ASSESSMENT-I

PL/SQL – Restaurant Application

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Creation of New Connection

Step 1: Creating the new User (Schema) in SQL*Plus (Backend CMD)

1.1 Connecting to FREEPDB1 as system:

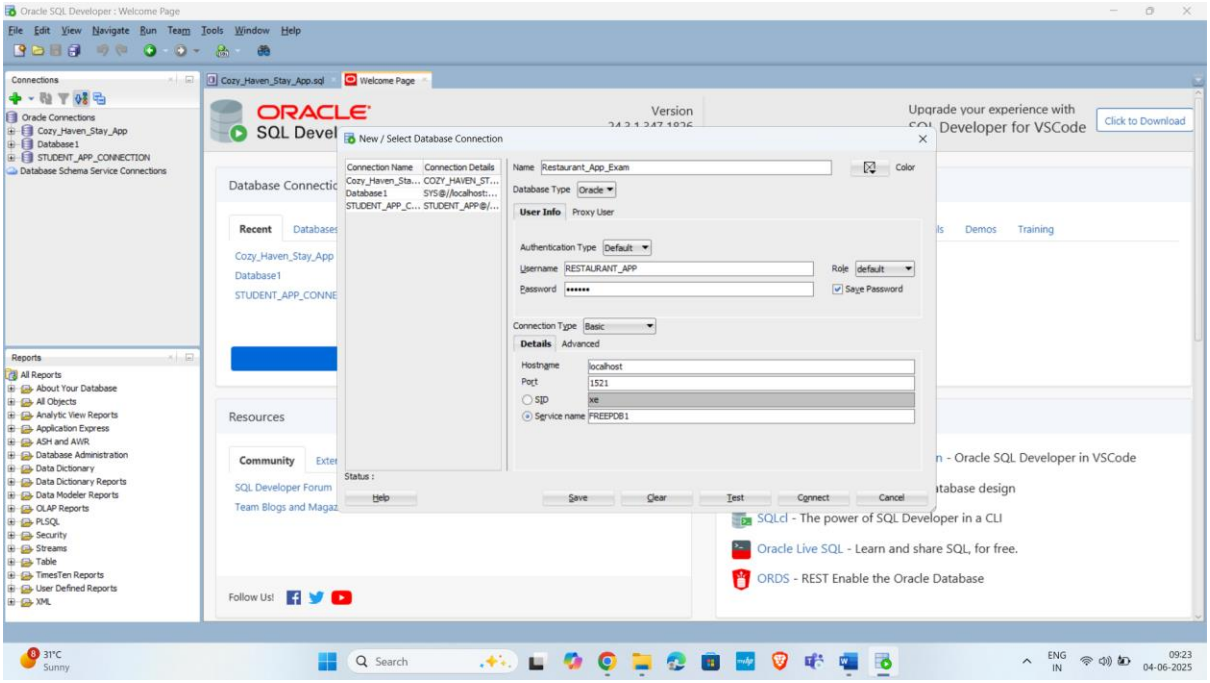
```
SQL*Plus: Release 23.0.0.0.0 - Production on Wed Jun 4 09:14:43 2025
Version 23.8.0.25.04

Copyright (c) 1982, 2025, Oracle.  All rights reserved.

Enter user-name: system
Enter password:
Last Successful login time: Mon Jun 02 2025 22:01:59 +05:30

Connected to:
Oracle Database 23ai Free Release 23.0.0.0.0 - Develop, Learn, and Run for Free
Version 23.8.0.25.04

SQL>
```

1.2 Creating the RESTAURANT_APP user and granting privileges:

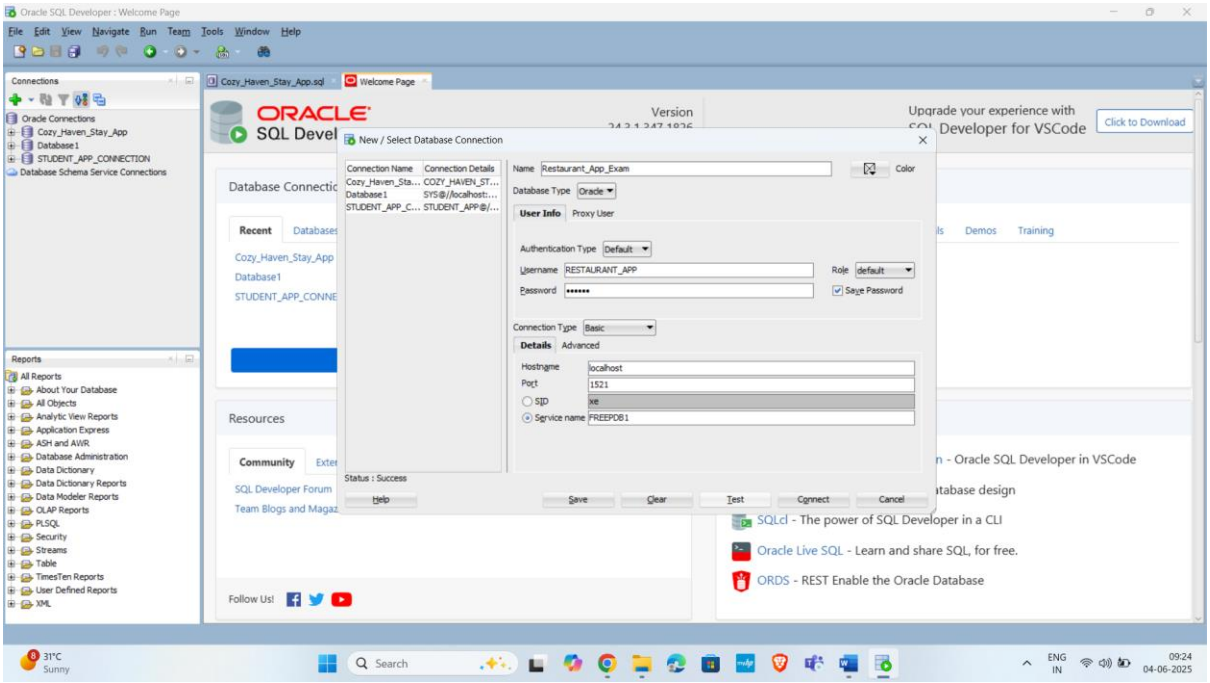
```
SQL> ALTER SESSION SET CONTAINER = FREEPDB1;

Session altered.

SQL> SHOW CON_NAME

CON_NAME
------------------------------
FREEPDB1
SQL> CREATE USER RESTAURANT_APP IDENTIFIED BY res123
  2  ;

User created.
```

```
SQL> GRANT CONNECT, RESOURCE TO RESTAURANT_APP;

Grant succeeded.

SQL> GRANT CREATE SESSION TO RESTAURANT_APP;

Grant succeeded.

SQL> GRANT CREATE TABLE TO RESTAURANT_APP;

Grant succeeded.

SQL> GRANT UNLIMITED TABLESPACE TO RESTAURANT_APP;

Grant succeeded.

SQL>
```

