94 or AT94 AT94, Hints part and part intersection, order by CLASS
- #13. List the order number and order date for each order placed by the customer named Johnsons Department Store. (Hint: to enter an apostrophe (single # quotation mark) within a string of characters, type two single quotation marks).
- #14. List the order number and order date for each order that contains an order line for an iron.
- #15. List the order number and order date for each order that either was placed by Johnsons Department or that contains an order line for a Gas Range.

Chap 5, p157.sql #17-#20



- #16. List the order number and order date for each order that was placed by Johnsons Department Store and that contains an order line for a Range.
- #17. List the order number and order date for each order that was placed by Johnsons Department Store but that does not contain an order line for a Gas Range.
- #18. List the part number, part description, unit price, and item class for each part that has a unit price greater than the unit price of every part in # item class AP. Use either the ALL or ANY operator in your query. (Hint: make sure you select the correct operator.)
- #19. If you used ALL in Exercise 18, repeat the exercise using ANY, if you use ANY, repeat the exercise using ALL, and then run the new command. What # question does this command answer?
- #20. For each part, list the part number, description, units on hand, order number, and number of units ordered. All parts should be included in the results. For those parts that are currently not on order, the order number and number of units ordered should be left blank.
Order the results by part number ASC then by order_num ASC



Chapter 6 DML


Database Manipulation Language

P177.sql

DML Commands don't produce output
Therefore Submit cannot verify DML Command;
Submit uses Select to verify DML

DML: insert into table, delete from table,
update table set

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Chapter 6 p177.sql 1st 6 query

10 Book queries + 5 tests

- # 1 create table 'NONAPPLIANCE' don't prefix table name 'NONAPPLIANCE' with your database - table fields are PART_NUM, DESCRIPTION, ON_HAND, CLASS and PRICE. These will have the same types as other tables have for these columns.
- # 2 insert into NONAPPLIANCE all items that are not class 'AP'; For this one you need to use insert select command., You will be inserting into the table NONAPPLIANCE, using a select from table: PART. Nota Bene submit cannot verify correct output for 1 and 2. Insert, create, update, delete have limited output so submit can not verify them. However, #2a (aka 3), will fail, if either 1 or 2 are wrong
- #2a #2a means it is used to check query #2
#Display contents of NONAPPLIANCE sort by ascending Price
- #3 change description of PART_NUM AT94 to Deluxe Iron
- #4 increase price of all items CLASS SG by 2%
- #5 add Part number TL92 description Trimmer, units on hand 11, class HW, price 29.95

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P177.sql 2nd 9



- Once again 6 and 7 are in book, #7a is used test 6 & 7
- # 5a display contents of NONAPPLIANCE Table
- # 6 delete every part in NONAPPLIANCE of class SG
- # 7 in NONAPPLIANCE change PART_NUM FD21 to CLASS NULL
- #7a display contents of NONAPPLIANCE Table
- # 8 Add new last Column ON_HAND_VALUE seven digit number with 2 decimal points to NONAPPLIANCE table
- # 8a set all values of column ON_HAND_VALUE to ON_HAND*PRICE in table:NONAPPLIANCE
- # 9 in NONAPPLIANCE table increase column DESCRIPTION to 30 characters
- # 9a display contents of NONAPPLIANCE Table
- # 10 Remove NONAPPLIANCE Table