Date: 03/03/2024

Batch: S1,S2,S3,S4,S5,S6,S7,S8

Experiment 5 : Extended practicals on lab experiment 4 and performance of DCL and TCL commands.

Walchand College of Engineering, Sangli

Department of Computer Science and Engineering

Course: Database Engineering Lab (6CS274) Year: 2023-24

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Question.1 Using the table client master and product master answer the following Questionnaires.

i. Change the selling price of the '1.44 floppy drive to Rs.1150.00

- **ii. Delete the record with client 0001 from the client master table.**

```
DELETE FROM client_master
WHERE client_no = '0001';
```

- **iii. Change the city of client_no'0005' to Bombay.**

```sql
UPDATE client_master
SET city = 'Bombay'
WHERE client_no = '0005';
```

- iv. Change the bal_due of client_no ‘0001, to 1000.

```sql
UPDATE client_master
SET bal_due = 1000
WHERE client_no = '0001';
```

- v. Find the products whose selling price is more than 1500 and also find the ne selling price as the original selling price *15.

```sql
SELECT Description, Sell_price, Sell_price * 1.5 AS new_sell_price
FROM product_master
WHERE Sell_price > 1500;
```

- vi. Find out the clients who stay in a city whose second letter is a.

```sql
SELECT *
FROM client_master
WHERE SUBSTR(city, 2, 1) = 'a';
```

- **vii. Find out the names of all clients having ‘a’ as the second letter in their names.**

```sql
SELECT *
FROM client_master
WHERE SUBSTR(name, 2, 1) = 'a';
```

- **viii. List the products in sorted order of their description.**

```sql
SELECT *
FROM product_master
ORDER BY Description;
```

- ix. Count the total number of orders

```sql
SELECT COUNT(*) AS total_orders
FROM client_master;
```

- **x. Calculate the average price of all the products.**

```sql
SELECT AVG(Sell_price) AS average_price
FROM product_master;
```

- **xi. Calculate the minimum price of products.**

```sql
SELECT MIN(Sell_price) AS min_price
FROM product_master;
```

- **xii. Determine the maximum and minimum prices. Rename the title as ‘max_price’ and min_price respectively.**

```sql
SELECT MAX(Sell_price) AS max_price,
       MIN(Sell_price) AS min_price
FROM product_master;
```

xiii. Count the number of products having price greater than or equal to 1500.

Question 2. Create a table EMPLOYEE_NEW with the following schema:

(Emp_no, E_name, E_address, E_ph_no, Dept_no, Dept_name,Job_id , Salary)

```sql
CREATE TABLE EMPLOYEE_NEW (
    Emp_no INT PRIMARY KEY,
    E_name VARCHAR(255),
    E_address VARCHAR(255),
    E_ph_no VARCHAR(15),
    Dept_no INT,
    Dept_name VARCHAR(255),
    Job_id VARCHAR(50),
    Salary DECIMAL(10, 2)
);
```

```
SQL> CREATE TABLE EMPLOYEE_NEW (
  2      Emp_no INT PRIMARY KEY,
  3      E_name VARCHAR(255),
  4      E_address VARCHAR(255),
  5      E_ph_no VARCHAR(15),
  6      Dept_no INT,
  7      Dept_name VARCHAR(255),
  8      Job_id VARCHAR(50),
  9      Salary DECIMAL(10, 2)
 10  );
```

- **Add a new column; HIREDATE to the existing relation.**

```
ALTER TABLE EMPLOYEE_NEW
ADD HIREDATE DATE;
```

```
SQL> ALTER TABLE EMPLOYEE_NEW
  2  ADD HIREDATE DATE;

Table altered.
```

- **Change the datatype of JOB_ID from char to varchar2.**

```
ALTER TABLE EMPLOYEE_NEW
MODIFY (JOB_ID VARCHAR2(50));
```

```
SQL> ALTER TABLE EMPLOYEE_NEW
  2  MODIFY (JOB_ID VARCHAR2(50));

Table altered.
```

- **Change the name of column/field Emp_no to E_no.**

```
ALTER TABLE EMPLOYEE_NEW
ALTER COLUMN JOB_ID VARCHAR2(50);
```

```
SQL> ALTER TABLE EMPLOYEE_NEW
  2  RENAME COLUMN Emp_no TO E_no;

Table altered.
```

