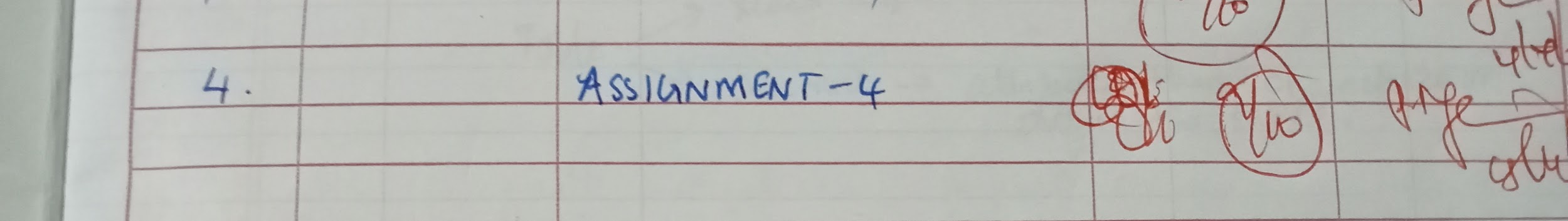
**UCS 1412 - DATABASE LAB**

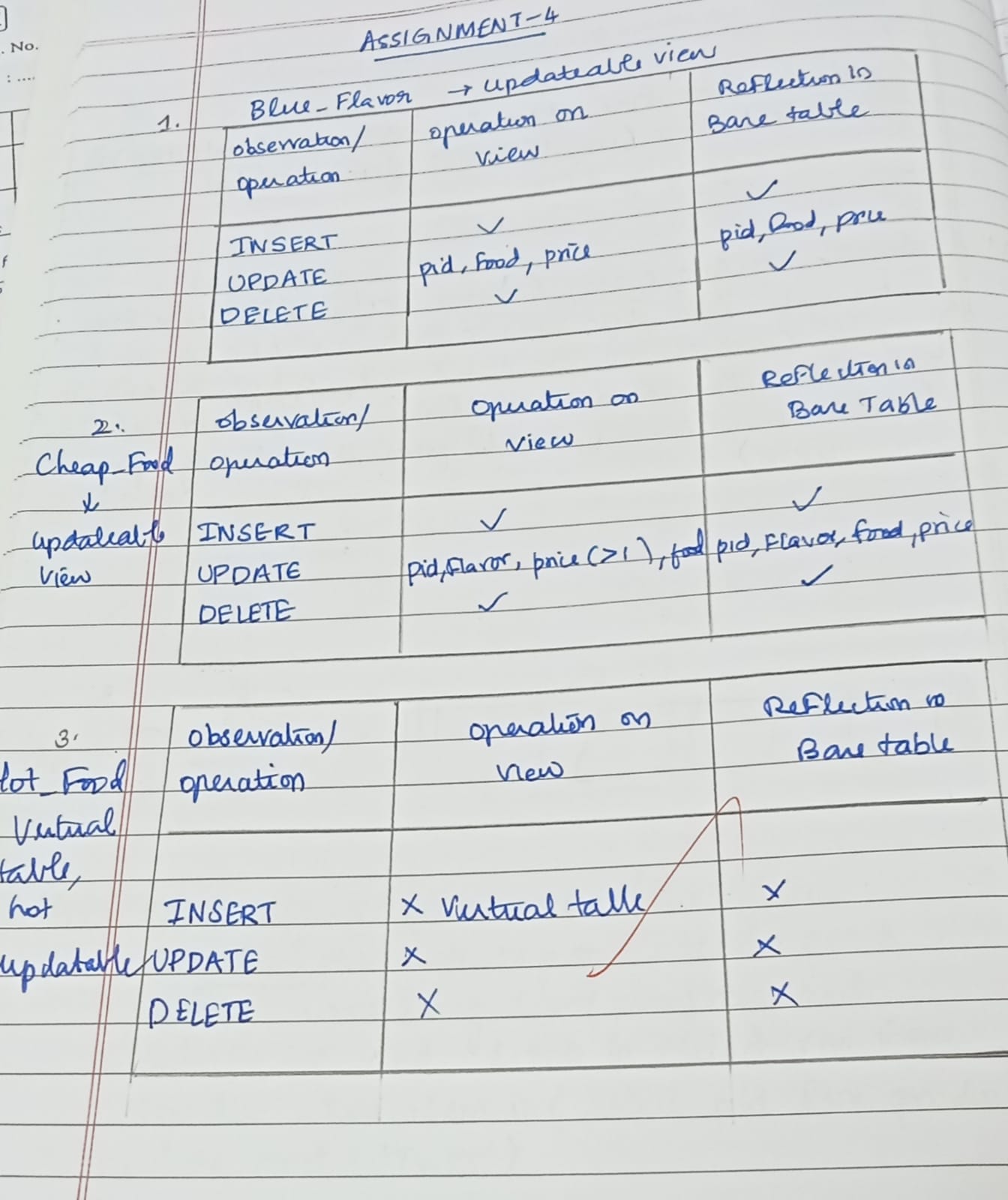
**Assignment 4 -Views**

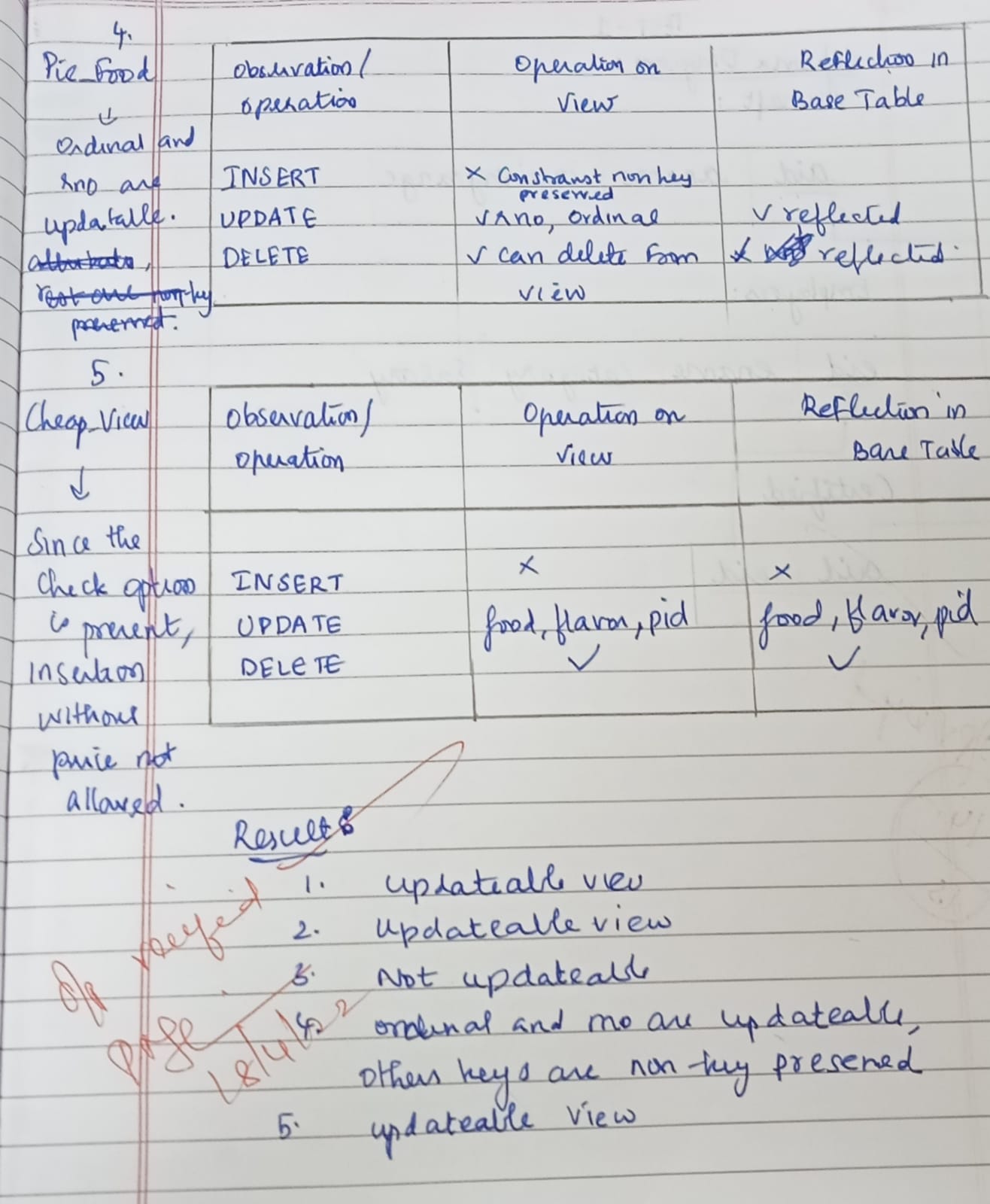
**DIKSHITHA VANI V**

**205001032**

**INDEX PAGE:**

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****

****

**SCRIPT FILE:**

SQL> set echo on;

SQL> @ Z:\csea\_a\_1032\assig4\check.sql

SQL> REM \*\*\*SSN COLLEGE OF ENGINEERING\*\*\*

SQL> REM \*\*\*DEPARTMENT OF COMPUTER SCIENCE ENGINEERING\*\*\*

SQL> REM \*\*\*DATABASE MANAGEMENT SYSTEMS LAB\*\*\*

SQL> REM \*\*\*Name:DIKSHITHA VANI V\*\*\*

SQL> REM \*\*\*Register No.: 205001032\*\*\*

SQL> REM \*\*\*Date: 18.04.2022\*\*\*

SQL> REM \*\* 1. \*\*

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

SQL> REM food, price) of Blueberry flavor. \*\*

SQL>

