SQL> @C:\Users\vaish\Desktop\dbms\_lab\ex4\lab4.sql

SQL> REM 1. Create a view named Blue\_Flavor, which display the product details (product id,

SQL> REM food, price) of Blueberry flavor.

SQL>

SQL> CREATE VIEW Blue\_Flavor AS

2 SELECT PID,FOOD,PRICE

3 FROM PRODUCTS

4 WHERE FLAVOR='Blueberry';

View created.

SQL>

SQL> SELECT \* FROM Blue\_flavor;

PID FOOD PRICE

--------------- -------------------- ----------

90-BLU-11 Tart 3.25

51-BLU Danish 1.15

SQL>

SQL> SELECT COLUMN\_NAME, UPDATABLE from

2 USER\_UPDATABLE\_COLUMNS where TABLE\_NAME='BLUE\_FLAVOR';

COLUMN\_NAME UPD

------------------------------ ---

PID YES

FOOD YES

PRICE YES

SQL>

SQL> SELECT \* FROM PRODUCTS WHERE FLAVOR='Blueberry';

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

90-BLU-11 Blueberry Tart 3.25

51-BLU Blueberry Danish 1.15

SQL>

SQL> INSERT INTO Blue\_flavor values ('30-BLFV','PIZZA',34);

1 row created.

SQL> UPDATE Blue\_flavor SET PRICE=25

2 WHERE PID='90-BLU-11';

1 row updated.

SQL> DELETE FROM Blue\_flavor

2 WHERE FOOD='Danish';

DELETE FROM Blue\_flavor

\*

ERROR at line 1:

ORA-02292: integrity constraint (SYSTEM.ITEM\_FK) violated - child record found

SQL>

SQL> SELECT \* FROM PRODUCTS WHERE FLAVOR='Blueberry';

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

90-BLU-11 Blueberry Tart 25

51-BLU Blueberry Danish 1.15

SQL>

SQL> SELECT \* FROM Blue\_flavor;

PID FOOD PRICE

--------------- -------------------- ----------

90-BLU-11 Tart 25

51-BLU Danish 1.15

SQL>

SQL> INSERT INTO PRODUCTS values('35-BLFV','Blueberry','Cookie',19);

1 row created.

SQL> UPDATE PRODUCTS SET PRICE=25

2 WHERE FLAVOR='Blueberry';

3 rows updated.

SQL> DELETE FROM PRODUCTS WHERE FOOD='Tart';

DELETE FROM PRODUCTS WHERE FOOD='Tart'

\*

ERROR at line 1:

ORA-02292: integrity constraint (SYSTEM.ITEM\_FK) violated - child record found

SQL>

SQL> SELECT \* FROM Blue\_flavor;

PID FOOD PRICE

--------------- -------------------- ----------

90-BLU-11 Tart 25

51-BLU Danish 25

35-BLFV Cookie 25

SQL>

SQL> REM 2. Create a view named Cheap\_Food, which display the details (product id, flavor,

SQL> REM food, price) of products with price lesser than $1. Ensure that, the price of these

SQL> REM food(s) should never rise above $1 through view.

SQL>

SQL> CREATE VIEW Cheap\_Food AS

2 SELECT \*

3 FROM PRODUCTS

4 WHERE PRICE<1;

View created.

SQL>

SQL> SELECT \* FROM Cheap\_Food;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

SQL>

SQL> SELECT COLUMN\_NAME, UPDATABLE from

2 USER\_UPDATABLE\_COLUMNS where TABLE\_NAME='CHEAP\_FOOD';

COLUMN\_NAME UPD

------------------------------ ---

PID YES

FLAVOR YES

FOOD YES

PRICE YES

SQL>

SQL> SELECT \* FROM PRODUCTS WHERE PRICE<1;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

SQL>

SQL> INSERT INTO Cheap\_Food values ('60-CPF','Veg','Nugget',0.32);

1 row created.

SQL> UPDATE Cheap\_Food SET FOOD='IceCream'

2 WHERE PID='70-W';

1 row updated.

