TASK TO BE DONE ON 04/06/2025 ON PL/SQL -KEERTHIKA.R

Enter user-name: system
Enter password:
Last Successful login time: Fri May 30 2025 16:15:15 +05:30

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

```
SQL> Create Table Restaurant
  2  (
  3     restaurantId number primary key,
  4     restaurantName varchar2(30),
  5     city varchar2(30),
  6     email varchar2(30),
  7     mobile varchar2(15),
  8     rating number(9,2)
  9  );
```

Table created.

--> Implement Procedures to AddRestaurant, SearchByRestaurantId, UpdateRestaurant, DeleteRestaurantById

1.AddRestaurant

```
SQL> CREATE OR REPLACE PROCEDURE AddRestaurant (
  2     p_id IN NUMBER,
  3     p_name IN VARCHAR2,
  4     p_city IN VARCHAR2,
  5     p_email IN VARCHAR2,
  6     p_mobile IN VARCHAR2,
  7     p_rating IN NUMBER
  8  )
  9  IS
 10  BEGIN
 11     INSERT INTO Restaurant (
 12        restaurantId, restaurantName, city, email, mobile, rating
 13     ) VALUES (
 14        p_id, p_name, p_city, p_email, p_mobile, p_rating
 15     );
 16
 17     DBMS_OUTPUT.PUT_LINE('Restaurant added successfully.');
 18  EXCEPTION
 19     WHEN OTHERS THEN
 20        DBMS_OUTPUT.PUT_LINE('Error: ' || SQLERRM);
 21  END;
 22  /
```

Procedure created.

```
SQL> set serveroutput on;
SQL>execAddRestaurant(01,'ArabianFood
Restaurant','Chennai','arabianreastaurant@gmail.com','9874663219',4);
Restaurant added successfully.
```

PL/SQL procedure successfully completed.

SQL>execAddRestaurant(02,'RoofTop
Restaurant','Chennai','roofietoppie@gmail.com','9658741236',5);
Restaurant added successfully.

PL/SQL procedure successfully completed.

SQL> exec AddRestaurant(03,'Olive Beach','Bangalore','itsolivebeachres@gmail.com','8547691239',4);
Restaurant added successfully.

PL/SQL procedure successfully completed.
I have added three records successfully.

2.SearchByRestaurantId

```
SQL> CREATE OR REPLACE PROCEDURE SearchByRestaurantId (
  2    p_id IN NUMBER
  3  )
  4  IS
  5    v_rest Restaurant%ROWTYPE;
  6  BEGIN
  7    SELECT * INTO v_rest
  8    FROM Restaurant
  9    WHERE restaurantId = p_id;
 10
 11    DBMS_OUTPUT.PUT_LINE('ID: ' || v_rest.restaurantId);
 12    DBMS_OUTPUT.PUT_LINE('Name: ' || v_rest.restaurantName);
 13    DBMS_OUTPUT.PUT_LINE('City: ' || v_rest.city);
 14    DBMS_OUTPUT.PUT_LINE('Email: ' || v_rest.email);
 15    DBMS_OUTPUT.PUT_LINE('Mobile: ' || v_rest.mobile);
 16    DBMS_OUTPUT.PUT_LINE('Rating: ' || v_rest.rating);
 17  EXCEPTION
 18    WHEN NO_DATA_FOUND THEN
 19      DBMS_OUTPUT.PUT_LINE('No restaurant found with ID ' || p_id);
 20  END;
 21  /
```

Procedure created.

SQL> EXEC SearchByRestaurantId(03);
ID: 3
Name: Olive Beach
City: Bangalore
Email: itsolivebeachres@gmail.com
Mobile: 8547691239
Rating: 4

PL/SQL procedure successfully completed.

3.UpdateRestaurant
```
SQL> CREATE OR REPLACE PROCEDURE UpdateRestaurant (
  2    p_id    IN NUMBER,
  3    p_name   IN VARCHAR2,
  4    p_city   IN VARCHAR2,
  5    p_email  IN VARCHAR2,
  6    p_mobile IN VARCHAR2,
  7    p_rating IN NUMBER
```

```
 8  )
 9  IS
10  BEGIN
11     UPDATE Restaurant
12     SET restaurantName = p_name,
13        city = p_city,
14        email = p_email,
15        mobile = p_mobile,
16        rating = p_rating
17     WHERE restaurantId = p_id;
18
19     IF SQL%ROWCOUNT = 0 THEN
20        DBMS_OUTPUT.PUT_LINE('No restaurant found with ID ' || p_id);
21     ELSE
22        DBMS_OUTPUT.PUT_LINE('Restaurant updated successfully.');
23     END IF;
24  EXCEPTION
25     WHEN OTHERS THEN
26        DBMS_OUTPUT.PUT_LINE('Error: ' || SQLERRM);
27  END;
28  /
```

Procedure created.