- **Modify the column width of the job field of the emp table**

```
ALTER TABLE EMPLOYEE_NEW
MODIFY Job_id VARCHAR2(100);
```

```
SQL> ALTER TABLE EMPLOYEE_NEW
  2  MODIFY Job_id VARCHAR2(100);

Table altered.
```

Question 3. Create a table EMPLOYEE with the following schema:

(Emp_no, E_name, E_address, E_ph_no, Dept_no, Dept_name,Job_id , Salary)

Write SQL queries for following question:

Insert at least 5 rows in the table.

```sql
INSERT INTO EMPLOYEE_NEW (Emp_no, E_name, E_address, E_ph_no, Dept_no, Dept_name, Job_id, Salary)
VALUES
(1, 'John', 'Address1', '1234567890', 10, 'HR', 'HR001', 50000.00),
(2, 'Alice', 'Address2', '2345678901', 20, 'IT', 'IT001', 60000.00),
(3, 'Bob', 'Address3', '3456789012', 30, 'Finance', 'FIN001', 55000.00),
(4, 'Emma', 'Address4', '4567890123', 40, 'Marketing', 'MKT001', 52000.00),
(5, 'Mike', 'Address5', '5678901234', 50, 'Operations', 'OP001', 58000.00);
```

- **inserted step wise in CD**

2. Display all the information in the EMP table.

```
    EMP_NO
---------
E_NAME
--------------------------------------------------------------------------------
E_ADDRESS
--------------------------------------------------------------------------------
E_PH_NO           DEPT_NO
--------------- ----------
DEPT_NAME
--------------------------------------------------------------------------------
JOB_ID                                                  SALARY
-------------------------------------------------- ----------
         1

    EMP_NO
----------
E_NAME
--------------------------------------------------------------------------------
E_ADDRESS
--------------------------------------------------------------------------------
E_PH_NO           DEPT_NO
--------------- ----------
DEPT_NAME
--------------------------------------------------------------------------------
JOB_ID                                                  SALARY
-------------------------------------------------- ----------
John
```

```sql
SELECT * FROM EMPLOYEE_NEW WHERE Dept_no = 10;
```

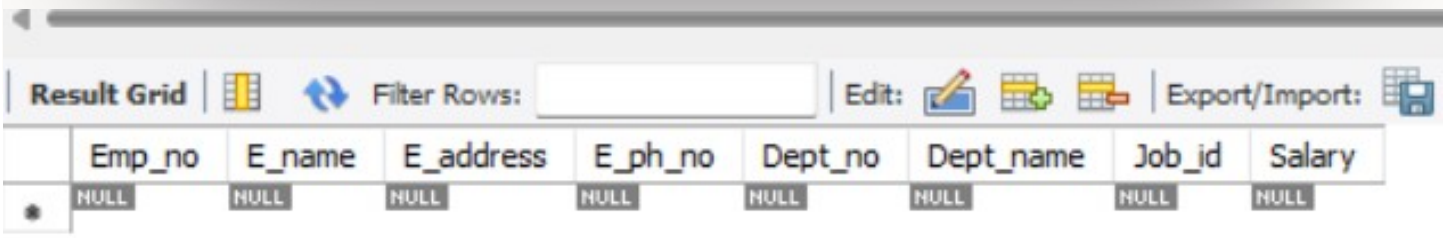
Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell

Emp_no	E_name	E_address	E_ph_no	Dept_no	Dept_name	Job_id	Salary
1	John	Address1	1234567890	10	HR	HR001	50000.00
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
UPDATE EMPLOYEE_NEW SET E_address = 'Nagpur' WHERE Emp_no = 12;
```

5. Display the details of the Employee who work in department MECH.

```sql
SELECT * FROM EMPLOYEE_NEW WHERE Dept_name = 'MECH';
```

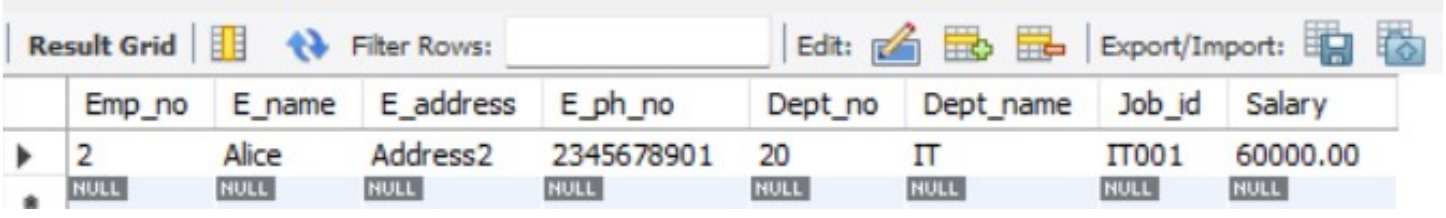


Result Grid | Filter Rows: | Edit: | Export/Import:

Emp_no	E_name	E_address	E_ph_no	Dept_no	Dept_name	Job_id	Salary
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
UPDATE EMPLOYEE_NEW SET E_email = NULL WHERE E_name = 'James';
```

