L10-DBS301-savepoint rollback etc

You will **create 2 tables** first, then **remove / restore** these tables and also to **add / modify /remove** certain database objects like **views** in this lab.

1. Create table CITIES **from table LOCATIONS,** but only for location numbers less than 2000 (do NOT create this table from scratch).

🡪 You will have exactly 10 rows here.

When you describe CITIES, the output is shown below:

SQL> DESC cities

Name Null? Type

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

LOCATION\_ID NUMBER(4)

STREET\_ADDRESS VARCHAR2(40)

POSTAL\_CODE VARCHAR2(12)

CITY NOT NULL VARCHAR2(30)

STATE\_PROVINCE VARCHAR2(25)

COUNTRY\_ID CHAR(2)

Answer:

CREATE TABLE CITIES

AS (SELECT LOCATION\_ID,STREET\_ADDRESS,

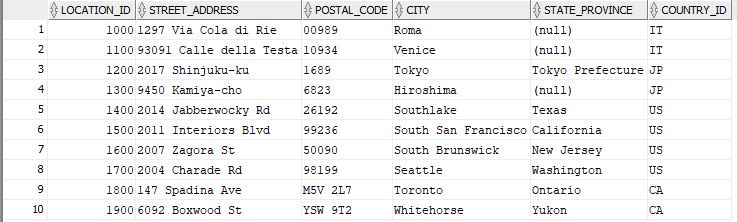
POSTAL\_CODE, CITY,STATE\_PROVINCE,

COUNTRY\_ID

FROM LOCATIONS

WHERE LOCATION\_ID < 2000

) ;



2. Create table TOWNS **from table LOCATIONS,** but only for location numbers less than 1500 (do NOT create this table from scratch). This table will have same structure as table CITIES.

🡪 You will have exactly 5 rows here.

Answer;

CREATE TABLE TOWNS

AS (SELECT LOCATION\_ID ,

STREET\_ADDRESS,

POSTAL\_CODE,

CITY,

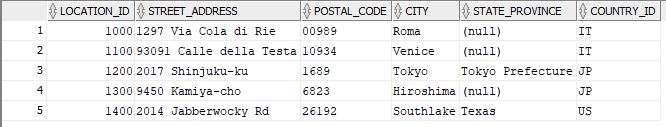
STATE\_PROVINCE,

COUNTRY\_ID

FROM LOCATIONS

WHERE LOCATION\_ID < 1500

) ;

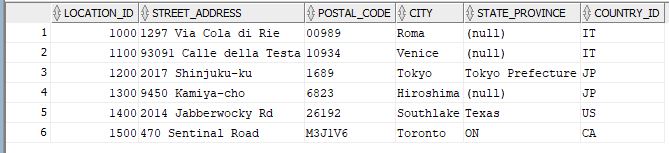


3. Now you will insert a row in TOWNS table, then delete the rows with Country\_id CA. Check the new values with SELECT. Later run the command rollback, and then check the values in the table.

Answer:

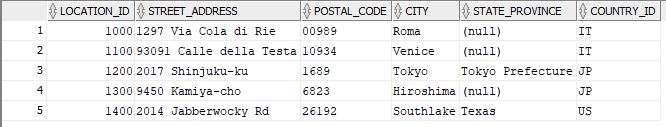
INSERT INTO towns VALUES(1500, '470 Sentinal Road', 'M3J1V6', 'Toronto', 'ON', 'CA');

SELECT \* FROM towns;



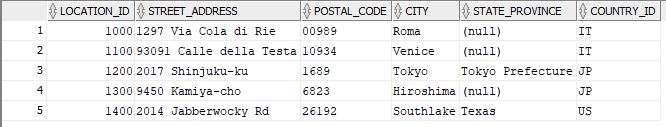
DELETE FROM towns WHERE country\_id = 'CA';

SELECT \* FROM towns;



ROLLBACK;

SELECT \* FROM towns;



4. INSERT INTO cities VALUES (2000,‘70 Pond Rd’,‘M1L’, ‘Toronto’, ‘ON’, ‘CA’);

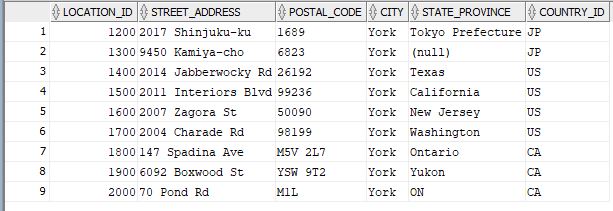
SAVEPOINT Insert\_Done;

DELETE FROM cities WHERE country\_id = ‘IT’;

SAVEPOINT Delete\_Done;

UPDATE city SET city = 'York';

Answer:



