

COSC 3380

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Seat# F1

Project 3:

(100 points.)

(Due date found in the COSC 3380 Detailed Syllabus!)

Use the COSC3380 Database created in Project 2.

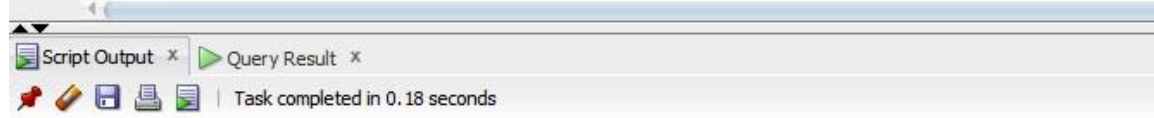
Part 1. Stored Procedures

1.

a. Create a simple procedure **ProductLineSale**, to be used by that will set a sale price to the existing Product table in the COSC3380 Database by adding a new column, SalePrice DECIMAL (6,2), that will hold the sale price for the products:

The **ProductLineSale** procedure should scan all rows of the **Product** table. Products with a ProductStandardPrice of \$400 or higher are discounted 10 percent, and products with a ProductStandardPrice of less than \$ 400 are discounted 15 percent. As with other database objects, there are Oracle SQL commands to create, alter, replace, drop, and show the code for procedures.

```
/* Create Procedure ProductLineSale
   add a new column, SalePrice DECIMAL (6,2)
   scan all rows of the Product table
   Products with a ProductStandardPrice of $400 or higher are discounted 10 percent &
   Products with a ProductStandardPrice of less than $ 400 are discounted 15 percent */
ALTER TABLE PRODUCT
  ADD SALEPRICE DECIMAL(6, 2);
CREATE OR REPLACE PROCEDURE PRODUCTLINESALE AS
BEGIN
  UPDATE PRODUCT P
    SET P.SALEPRICE = P.PRODUCTSTANDARDPRICE - P.PRODUCTSTANDARDPRICE*.10
    WHERE P.PRODUCTSTANDARDPRICE >= 400;
  UPDATE PRODUCT P
    SET P.SALEPRICE = P.PRODUCTSTANDARDPRICE - P.PRODUCTSTANDARDPRICE*.15
    WHERE P.PRODUCTSTANDARDPRICE < 400;
END PRODUCTLINESALE;
```



Procedure PRODUCTLINESALE compiled

b. Run the **ProductLineSale** procedure in Oracle.

c. Display the contents of the **PRODUCT** table.

```

/* Run ProductLine Sale procedure */
EXECUTE PRODUCTLINE SALE;
/* Display Product table */
SELECT * FROM PRODUCT;

```

PRODUCTID	PRODUCTNAME	PRODUCTFINISH	PRODUCTSTANDARDPRICE	PRODUCTLINEID	PHOTO	SALEPRICE
1	End Table	Cherry	175	1	table.jpg	148.75
2	Coffee Table	Natural Ash	200	2	(null)	170
3	Computer Desk	Natural Ash	375	2	(null)	318.75
4	Entertainment Center	Natural Maple	650	3	(null)	585
5	Writers Desk	Cherry	325	1	(null)	276.25
6	8-Drawer Desk	White Ash	750	2	(null)	675
7	Dining Table	Natural Ash	800	2	(null)	720
8	Computer Desk	Walnut	250	3	(null)	212.5

Part 2. TRIGGERS

Consider the following example: The inventory manager needs to know (the action of being informed) when an inventory item's standard price is updated in the Product table (the event). After creating a new table, PriceUpdates, write a trigger that enters each product when it is updated, the date that the change was made, and the new standard price that was entered.

