

DBS201

Group Assignment 1

Professor: **Russel Pangborn**

Insu Yun (DR201B27)

S.N: 017-747-148

Yiwei Yang (DR201B27)

S.N: 046-348-140

1. Complete the Physical Design.

1) INVOICE

| Column Name | Data Type | Length | PK | FK | NOT NULL | Unique | Check | Default |
|--------------|-----------|--------|----|----|----------|--------|-------|---------|
| INV# | CHARACTER | 10 | Y | | Y | | | |
| INVOICEDATE | DATE | | | | Y | | | Y |
| SALESPERSON# | DECIMAL | 2 | | Y | Y | | | |
| CUST# | DECIMAL | 3 | | Y | Y | | | |

2) INVOICE_EQUIPMENT

| Column Name | Data Type | Length | PK | FK | NOT NULL | Unique | Check | Default |
|-------------|-----------|--------|----|----|----------|--------|-------|---------|
| INV# | CHARACTER | 10 | Y | Y | Y | | | |
| EQP# | CHARACTER | 10 | Y | Y | Y | | | |
| QTY | DECIMAL | 4 | | | Y | | | |
| CHARGE | DECIMAL | 7,2 | | | Y | | | |

3) EQUIP_CLASS

| Column Name | Data Type | Length | PK | FK | NOT NULL | Unique | Check | Default |
|--------------|-----------|--------|----|----|----------|--------|-------|---------|
| EQPCLASSCODE | CHARACTER | 3 | Y | | Y | | | |
| EQPCLASSDESC | CHARACTER | 25 | | | Y | | | |

4) SALESPERSON

| Column Name | Data Type | Length | PK | FK | NOT NULL | Unique | Check | Default |
|------------------|-----------|--------|----|----|----------|--------|-------|---------|
| SALESPERSON # | DECIMAL | 2 | Y | | Y | | | |
| SALESPERSON NAME | CHARACTER | 20 | | | Y | | | |

5) EQUIPMENT

| Column Name | Data Type | Length | PK | FK | NOT NULL | Unique | Check | Default |
|--------------|-----------|--------|----|----|----------|--------|-------|---------|
| EQP# | CHARACTER | 10 | Y | | Y | | | |
| EQP_DESC | CHARACTER | 25 | | | Y | | | |
| EQPCLASSCODE | CHARACTER | 3 | | Y | Y | | | |

6) CUSTOMER

| Column Name | Data Type | Length | PK | FK | NOT NULL | Unique | Check | Default |
|--------------------|-----------|--------|----|----|----------|--------|-------|---------|
| CUST# | DECIMAL | 3 | Y | | Y | | | |
| CLNAME | CHARACTER | 10 | | | Y | | | |
| CFNAME | CHARACTER | 10 | | | Y | | | |
| CUSTADDRESS | CHARACTER | 30 | | | Y | | | Y |
| CUSTPHONE | DECIMAL | 10 | | | Y | | | Y |
| FEDERAL_GST_NUMBER | DECIMAL | 9 | | | Y | Y | Y | |
| SALESPERSON # | DECIMAL | 2 | | Y | Y | | | |

2. Provide Printed Syntax for all the statements used to set up your 6 Tables and any Table Constraints

CREATE COLLECTION COMPOB27

1) TABLE EQUIP_CLASS

```
CREATE TABLE COMPOB27/EQUIP_CLASS (  
    EQPCLASSCODE CHAR (3 ) NOT NULL,  
    EQPCLASSDESC CHAR (25 ) NOT NULL,  
    CONSTRAINT EQUIP_CLASS_PK PRIMARY KEY (EQPCLASSCODE))
```

2) TABLE SALESPERSON

```
CREATE TABLE COMPOB27/SALESPERSON (  
    SALESPERSON# DEC (2 ) NOT NULL,  
    SALESPERSONNAME CHAR (20 ) NOT NULL  
    CONSTRAINT SALESPERSON_PK PRIMARY KEY(SALESPERSON#))
```

3) EQUIPMENT

```
CREATE TABLE COMPOB27/EQUIPMENT (  
    EQP# CHAR (10 ) NOT NULL,  
    EQP_DESC CHAR (25 ) NOT NULL,  
    EQPCLASSCODE CHAR (3 ) NOT NULL,  
    CONSTRAINT EQUIPMENT_PK PRIMARY KEY (EQP#),  
    CONSTRAINT EQUIP_CLASS_FK FOREIGN KEY (EQPCLASSCODE)  
    REFERENCES COMPOB27/EQUIP_CLASS (EQPCLASSCODE))
```