SQL> DELETE FROM Cheap\_Food

2 WHERE FLAVOR='Lemon';

DELETE FROM Cheap\_Food

\*

ERROR at line 1:

ORA-02292: integrity constraint (SYSTEM.ITEM\_FK) violated - child record found

SQL>

SQL> SELECT \* FROM PRODUCTS WHERE PRICE<1;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .79

70-W Walnut IceCream .79

60-CPF Veg Nugget .32

SQL>

SQL> SELECT \* FROM Cheap\_Food;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .79

70-W Walnut IceCream .79

60-CPF Veg Nugget .32

SQL>

SQL> INSERT INTO PRODUCTS values('18-CPF','Nuts','Twist',0.19);

1 row created.

SQL> UPDATE PRODUCTS SET PRICE=0.25

2 WHERE FLAVOR='Lemon' and FOOD='Cookie';

1 row updated.

SQL> DELETE FROM PRODUCTS WHERE FOOD='Nugget';

1 row deleted.

SQL>

SQL> SELECT \* FROM Cheap\_Food;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .25

70-W Walnut IceCream .79

18-CPF Nuts Twist .19

SQL>

SQL> REM 3.Create a view called Hot\_Food that show the product id and its quantity where the

SQL> REM same product is ordered more than once in the same receipt.

SQL>

SQL> CREATE VIEW Hot\_Food AS

2 SELECT ITEM,COUNT(\*) AS QUANTITY

3 FROM ITEM\_LIST

4 GROUP BY RNO,ITEM

5 HAVING COUNT(\*)>1;

View created.

SQL>

SQL> SELECT \* FROM Hot\_Food;

ITEM QUANTITY

--------------- ----------

70-R 2

90-APR-PF 2

50-APP 2

51-ATW 2

90-ALM-I 2

90-BER-11 2

90-PEC-11 2

70-M-CH-DZ 2

46-11 2

70-M-CH-DZ 2

90-CHR-11 2

ITEM QUANTITY

--------------- ----------

90-BLU-11 2

50-CHS 2

70-M-CH-DZ 2

70-R 2

90-APP-11 2

70-MAR 2

50-APR 2

51-BC 2

50-ALM 2

20 rows selected.

SQL>

SQL> SELECT COLUMN\_NAME, UPDATABLE from

2 USER\_UPDATABLE\_COLUMNS where TABLE\_NAME='HOT\_FOOD';

COLUMN\_NAME UPD

------------------------------ ---

ITEM NO

QUANTITY NO

SQL>

SQL> SELECT ITEM,COUNT(\*) AS QUANTITY

2 FROM ITEM\_LIST

3 GROUP BY RNO,ITEM

4 HAVING COUNT(\*)>1;

ITEM QUANTITY

--------------- ----------

70-R 2

90-APR-PF 2

50-APP 2

51-ATW 2

90-ALM-I 2

90-BER-11 2

90-PEC-11 2

70-M-CH-DZ 2

46-11 2

70-M-CH-DZ 2

90-CHR-11 2

ITEM QUANTITY

--------------- ----------

90-BLU-11 2

50-CHS 2

70-M-CH-DZ 2

70-R 2

90-APP-11 2

70-MAR 2

50-APR 2

51-BC 2

50-ALM 2

20 rows selected.

SQL>

SQL> INSERT INTO Hot\_Food values(

2 '13-HF',3);

INSERT INTO Hot\_Food values(

\*

ERROR at line 1:

ORA-01733: virtual column not allowed here

SQL> UPDATE Hot\_Food SET QUANTITY=10

2 WHERE ITEM='46-11';

UPDATE Hot\_Food SET QUANTITY=10

\*

ERROR at line 1:

ORA-01732: data manipulation operation not legal on this view

SQL> DELETE FROM Hot\_Food

2 WHERE ITEM='70-R';

DELETE FROM Hot\_Food

\*

ERROR at line 1:

ORA-01732: data manipulation operation not legal on this view

SQL>

SQL> SELECT ITEM,COUNT(\*) AS QUANTITY

2 FROM ITEM\_LIST

3 GROUP BY RNO,ITEM

4 HAVING COUNT(\*)>1;

ITEM QUANTITY

--------------- ----------

70-R 2

90-APR-PF 2

50-APP 2

51-ATW 2

90-ALM-I 2

90-BER-11 2

90-PEC-11 2

70-M-CH-DZ 2

46-11 2

70-M-CH-DZ 2

90-CHR-11 2

ITEM QUANTITY

--------------- ----------

90-BLU-11 2

50-CHS 2

70-M-CH-DZ 2

70-R 2

90-APP-11 2

70-MAR 2

50-APR 2

51-BC 2

50-ALM 2

20 rows selected.

