**PROGRAM 1:**

**CREATE A TABLE**

**AIM:**

To create an employee and department tables.

**ALGORITHM:**

STEP 1: Start the process

STEP 2: Create a department table with the following fields

Department ID number (3) as a primary key,

department name varchar2 (10)

STEP 3: Create an employee table with the following fields

Employee number number (6) as a Primary Key,

employee name varchar2 (10),

department ID number (3) as a Foreign key

STEP 4: Describe the table structure.

STEP 5: Stop the process.

CODING:

**Department Table Creation:**

SQL>create table department(deptid number(3),constraint deptid\_pk primary key(deptid),deptname varchar2(10));

Table Created

SQL>desc department;

|  |  |  |
| --- | --- | --- |
| **Column** | **Null?** | **Type** |
| DEPTID | NOT NULL | NUMBER(3) |
| DEPTNAME | - | VARCHAR2(10) |

**Employee Table Creation:**

**SQL>**create table employee(empno number(6),constraint empno\_pk primary key(empno),empname varchar2(10),deptid number(3),constraint deptid\_fk foreign key(deptid)references department);

Table Created

SQL)desc employee;

|  |  |  |
| --- | --- | --- |
| **Column** | **Null?** | **Type** |
| EMPNO | NOT NULL | NUMBER(6) |
| EMPNAME | - | VARCHAR2(10) |
| DEPTID | - | NUMBER(3) |
|  |  |  |

**PROGRAM 2:**

**ALTER A TABLE**

**AIM:** Alter the employee table and Insert rows into the employee table.

# ALGORITHM:

STEP 1: Start the process

STEP 2:Create an employee table with the following fields

Employee number number (6) as a Primary Key, employee name varchar2 (10),

department ID number (3)

STEP 3: Alter employee name as varchar2 (20) in employee table.. STEP 4: Add the salary column in employee table.

STEP 5: Describe the employee table structure. STEP 6: Insert rows into the employee table.

STEP 7: Display the inserted rows using select query. STEP 8: Stop the process.

**CODING:**

**SQL>**create table employee(empno number(6),constraint empno\_pk primary key(empno),empname varchar2(10),deptid number(3));

SQL>desc employee;

|  |  |  |
| --- | --- | --- |
| **Column** | **Null?** | **Type** |
| EMPNO | NOT NULL | NUMBER(6) |
| EMPNAME | - | VARCHAR2(10) |
| DEPTID | - | NUMBER(3) |

**ALTER AN EMPLOYEE TABLE:**

SQL>alter table employee modify empname varchar2(20);

Table Altered

SQL>desc employee;

|  |  |  |
| --- | --- | --- |
| **Column** | **Null?** | **Type** |
| EMPNO | NOT NULL | NUMBER(6) |
| EMPNAME | - | VARCHAR2(20) |
| DEPTID | - | NUMBER(3) |

SQL> alter table employee add salary number(10);

Table Altered

SQL>desc employee;

|  |  |  |
| --- | --- | --- |
| **Column** | **Null?** | **Type** |
| EMPNO | NOT NULL | NUMBER(6) |
| EMPNAME | - | VARCHAR2(20) |
| DEPTID | - | NUMBER(3) |

SALARY - NUMBER(10)

INSERT VALUES INTO AN EMPLOYEE TABLE:

SQL>insert into employee values(100,'surya',11,20000);

SQL>insert into employee values(101,'ram',12,22000);

SQL>insert into employee values(102,'abi',11,25000);

SQL>insert into employee values(103,'kiran',13,30000);

SQL>insert into employee values(104,'ajith',15,45000);

SQL> select \*from employee;

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** | **SALARY** |
| 100 | surya | 11 | 20000 |
| 101 | ram | 12 | 22000 |

102 abi 11 25000

103 kiran 13 30000

104 ajith 15 45000

**PROGRAM 3:**

**UPDATE AND DELETE OPERATION**

**AIM:** To Perform update and delete operations in employee table.

# ALGORITHM:

STEP 1: Start the process

STEP 2: Create an employee table with the following fields

Employee number number (6) as a Primary Key, employee name varchar2 (10),

department ID number (3)

STEP 3: Insert rows into the employee table.

