**Assignment-6**

**Database Modification:**

1. Create two table emp_new and dept_new as the same structure and data as of emp and dept table.

```
SQL> create table emp_new as select * from emp ;

Table created.

SQL> create table dept_new as select * from dept;

Table created.
```

2. Modify dept_new table so that deptno will be the PRIMARY key.

```
SQL> alter table dept_new add constraint pk_deptno primary key(deptno);

Table altered.
```

3. Add a column named, 'Grade' (which holds grade of the employees) with CHAR(1) to the existing emp_new table.

```
SQL> alter table emp_new add Grade char(1);

Table altered.
```

```
SQL> desc emp_new;
 Name                                                                                    Null?    Type
 --------------------------------------------------------------------------------------- -------- ------------------------------------------------------------
 EMPNO                                                                                   NOT NULL NUMBER(4)
 ENAME                                                                                            VARCHAR2(10)
 JOB                                                                                              VARCHAR2(9)
 MGR                                                                                              NUMBER(4)
 HIREDATE                                                                                         DATE
 SAL                                                                                              NUMBER(7,2)
 COMM                                                                                             NUMBER(7,2)
 DEPTNO                                                                                  NOT NULL NUMBER(2)
 GRADE                                                                                            CHAR(1)
```

4. Modify emp_new table to add a constraint 'emp_noPri' as PRIMARY key on empno attribute.

```
SQL> alter table emp_new add constraint emp_noPri primary key(empno);

Table altered.
```

5. Add constraints REFERENCES to deptno of emp_new table referring deptno of dept_new table.

```
SQL> alter table emp_new add constraint fk_deptno foreign key (deptno) refer
ences dept_new(deptno);

Table altered.
```

6. Modify the emp_new table so that we can't store the salary of the employee which is less

than 2500.

```
SQL> alter table emp_new add constraint sal_const check (sal>=2500) novalida
te;

Table altered.
```

7. Modify the sal column of emp_new table to NOT NULL and increase its size to 10.

```
SQL> alter table emp_new modify sal number(10,2) NOT NULL;

Table altered.
```

8. Modify the ename column of emp_new table to increase its width to VARCHAR(35).

```
SQL> alter table emp_new modify ename varchar2(35) ;

Table altered.

SQL> desc emp_new;
 Name                                                                                    Null?    Type
 --------------------------------------------------------------------------------------- -------- ----------------
 EMPNO                                                                                   NOT NULL NUMBER(4)
 ENAME                                                                                            VARCHAR2(35)
 JOB                                                                                              VARCHAR2(9)
 MGR                                                                                              NUMBER(4)
 HIREDATE                                                                                         DATE
 SAL                                                                                     NOT NULL NUMBER(10,2)
 COMM                                                                                             NUMBER(7,2)
 DEPTNO                                                                                  NOT NULL NUMBER(2)
 GRADE                                                                                            CHAR(1)
```

9. Drop the PRIMARY key constraint from emp_new table.

```
SQL> alter table emp_new drop primary key;

Table altered.
```

10. Drop the primary key constraint of dept_new table so that it will also dropped the foreign key constraint on emp_new_deptno.

```
SQL> alter table dept_new drop primary key cascade;

Table altered.
```

11. Display all column name and constraint name of emp_new table.

```
SQL> select column_name, constraint_name from user_cons_columns where
  2  table_name='EMP_NEW';

COLUMN_NAME
------------------------------------------------------------------------
CONSTRAINT_NAME
------------------------------------------------------------------------
SAL
SAL_CONST

SAL
SYS_C008400

EMPNO
SYS_C008390


COLUMN_NAME
------------------------------------------------------------------------
CONSTRAINT_NAME
------------------------------------------------------------------------
DEPTNO
SYS_C008391
```

12. Disable the primary key constraint of dept_new table.

```
SQL> alter table dept_new add constraint dept_pk primary key (deptno);

Table altered.

SQL> alter table dept_new disable primary key;

Table altered.
```

13. Create table emp_new1 and dept_new1 from emp and dept respectively (also consider that there is a referential integrity between the tables using deptno attribute).

```
SQL> CREATE TABLE emp_new1 AS SELECT * FROM emp;

Table created.

SQL> CREATE TABLE dept_new1 AS SELECT * FROM dept;

Table created.
```

```
SQL> ALTER TABLE dept_new1
  2  ADD CONSTRAINT pk_deptno_dept_new1 PRIMARY KEY (deptno);

Table altered.

SQL> ALTER TABLE emp_new1
  2  ADD CONSTRAINT fk_deptno_emp_new1 FOREIGN KEY (deptno) REFERENCES dept_new1(deptno);

Table altered.
```