SQL>

SQL> REM 4.Create a view named Pie\_Food that will display the details (customer lname, flavor,

SQL> REM receipt number and date, ordinal) who had ordered the Pie food with receipt details.

SQL>

SQL> CREATE VIEW Pie\_Food AS

2 SELECT CID,LNAME,FLAVOR,RNO,RDATE,ORDINAL

3 FROM CUSTOMERS NATURAL JOIN RECEIPTS NATURAL JOIN ITEM\_LIST JOIN PRODUCTS on ITEM=PID

4 WHERE FOOD='Pie';

View created.

SQL>

SQL> SELECT \* FROM Pie\_Food;

CID LNAME FLAVOR RNO RDATE ORDINAL

---------- --------------- ---------- ---------- --------- ----------

1 JULIET Apple 39685 28-OCT-07 4

1 JULIET Apple 66227 10-OCT-07 2

3 TRAVIS Apple 48647 09-OCT-07 2

6 JOSETTE Apple 87454 21-OCT-07 1

6 JOSETTE Apple 47353 12-OCT-07 2

8 RUPERT Apple 53376 30-OCT-07 3

9 CUC Apple 50660 18-OCT-07 2

13 KIP Apple 11548 21-OCT-07 2

14 RAYFORD Apple 29226 26-OCT-07 2

14 RAYFORD Apple 51991 17-OCT-07 1

16 ARIANE Apple 39109 02-OCT-07 1

CID LNAME FLAVOR RNO RDATE ORDINAL

---------- --------------- ---------- ---------- --------- ----------

16 ARIANE Apple 44798 04-OCT-07 3

17 CHARLENE Apple 98806 15-OCT-07 3

13 rows selected.

SQL>

SQL> SELECT COLUMN\_NAME, UPDATABLE from

2 USER\_UPDATABLE\_COLUMNS where TABLE\_NAME='PIE\_FOOD';

COLUMN\_NAME UPD

------------------------------ ---

CID NO

LNAME NO

FLAVOR NO

RNO YES

RDATE NO

ORDINAL YES

6 rows selected.

SQL>

SQL> SELECT CID,LNAME,FLAVOR,RNO,RDATE,ORDINAL

2 FROM CUSTOMERS NATURAL JOIN RECEIPTS NATURAL JOIN ITEM\_LIST JOIN PRODUCTS on ITEM=PID

3 WHERE FOOD='Pie';

CID LNAME FLAVOR RNO RDATE ORDINAL

---------- --------------- ---------- ---------- --------- ----------

1 JULIET Apple 39685 28-OCT-07 4

1 JULIET Apple 66227 10-OCT-07 2

3 TRAVIS Apple 48647 09-OCT-07 2

6 JOSETTE Apple 87454 21-OCT-07 1

6 JOSETTE Apple 47353 12-OCT-07 2

8 RUPERT Apple 53376 30-OCT-07 3

9 CUC Apple 50660 18-OCT-07 2

13 KIP Apple 11548 21-OCT-07 2

14 RAYFORD Apple 29226 26-OCT-07 2

14 RAYFORD Apple 51991 17-OCT-07 1

16 ARIANE Apple 39109 02-OCT-07 1

CID LNAME FLAVOR RNO RDATE ORDINAL

---------- --------------- ---------- ---------- --------- ----------

16 ARIANE Apple 44798 04-OCT-07 3

17 CHARLENE Apple 98806 15-OCT-07 3

13 rows selected.