4) CUSTOMER

```
CREATE TABLE COMPOB27/CUSTOMER (  
    CUST# DEC (3) NOT NULL,  
    CLNAME CHAR (10) NOT NULL,  
    CFNAME CHAR (10) NOT NULL,  
    CUSTADDRESS CHAR (30) NOT NULL WITH DEFAULT,  
    CUSTPHONE DEC (10) NOT NULL WITH DEFAULT,  
    FEDERAL_GST_NUMBER DEC (9) NOT NULL,  
    SALESPERSON# DEC (2) NOT NULL,  
    CONSTRAINT CUSTOMER_PK PRIMARY KEY (CUST#),  
    CONSTRAINT SALESPERSON_FK1 FOREIGN KEY (SALESPERSON#)  
    REFERENCES COMPOB27/SALESPERSON (SALESPERSON#),  
    CONSTRAINT GST_UNIQUE UNIQUE(FEDERAL_GST_NUMBER),  
    CONSTRAINT GST_CHECK CHECK (FEDERAL_GST_NUMBER BETWEEN  
    100000000 AND 999999999 ))
```

5) INVOICE

```
CREATE TABLE COMPOB27/INVOICE (  
    INV# CHAR (10 ) NOT NULL,  
    INVOICEDATE DATE NOT NULL WITH DEFAULT,  
    SALESPERSON# DEC (2 ) NOT NULL,  
    CUST# DEC (3 ) NOT NULL WITH DEFAULT,  
    CONSTRAINT INVOICE_PK PRIMARY KEY (INV#),  
    CONSTRAINT SALESPERSON_FK FOREIGN KEY (SALESPERSON#)  
        REFERENCES COMPOB27/SALESPERSON (SALESPERSON#),  
    CONSTRAINT CUSTOMER_FK FOREIGN KEY (CUST#)  
        REFERENCES COMPOB27/CUSTOMER (CUST#))
```

6) INVOICE_EQUIPMENT

```
CREATE TABLE COMPOB27/INVOICE_EQUIPMENT (  
    INV# CHAR (10 ) NOT NULL,  
    EQP# CHAR (10 ) NOT NULL,  
    QTY DEC (4 ) NOT NULL,  
    CHARGE DEC (7 , 2) NOT NULL,  
    CONSTRAINT INV_EQP_PK PRIMARY KEY (INV#, EQP#),  
    CONSTRAINT INVOICE_FK FOREIGN KEY (INV#)  
        REFERENCES INVOICE (INV#),  
    CONSTRAINT EQUIPMENT_FK FOREIGN KEY (EQP#)  
        REFERENCES EQUIPMENT (EQP#))
```

3. Provide printed Syntax to Create 2 “Views”

1) SALESINFO VIEW

```
CREATE VIEW COMPOB27.SALESINFO AS (  
    SELECT EC.EQPCLASSCODE AS "EQUIP CLASS",  
        EC.EQPCLASSDESC AS "CLASS DESCRIPTION",  
        E.EQP# AS "EQUIP NUM",  
        E.EQP_DESC AS "EQUIPMENT DESCRIPTION",  
        IE.CHARGE AS "CHARGE",  
        IE.QTY AS QTY, I.INV# AS "INV. NUM",  
        I.INVOICEDATE AS "INV. DATE",  
        TRIM (S.SALESPERSON#) || ('-' ) || (S.SALESPERSONNAME) AS  
        "SALES-PERSON", C.CUST# AS "CUST NO"  
    FROM COMPOB27.CUSTOMER C, COMPOB27.EQUIPMENT E,  
        COMPOB27.EQUIP_CLASS EC, COMPOB27.INVOICE I,  
        COMPOB27.INVOICE_EQUIPMENT IE,  
        COMPOB27.SALESPERSON S  
    WHERE I.INV# = IE.INV# AND  
        EC.EQPCLASSCODE = E.EQPCLASSCODE AND  
        S.SALESPERSON# = I.SALESPERSON# AND  
        S.SALESPERSON# = C.SALESPERSON# AND  
        E.EQP# = IE.EQP# AND  
        C.CUST# = I.CUST#)
```

2)SALESGT1000

```
CREATE VIEW COMPOB27.SALESGT1000 AS (  
SELECT EC.EQPCLASSCODE AS "EQUIP CLASS",  
       EC.EQPCLASSDESC AS "CLASS DESCRIPTION",  
       E.EQP# AS "EQUIP NUM",  
       E.EQP_DESC AS "EQUIPMENT DESCRIPTION",  
       IE.CHARGE AS "CHARGE",  
       IE.QTY AS QTY, I.INV# AS "INV. NUM",  
       I.INVOICEDATE AS "INV. DATE",  
       TRIM (S.SALESPERSON#) || ('-') || (S.SALESPERSONNAME) AS  
       "SALES-PERSON", C.CUST# AS "CUST NO"  
FROM COMPOB27.CUSTOMER C, COMPOB27.EQUIPMENT E,  
     COMPOB27.EQUIP_CLASS EC, COMPOB27.INVOICE I,  
     COMPOB27.INVOICE_EQUIPMENT IE,  
     COMPOB27.SALESPERSON S  
WHERE I.INV# = IE.INV# AND  
       EC.EQPCLASSCODE = E.EQPCLASSCODE AND  
       S.SALESPERSON# = I.SALESPERSON# AND  
       S.SALESPERSON# = C.SALESPERSON# AND  
       E.EQP# = IE.EQP# AND  
       C.CUST# = I.CUST# AND  
       IE.CHARGE >= 1000 )
```