//I wish to change city name

```
SQL> EXEC UpdateRestaurant(01,'Arabian Food
Restaurant','Hyderabad','arabianreastaurant@gmail.com','9874663219',4);
Restaurant updated successfully.
```

PL/SQL procedure successfully completed.

SQL> select * from Restaurant;

```
RESTAURANTID RESTAURANTNAME              CITY
------------ ----------------------------- -----------------------------
EMAIL                 MOBILE         RATING
----------------------------- --------------- ----------
        1 Arabian Food Restaurant     Chennai
arabianreastaurant@gmail.com  9874663219          4

        2 RoofTop Restaurant          Chennai
roofietoppie@gmail.com        9658741236          5

        3 Olive Beach                 Bangalore
itsolivebeachres@gmail.com    8547691239          4
```

4.DeleteByRestaurantId
```
SQL> CREATE OR REPLACE PROCEDURE DeleteRestaurantById (
 2    p_id IN NUMBER
 3  )
 4  IS
 5  BEGIN
 6     DELETE FROM Restaurant
 7     WHERE restaurantId = p_id;
 8
```

```
  9    IF SQL%ROWCOUNT = 0 THEN
 10      DBMS_OUTPUT.PUT_LINE('No restaurant found with ID ' || p_id);
 11    ELSE
 12      DBMS_OUTPUT.PUT_LINE('Restaurant deleted successfully.');
 13    END IF;
 14  EXCEPTION
 15    WHEN OTHERS THEN
 16      DBMS_OUTPUT.PUT_LINE('Error: ' || SQLERRM);
 17  END;
 18  /
```

Procedure created.

```
SQL> EXEC DeleteRestaurantById(03);
Restaurant deleted successfully.
```

PL/SQL procedure successfully completed.

```
SQL> select * from Restaurant where restaurantId = 03;
```

no rows selected

Cursor to print all restaurant Details

```
SQL> CREATE OR REPLACE PROCEDURE PrintAllRestaurants
  2  IS
  3    CURSOR rest_cursor IS
  4      SELECT * FROM Restaurant;
  5
  6    rest_row Restaurant%ROWTYPE;
  7  BEGIN
  8    OPEN rest_cursor;
  9    LOOP
 10      FETCH rest_cursor INTO rest_row;
 11      EXIT WHEN rest_cursor%NOTFOUND;
 12
 13      DBMS_OUTPUT.PUT_LINE('ID: ' || rest_row.restaurantId ||
 14                ', Name: ' || rest_row.restaurantName ||
 15                ', City: ' || rest_row.city ||
 16                ', Email: ' || rest_row.email ||
 17                ', Mobile: ' || rest_row.mobile ||
 18                ', Rating: ' || rest_row.rating);
 19    END LOOP;
 20    CLOSE rest_cursor;
 21  EXCEPTION
 22    WHEN OTHERS THEN
 23      DBMS_OUTPUT.PUT_LINE('Error: ' || SQLERRM);
 24  END;
 25  /
```

Procedure created.

```
SQL> EXEC PrintAllRestaurants;
ID: 1, Name: Arabian Food Restaurant, City: Chennai, Email:
arabianreastaurant@gmail.com, Mobile: 9874663219, Rating: 4
ID: 2, Name: RoofTop Restaurant, City: Chennai, Email: roofietoppie@gmail.com,
Mobile: 9658741236, Rating: 5
```

PL/SQL procedure successfully completed.

