**SQL> -- ---------------------------------------------------------**

**SQL> -- The following comments will also be sent / spooled to the**

**SQL> -- output text file to identify the ownership of the**

**SQL> -- Oracle SQL\*Plus work.**

**SQL> --**

**SQL> -- COMP 2714**

**SQL> -- SET 2A**

**SQL> -- LAB01 Exercise / Assignment Asn01**

**SQL> -- Qin, Chris A00944299**

**SQL> -- email: cqin8@my.bcit.ca**

**SQL> --**

**SQL> -- ---------------------------------------------------------**

**SQL> -- By default, Oracle uses the Windows Regional Option settings**

**SQL> -- for the date and time format. To avoid confusion and to keep**

**SQL> -- a consistent format, use Oracle's ALTER SESSION statement to**

**SQL> -- change the current session's date format to YYYY-MM-DD, and**

**SQL> -- then verify by displaying the current system date SYSDATE.**

**SQL> --**

**SQL> ALTER SESSION SET NLS\_DATE\_FORMAT='YYYY-MM-DD';**

**Session altered.**

**SQL> --**

**SQL> SELECT SYSDATE**

**2 FROM DUAL;**

**SYSDATE**

**----------**

**2019-01-09**

**SQL> --**

**SQL> -- ---------------------------------------------------------**

**SQL> -- The next line uses the SQL\*Plus START command to run a**

**SQL> -- SQL script file (assumed to be located in D:\WORK\2714).**

**SQL> -- \*\* If needed, change D:\... path to the folder you are using \*\***

**SQL> --**

**SQL> -- Once you have made all the necessary changes, save this current**

**SQL> -- script file to disk. Then inside the SQL\*Plus command window**

**SQL> -- command prompt, type the following START command to execute.**

**SQL> --**

**SQL> -- START D:\WORK\2714\Lab01\_sample.sql**

**SQL> -- ---------------------------------------------------------**

**SQL> -- Drop tables first before creating**

**SQL> DROP TABLE OrdProd;**

**Table dropped.**

**SQL> DROP TABLE OrderTbl;**

**Table dropped.**

**SQL> DROP TABLE Product;**

**Table dropped.**

**SQL> DROP TABLE Customer;**

**Table dropped.**

**SQL> --**

**SQL> -- Q1. Create Customer Table - \*\*\* Note sample coding style \*\*\***

**SQL> CREATE TABLE Customer**

**2 (CustNo CHAR(8) NOT NULL**

**3 ,CustFirstName VARCHAR2(20) NOT NULL**

**4 ,CustLastName VARCHAR2(30) NOT NULL**

**5 ,CustStreet VARCHAR2(50) NOT NULL**

**6 ,CustCity VARCHAR2(30) NOT NULL**

**7 ,CustState CHAR(2) NOT NULL**

**8 ,CustZip CHAR(10) NOT NULL**

**9 ,CustBal DECIMAL(12,2) DEFAULT 0 NOT NULL**

**10 ,CONSTRAINT PKCustomer PRIMARY KEY (CustNo)**

**11 );**

**Table created.**

**SQL> -- Q2. Create Product Table**

**SQL> CREATE TABLE Product**

**2 (ProdNo CHAR(8) NOT NULL**

**3 ,ProdName VARCHAR2(50) NOT NULL**

**4 ,ProdMfg VARCHAR2(20) NOT NULL**

**5 ,ProdQOH DECIMAL(10) NOT NULL**

**6 ,ProdPrice DECIMAL(12,2) NOT NULL**

**7 ,ProdNextShipDate DATE**

**8 ,CONSTRAINT PKProduct PRIMARY KEY (ProdNo)**

**9 );**

**Table created.**

**SQL> -- Q3. Create Order Table**

**SQL> CREATE TABLE OrderTbl**

**2 (OrdNo CHAR(8) NOT NULL**

**3 ,OrdDate DATE NOT NULL**

**4 ,CustNo CHAR(8) NOT NULL**

**5 ,CONSTRAINT PKOrder PRIMARY KEY (OrdNo)**

**6 ,CONSTRAINT FKCustNo**

**7 FOREIGN KEY (CustNo)**

**8 REFERENCES Customer (CustNo)**

**9 );**

**Table created.**

**SQL> -- Q4. Create Ordered Product Table**

**SQL> CREATE TABLE OrdProd**

**2 (OrdNo CHAR(8) NOT NULL**

**3 ,ProdNo CHAR(8) NOT NULL**

**4 ,Qty DECIMAL(10) DEFAULT 1 NOT NULL**

**5 ,CONSTRAINT PKOrdProd PRIMARY KEY (OrdNo, ProdNo)**

**6 ,CONSTRAINT FKOrdNo**

**7 FOREIGN KEY (OrdNo) REFERENCES OrderTbl (OrdNo)**

**8 ON DELETE CASCADE**

**9 ,CONSTRAINT FKProdNo**

**10 FOREIGN KEY (ProdNo)**

**11 REFERENCES Product -- (ProdNo) Optional**

**12 );**

**Table created.**

**SQL> --**

**SQL> -- ... Additional sections of SQL commands / statements.