4. Provide the Required SQL statement

```
SELECT S."EQUIP NUM",  
       S."EQUIPMENT DESCRIPTION",  
       S."CHARGE",  
       S."QTY",  
       S."INV. NUM",  
       S."INV. DATE",  
       S."SALES-PERSON",  
       S."CUST NO"  
FROM COMPOB27.SALESINFO S  
WHERE S."CHARGE" >= 750 AND S."INV. DATE" = '10/13/14'  
ORDER BY S."INV. NUM", S."EQUIP NUM"
```

5. Insert Sample Rows (at least three) for each Table

1) EQUIPCCLASS

```
INSERT INTO COMPOB27/EQUIP_CLASS VALUES('AAA', 'TRIPLE A')  
INSERT INTO COMPOB27/EQUIP_CLASS VALUES('BBB', 'TRIPLE B')  
INSERT INTO COMPOB27/EQUIP_CLASS VALUES('CCC', 'TRIPLE C')  
INSERT INTO COMPOB27/EQUIP_CLASS VALUES('HHH', 'TRIPLE H')  
INSERT INTO COMPOB27/EQUIP_CLASS VALUES('MMM', 'TRIPLE M')
```

2) SALESPERSON

```
INSERT INTO COMPOB27/SALESPERSON VALUES(11, 'ELEVEN')
INSERT INTO COMPOB27/SALESPERSON VALUES(22, 'TWELVE')
INSERT INTO COMPOB27/SALESPERSON VALUES(33, 'DOUBLE THREE')
INSERT INTO COMPOB27/SALESPERSON VALUES(77, 'LUCKY SEVEN')
INSERT INTO COMPOB27/SALESPERSON VALUES(99, 'BIGEST NUMBER')
```

3) EQUIPMENT

```
INSERT INTO COMPOB27/EQUIPMENT VALUES('AAA1', 'SUPER A', 'AAA')
INSERT INTO COMPOB27/EQUIPMENT VALUES('BBB1', 'SUPER B', 'BBB')
INSERT INTO COMPOB27/EQUIPMENT VALUES('CCC1', 'SUPER C', 'CCC')
INSERT INTO COMPOB27/EQUIPMENT VALUES('HHH1', 'CHAMPION TRIPLE H', 'HHH')
INSERT INTO COMPOB27/EQUIPMENT VALUES('MMM1', 'TRIPLE M BEST', 'MMM')
```

4) CUSTOMER

```
INSERT INTO COMPOB27/CUSTOMER VALUES(001, 'YUN', 'INSU',
                                         '7 WALMER RD. TORONTO', 4168248899, 100000001, 11)
INSERT INTO COMPOB27/CUSTOMER VALUES(002, 'YANG', 'YIWEI',
                                         '1098 YOUNG ST. TORONTO', 4168888888, 100000002, 22)
INSERT INTO COMPOB27/CUSTOMER VALUES(003, 'PANGBORN', 'RUSSEL',
                                         '201 POND RD. TORONTO', 4164444444, 100000003, 33)
INSERT INTO COMPOB27/CUSTOMER VALUES(007, 'SIMPSON', 'HOMER',
                                         '742 EVERGREEN TERRACE', 4167777777, 100000007, 77)
INSERT INTO COMPOB27/CUSTOMER VALUES(009, 'SIMPSON', 'MARGE',
                                         '742 EVERGREEN TERRACE', 4169999999, 100000009, 99)
```

5) INVOICE

```
INSERT INTO COMPOB27/INVOICE VALUES('CCI-00001', '2014-10-14', 11, 001)
INSERT INTO COMPOB27/INVOICE VALUES('CCI-00002', '2014-10-15', 22, 002)
INSERT INTO COMPOB27/INVOICE VALUES('CCI-00003', '2014-10-16', 33, 003)
INSERT INTO COMPOB27/INVOICE VALUES('CCI-00007', '2014-10-13', 77, 007)
INSERT INTO COMPOB27/INVOICE VALUES('CCI-00009', '2014-10-13', 99, 009)
```

6) INVOICE_EQUIPMENT

```
INSERT INTO COMPOB27/INVOICE_EQUIPMENT VALUES('CCI-00001', 'AAA1', 10, 4900)
INSERT INTO COMPOB27/INVOICE_EQUIPMENT VALUES('CCI-00002', 'BBB1', 13, 1300)
INSERT INTO COMPOB27/INVOICE_EQUIPMENT VALUES('CCI-00007', 'CCC1', 57, 3235)
INSERT INTO COMPOB27/INVOICE_EQUIPMENT VALUES('CCI-00003', 'HHH1', 20, 9010)
INSERT INTO COMPOB27/INVOICE_EQUIPMENT VALUES('CCI-00009', 'MMM1', 2, 3000)
```

6. Provide system report on the six tables each having 3 rows of data

7. Provide a System Report from Part 4 above