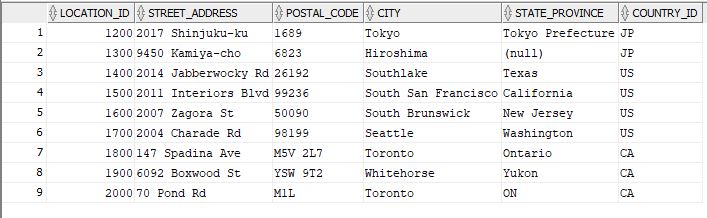
What will be the result if you execute the following command:

* 1. ROLLBACK to SAVEPOINT Delete\_Done;

Answer:

ROLLBACK to Delete\_Done;

SELECT \* FROM cities;



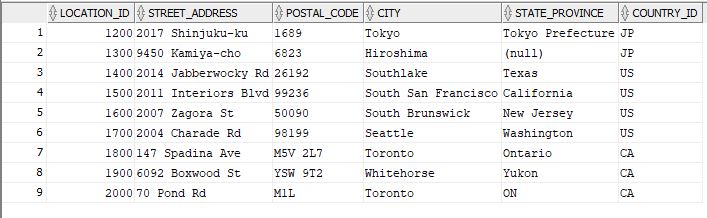
* 1. COMMIT Delete\_Done;
  2. Rollback;

Answer:

COMMIT;

ROLLBACK;

select \* from cities;

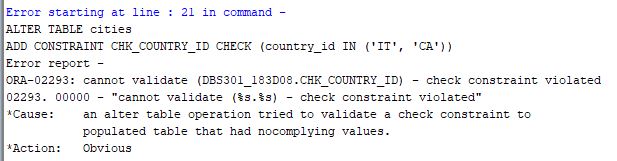


5. Add a check constraint in Cities table that will have country\_id as IT and CA only.

Answer:

ALTER TABLE cities

ADD CONSTRAINT CHK\_COUNTRY\_ID CHECK (country\_id IN ('IT', 'CA'));



6. Create simple view called CA\_CITY\_VU, based on table CITIES so that will contain only columns Street\_Address, City and State\_Province for locations only in CANADA. Then display all data from this view.

Answer:

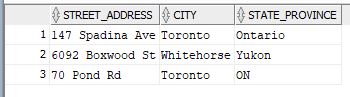
CREATE VIEW CAN\_CITY\_VU (STREET\_ADDRESS,CITY,STATE\_PROVINCE)

AS SELECT STREET\_ADDRESS,CITY,STATE\_PROVINCE

FROM CITIES

WHERE COUNTRY\_ID = 'CA' ;

SELECT \* FROM CAN\_CITY\_VU;



7. Modify your simple view so that will have following aliases instead of original column names: Street, City and Prov and also will include cities from ITALY as well. Then display all data from this view.

Answer:

CREATE OR REPLACE VIEW CAN\_CITY\_VU

AS SELECT STREET\_ADDRESS Street,

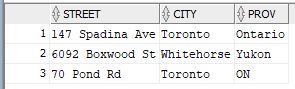
CITY City,

STATE\_PROVINCE Prov

FROM CITIES

WHERE COUNTRY\_ID IN ('CA','IT');

SELECT \* FROM CAN\_CITY\_VU;



8. Create complex view called CITY\_DEPNAME\_VU, based on tables EMPLOYEES, LOCATIONS and DEPARTMENTS, so that will contain only columns Last\_name, Department\_Name, City and State\_Province for locations in ITALY or CANADA. Then display all data from this view.

CREATE VIEW CITY\_DEPNAME\_VU

AS SELECT e.last\_name, d.department\_name, l.city, l.state\_province

FROM employees e JOIN departments d

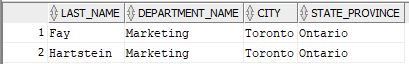
ON e.department\_id = d.department\_id

JOIN locations l

ON d.location\_id = l.location\_id

WHERE COUNTRY\_ID IN ('CA', 'IT');

SELECT \* FROM CITY\_DEPNAME\_VU;



9. Modify your complex view so that will have following aliases instead of original column names: Lname, DName, City and Prov and also will include all cities outside United States.

Then display all data from this view.

Answer:

CREATE or REPLACE VIEW CITY\_DEPNAME\_VU

AS SELECT e.last\_name Lname, d.department\_name DName, l.city, l.state\_province Prov

FROM employees e JOIN departments d

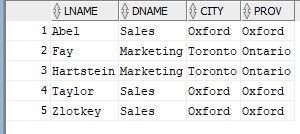
ON e.department\_id = d.department\_id

JOIN locations l

ON d.location\_id = l.location\_id

WHERE NOT COUNTRY\_ID = 'US';

SELECT \* FROM CITY\_DEPNAME\_VU;



10. Check in the Data Dictionary what Views (their names and definitions) are created so far in your account. Then drop your CITY\_DEPNAME\_VU and check Data Dictionary again. What is different?

SELECT Lname,DName,City,Prov FROM CITY\_DEPNAME\_VU;

DROP VIEW CITY\_DEPNAME\_VU;

SELECT Lname,DName,City,Prov FROM CITY\_DEPNAME\_VU;