SQL> create or replace view Blue\_flavor as select pid,food ,price from products where flavor='Blueberry';

View created.

SQL> select \* from Blue\_flavor;

PID FOOD PRICE

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

90-BLU-11 Tart 3.25

51-BLU Danish 1.15

SQL>

SQL> savepoint pt1;

Savepoint created.

SQL>

SQL> insert into products values('P103','Blueberry','cupcake',1.5);

1 row created.

SQL> select \* from Blue\_Flavor;

PID FOOD PRICE

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

90-BLU-11 Tart 3.25

51-BLU Danish 1.15

P103 cupcake 1.5

SQL> select \* from products where food='cupcake';

PID FLAVOR FOOD PRICE

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

P103 Blueberry cupcake 1.5

SQL>

SQL> insert into Blue\_Flavor Values('Ptmp-100','vada',2);

1 row created.

SQL> select \* from Blue\_Flavor;

PID FOOD PRICE

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

90-BLU-11 Tart 3.25

51-BLU Danish 1.15

P103 cupcake 1.5

SQL> select \* from products where food='vada';

PID FLAVOR FOOD PRICE

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

Ptmp-100 vada 2

SQL>

SQL> REM \*\* price column is updatable\*\*

SQL> update Blue\_flavor set price=1.4 where food='Tart';

1 row updated.

SQL> select \* from Blue\_flavor;

PID FOOD PRICE

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

90-BLU-11 Tart 1.4

51-BLU Danish 1.15

P103 cupcake 1.5

SQL> select \* from products where food='Tart' and flavor='Blueberry';

PID FLAVOR FOOD PRICE

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

90-BLU-11 Blueberry Tart 1.4

SQL>

SQL> REM \*\* food column is updatable\*\*

SQL> update Blue\_flavor set food='Dosa' where food='Tart';

1 row updated.