Procedure with output parameters to searchRestaurantById

```
SQL> CREATE OR REPLACE PROCEDURE searchRestaurantById(
 2    p_id     IN  NUMBER,
 3    p_name   OUT VARCHAR2,
 4    p_city   OUT VARCHAR2,
 5    p_email  OUT VARCHAR2,
 6    p_mobile OUT VARCHAR2,
 7    p_rating OUT NUMBER
 8 )
 9 IS
10 BEGIN
11    SELECT restaurantName, city, email, mobile, rating
12    INTO p_name, p_city, p_email, p_mobile, p_rating
13    FROM Restaurant
14    WHERE restaurantId = p_id;
15 EXCEPTION
16    WHEN NO_DATA_FOUND THEN
17       p_name := NULL;
18       p_city := NULL;
19       p_email := NULL;
20       p_mobile := NULL;
21       p_rating := NULL;
22 END;
23 /
```

Procedure created.

```
SQL> VARIABLE v_name VARCHAR2(30);
SQL> VARIABLE v_city VARCHAR2(30);
SQL> VARIABLE v_email VARCHAR2(30);
SQL> VARIABLE v_mobile VARCHAR2(15);
SQL> VARIABLE v_rating NUMBER;
SQL> EXEC searchRestaurantById(01, :v_name, :v_city, :v_email, :v_mobile, :v_rating);
```

PL/SQL procedure successfully completed.

```
SQL> PRINT v_name v_city v_email v_mobile v_rating;
```

V_NAME

Arabian Food Restaurant

V_CITY

Chennai

V_EMAIL
----
arabianreastaurant@gmail.com

```
V_MOBILE
----------------------------------------------------------------------------
9874663219


 V_RATING
----------
        4
```

Backup Table creation

```
SQL> Create Table RestaurantBackup
  2  (
  3    RbId number primary key,
  4     restaurantId number,
  5     restaurantName varchar2(30),
  6     city varchar2(30),
  7     email varchar2(30),
  8     mobile varchar2(15),
  9     rating number(9,2),
 10     operation varchar2(30),
 11     activityOn Date default sysdate
 12  );
```

Table created.

```
SQL> CREATE SEQUENCE RestaurantBackup_seq
  2  START WITH 1
  3  INCREMENT BY 1
  4  NOCACHE
  5  NOCYCLE;
```

Sequence created.

Write 3 Triggers for Insert, Update and Delete as you need to store the records in backup table and write operation as "INSERT","DELETE","UPDATE"

If update old values to be stored in Backup Table
if delete old values to be stored in Backup Table
if insert new values to be stored in backup table

I Insert values
```
SQL> CREATE OR REPLACE TRIGGER trg_restaurant_insert
  2  BEFORE INSERT ON Restaurant
  3  FOR EACH ROW
  4  BEGIN
  5    INSERT INTO RestaurantBackup (
  6      RbId, restaurantId, restaurantName, city, email, mobile, rating, operation
  7    ) VALUES (
  8      RestaurantBackup_seq.NEXTVAL,
  9      :NEW.restaurantId, :NEW.restaurantName, :NEW.city,
 10      :NEW.email, :NEW.mobile, :NEW.rating,
 11      'INSERT'
 12    );
 13  END;
 14  /
```

Trigger created.

SQL> -- Insert a new restaurant
SQL> INSERT INTO Restaurant VALUES (101, 'Dominos', 'Chennai', 'dominos@food.com', '9876543210', 4.2);

1 row created.

SQL> COMMIT;

Commit complete.

SQL> Insert into Restaurant Values(04,'Anandha bhavan','Mumbai','aanadhares25@gmail.com','8654793219',3);

1 row created.

SQL> SELECT * FROM RestaurantBackup;

```
     RBID RESTAURANTID RESTAURANTNAME
---------- ------------ ------------------------------
CITY                 EMAIL                MOBILE
----------------------------- ----------------------------- ---------------
    RATING OPERATION              ACTIVITYO
---------- ----------------------------- ---------
        1        101 Dominos
Chennai              dominos@food.com         9876543210
      4.2 INSERT                04-JUN-25

        2          4 Anandha bhavan
Mumbai               aanadhares25@gmail.com      8654793219
        3 INSERT                04-JUN-25
```

II Update values

SQL> CREATE OR REPLACE TRIGGER trg_restaurant_update
```
 2  BEFORE UPDATE ON Restaurant
 3  FOR EACH ROW
 4  BEGIN
 5    INSERT INTO RestaurantBackup (
 6       RbId, restaurantId, restaurantName, city, email, mobile, rating, operation
 7    ) VALUES (
 8       RestaurantBackup_seq.NEXTVAL,
 9       :OLD.restaurantId, :OLD.restaurantName, :OLD.city,
10       :OLD.email, :OLD.mobile, :OLD.rating,
11       'UPDATE'
12    );
13  END;
14  /
```

Trigger created.

SQL> -- Update the restaurant's city
SQL> UPDATE Restaurant SET city = 'Hyderabad' WHERE restaurantId = 101;

1 row updated.

SQL> COMMIT;

Commit complete.