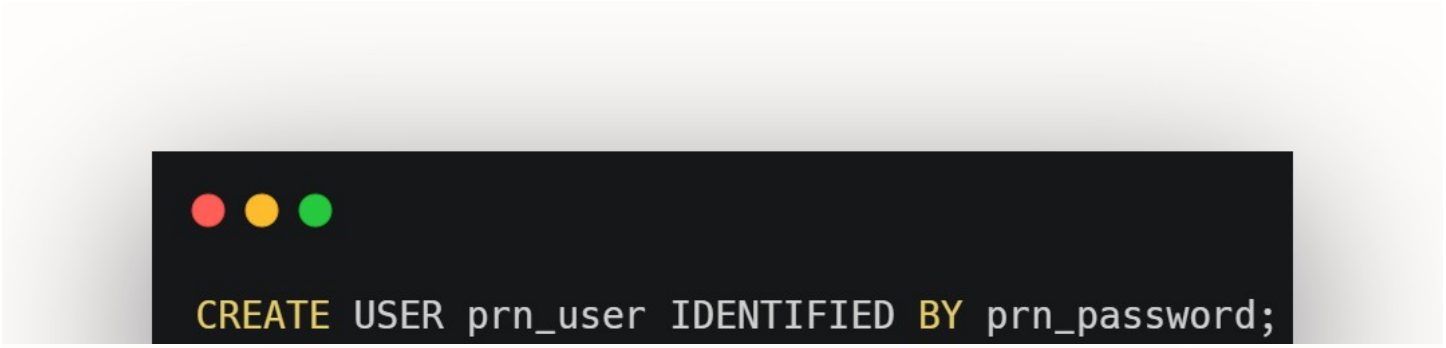
```sql
SELECT * FROM EMPLOYEE_NEW WHERE Dept_name = 'SALES';
```