SQL>

SQL> INSERT INTO Pie\_Food values (30,'RAJEN','STRAWBERRY',87210,'13-DEC-99',1);

INSERT INTO Pie\_Food values (30,'RAJEN','STRAWBERRY',87210,'13-DEC-99',1)

\*

ERROR at line 1:

ORA-01779: cannot modify a column which maps to a non key-preserved table

SQL> UPDATE Pie\_Food SET LNAME='MARIE'

2 WHERE ORDINAL=4;

UPDATE Pie\_Food SET LNAME='MARIE'

\*

ERROR at line 1:

ORA-01779: cannot modify a column which maps to a non key-preserved table

SQL> DELETE FROM Pie\_Food WHERE

2 RNO=98806;

1 row deleted.

SQL>

SQL> SELECT CID,LNAME,FLAVOR,RNO,RDATE,ORDINAL

2 FROM CUSTOMERS NATURAL JOIN RECEIPTS NATURAL JOIN ITEM\_LIST JOIN PRODUCTS on ITEM=PID

3 WHERE FOOD='Pie';

CID LNAME FLAVOR RNO RDATE ORDINAL

---------- --------------- ---------- ---------- --------- ----------

1 JULIET Apple 39685 28-OCT-07 4

1 JULIET Apple 66227 10-OCT-07 2

3 TRAVIS Apple 48647 09-OCT-07 2

6 JOSETTE Apple 87454 21-OCT-07 1

6 JOSETTE Apple 47353 12-OCT-07 2

8 RUPERT Apple 53376 30-OCT-07 3

9 CUC Apple 50660 18-OCT-07 2

13 KIP Apple 11548 21-OCT-07 2

14 RAYFORD Apple 29226 26-OCT-07 2

14 RAYFORD Apple 51991 17-OCT-07 1

16 ARIANE Apple 39109 02-OCT-07 1

CID LNAME FLAVOR RNO RDATE ORDINAL

---------- --------------- ---------- ---------- --------- ----------

16 ARIANE Apple 44798 04-OCT-07 3

12 rows selected.

SQL>

SQL> REM 5. Create a view Cheap\_View from Cheap\_Food that shows only the product id, flavor and food.

SQL>

SQL> CREATE VIEW Cheap\_View AS

2 SELECT PID,FLAVOR,FOOD

3 FROM Cheap\_Food;

View created.

SQL>

SQL> SELECT \* FROM Cheap\_View;

PID FLAVOR FOOD

--------------- ---------- --------------------

70-LEM Lemon Cookie

70-W Walnut IceCream

18-CPF Nuts Twist

SQL>

SQL> SELECT COLUMN\_NAME, UPDATABLE from

2 USER\_UPDATABLE\_COLUMNS where TABLE\_NAME='CHEAP\_VIEW';

COLUMN\_NAME UPD

------------------------------ ---

PID YES

FLAVOR YES

FOOD YES

SQL>

SQL> SELECT \*

2 FROM Cheap\_Food;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .25

70-W Walnut IceCream .79

18-CPF Nuts Twist .19

SQL>

SQL> INSERT INTO Cheap\_View values(

2 '56-CV','Grape','Juice');

1 row created.

SQL> UPDATE Cheap\_View SET FOOD='Chocolate'

2 WHERE PID='70-W';

1 row updated.

SQL> DELETE FROM Cheap\_View

2 WHERE FLAVOR='Nuts';

1 row deleted.

SQL>

SQL> SELECT \* FROM Cheap\_Food;

PID FLAVOR FOOD PRICE

--------------- ---------- -------------------- ----------

70-LEM Lemon Cookie .25

70-W Walnut Chocolate .79

SQL>

SQL> SELECT \* FROM Cheap\_View;

PID FLAVOR FOOD

--------------- ---------- --------------------

70-LEM Lemon Cookie

70-W Walnut Chocolate

SQL>

SQL> INSERT INTO Cheap\_Food values ('82-CPF','Non-Veg','Nugget',0.62);

1 row created.

SQL> UPDATE Cheap\_Food SET FOOD='IceCream'

2 WHERE PID='70-W';

1 row updated.