SQL> SELECT * FROM RestaurantBackup;

```
    RBID RESTAURANTID RESTAURANTNAME
---------- ------------ -----------------------------
CITY                  EMAIL                  MOBILE
---------------------------- ---------------------------- --------------
   RATING OPERATION           ACTIVITYO
---------- ---------------------------- ---------
      1        101 Dominos
Chennai              dominos@food.com         9876543210
   4.2 INSERT               04-JUN-25

      2          4 Anandha bhavan
Mumbai              aanadhares25@gmail.com      8654793219
     3 INSERT               04-JUN-25

    RBID RESTAURANTID RESTAURANTNAME
---------- ------------ -----------------------------
CITY                  EMAIL                  MOBILE
---------------------------- ---------------------------- --------------
   RATING OPERATION           ACTIVITYO
---------- ---------------------------- ---------

      3        101 Dominos
Chennai              dominos@food.com         9876543210
   4.2 UPDATE               04-JUN-25
```

SQL> **select * from Restaurant;**

```
RESTAURANTID RESTAURANTNAME            CITY
------------ ----------------------------- ----------------------------
EMAIL                  MOBILE      RATING
---------------------------- -------------- ----------
      1 Arabian Food Restaurant    Chennai
arabianreastaurant@gmail.com  9874663219        4

      2 RoofTop Restaurant         Chennai
roofietoppie@gmail.com      9658741236        5

    101 Dominos                Hyderabad
dominos@food.com          9876543210      4.2

RESTAURANTID RESTAURANTNAME            CITY
------------ ----------------------------- ----------------------------
EMAIL                  MOBILE      RATING
---------------------------- -------------- ----------
      4 Anandha bhavan             Mumbai
aanadhares25@gmail.com      8654793219        3
```

III Delete values

```
SQL> CREATE OR REPLACE TRIGGER trg_restaurant_delete
  2  BEFORE DELETE ON Restaurant
  3  FOR EACH ROW
  4  BEGIN
  5    INSERT INTO RestaurantBackup (
  6       RbId, restaurantId, restaurantName, city, email, mobile, rating, operation
  7    ) VALUES (
  8       RestaurantBackup_seq.NEXTVAL,
  9       :OLD.restaurantId, :OLD.restaurantName, :OLD.city,
 10       :OLD.email, :OLD.mobile, :OLD.rating,
 11       'DELETE'
 12    );
 13  END;
 14  /
```

Trigger created.

```
SQL> -- Delete the restaurant
SQL> DELETE FROM Restaurant WHERE restaurantId = 101;
```

1 row deleted.

```
SQL> COMMIT;
```

Commit complete.

```
SQL> select * from RestaurantBackUp;
```

```
     RBID RESTAURANTID RESTAURANTNAME
---------- ------------ -----------------------------
CITY               EMAIL                 MOBILE
----------------------------- ----------------------------- ---------------
   RATING OPERATION              ACTIVITYO
---------- ----------------------------- ---------
        1       101 Dominos
Chennai            dominos@food.com          9876543210
      4.2 INSERT             04-JUN-25

        2        4 Anandha bhavan
Mumbai             aanadhares25@gmail.com     8654793219
        3 INSERT             04-JUN-25

     RBID RESTAURANTID RESTAURANTNAME
---------- ------------ -----------------------------
CITY               EMAIL                 MOBILE
----------------------------- ----------------------------- ---------------
   RATING OPERATION              ACTIVITYO
---------- ----------------------------- ---------

        3       101 Dominos
Chennai            dominos@food.com          9876543210
      4.2 UPDATE             04-JUN-25

        4       101 Dominos
```

```
Hyderabad          dominos@food.com          9876543210

     RBID RESTAURANTID RESTAURANTNAME
---------- ------------ -----------------------------
CITY                EMAIL                MOBILE
---------------------------- ---------------------------- ---------------
   RATING OPERATION          ACTIVITYO
---------- ---------------------------- ---------
     4.2 DELETE              04-JUN-25


SQL> Select * from Restaurant;

RESTAURANTID RESTAURANTNAME            CITY
------------ ---------------------------- ----------------------------
EMAIL                MOBILE          RATING
---------------------------- --------------- ----------
         1 Arabian Food Restaurant    Chennai
arabianreastaurant@gmail.com  9874663219         4

         2 RoofTop Restaurant         Chennai
roofietoppie@gmail.com        9658741236        5

         4 Anandha bhavan             Mumbai
aanadhares25@gmail.com        8654793219         3
```