**

**SQL> -- \*\*\* Note the sample coding style \*\*\***

**SQL> --**

**SQL> -- The SQL\*Plus command DESCRIBE can be used to display the table info**

**SQL> DESCRIBE Customer;**

**Name Null? Type**

**----------------------------------------------------- -------- ------------------------------------**

**CUSTNO NOT NULL CHAR(8)**

**CUSTFIRSTNAME NOT NULL VARCHAR2(20)**

**CUSTLASTNAME NOT NULL VARCHAR2(30)**

**CUSTSTREET NOT NULL VARCHAR2(50)**

**CUSTCITY NOT NULL VARCHAR2(30)**

**CUSTSTATE NOT NULL CHAR(2)**

**CUSTZIP NOT NULL CHAR(10)**

**CUSTBAL NOT NULL NUMBER(12,2)**

**SQL> DESCRIBE Product;**

**Name Null? Type**

**----------------------------------------------------- -------- ------------------------------------**

**PRODNO NOT NULL CHAR(8)**

**PRODNAME NOT NULL VARCHAR2(50)**

**PRODMFG NOT NULL VARCHAR2(20)**

**PRODQOH NOT NULL NUMBER(10)**

**PRODPRICE NOT NULL NUMBER(12,2)**

**PRODNEXTSHIPDATE DATE**

**SQL> DESCRIBE OrderTbl;**

**Name Null? Type**

**----------------------------------------------------- -------- ------------------------------------**

**ORDNO NOT NULL CHAR(8)**

**ORDDATE NOT NULL DATE**

**CUSTNO NOT NULL CHAR(8)**

**SQL> DESCRIBE OrdProd;**

**Name Null? Type**

**----------------------------------------------------- -------- ------------------------------------**

**ORDNO NOT NULL CHAR(8)**

**PRODNO NOT NULL CHAR(8)**

**QTY NOT NULL NUMBER(10)**

**SQL> --**

**SQL> -- Q5. Insert some sample data - \*\*\* Note sample coding style \*\*\***

**SQL> --**

**SQL> -- Insert Customer Data**

**SQL> INSERT INTO Customer**

**2 VALUES('C0954327','Sheri','Gordon','336 Hill St.','Littleton','CO',**

**3 '80129-5543',230.00);**

**1 row created.**

**SQL> -- Insert Product Data**

**SQL> INSERT INTO Product**

**2 VALUES ('P1445671','Color Laser Printer','Intersafe',**

**3 33,14.99,NULL);**

**1 row created.**

**SQL> -- Insert Order Data**

**SQL> INSERT INTO OrderTbl**

**2 VALUES ('O1116324',DATE'2019-01-23','C0954327');**

**1 row created.**

**SQL> -- Insert Ordered Product Data**

**SQL> INSERT INTO OrdProd**

**2 VALUES('O1116324','P1445671',5);**

**1 row created.**

**SQL> COMMIT;**

**Commit complete.**

**SQL> --**

**SQL> -- Q6. Display inserted data**

**SQL> --**

**SQL> SELECT \***

**2 FROM Customer;**

**CUSTNO CUSTFIRSTN CUSTLASTNAME CUSTSTREET**

**-------- ---------- --------------- --------------------------------------------------**

**CUSTCITY CU CUSTZIP CUSTBAL**

**------------------------------ -- ---------- ----------**

**C0954327 Sheri Gordon 336 Hill St.**

**Littleton CO 80129-5543 230**

**SQL> --**

**SQL> SELECT \***

**2 FROM Product;**

**PRODNO PRODNAME PRODMFG PRODQOH PRODPRICE PRODNEXTSH**

**-------- --------------- -------------------- ---------- --------- ----------**

**P1445671 Color Laser Pri Intersafe 33 14.99**

**nter**

**SQL> --**

**SQL> SELECT \***

**2 FROM OrderTbl**

**3 WHERE OrdDate = DATE'2019-01-23'**

**4 AND CustNo = 'C0954327';**

**ORDNO ORDDATE CUSTNO**

**-------- ---------- --------**

**O1116324 2019-01-23 C0954327**

**SQL> --**

**SQL> SELECT \***

**2 FROM OrdProd;**

**ORDNO PRODNO QTY**

**-------- -------- ----------**

**O1116324 P1445671 5**

**SQL> --**

**SQL> -- Q.7 - \*\*\* Note sample coding style \*\*\***

**SQL> --**

**SQL> SELECT OrdNo, OrdDate, CustNo**

**2 FROM OrderTbl**

**3 WHERE OrdDate = DATE'2019-01-23'**

**4 AND CustNo = 'C0954327';**

**ORDNO ORDDATE CUSTNO**

**-------- ---------- --------**

**O1116324 2019-01-23 C0954327**

**SQL> --**

**SQL> --**

**SQL> -- Q.8a - BAD coding, though there is no syntax errors**

**SQL> -- - Can you read and make sense out of this easily?