SQL> select \* from Blue\_flavor;

PID FOOD PRICE

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

90-BLU-11 Dosa 1.4

51-BLU Danish 1.15

P103 cupcake 1.5

SQL> select \* from products where food='Dosa' and flavor='Blueberry';

PID FLAVOR FOOD PRICE

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

90-BLU-11 Blueberry Dosa 1.4

SQL>

SQL> REM \*\* pid column is updatable \*\*

SQL> update Blue\_Flavor set pid='P1003' where pid='P103';

1 row updated.

SQL> select pid,food from Blue\_flavor;

PID FOOD

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

90-BLU-11 Dosa

51-BLU Danish

P1003 cupcake

SQL> select pid,food from products where pid='P1003';

PID FOOD

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

P1003 cupcake

SQL>

SQL> REM \*\* Deletion is possible for the newly created value \*\*

SQL> delete from Blue\_Flavor where food='cupcake';

1 row deleted.

SQL> select \* from Blue\_Flavor;

PID FOOD PRICE

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

90-BLU-11 Dosa 1.4

51-BLU Danish 1.15

SQL> select \* from products where food='cupcake';

no rows selected

SQL>

SQL> rollback to pt1;

Rollback complete.

SQL>

SQL> select COLUMN\_NAME,UPDATABLE,INSERTABLE,DELETABLE FROM USER\_UPDATABLE\_COLUMNS WHERE TABLE\_NAME='BLUE\_FLAVOR';

COLUMN\_NAME UPD INS DEL

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

PID YES YES YES

FOOD YES YES YES

PRICE YES YES YES

SQL> REM RESULT: ALL INSERTIONS ,UPDATIONS POSSIBLE

SQL> REM updatable VIEW

SQL> REM \*\*2.\*\*

SQL> REM 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 or replace view Cheap\_Food as select \* from products where price<1 with check option;

View created.

SQL> select\* from Cheap\_Food;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

SQL>

SQL> savepoint pt2;

Savepoint created.

SQL>

SQL> Select \* from Cheap\_Food;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

SQL>

SQL> REM \*\*INSERTION\*\*

SQL> insert into Cheap\_Food values('P1006','Strawberry','Candy',0.05);

1 row created.

SQL> Select \* from Cheap\_Food;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

P1006 Strawberry Candy .05

SQL> Select \* from products where food='Candy';

PID FLAVOR FOOD PRICE

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

P1006 Strawberry Candy .05

SQL>

SQL> REM \*\* price column is updatable with check condition \*\*

SQL> update Cheap\_Food set price=0.45 where pid='P1006';

1 row updated.

SQL> select \* from Cheap\_Food ;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

P1006 Strawberry Candy .45

SQL> select \* from products where food='Candy';

PID FLAVOR FOOD PRICE

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

P1006 Strawberry Candy .45

SQL>

SQL> REM \*\* price column is updatable with check condition \*\*

SQL> update Cheap\_Food set price=1.45 where pid='P1006';

update Cheap\_Food set price=1.45 where pid='P1006'

\*

ERROR at line 1:

ORA-01402: view WITH CHECK OPTION where-clause violation

SQL> select \* from Cheap\_Food ;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

P1006 Strawberry Candy .45

SQL> select \* from products where food='Candy';

PID FLAVOR FOOD PRICE

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

P1006 Strawberry Candy .45

SQL>

SQL>

SQL> REM \*\* food column is updatable\*\*

SQL> update Cheap\_Food set food='Tart' where food='Dosa';

0 rows updated.

SQL> select \* from Cheap\_Food ;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

P1006 Strawberry Candy .45

SQL> select \* from products where food='Tart' ;

PID FLAVOR FOOD PRICE

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

90-ALM-I Almond Tart 3.75

90-APP-11 Apple Tart 3.25

90-APR-PF Apricot Tart 3.25

90-BER-11 Berry Tart 3.25

90-BLK-PF Blackberry Tart 3.25

90-BLU-11 Blueberry Tart 3.25

90-CH-PF Chocolate Tart 3.75

90-CHR-11 Cherry Tart 3.25

90-LEM-11 Lemon Tart 3.25

90-PEC-11 Pecan Tart 3.75

10 rows selected.