Step 2: Creating the New Connection in Oracle SQL Developer

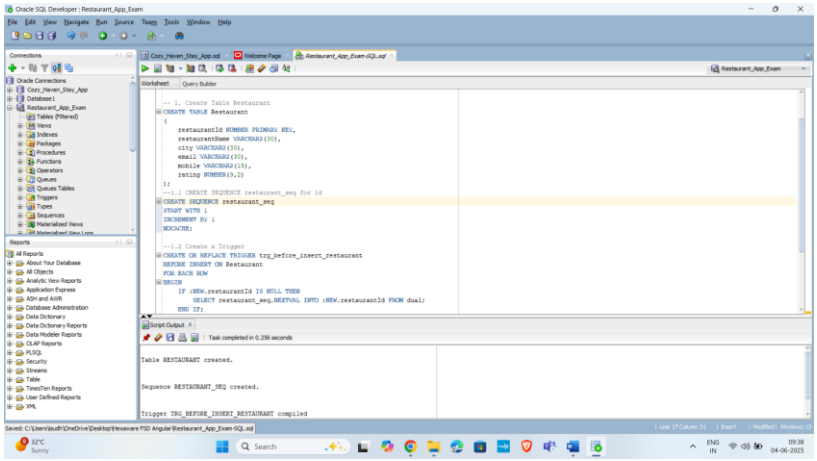


Successfully created a new connection and verified using Test

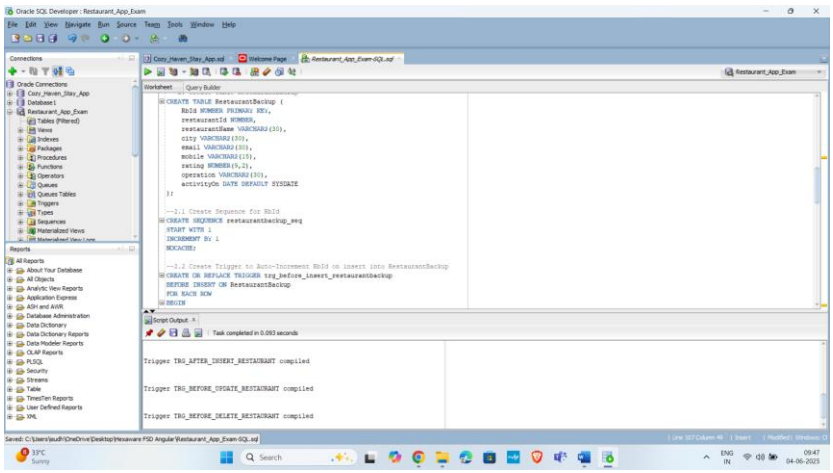


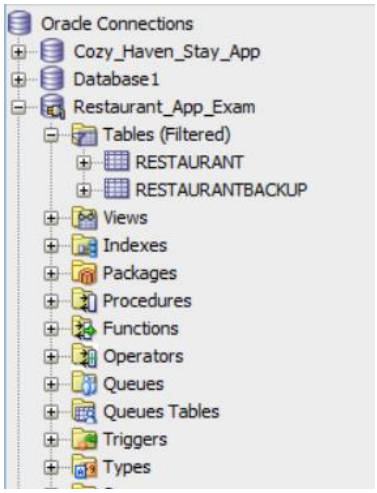
Creation of Tables:

1.Restaurant



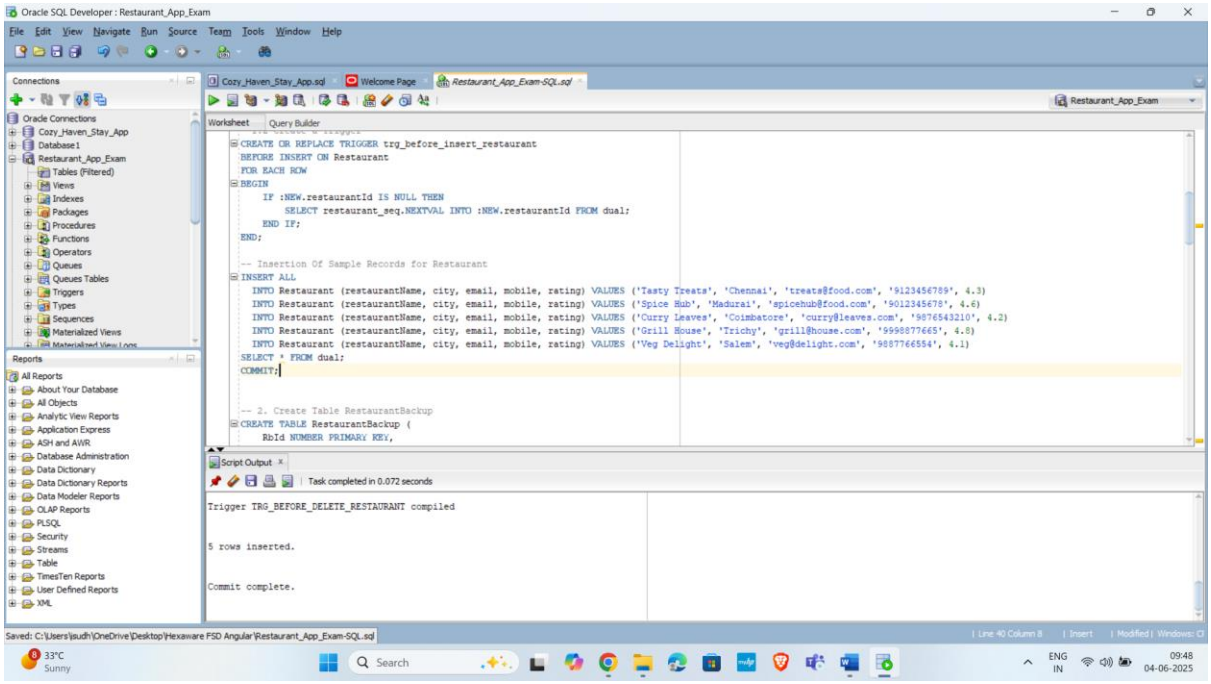
2.Restaurant Backup

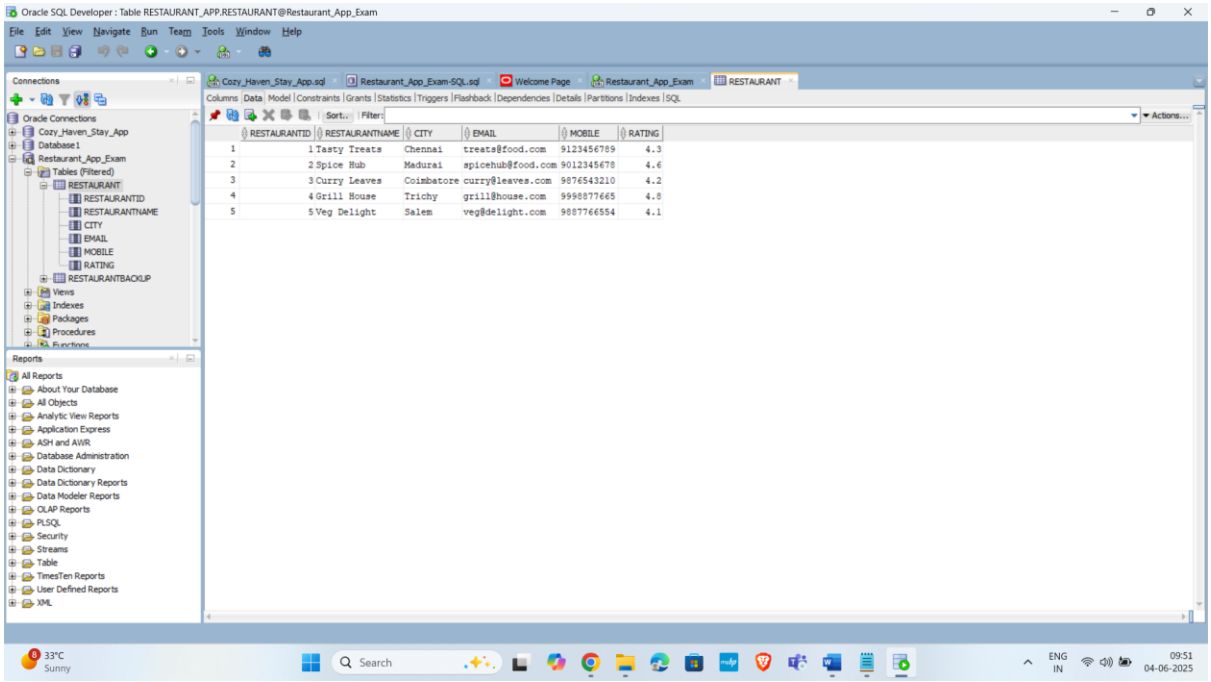




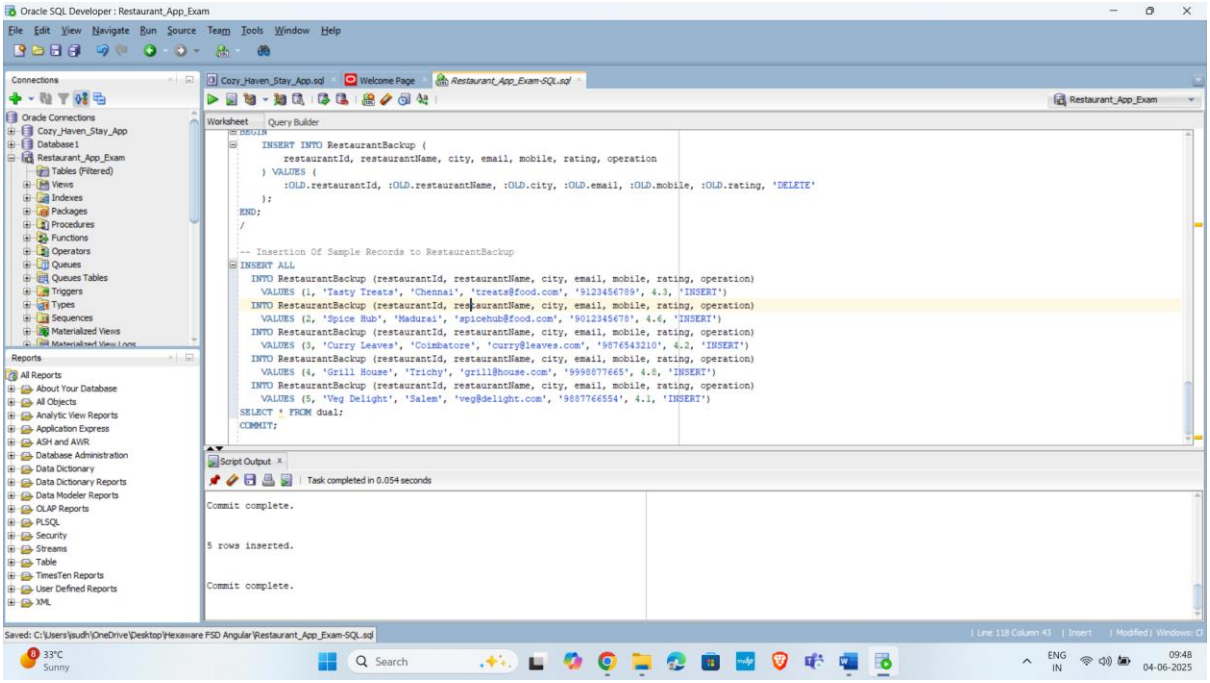
Insertion Of Samples:

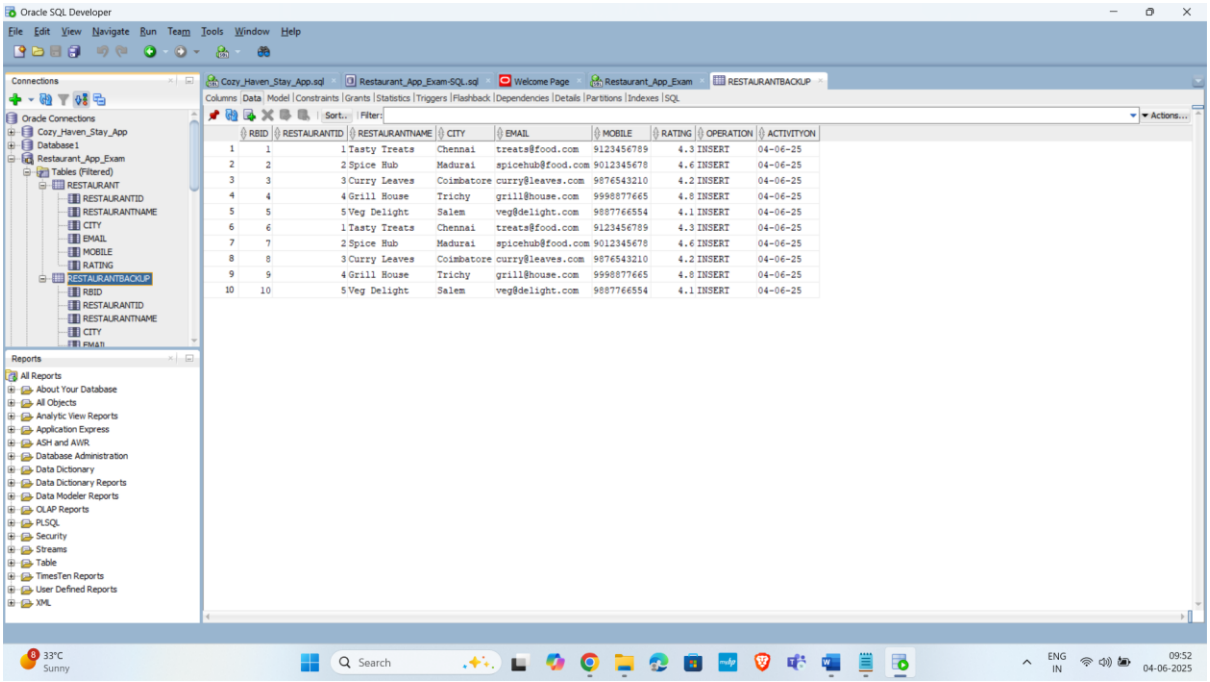
1.Restaurant





2.Restaurant Backup



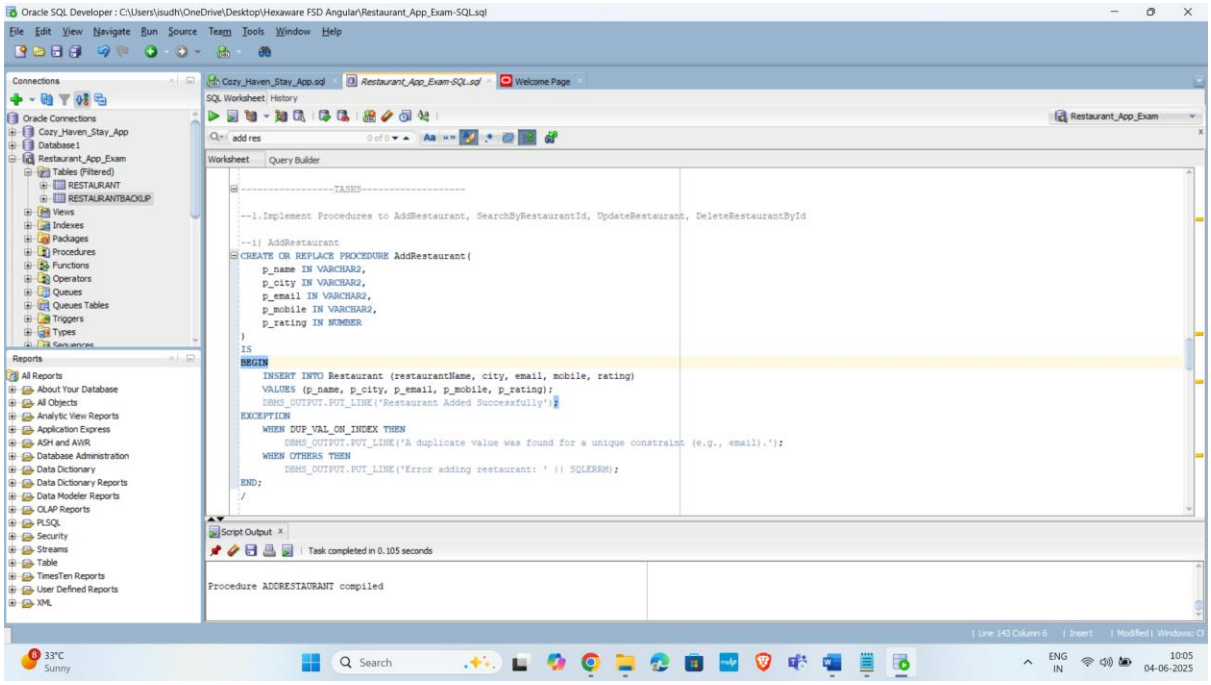


Tasks:

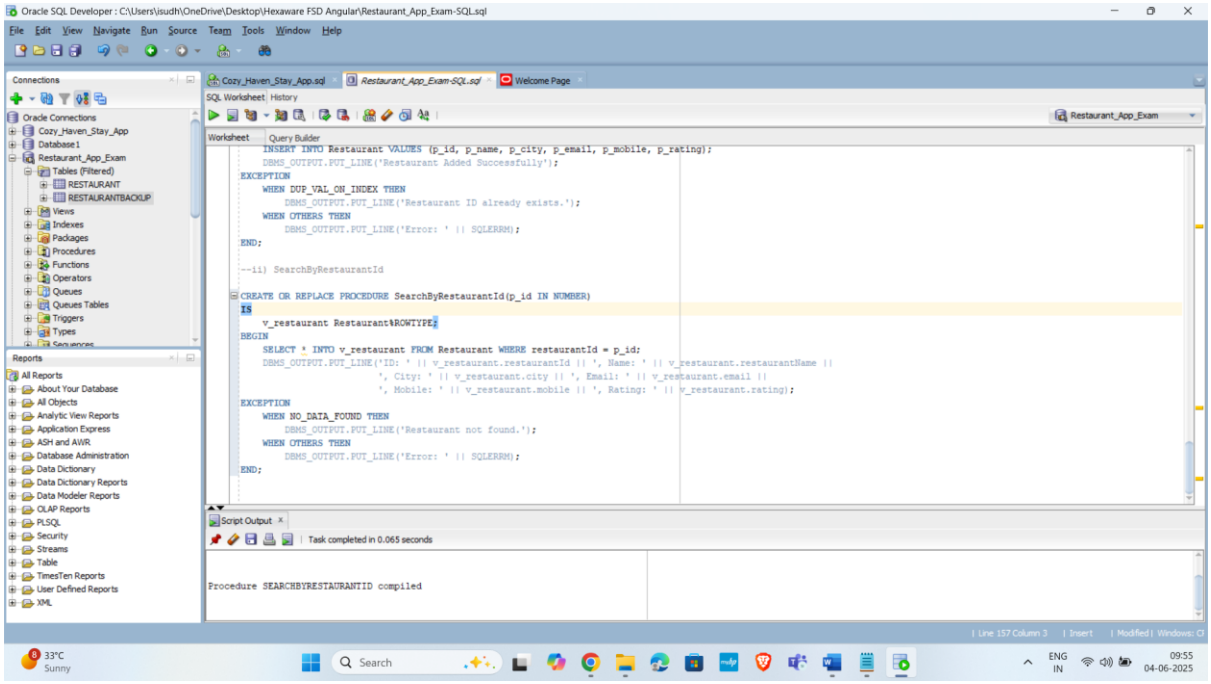
1. Implement Procedures to

AddRestaurant, SearchByRestaurantId, UpdateRestaurant, DeleteRestaurantById

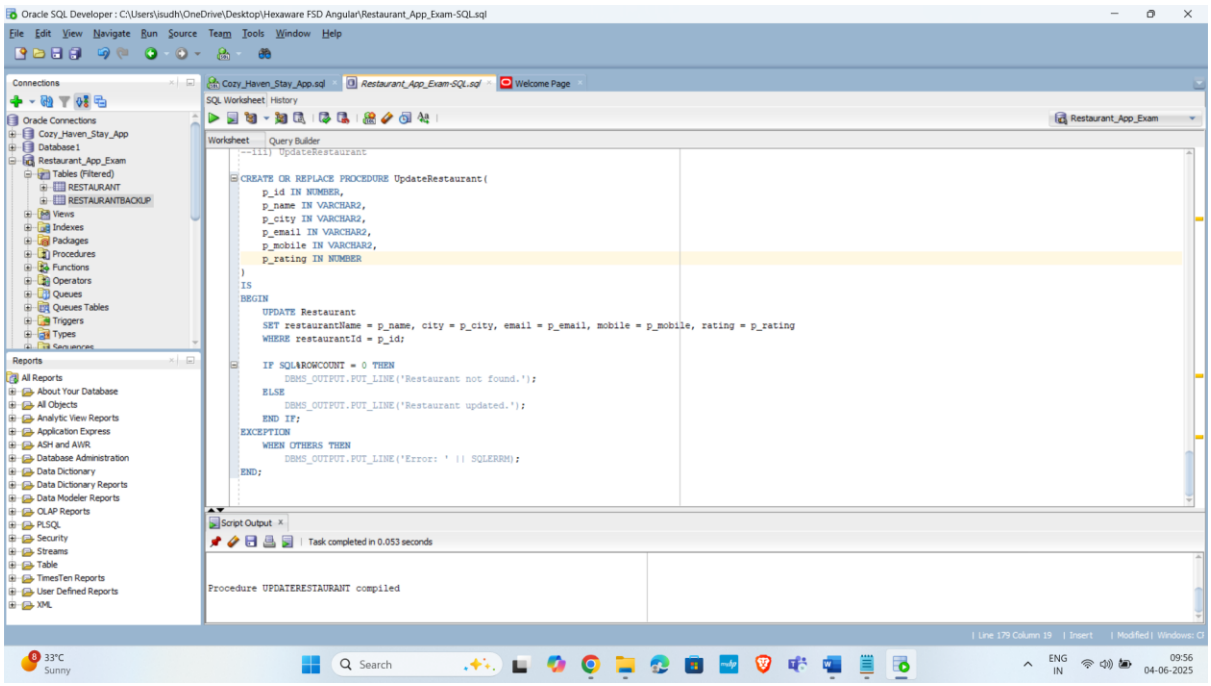
i) Add Restaurant



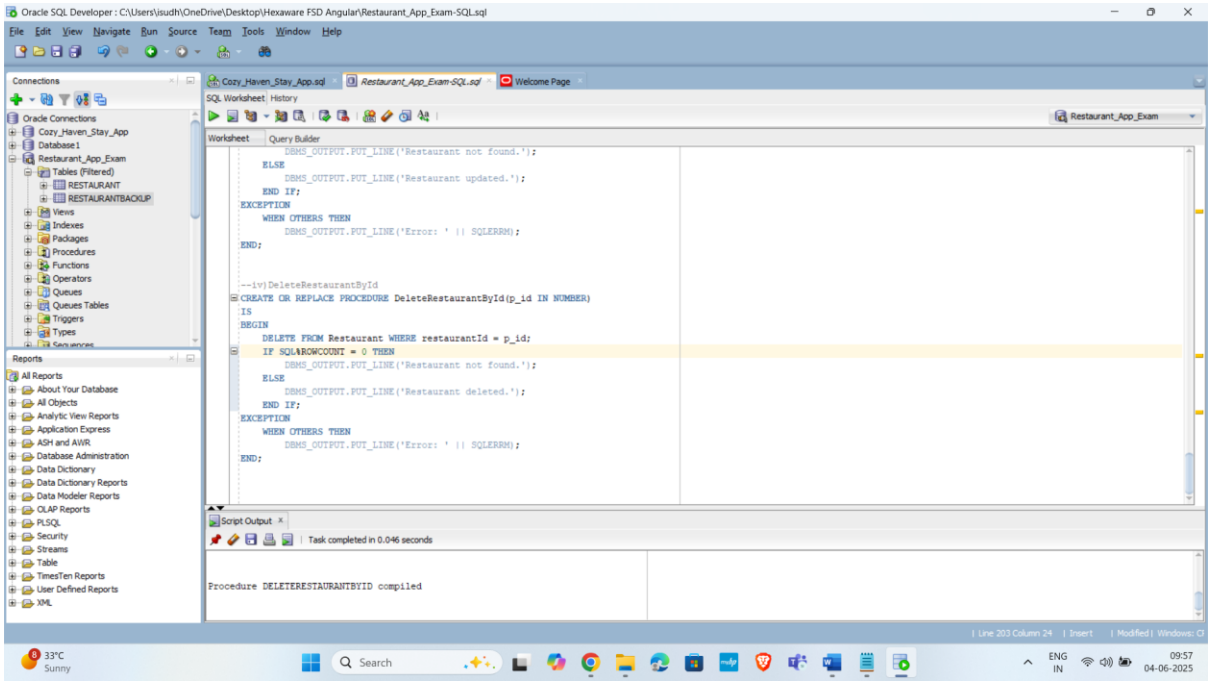
ii) SearchByRestaurantId



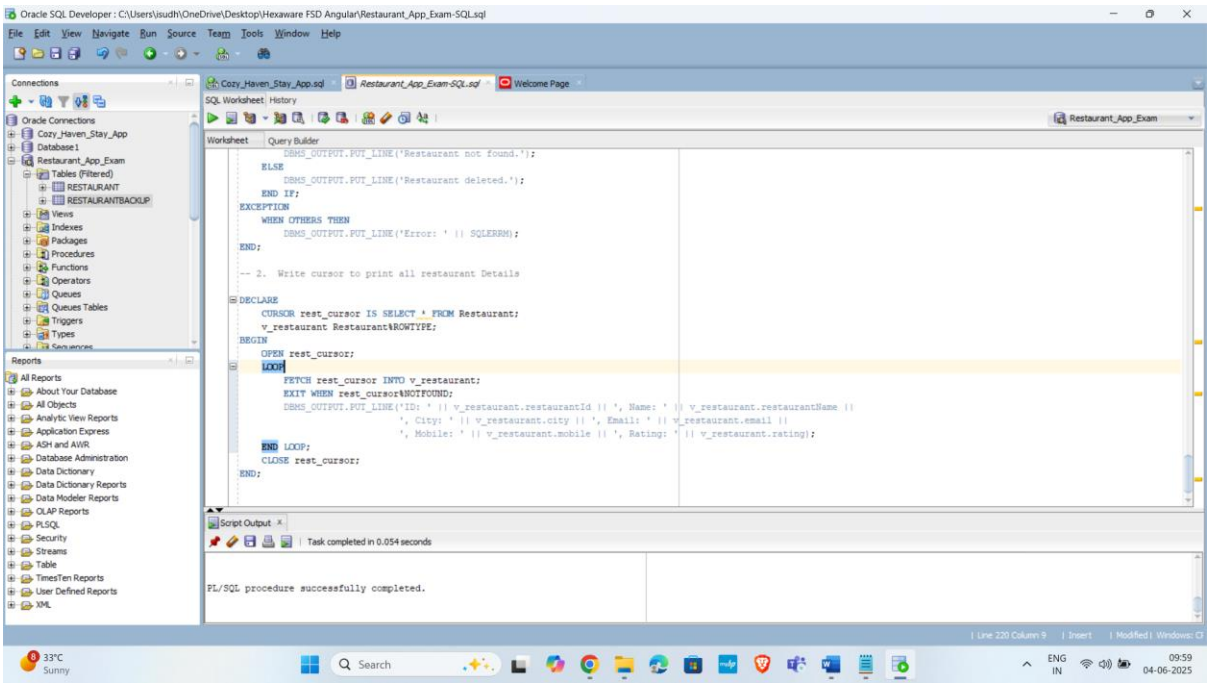
iii) UpdateRestaurant



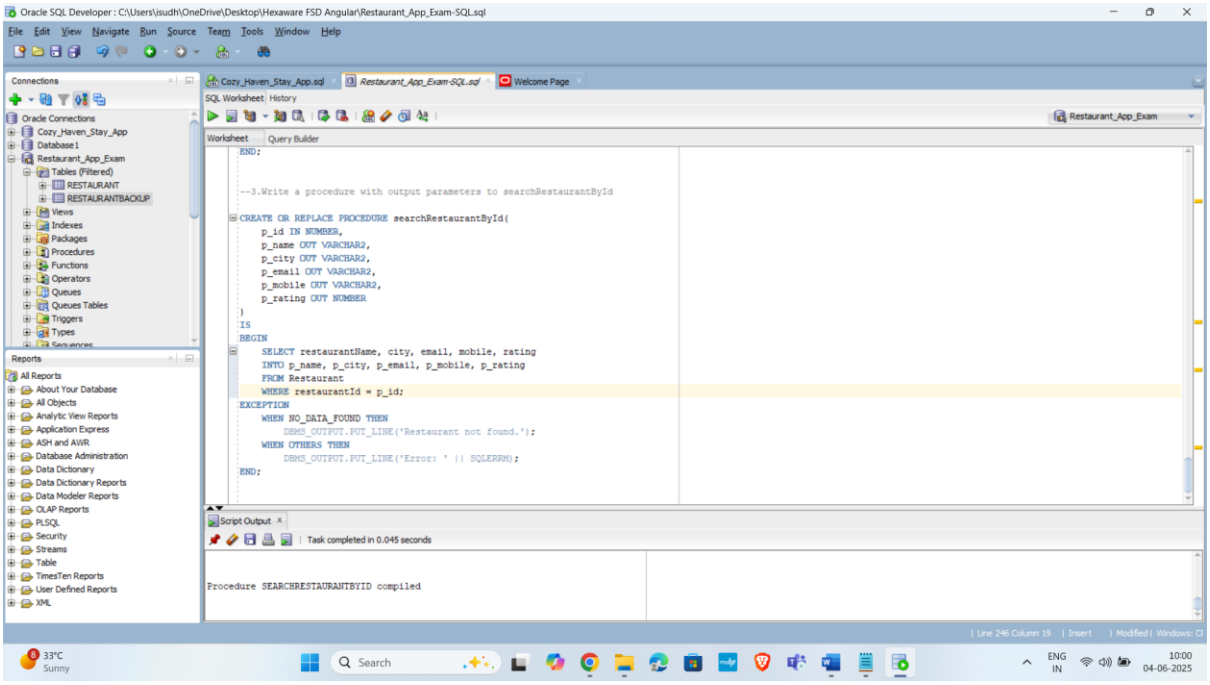
iv) DeleteRestaurantById



2. Write cursor to print all restaurant Details



3. Write a procedure with output parameters to searchRestaurantById



4.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" //done after table creation

1.If update old values to be stored in Backup Table

2.if delete old values to be stored in Backup Table

3.if insert new values to be stored in backup table

Trigger Name	Timing	Event	Captures	operation
trg_after_insert_restaurant	AFTER INSERT	Insert	NEW values	'INSERT'
trg_before_update_restaurant	BEFORE UPDATE	Update	OLD values	'UPDATE'
trg_before_delete_restaurant	BEFORE DELETE	Delete	OLD values	'DELETE'

1. trg_before_update_restaurant

```
--2.3.2 Before Update on Restaurant — Log old data before update

CREATE OR REPLACE TRIGGER trg_before_update_restaurant
BEFORE UPDATE ON Restaurant
FOR EACH ROW
BEGIN
    INSERT INTO RestaurantBackup (
        restaurantId, restaurantName, city, email, mobile, rating, operation
    ) VALUES (
        :OLD.restaurantId, :OLD.restaurantName, :OLD.city, :OLD.email, :OLD.mobile, :OLD.rating, 'UPDATE'
    );
END;
/
```