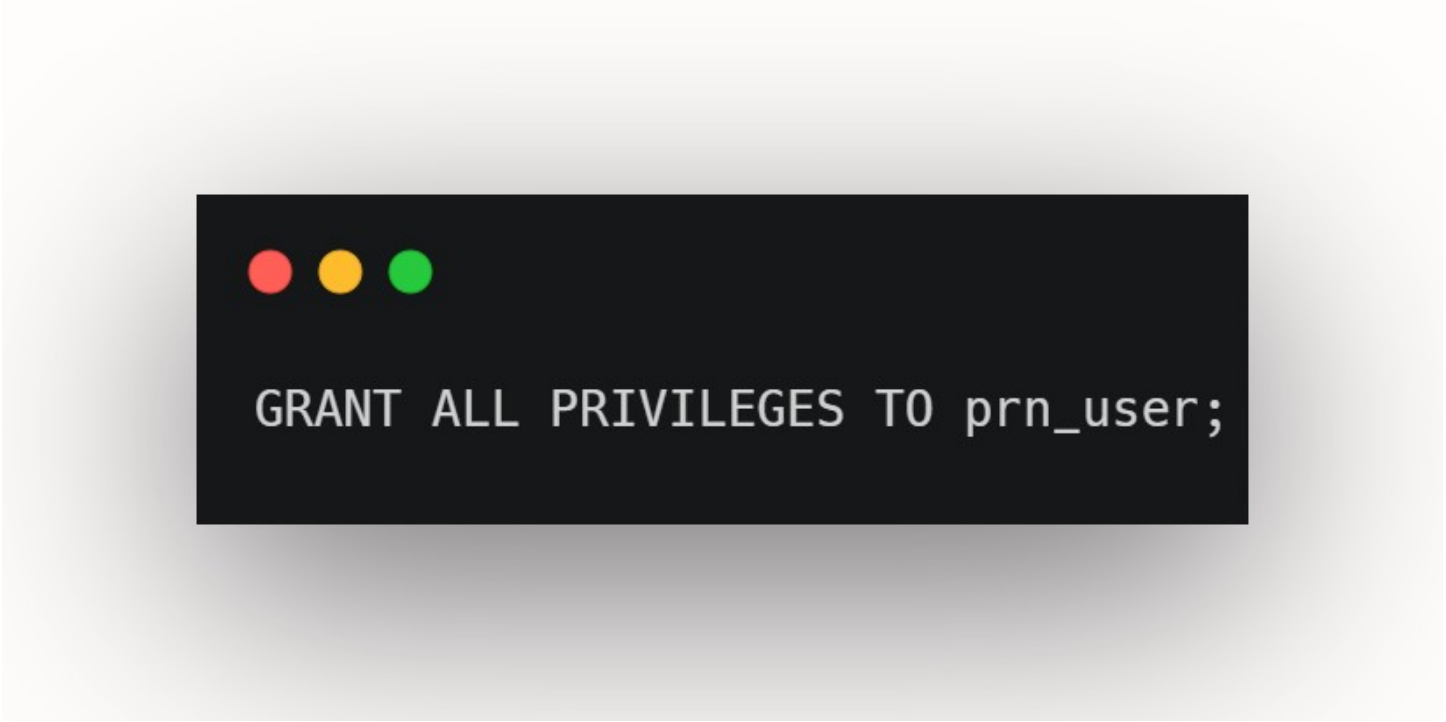


Result Grid | Filter Rows: | Edit: | Export/Import:

Emp_no	E_name	E_address	E_ph_no	Dept_no	Dept_name	Job_id	Salary
2	Alice	Address2	2345678901	20	IT	IT001	60000.00
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

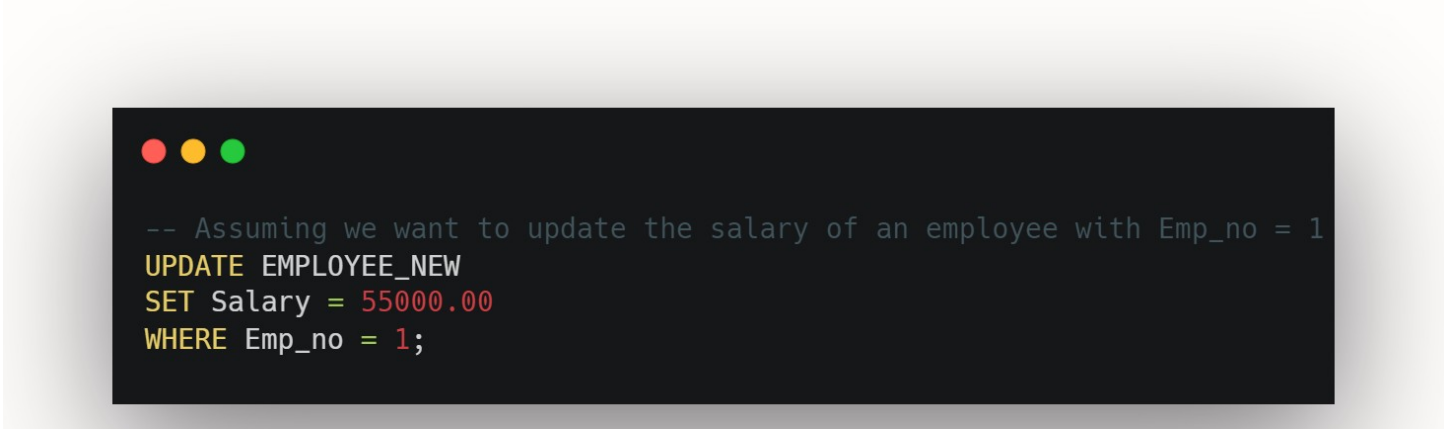
Question 4: create a user with your PRN number and give the password of your PRN number. Perform some of the DML and DDL tasks by providing permission to the same user. After performance remove permissions given as well as remove user.





TO perform DML and DDL tasks we will consider the EMPLOYEE table

Step 1: Insert Data into a Table



Step 4: Remove Permissions

```
REVOKE ALL PRIVILEGES FROM prn_user;
```

```
CREATE TABLE Library (
    BookID INT PRIMARY
KEY,Title VARCHAR(255),
    Author VARCHAR(255),
    Genre VARCHAR(100),
    PublishYear INT
);
```