```sql
/*
LAB 7-
MEMBERS-
BEN LIU
ABBAS HUSSEIN
VRUNDA PATEL

10/22/2023
*/


-- Question 1 by Ben Liu
/*
1. The user has established a new connection to the server and has a blank sheet
ready to start a new transaction
2. The user uses the BEGIN statement in Oracle SQL, this will start a new
transaction
3. The user executes a COMMIT statement current transaction commits and a new
transaction begins
4. The user executes ANY DDL statement.  This automatically triggers an auto-commit of the current
transaction and starts a new transaction.
*/

/* question 2 (done by vrunda)*/
CREATE TABLE newEmployees AS
SELECT *
FROM employees
WHERE 1 = 0;


/*
QN. 3 (Done by Abbas Hussein)
*/
SET
   autocommit off;
SET
   transaction read write;

-- Question 4 by Ben Liu
INSERT INTO newemployees
           (
                      employeenumber,
                      lastname,
                      firstname,
                      extension,
                      email officecode,
                      reportsto,
                      jobtitle
           )
           VALUES
           (
                      100,
                      'Patel',
                      'Ralph' 22333,
                      'rpatel@mail.com',
                      1,
                      NULL,
                      'Sales Rep'
           )
           ,
           (
                      101,
                      'Denis',
                      'Betty',
                      33444,
                      'bdenis@mail.com',
                      4,
                      NULL,
                      'Sales Rep'
           )
           ,
           (
                      101,
                      'Denis',
                      'Betty',
                      33444,
                      'bdenis@mail.com',
                      4,
                      NULL,
                      'Sales Rep'
           )
           ,
           (
                      102,
                      'Biri',
                      'Ben',
```

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                44555,
                'bbirir@mail.com',
                2,
                NULL,
                'Sales Rep'
    )
    ,
    (
                103,
                'Newman',
                'Chad',
                66777,
                'cnewman@mail.com',
                3,
                NULL,
                'Sales Rep'
    )
    ,
    (
                104,
                'Ropeburn',
                'Audrey',
                77888,
                'aropebur@mail.com',
                1,
                NULL,
                'Sales Rep'
    );


/* question 5 (done by vrunda)*/
SELECT *
FROM newEmployees;
/5 rows are selected/


/*
QN. 6 (Done by Abbas Hussein)
*/
ROLLBACK;
SELECT
    *
FROM
   newemployees;
/*
No rows should be selected because the rollback canceled the changes.
*/

-- Question 7 by Ben Liu
-- REDO task 4INSERT INTO newemployees
        (
                employeenumber,
                lastname,
                firstname,
                extension,
                email officecode,
                reportsto,
                jobtitle
        )
        VALUES
        (
                100,
                'Patel',
                'Ralph' 22333,
                'rpatel@mail.com',
                1,
                NULL,
                'Sales Rep'
    )
    ,
    (
                101,
                'Denis',
                'Betty',
                33444,
                'bdenis@mail.com',
                4,
                NULL,
                'Sales Rep'
    )
    ,
    (
                102,
                'Biri',
                'Ben',
                44555,
                'bbirir@mail.com',
```

```sql
                2,
                NULL,
                'Sales Rep'
        )
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        (
                103,
                'Newman',
                'Chad',
                66777,
                'cnewman@mail.com',
                3,
                NULL,
                'Sales Rep'
        )
        ,
        (
                104,
                'Ropeburn',
                'Audrey',
                77888,
                'aropebur@mail.com',
                1,
                NULL,
                'Sales Rep'
        );

-- Commit changesCOMMIT;
-- Display entire tableSELECT *
FROM    newemployees;

-- Counts the # of rowsSELECT Count(*)
FROM    newemployees;

/* question 8 (done by vrunda)*/
UPDATE newEmployees
SET jobTitle = 'unknown';

/*
QN. 9 (Done by Abbas Hussein)
*/
COMMIT;


-- Question 10 by Ben Liu
/*10ab. All(28) of the rows become unknown because the changes have been committed so
the roll back could not go to the beginning of a transaction that has been
completed already.*/
/*10c. The difference is that the rollback in question 6 was effective because
the insert changes have not been committed*/

/* question 11 (done by vrunda)*/
BEGIN TRANSACTION;
DELETE FROM newEmployees
 WHERE employeeNumber IN (101, 102);


/*
QN. 12 (Done by Abbas Hussein)
*/
CREATE view vwnewemps AS
SELECT
    *
FROM
    newemployees
ORDER BY
    lastname,
    firstname;

-- Question 13 by Ben Liu
-- 13a. All the employees in the record are placed back into the table back to 28
-- 13b. It was effective because no commit's have been made before the rollback
-- Question 16 by Ben LiuUPDATE newemployees
SET     jobtitle = 'unknown';SELECT jobtitle
FROM    newemployees;

/* question 14 (done by vrunda)*/
BEGIN TRANSACTION;
INSERT INTO newEmployees (employeeNumber, lastname, firstname, extension, email, OfficeCode, reportsTo, jobTitle)
SELECT employeeNumber, lastname, firstname, extension, email, OfficeCode, NULL, jobTitle
FROM employees;


/*
QN. 15 (Done by Abbas Hussein)
*/
SAVEPOINT insertion;
```

```sql
-- Question 16 by Ben LiuUPDATE newemployees
SET    jobtitle = 'unknown';SELECT jobtitle
FROM   newemployees;


/* question 17 (done by vrunda)*/
ROLLBACK TO insertion;
SELECT * FROM newEmployees;
/*The data will look like it did after the initial data insertion in task 14. The update made in task 16 will be undone, and the job titles
will be restored to their original values.*/


/*
QN. 18 (Done by Abbas Hussein)
*/
ROLLBACK;
SELECT
    *
FROM
    newemployees;

-- Question 19 by Ben Liu
REVOKE ALL ON newemployees FROM PUBLIC;
/*
The data should be as it was after the data insertion in Task 14. The update from Task 16 should be canceled.
*/

/* question 20 (done by vrunda)*/
GRANT SELECT ON newEmployees TO vvpatel20;


/*
QN. 21 (Done by Abbas Hussein)
*/
GRANT INSERT,
UPDATE
,
    DELETE
        ON newemployees TO vvpatel20;

-- Question 22 by Ben Liu
REVOKE ALL ON newemployees FROM dbs211_233nbb24;

/* question 23 (done by vrunda)*/
DROP VIEW vwNewEmps;
DROP TABLE newEmployees;
```