2. trg_before_delete_restaurant

```
--2.3.3 Before Delete on Restaurant — Log old data before delete
CREATE OR REPLACE TRIGGER trg_before_delete_restaurant
BEFORE DELETE ON Restaurant
FOR EACH ROW
BEGIN
    INSERT INTO RestaurantBackup (
        restaurantId, restaurantName, city, email, mobile, rating, operation
    ) VALUES (
        :OLD.restaurantId, :OLD.restaurantName, :OLD.city, :OLD.email, :OLD.mobile, :OLD.rating, 'DELETE'
    );
END;
/
```

3. trg_after_insert_restaurant

```
--2.3.1 After Insert on Restaurant — Log new inserted row

CREATE OR REPLACE TRIGGER trg_after_insert_restaurant
AFTER INSERT ON Restaurant
FOR EACH ROW
BEGIN
    INSERT INTO RestaurantBackup (
        restaurantId, restaurantName, city, email, mobile, rating, operation
    ) VALUES (
        :NEW.restaurantId, :NEW.restaurantName, :NEW.city, :NEW.email, :NEW.mobile, :NEW.rating, 'INSERT'
    );
END;
/
```

Sample Inputs and Corresponding Output

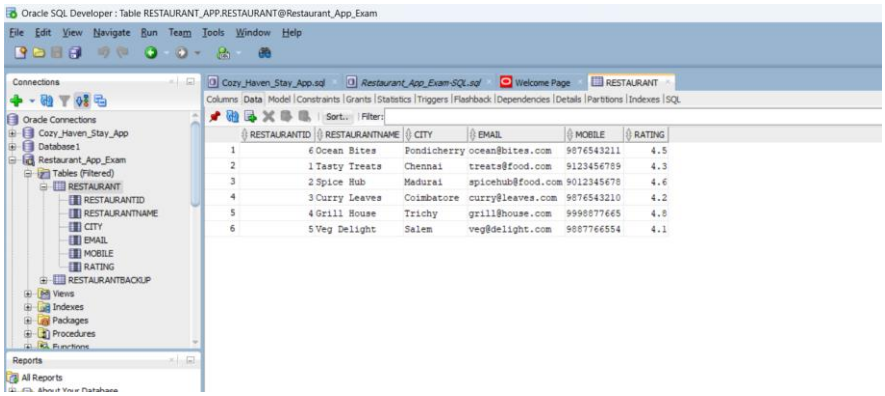
Inputs that I used :

Procedure	Sample Input
AddRestaurant	('Ocean Bites', 'Pondicherry', 'ocean@bites.com', '9876543211', 4.5)
SearchByRestaurantId	1 (existing ID), 999 (non-existing ID)
UpdateRestaurant	(2, 'Spice Hub Deluxe', 'Madurai', 'spicehub@newmail.com', '9012345678', 4.7)
DeleteRestaurantById	3 (existing ID), 999 (non-existing ID)
searchRestaurantById	1

1) AddRestaurant

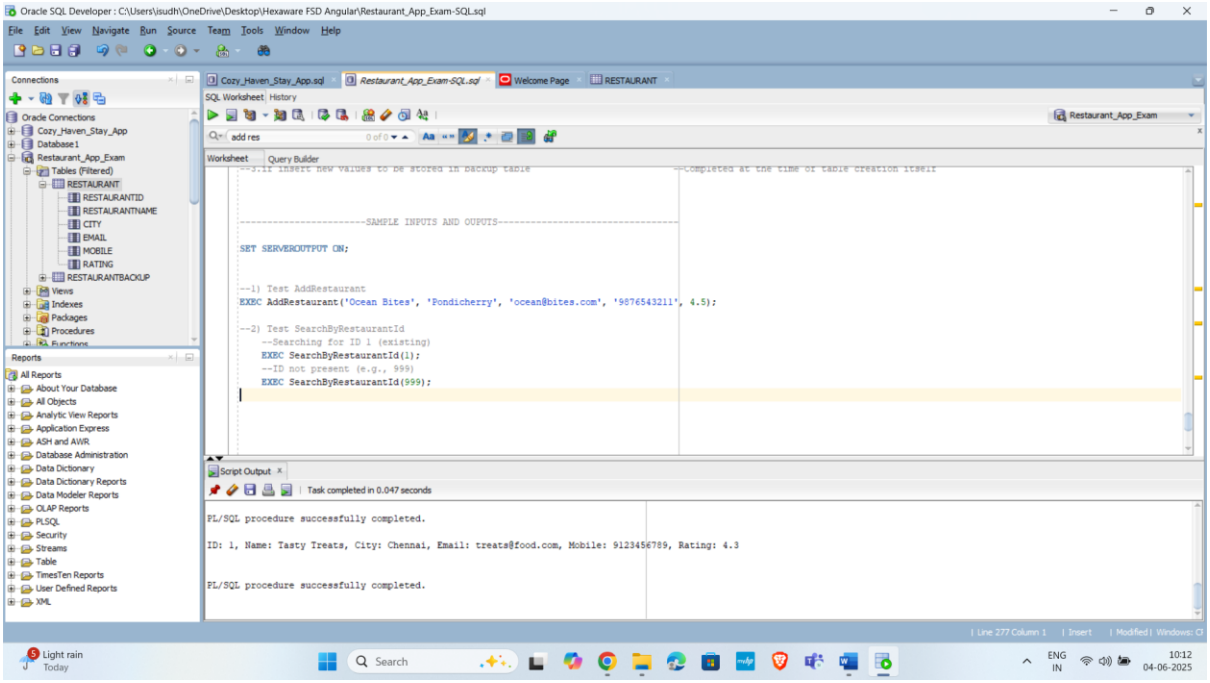
EXEC AddRestaurant('Ocean Bites', 'Pondicherry', 'ocean@bites.com', '9876543211', 4.5);

```
Restaurant Added Successfully


PL/SQL procedure successfully completed.
```