1. Write and run the trigger named *StandardPriceUpdate*

```

/* Create Trigger StandardPriceUpdate
   enters each product when it is updated,
   the date that the change was made, &
   the new standard price that was entered. */
CREATE OR REPLACE TRIGGER STANDARDPRICEUPDATE
AFTER UPDATE ON PRODUCT
FOR EACH ROW
BEGIN
    INSERT INTO PRICEUPDATE VALUES (PRICEUPDATEID, SYSDATE, :OLD.OLDPRICE, :NEW.NEWPRICE);
END STANDARDPRICEUPDATE;
/

```

Script Output x Query Result x Query Result 1 x

Task completed in 0.456 seconds

Trigger STANDARDPRICEUPDATE compiled

Part 3. Accessing COSC3380 Database from JSP

A **JSP** Web Page

Create **SalestoDate.jsp**

(jsp page oracle 12c DBMS backend)



Sales To Date

PRODUCT ID	PRODUCT NAME	PRODUCT FINISH	ORDERED QUANTITY
1	End Table	Cherry	5
2	Coffee Table	Natural Ash	4
3	Computer Desk	Natural Ash	11
4	Entertainment Center	Natural Maple	8
5	Writers Desk	Cherry	2
6	8-Drawer Desk	White Ash	2
7	Dining Table	Natural Ash	5
8	Computer Desk	Walnut	15

```
/* Create View SalesToDate & display */
CREATE VIEW SALESTODATE (PRODUCTID, PRODUCTNAME, PRODUCTFINISH, ORDEREDQUANTITY) AS
  SELECT P.PRODUCTID, P.PRODUCTNAME, P.PRODUCTFINISH, SUM(OL.ORDEREDQUANTITY)
  FROM PRODUCT P, ORDERLINE OL
  WHERE P.PRODUCTID = OL.PRODUCTID
  GROUP BY P.PRODUCTID, P.PRODUCTNAME, P.PRODUCTFINISH
  ORDER BY P.PRODUCTID;
```

```
SELECT * FROM SALESTODATE;
```

SQL | All Rows Fetched: 8 in 0.056 seconds

PRODUCTID	PRODUCTNAME	PRODUCTFINISH	ORDEREDQUANTITY
1	End Table	Cherry	5
2	Coffee Table	Natural Ash	4
3	Computer Desk	Natural Ash	11
4	Entertainment Center	Natural Maple	8
5	Writers Desk	Cherry	2
6	8-Drawer Desk	White Ash	2
7	Dining Table	Natural Ash	5
8	Computer Desk	Walnut	15

```
index.jsp x SQL 1 [jdbc:oracle:thin:@129.7.2...] x
Source History
1 <!--
2   Document   : Project 3
3   Author    : Paola Garibay
4   -->
5 <%@ page import = "java.sql.*"%>
6 <%@ page import = "java.io.*" %>
7 <% Class.forName("oracle.jdbc.driver.OracleDriver");%>
8
9 <%@page contentType="text/html" pageEncoding="UTF-8"%>
10 <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
11    "http://www.w3.org/TR/html4/loose.dtd">
12 <html>
13 <head>
14   <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
15   <title>Project 3 JSP Page</title>
16 </head>
17 <body>
18   <h1>Sales To Date</h1>
19
20   <%
21     String url = "jdbc:oracle:thin:@129.7.240.3:1521:orcl";
22     //Establish connection
23     Connection conn = DriverManager.getConnection(url, "GARIBAYP", "GARIBAYP#");
24
25     Statement statement = conn.createStatement();
26     ResultSet resultset = statement.executeQuery("SELECT * FROM SALESTODATE");
27   %>
28
29   <!-- Setup the Output Report HTML View -->
30   <TABLE BORDER = "1" BGCOLOR = "CCFFFF" width = "50%" cellpadding = "0" bordercolor = "BLACK" border = "1">
31     <TR>
32       <TH bgcolor="#DAA520"> <font size="2"/>PRODUCT ID</TH>
33       <TH bgcolor="#DAA520"> <font size="2"/>PRODUCT NAME</TH>
34       <TH bgcolor="#DAA520"> <font size="2"/>PRODUCT FINISH</TH>
35       <TH bgcolor="#DAA520"> <font size="2"/>ORDERED QUANTITY</TH>
36     </TR>
37     <% while (resultset.next()) {%>
38     <TR>
39       <TD <font size = '2' /><center><%= resultset.getString(1)%></center></TD>
40       <TD <font size = '2' /><center><%= resultset.getString(2)%></center></TD>
41       <TD <font size = '2' /><center><%= resultset.getString(3)%></center></TD>
42       <TD <font size = '2' /><center><%= resultset.getString(4)%></center></TD>
43     </TR>
44     <% }%>
45   </TABLE>
46 </body>
47 </html>
```