EXPERIMENT: 1

Aim: Queries for Creating, Dropping, and Altering Tables and insert row into a table (use constraints while creating tables) examples using Select Command.

Procedure:

1. Creation of emp_ & dept table in Sql:

```
SQL>create table dept(
        deptno number(2,0) primary key,
        dname varchar2(14) NOT NULL,
        loc varchar2(13) NOT NULL,
);
```

Table created.

```
SQL>create table emp(
        empno    number(4,0),
        ename    varchar2(10) NOT NULL,
        job      varchar2(9) NOT NULL,
        mgr      number(4,0),
        hiredate date,
        sal      number(7,2) NOT NULL,
        comm     number(7,2),
        eptno    number(2,0),
        constraint pk_emp primary key (empno),
        constraint fk_deptno foreign key (deptno) references dept (deptno)
);
```

Table created.

2. View Structure/schema_of_emp_& dept table in sql:

SQL> select *from emp;

no rows selected

SQL> select *from dept;

no rows selected

SQL> desc emp;

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		NUMBER(2)

SQL> desc dept;

Name	Null?	Type
DEPTNO	NOT NULL	NUMBER(2)
DNAME		VARCHAR2(14)
LOC		VARCHAR2(13)

2. Insert the values in emp & dept table in sql:

There are several ways to insert the values in the existing table

Query to insert single record in the existing table:

SQL> insert into dept(deptno,dname,loc) values(20,'admin','hyd');

1 row created.

Query to insert multiple records in the existing table:

SQL>insert into dept values(&deptno,'&dname','&loc');

Enter value for deptno: 10

Enter value for dname: sales

Enter value for loc: vijayawada

old 1: insert into dept values(&deptno,'&dname','&loc')

new 1: insert into dept values(10,'sales','vijayawada')

1 row created.

SQL>/

Enter value for deptno: 20

Enter value for dname: admin

Enter value for loc: hyd

old 1: insert into dept values(&deptno,'&dname','&loc')

1 row created.

SQL> /

Enter value for deptno: 30

Enter value for dname: marketing

Enter value for loc: vzg

old 1: insert into dept values(&deptno,'&dname','&loc')

new 1: insert into dept values(30,'marketing','vzg')

1 row created.

4. Select Command: this command is used to print the record from the existing table.

View all records in dept table:

SQL> select *from dept;

```
  DEPTNO    DNAME            LOC
----------------------------
        10 sales            vijayawada
        20 admin            hyd
        30 marketing        vzg
```

View records basing on given criteria on specific column.

1. View single column from existing table.

SQL>select dname from dept;

DNAME

```
----------
```

Sales

Admin

Marketing

2. View specific record(s) from existing table based on given condition.

SQL> select *from dept where dname='sales';

```
 DEPTNO    DNAME            LOC
----------------------------
        10 sales          vijayawada
```

Types of SQL Commands:

DDL: DDL Commands (Data Definition Language)

1. CREATE 2. DESC 3. ALTER 4. DROP 5.TRUNCATE 6. RENAME

DML Commands (Data Manipulation Language)

1. SELECT 2. INSERT 3. UPDATE 4. DELETE

TCL(Transaction Control Language)

1. COMMIT 2. ROLLBACK 3. SAVEPOINT

DCL Commands (Data Control Language)

1. GRANT 2. REVOKE

1. CREATE:

CREATE TABLE: This is used to create a new relation and the corresponding

Syntax: CREATE TABLE relation_name (field_1 data_type(Size),field_2 data_type(Size), .. .);

Example:

SQL>CREATE TABLE Student (id number, name varchar2(10));

RESULT: Table created.

2. DESC: It is used to describe a schema as well as to retrieve rows from table in descending order.

SYNTAX: DESC

EX: SQL> DESC EMP1;

NAME	NULL?	TYPE
EMPNO	NOT NULL	NUMBER(10)
ENAME		VARCHAR2(15)
JOB		CHAR(10)
DEPTNAME		VARCHAR2(10)
DEPTNO		NUMBER(9)
HIREDATE		DATE
SALARY		NUMBER(8)
EXP		NUMBER(5**)**

3. ALTER: This is used for add, remove or modify the structure of the existing table

(a) ALTER TABLE ...ADD...: This is used to add some extra fields into existing relation.

Syntax: ALTER TABLE relation_name ADD(new field_1 data_type(size), new field_2 data_type(size),..);

Example : SQL>ALTER TABLE emp1 ADD(Address CHAR(10));

TABLE ALTERED.

(b) ALTER TABLE...MODIFY...: This is used to change the width as well as data type of fields of existing relations.

Syntax: ALTER TABLE relation_name MODIFY (field_1 newdata_type(Size), field_2 newdata_type(Size),... , field_newdata_type(Size));

Example:

SQL>ALTER TABLE emp1 MODIFY(ename VARCHAR2(20), salary NUMBER(5));

TABLE ALTERED.

SQL> DESC EMP1;

NAME	NULL?	TYPE
EMPNO	NOT NULL	NUMBER(10)
ENAME		**VARCHAR2(20)**
JOB		CHAR(10)
DEPTNAME		VARCHAR2(10)
DEPTNO		NUMBER(9)
HIREDATE		DATE
SALARY		**NUMBER(5)**
EXP		NUMBER(5)
ADDRESS		CHAR(10)

4. DROP TABLE: This is used to delete the structure of a relation. It permanently deletes the table.

Syntax: DROP TABLE tablename;

Example:

SQL>DROP TABLE EMP1;

Table dropped;

DROP: this command is used to remove the date from the existing table

DROP COLUMN IN TABLE

Syntax:

To DROP A COLUMN in an existing table, the Oracle ALTER TABLE **syntax is**:

ALTER TABLE table_name DROP COLUMN column_name;

Example customers DROP COLUMN customer_name;

SQL> ALTER TABLE customers DROP COLUMN customer_name;

5. RENAME: It is used to modify the name of the existing database object.

Syntax: RENAME old_table_name TO new_table_name;

Example:

SQL>RENAME EMP1 TO EMP2;

Table renamed.