**

**SQL> select c.CustNo, CustFirstName, CustLastName, o.OrdNo, OrdDate,**

**2 p.ProdNo, ProdName, ProdPrice from Customer c join OrderTbl o on c.CustNo**

**3 = o.CustNo join OrdProd op on o.OrdNo = op.OrdNo join Product p on op.ProdNo**

**4 = p.ProdNo where OrdDate > DATE'2019-01-01' and c.CustNo = 'C0954327';**

**CUSTNO CUSTFIRSTN CUSTLASTNAME ORDNO ORDDATE PRODNO PRODNAME PRODPRICE**

**-------- ---------- --------------- -------- ---------- -------- --------------- ---------**

**C0954327 Sheri Gordon O1116324 2019-01-23 P1445671 Color Laser Pri 14.99**

**nter**

**SQL> --**

**SQL> -- Q.8b \*\*\* Note sample coding style \*\*\* Make code readable \*\*\***

**SQL> -- Use multiple lines with proper indentation levels**

**SQL> -- instead of long lines, and avoid line wraps.**

**SQL> -- In this sample, 2 spaces are used to indent each level of coding.**

**SQL> --**

**SQL> SELECT c.CustNo, CustFirstName, CustLastName,**

**2 o.OrdNo, OrdDate, p.ProdNo, ProdName, ProdPrice**

**3 FROM Customer c**

**4 JOIN OrderTbl o**

**5 ON c.CustNo = o.CustNo**

**6 JOIN OrdProd op**

**7 ON o.OrdNo = op.OrdNo**

**8 JOIN Product p**

**9 ON op.ProdNo = p.ProdNo**

**10 WHERE OrdDate > DATE'2019-01-01'**

**11 AND c.CustNo = 'C0954327';**

**CUSTNO CUSTFIRSTN CUSTLASTNAME ORDNO ORDDATE PRODNO PRODNAME PRODPRICE**

**-------- ---------- --------------- -------- ---------- -------- --------------- ---------**

**C0954327 Sheri Gordon O1116324 2019-01-23 P1445671 Color Laser Pri 14.99**

**nter**

**SQL> --**

**SQL> -- Q.9 - Note use of SQL\*Plus commands SET and COLUMN**

**SQL> -- - Compare the output differences between Q.8 and Q.9**

**SQL> --**

**SQL> SET LINESIZE 100**

**SQL> SET PAGESIZE 60**

**SQL> COLUMN CustFirstName FORMAT A10**

**SQL> COLUMN CustLastName FORMAT A15**

**SQL> COLUMN ProdName FORMAT A15**

**SQL> COLUMN ProdPrice FORMAT 9999.99**

**SQL> --**

**SQL> SELECT c.CustNo, CustFirstName, CustLastName,**

**2 o.OrdNo, OrdDate, p.ProdNo, ProdName, ProdPrice**

**3 FROM Customer c**

**4 JOIN OrderTbl o**

**5 ON c.CustNo = o.CustNo**

**6 JOIN OrdProd op**

**7 ON o.OrdNo = op.OrdNo**

**8 JOIN Product p**

**9 ON op.ProdNo = p.ProdNo**

**10 WHERE OrdDate > DATE'2019-01-01'**

**11 AND c.CustNo = 'C0954327';**

**CUSTNO CUSTFIRSTN CUSTLASTNAME ORDNO ORDDATE PRODNO PRODNAME PRODPRICE**

**-------- ---------- --------------- -------- ---------- -------- --------------- ---------**

**C0954327 Sheri Gordon O1116324 2019-01-23 P1445671 Color Laser Pri 14.99**

**nter**

**SQL> --**

**SQL> --**

**SQL> -- \*\* This last SQL\*Plus SPOOL command line is MOST IMPORTANT !! \*\***

**SQL> -- It is usually the last line of the script file, and its purpose**

**SQL> -- is to close off the current spool output text file, so that all**

**SQL> -- output from this script will be flushed to disk and saved to the**

**SQL> -- SPOOL text file.**

**SQL> -- Otherwise, you may end up missing output content.**

**SQL> --**

**SQL> SPOOL OFF**

**SQL> -- Q.3.2a - After the SYSDATE Section, the current date shows up**

**SQL> -- in the YYYY-MM-DD format. In addition, SQL command SQL> -- results show up (Table Dropped, Table Created, etc.).**

**SQL> -- Q.3.2b - Everything after the first output SPOOL path statement SQL> -- until the SPOOL OFF statement shows up. Every line of SQL> -- code or comment before the SPOOL statement doesn't show SQL> -- up.**

**SQL> -- Q.3.2c - All the output statements from the SQL file commands do SQL> -- not have counterparts to the original script file.**

Answers to questions:

Q.4.1h - The lines with commands SET LINESIZE, SET PAGESIZE, COLUMN and

FORMAT serve to customize the fonts and sizes of the created

tables.

Q.4.2b –

Customer(CustNo, CustFirstName, CustLastName, CustStreet, CustCity,

CustState, CustZip, CustBalZip, CustBal)

Product(ProdNo, ProdName, ProdMfg, ProdQOH, ProdPrice, ProdNextShipDate)

OrderTbl(OrdNo, OrdDate, CustNo)

OrdProd(OrdNo, ProdNo, Qty)