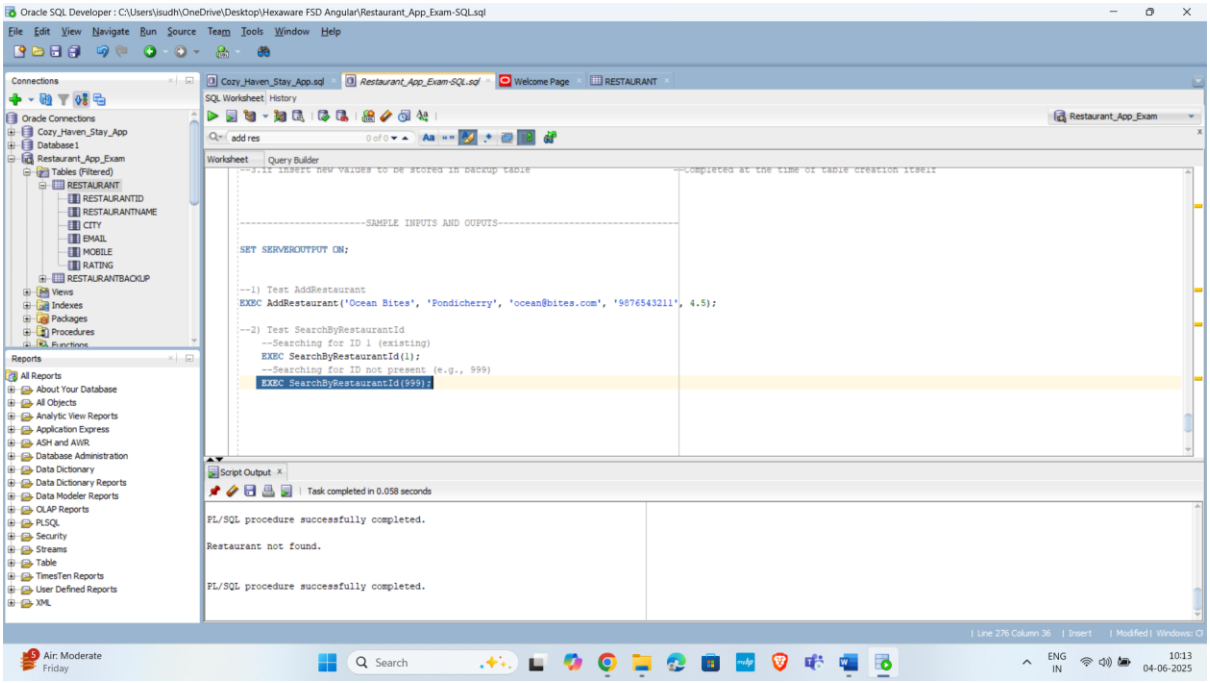


2) SearchByRestaurantId

2.1 Searching for ID 1 (existing)

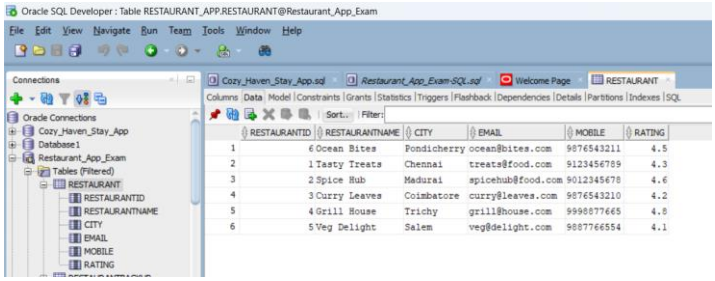


2.2 Searching for ID not present (e.g., 999)

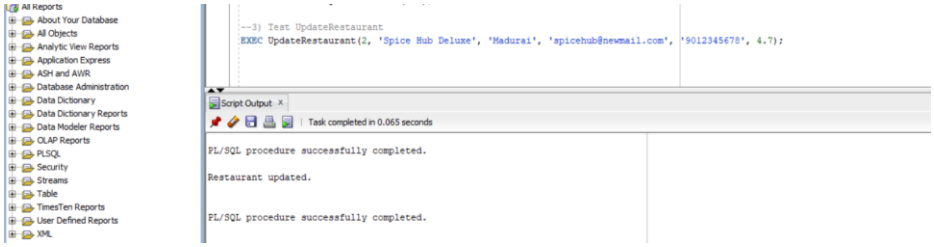


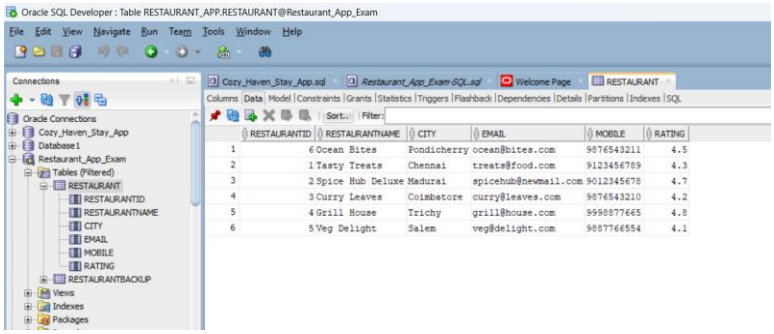
3.Update Restaurant

Before Updation

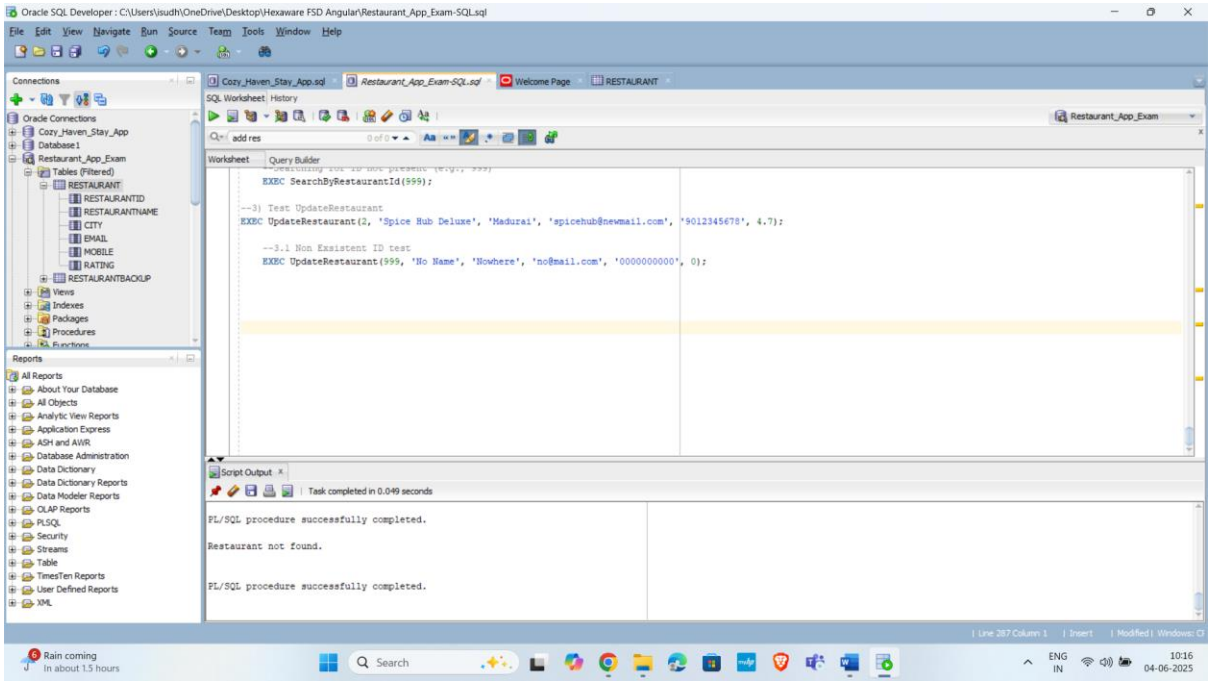


After Updation





3.1 Non Existent ID test

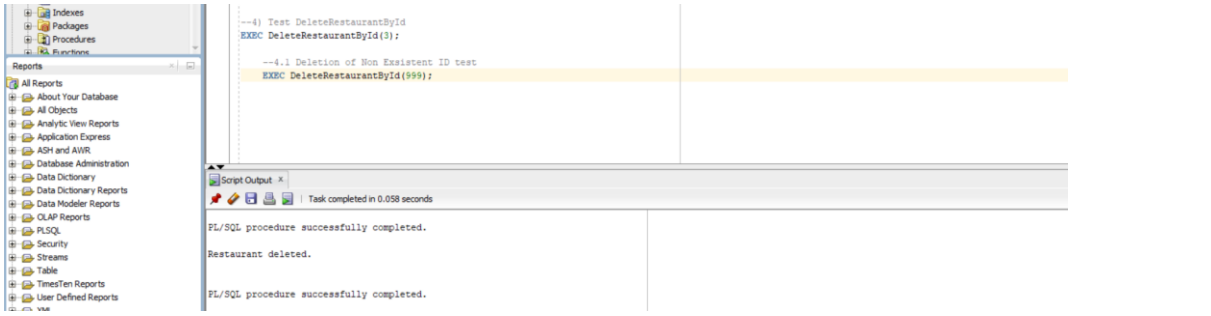


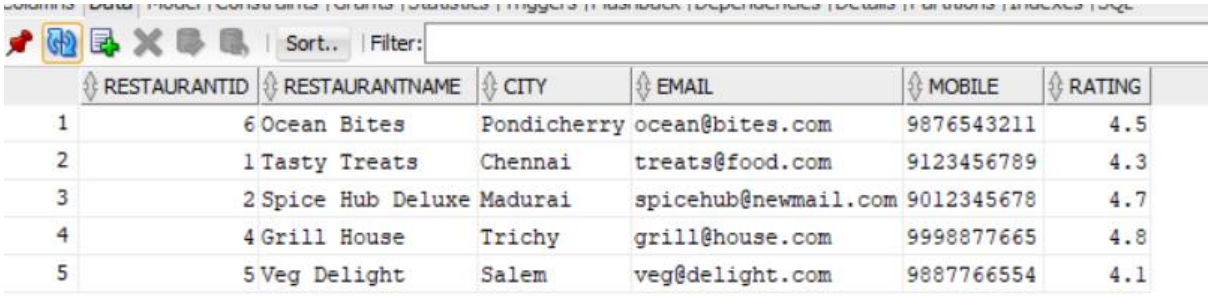
4.Deletion

Before

	RESTAURANTID	RESTAURANTNAME	CITY	EMAIL	MOBILE	RATING
1	6	Ocean Bites	Pondicherry	ocean@bites.com	9876543211	4.5
2	1	Tasty Treats	Chennai	treats@food.com	9123456789	4.3
3	2	Spice Hub Deluxe	Madurai	spicehub@newmail.com	9012345678	4.7
4	3	Curry Leaves	Coimbatore	curry@leaves.com	9876543210	4.2
5	4	Grill House	Trichy	grill@house.com	9998877665	4.8
6	5	Veg Delight	Salem	veg@delight.com	9887766554	4.1

