

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>