SQL> DELETE FROM Cheap\_Food

2 WHERE FLAVOR='Lemon';

DELETE FROM Cheap\_Food

\*

ERROR at line 1:

ORA-02292: integrity constraint (SYSTEM.ITEM\_FK) violated - child record found

SQL>

SQL> SELECT \* FROM Cheap\_View;

PID FLAVOR FOOD

--------------- ---------- --------------------

70-LEM Lemon Cookie

70-W Walnut IceCream

82-CPF Non-Veg Nugget

SQL>

SQL> REM 6.Create a sequence named Ordinal\_No\_Seq which generates the ordinal number

SQL> REM starting from 1, increment by 1, to a maximum of 10. Include the options of cycle,

SQL> REM cache and order. Use this sequence to populate the item\_list table for a new order.

SQL>

SQL> CREATE SEQUENCE Ordinal\_No\_Seq

2 MAXVALUE 10

3 START WITH 1

4 INCREMENT BY 1

5 CACHE 5

6 CYCLE

7 ORDER;

Sequence created.

SQL>

SQL> INSERT INTO RECEIPTS values(491204,'20-Jan-2019',12);

1 row created.

SQL> INSERT INTO ITEM\_LIST values(491204,Ordinal\_No\_Seq.nextval,'90-CH-PF');

1 row created.

SQL> INSERT INTO ITEM\_LIST values(491204,Ordinal\_No\_Seq.nextval,'70-GA');

1 row created.

SQL> INSERT INTO ITEM\_LIST values(491204,Ordinal\_No\_Seq.nextval,'51-APP');

1 row created.

SQL>

SQL> SELECT \* FROM ITEM\_LIST WHERE RNO=491204;

RNO ORDINAL ITEM

---------- ---------- ---------------

491204 1 90-CH-PF

491204 2 70-GA

491204 3 51-APP

SQL>

SQL> REM 7:Create a synonym named Product\_details for the item\_list relation. Perform the DML operations on it.

SQL>

SQL> CREATE SYNONYM Product\_details for ITEM\_LIST;

Synonym created.

SQL>

SQL> INSERT INTO RECEIPTS values(181923,'10-Jul-2009',10);

1 row created.

SQL> INSERT INTO Product\_details

2 values(181923,8,'24-8x10');

1 row created.

SQL> SELECT \* FROM Product\_details WHERE RNO=181923;

RNO ORDINAL ITEM

---------- ---------- ---------------

181923 8 24-8x10

SQL> SELECT \* FROM ITEM\_LIST WHERE RNO=181923;

RNO ORDINAL ITEM

---------- ---------- ---------------

181923 8 24-8x10

SQL>

SQL> UPDATE Product\_details

2 SET ITEM='90-APR-PF'

3 where RNO=181923 and ordinal='8';

1 row updated.

SQL> SELECT \* FROM Product\_details WHERE RNO=181923;

RNO ORDINAL ITEM

---------- ---------- ---------------

181923 8 90-APR-PF

SQL> SELECT \* FROM ITEM\_LIST WHERE RNO=181923;

RNO ORDINAL ITEM

---------- ---------- ---------------

181923 8 90-APR-PF

SQL>

SQL> DELETE FROM Product\_details

2 where RNO=181923;

1 row deleted.

SQL> SELECT \* FROM Product\_details WHERE RNO=181923;

no rows selected

SQL> SELECT \* FROM ITEM\_LIST WHERE RNO=181923;

no rows selected

SQL>

SQL> REM 8:Drop all the above created database objects.

SQL>

SQL> DROP VIEW Blue\_flavor;

View dropped.

SQL> DROP VIEW Cheap\_Food;

View dropped.

SQL> DROP VIEW Hot\_Food ;

View dropped.

SQL> DROP VIEW Pie\_Food;

View dropped.

SQL> DROP VIEW Cheap\_View;

View dropped.

SQL> DROP SEQUENCE Ordinal\_No\_Seq;

Sequence dropped.

SQL> DROP SYNONYM Product\_details;

Synonym dropped.

SQL> spool off