After

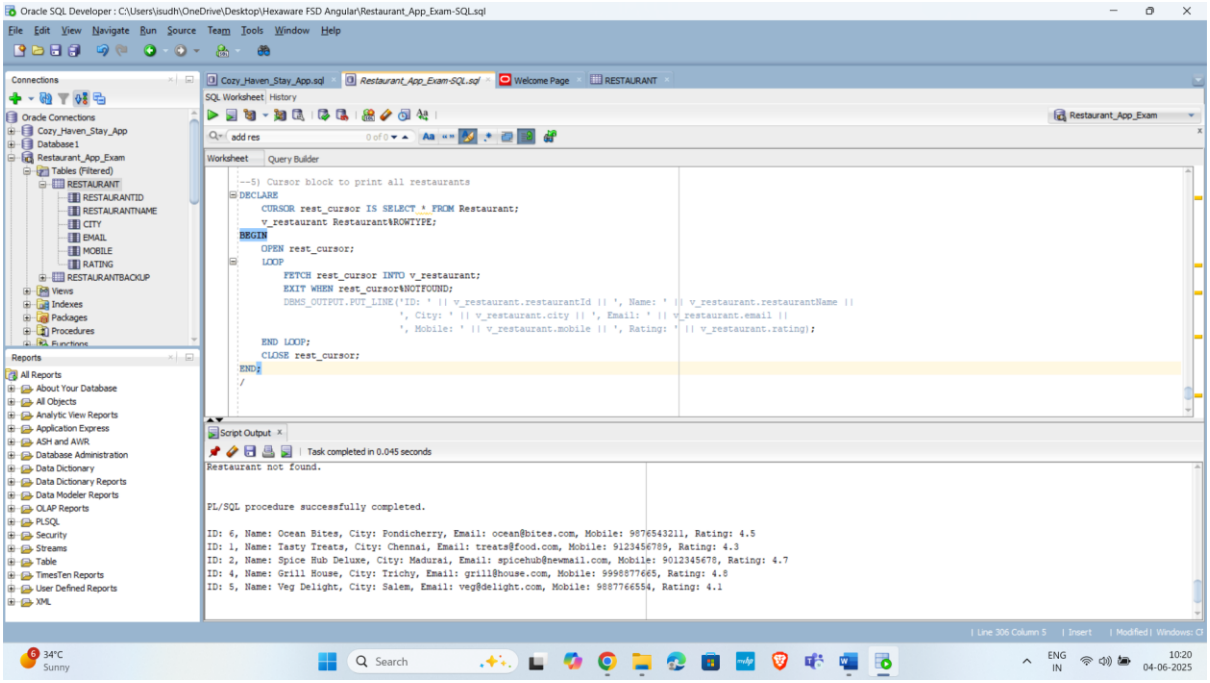




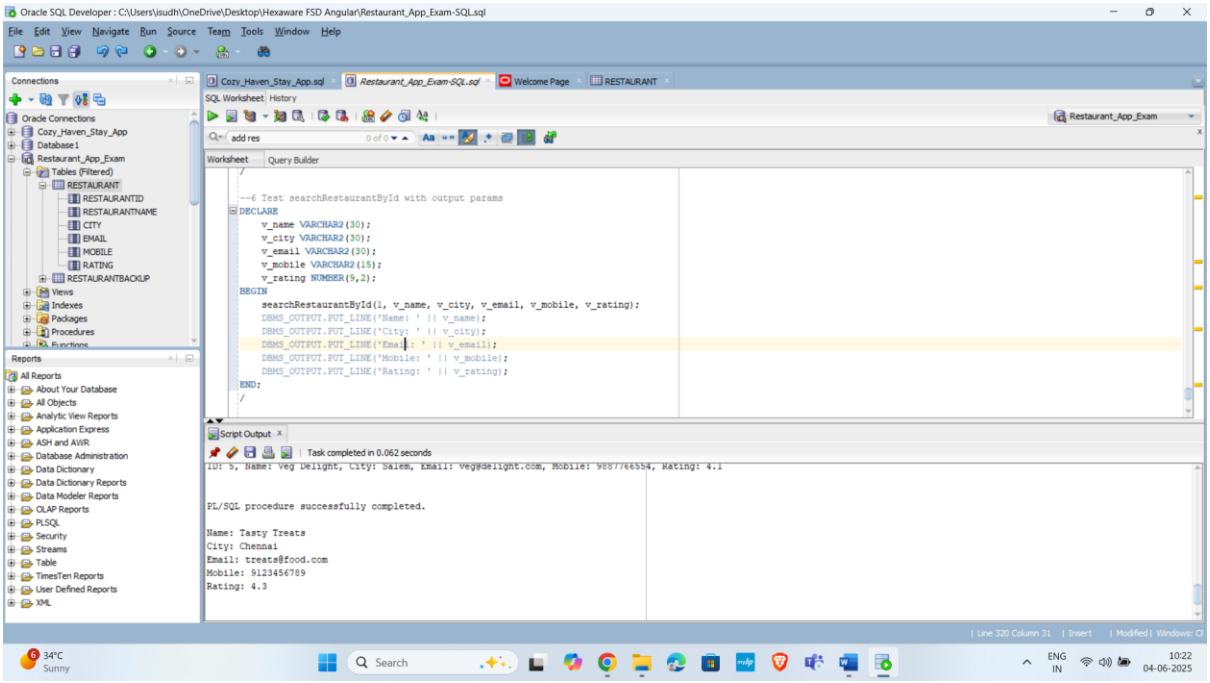
	RESTAURANTID	RESTAURANTNAME	CITY	EMAIL	MOBILE	RATING
1	6	Ocean Bites	Pondicherry	ocean@bites.com	9876543211	4.5
2	1	Tasty Treats	Chennai	treats@food.com	9123456789	4.3
3	2	Spice Hub Deluxe	Madurai	spicehub@newmail.com	9012345678	4.7
4	4	Grill House	Trichy	grill@house.com	9998877665	4.8
5	5	Veg Delight	Salem	veg@delight.com	9887766554	4.1

4.1 Non existent ID deletion

5. Cursor block to print all restaurants



6. SearchRestaurantById with output params



7. Verifying Triggers working by checking RestaurantBackup

	RBID	RESTAURANTID	RESTAURANTNAME	CITY	EMAIL	MOBILE	RATING	OPERATION	ACTIVITYON
1	11	6	Ocean Bites	Pondicherry	ocean@bites.com	9876543211	4.5	INSERT	04-06-25
2	12	2	Spice Hub	Madurai	spicehub@food.com	9012345678	4.6	UPDATE	04-06-25
3	13	3	Curry Leaves	Coimbatore	curry@leaves.com	9876543210	4.2	DELETE	04-06-25