14. Now try to drop the dept_new1 table and give a comment on your output.

```
SQL>  DROP TABLE DEPT_NEW1;
 DROP TABLE DEPT_NEW1
            *
ERROR at line 1:
ORA-02449: unique/primary keys in table referenced by foreign keys
```

15. Add the comment 'Employee Information of XYZ Company' on emp table.

```
SQL>  COMMENT ON TABLE EMP IS 'Employee Information of XYZ Company';

Comment created.
```

16. Add the comment 'Unique depart of XYZ Company' to deptno column of dept table.

```
SQL> COMMENT ON COLUMN DEPT.DEPTNO IS 'Unique depart of of XYZ
  2  Company';

Comment created.
```

17. How to show the comments of a particular column of a table?

```
SQL> SELECT * FROM USER_COL_COMMENTS WHERE TABLE_NAME = 'DEPT';

TABLE_NAME
------------------------------------------------------------
COLUMN_NAME
------------------------------------------------------------
COMMENTS
------------------------------------------------------------
ORIGIN_CON_ID
-------------
DEPT
DEPTNO
Unique depart of of XYZ
Company
             1

TABLE_NAME
------------------------------------------------------------
COLUMN_NAME
------------------------------------------------------------
COMMENTS
------------------------------------------------------------
ORIGIN_CON_ID
-------------

DEPT
DNAME

             1

TABLE_NAME
------------------------------------------------------------
COLUMN_NAME
------------------------------------------------------------
COMMENTS
------------------------------------------------------------
ORIGIN_CON_ID
-------------

DEPT
LOC

             1

TABLE_NAME
------------------------------------------------------------
COLUMN_NAME
------------------------------------------------------------
COMMENTS
------------------------------------------------------------
ORIGIN_CON_ID
-------------
```

18. How to show the comments on a particular a table?

```
SQL> SELECT * FROM USER_TAB_COMMENTS WHERE TABLE_NAME = 'EMP';

TABLE_NAME                                                                                                                                                       TABLE_TYPE
---------------------------------------------------------------------------------------------------------------------------------------------------------------- -------------
COMMENTS
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
ORIGIN_CON_ID
-------------
EMP                                                                                                                                                              TABLE
Employee Information of XYZ Company
           1
```

19. Remove the comment on emp table.

```
SQL> COMMENT ON TABLE EMP IS ''

Comment created.
```

20. Change the name of the emp table as emp_change table.

```
SQL> RENAME EMP TO EMP_CHANGE;

Table renamed.
```

21. Drop the emp_new1 table so that the table structure will remain there in the database.

```
SQL>  TRUNCATE TABLE EMP_NEW1;

Table truncated.

SQL> DESC EMP_NEW1;
 Name                                                                                  Null?    Type
 ------------------------------------------------------------------------------------- -------- ------------
 EMPNO                                                                                 NOT NULL NUMBER(4)
 ENAME                                                                                          VARCHAR2(10)
 JOB                                                                                            VARCHAR2(9)
 MGR                                                                                            NUMBER(4)
 HIREDATE                                                                                       DATE
 SAL                                                                                            NUMBER(7,2)
 COMM                                                                                           NUMBER(7,2)
 DEPTNO                                                                                NOT NULL NUMBER(2)

SQL> SELECT * FROM EMP_NEW1;

no rows selected
```

22. Drop the dept_new1 table permanently so the table structure will no longer present in the database.

```
SQL> DROP TABLE DEPT_NEW1 CASCADE CONSTRAINTS;

Table dropped.
```

23. Drop the Grade column from emp_new table.

```
SQL> ALTER TABLE EMP_NEW DROP COLUMN GRADE;

Table altered.
```

24. Make the comm. column of emp_new table as unused

27. Rename the comm. column of emp_new table to commission.

```
SQL>  ALTER TABLE EMP_NEW RENAME COLUMN COMM TO COMMISSION;

Table altered.
```

```
SQL>  ALTER TABLE EMP_NEW SET UNUSED COLUMN COMMISSION;

Table altered.
```

25. How can we display the marked unsued columns of a emp_new table.

```
SQL> SELECT * FROM USER_UNUSED_COL_TABS WHERE TABLE_NAME =
  2  'EMP_NEW';

TABLE_N      COUNT
------- ----------
EMP_NEW          1
```

26. Drop the unused columns of emp_new table.

```
SQL> ALTER TABLE EMP_NEW DROP UNUSED COLUMNS;

Table altered.
```