SQL>

SQL> REM \*\* pid column is updatable \*\*

SQL> update Cheap\_Food set pid='new\_P1006' where pid='P1006';

1 row updated.

SQL> select \* from Cheap\_Food ;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

new\_P1006 Strawberry Candy .45

SQL> select \* from products where food='Candy';

PID FLAVOR FOOD PRICE

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

new\_P1006 Strawberry Candy .45

SQL>

SQL>

SQL> REM \*\* flavor column is updatable \*\*

SQL> update Cheap\_Food set flavor='chocolate' where pid='new\_P1006';

1 row updated.

SQL> select \* from Cheap\_Food ;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

new\_P1006 chocolate Candy .45

SQL> select \* from products where food='Candy';

PID FLAVOR FOOD PRICE

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

new\_P1006 chocolate Candy .45

SQL>

SQL>

SQL> REM \*\* DELETION \*\*

SQL> Delete from Cheap\_Food where pid='new\_P1006';

1 row deleted.

SQL> select \* from Cheap\_Food ;

PID FLAVOR FOOD PRICE

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

70-LEM Lemon Cookie .79

70-W Walnut Cookie .79

SQL> select \* from products where food='Candy';

no rows selected

SQL>

SQL>

SQL> select COLUMN\_NAME,UPDATABLE,INSERTABLE,DELETABLE FROM USER\_UPDATABLE\_COLUMNS WHERE TABLE\_NAME='CHEAP\_FOOD';

COLUMN\_NAME UPD INS DEL

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

PID YES YES YES

FLAVOR YES YES YES

FOOD YES YES YES

PRICE YES YES YES

SQL>

SQL>

SQL> rollback to pt2;

Rollback complete.

SQL> REM RESULT: ALL INSERTIONS ,UPDATIONS POSSIBLE

SQL> REM updatable VIEW

SQL> REM \*\*3.\*\*

SQL> REM 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 or replace view Hot\_Food (pid,quantity) as select item,count(\*) from item\_list group by(rno,item) having count(\*)>1;

View created.

SQL>

SQL> savepoint pt3;

Savepoint created.

SQL>

SQL> REM \*\*INSERTION\*\*

SQL> Insert into Hot\_Food values('P109',15);

Insert into Hot\_Food values('P109',15)

\*

ERROR at line 1:

ORA-01733: virtual column not allowed here

SQL>

SQL> REM \*\*UPDATION\*\*

SQL> Update Hot\_Food set pid='new\_value' where pid='90-APR-PF';

Update Hot\_Food set pid='new\_value' where pid='90-APR-PF'

\*

ERROR at line 1:

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

SQL> Update Hot\_Food set quantity=100 where pid='90-APR-PF';

Update Hot\_Food set quantity=100 where pid='90-APR-PF'

\*

ERROR at line 1:

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

SQL>

SQL> REM \*\*DELETION\*\*

SQL> Delete from Hot\_Food where pid='90-APR-PF';

Delete from Hot\_Food where pid='90-APR-PF'

\*

ERROR at line 1:

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

SQL>

SQL>

SQL> select \*from Hot\_Food;

PID 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

PID 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> select COLUMN\_NAME,UPDATABLE,INSERTABLE,DELETABLE FROM USER\_UPDATABLE\_COLUMNS WHERE TABLE\_NAME='HOT\_FOOD';

COLUMN\_NAME UPD INS DEL

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

PID NO NO NO

QUANTITY NO NO NO

SQL>

SQL> rollback to pt3;

Rollback complete.

SQL> REM CANNOT INSERT,UPDATE OR DELETE

SQL> REM RESULT - NOT AN updatable VIEW

SQL>

SQL> REM \*\*4.\*\*

SQL> REM 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>

SQL> create or replace view Pie\_Food as select c.lname,p.flavor,i.rno,r.rdate,i.ordinal from Receipts r join item\_list i on r.rno=i.rno join products p on p.pid=i.item join customers c on c.cid=r.cid where p.food='Pie';

View created.

