SQL> @D:/Ex07\_commands.sql

SQL>

SQL> rem 1. The combination of Flavor and Food determines the product id. Hence, while

SQL> rem inserting a new instance into the Products relation, ensure that the same combination

SQL> rem of Flavor and Food is not already available.

SQL> savepoint A;

Savepoint created.

SQL> create or replace trigger unique\_food

2 before insert on products

3 for each row

4 declare

5 p products%rowtype;

6 cursor c1 is

7 select \* from products

8 where food = :new.food and flavor = :new.flavor;

9 begin

10 open c1;

11 fetch c1 into p;

12 if c1%rowcount>0 then

13 RAISE\_APPLICATION\_ERROR( -20001, 'The Combination of Food and Flavor already exists' );

14 else

15

16 dbms\_output.put\_line('Inserted');

17 end if;

18 close c1;

19 end;

20 /

Trigger created.

SQL> insert into products values('TT-03','Apricot','Tart',3.75);

insert into products values('TT-03','Apricot','Tart',3.75)

\*

ERROR at line 1:

ORA-20001: The Combination of Food and Flavor already exists

ORA-06512: at "HR.UNIQUE\_FOOD", line 10

ORA-04088: error during execution of trigger 'HR.UNIQUE\_FOOD'

SQL> insert into products values('TT-03','Grapes','Tart',3.75);

Inserted

1 row created.

SQL>

SQL>

SQL>

SQL> REM 2. While entering an item into the item\_list relation, update the amount in Receipts with

SQL> REM the total amount for that receipt number.

SQL> alter table Receipts add amount number(5,2);

Table altered.

SQL> update receipts r set amount = (select sum(p.price) from item\_list i join products p on i.item = p.pid

2 where i.rno = r.rno);

199 rows updated.

SQL> create or replace trigger amount\_update

2 after insert on item\_list for each row

3 declare

4 iprice products.price%type;

5 begin

6 select price into iprice from products where pid = :new.item;

7 update Receipts set amount = amount + iprice where rno = :new.rno;

8 end;

9 /

Trigger created.

SQL>

SQL> select \* from Receipts where rno = 77406;

RNO R\_DATE CID AMOUNT

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

77406 09-OCT-07 13 23.25

SQL> insert into item\_list values(77406, 8, '70-MAR');

1 row created.

SQL> select \* from Receipts where rno = 77406;

RNO R\_DATE CID AMOUNT

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

77406 09-OCT-07 13 24.5

SQL> alter table receipts drop column amount;

Table altered.

SQL>

SQL> REM 3. Implement the following constraints for Item\_list relation:

SQL> REM a. A receipt can contain a maximum of five items only.

SQL> REM b. A receipt should not allow an item to be purchased more than thrice.

SQL>

SQL> create or replace trigger item\_constraint

2 before insert or update on item\_list for each row

3 begin

4 if :new.ordinal > 5 then

5 raise\_application\_error(-20002,'Error: Has more than 5 items!');

6 end if;

7 end;

8 /

Trigger created.

SQL>

SQL> create or replace trigger thrice\_constraint

2 before insert or update on item\_list for each row

3 declare

4 cursor c2 is select rno, item, count(\*) as qty from item\_list

5 where item = :new.item and rno = :new.rno

6 group by item, rno;

7 q int;

8 r item\_list.rno%type;

9 i item\_list.item%type;

10 begin

11 open c2;

12 fetch c2 into r, i, q;

13 if c2%FOUND then

14 if q >= 3 then

15 raise\_application\_error(-20003,'Error: Item count > 3!');

16 end if;

17 end if;

18 end;

19 /

Trigger created.

SQL>

SQL> insert into item\_list values(55944, 6, '50-CHS');

insert into item\_list values(55944, 6, '50-CHS')

\*

ERROR at line 1:

ORA-20002: Error: Has more than 5 items!

ORA-06512: at "HR.ITEM\_CONSTRAINT", line 3

ORA-04088: error during execution of trigger 'HR.ITEM\_CONSTRAINT'

SQL> insert into item\_list values(84665, 2, '90-BER-11');

1 row created.

SQL> insert into item\_list values(84665, 3, '90-BER-11');

1 row created.

SQL> insert into item\_list values(84665, 4, '90-BER-11');

insert into item\_list values(84665, 4, '90-BER-11')

\*

ERROR at line 1:

ORA-20003: Error: Item count > 3!

ORA-06512: at "HR.THRICE\_CONSTRAINT", line 13

ORA-04088: error during execution of trigger 'HR.THRICE\_CONSTRAINT'

SQL>