SQL> select \* from Pie\_Food;

LNAME FLAVOR RNO RDATE ORDINAL

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

JULIET Apple 39685 28-OCT-07 4

JULIET Apple 66227 10-OCT-07 2

TRAVIS Apple 48647 09-OCT-07 2

JOSETTE Apple 87454 21-OCT-07 1

JOSETTE Apple 47353 12-OCT-07 2

RUPERT Apple 53376 30-OCT-07 3

CUC Apple 50660 18-OCT-07 2

KIP Apple 11548 21-OCT-07 2

RAYFORD Apple 29226 26-OCT-07 2

RAYFORD Apple 51991 17-OCT-07 1

ARIANE Apple 39109 02-OCT-07 1

LNAME FLAVOR RNO RDATE ORDINAL

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

ARIANE Apple 44798 04-OCT-07 3

CHARLENE Apple 98806 15-OCT-07 3

13 rows selected.

SQL>

SQL> REM \*\* Only attributes of key preserved table can be changed \*\*

SQL>

SQL> savepoint pt4;

Savepoint created.

SQL>

SQL> REM \*\* INSERTION \*\*

SQL> insert into Pie\_Food values ('KIP','Strawberry',78179, '24-Oct-2007',1);

insert into Pie\_Food values ('KIP','Strawberry',78179, '24-Oct-2007',1)

\*

ERROR at line 1:

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

SQL>

SQL> REM \*\*UPDATION\*\*

SQL> REM \*\*updating rno and ordinal \*\*

SQL> update Pie\_Food set ordinal=5 where rdate='28-OCT-07';

1 row updated.

SQL> select \* from Pie\_Food where rdate='28-OCT-07';

LNAME FLAVOR RNO RDATE ORDINAL

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

JULIET Apple 39685 28-OCT-07 5

SQL> update Pie\_Food set rno =66227 where rdate='28-OCT-07';

1 row updated.

SQL> select \* from Pie\_Food ;

LNAME FLAVOR RNO RDATE ORDINAL

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

JULIET Apple 66227 10-OCT-07 2

JULIET Apple 66227 10-OCT-07 5

TRAVIS Apple 48647 09-OCT-07 2

JOSETTE Apple 87454 21-OCT-07 1

JOSETTE Apple 47353 12-OCT-07 2

RUPERT Apple 53376 30-OCT-07 3

CUC Apple 50660 18-OCT-07 2

KIP Apple 11548 21-OCT-07 2

RAYFORD Apple 29226 26-OCT-07 2

RAYFORD Apple 51991 17-OCT-07 1

ARIANE Apple 39109 02-OCT-07 1

LNAME FLAVOR RNO RDATE ORDINAL

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

ARIANE Apple 44798 04-OCT-07 3

CHARLENE Apple 98806 15-OCT-07 3

13 rows selected.

SQL>

SQL> REM \*\*updating lname or rdate or flavor \*\*

SQL> update Pie\_Food set flavor='Pineapple';

update Pie\_Food set flavor='Pineapple'

\*

ERROR at line 1:

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

SQL> update Pie\_Food set lname='ROY';

update Pie\_Food set lname='ROY'

\*

ERROR at line 1:

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

SQL> update Pie\_Food set rdate='28-OCT-07';

update Pie\_Food set rdate='28-OCT-07'

\*

ERROR at line 1:

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

SQL>

SQL> REM \*\* Deletion \*\*

SQL> delete from Pie\_food where lname='RAYFORD';

2 rows deleted.

SQL> select rno,ordinal from item\_list where rno='29226' and ordinal=2;

no rows selected

SQL>

SQL> select COLUMN\_NAME,UPDATABLE,INSERTABLE,DELETABLE FROM USER\_UPDATABLE\_COLUMNS WHERE TABLE\_NAME='PIE\_FOOD';

COLUMN\_NAME UPD INS DEL

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

LNAME NO NO NO

FLAVOR NO NO NO

RNO YES YES YES

RDATE NO NO NO

ORDINAL YES YES YES

SQL>

SQL> rollback to pt4;

Rollback complete.

SQL>

SQL> REM RESULT: CANNOT INSERT

SQL> REM CAN UPDATE A FEW ATTRIBUTES

SQL> REM CAN DELETE FROM VIEW NOT FROM ORIGINAL TABLE

SQL> REM UPDATABLE VIEW WRT ITEM\_LIST TABLE ATTRIBUTES ALONE

SQL> REM \*\*5.\*\*

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

SQL>

SQL> create or replace view Cheap\_View as select pid,food,flavor from Cheap\_Food;

View created.

SQL> select \* from Cheap\_View;

PID FOOD FLAVOR

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

70-LEM Cookie Lemon

70-W Cookie Walnut

SQL>

SQL> savepoint pt5;

Savepoint created.

SQL>

SQL> REM \*\* INSERTION \*\*

SQL> REM \*\* INSERTION IS NOT POSSIBLE BECAUSE OF CHECK CONSTRAINT IN Cheap\_Food view \*\*

SQL> insert into Cheap\_view Values('P1007','Vanilla','choco');

insert into Cheap\_view Values('P1007','Vanilla','choco')

\*

ERROR at line 1:

ORA-01402: view WITH CHECK OPTION where-clause violation

SQL>

SQL>

SQL> REM \*\* food column is updatable\*\*

SQL> update Cheap\_Food set food='Tart' where food='Cookie';

2 rows updated.

SQL> select \* from Cheap\_view ;

PID FOOD FLAVOR

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

70-LEM Tart Lemon

70-W Tart Walnut

SQL> select \* from products where food='Tart' ;

PID FLAVOR FOOD PRICE

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

90-ALM-I Almond Tart 3.75

90-APP-11 Apple Tart 3.25

90-APR-PF Apricot Tart 3.25

90-BER-11 Berry Tart 3.25

90-BLK-PF Blackberry Tart 3.25

90-BLU-11 Blueberry Tart 3.25

90-CH-PF Chocolate Tart 3.75

90-CHR-11 Cherry Tart 3.25

90-LEM-11 Lemon Tart 3.25

90-PEC-11 Pecan Tart 3.75

70-LEM Lemon Tart .79

PID FLAVOR FOOD PRICE

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

70-W Walnut Tart .79

12 rows selected.

SQL>

SQL>

SQL> REM \*\* flavor column is updatable \*\*

SQL> update Cheap\_view set flavor='chocolate' where pid='new\_P1007';

0 rows updated.

SQL> select \* from Cheap\_View;

PID FOOD FLAVOR

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

70-LEM Tart Lemon

70-W Tart Walnut

SQL> select \* from products where food='choco';

no rows selected

SQL>

SQL>

SQL> REM \*\* DELETION \*\*

SQL> Delete from Cheap\_view where pid='new\_P1007';

0 rows deleted.

SQL> select \* from Cheap\_view ;

PID FOOD FLAVOR

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

70-LEM Tart Lemon

70-W Tart Walnut

SQL> select \* from products where food='choco';

no rows selected

SQL>

SQL> select COLUMN\_NAME,UPDATABLE,INSERTABLE,DELETABLE FROM USER\_UPDATABLE\_COLUMNS WHERE TABLE\_NAME='CHEAP\_VIEW';

COLUMN\_NAME UPD INS DEL

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

PID YES YES YES

FOOD YES YES YES

FLAVOR YES YES YES

SQL>

SQL> rollback to pt5;

Rollback complete.

PpSQL> REM CANNOT INSERT,DELETE OR UPDATE BECAUSE OF THE CHECK CONSTRAINT IN SQL> REM CHEAP\_FOOD

SQL> REM RESULT: UPDATABLE VIEW

SQL> REM IT'S UPDATABLE BECAUSE UPDATION IS RESTRICTED ONLY DUE TO CHECK CONSTRAINT

SQL> REM \*\*6.\*\*

SQL> REM Drop the view Cheap\_View

SQL> drop view Cheap\_View;

View dropped.

SQL> spool off;