STEP 4:Perform update operation in employee table using update statement with where clause. STEP 5: Perform delete operation in employee table using delete statement with where clause. STEP 6: Display the result using select query.

STEP 7: Stop the process.

**CODING:**

**SQL>**create table employee(empno number(6),constraint empno\_pk primary key(empno),empname varchar2(10),deptid number(3));

SQL>desc employee;

|  |  |  |
| --- | --- | --- |
| **Column** | **Null?** | **Type** |
| EMPNO | NOT NULL | NUMBER(6) |
| EMPNAME | - | VARCHAR2(10) |
| DEPTID | - | NUMBER(3) |

SQL>insert into employee values(100,'arun',11);

SQL>insert into employee values(101,'kabilan',12);

SQL>insert into employee values(102,'vijay',13);

SQL>insert into employee values(103,'abi',14);

SQL>insert into employee values(104,'shiyam',15);

SQL> select \*from employee;

|  |  |  |
| --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** |
| 100 | arun | 11 |
| 101 | kabilan | 12 |
| 102 | vijay | 13 |
| 103 | abi | 14 |
| 104 | shiyam | 15 |

**Update Operation:**

SQL> update employee set empname='arunkumar' where empno=100;

1 row Updated

SQL> select \*from employee;

|  |  |  |
| --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** |
| 100 | arunkumar | 11 |
| 101 | kabilan | 12 |
| 102 | vijay | 13 |
| 103 | abi | 14 |
| 104 | shiyam | 15 |

**Delete Operation:**

SQL> delete from employee where empno=101;

1 row Deleted

SQL> select \*from employee;

|  |  |  |
| --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** |
| 100 | arunkumar | 11 |
| 102 | vijay | 13 |
| 103 | abi | 14 |
| 104 | shiyam | 15 |

**PROGRAM 4:**

**SORTING**

**AIM:** To display the employees belongs to a specific department and Sort the department table.

# ALGORITHM:

STEP 1: Start the process

STEP 2: Create a department table with the following fields

Employee number number (6) as a Primary Key, employee name varchar2 (10),

Department ID number (3)

department name varchar2 (10)

STEP 3: Describe the table structure

STEP 4: Insert rows into the department table.

STEP 5: Display the employees belongs to a specific department using where clause. STEP 6: Sort the department table.

STEP 7: Stop the process.

SQL> create table department(empno number(3),constraint empno\_pk primary key(empno),

empname varchar2(20),deptid number(3),deptname varchar2(20));

Table Created

SQL>insert into department values(100,'ramki',11,'sales');

SQL>insert into department values(101,'kavya',12,'purchase');

SQL>insert into department values(102,'abi',11,'sales');

SQL>insert into department values(103,'zon',13,'marketing');

SQL>insert into department values(104,'dev',14,'admin');

SQL>insert into department values(105,'shyam',11,'sales');

SQL> select \*from department;

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** | **DEPTNAME** |
| 100 | ramki | 11 | sales |
| 101 | kavya | 12 | purchase |
| 102 | abi | 11 | sales |
| 103 | zon | 13 | marketing |
| 104 | dev | 14 | admin |
| 105 | shyam | 11 | sales |

Display the employees belongs to a specific department:

SQL> select \*from department where deptname='sales';

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** | **DEPTNAME** |
| 100 | ramki | 11 | sales |
| 102 | abi | 11 | sales |
| 105 | shyam | 11 | sales |

Sort the department table:

SQL> select \*from department order by deptid;

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** | **DEPTNAME** |
| 100 | ramki | 11 | sales |
| 102 | abi | 11 | sales |
| 105 | shyam | 11 | sales |
| 101 | kavya | 12 | purchase |
| 103 | zon | 13 | marketing |
| 104 | dev | 14 | admin |

# PROGRAM 5:

**GROUP FUNCTIONS**

**AIM:** To Select the minimum and maximum salary from employee table. Also find the average salary from the employee table.

# ALGORITHM:

STEP 1: Start the process

STEP 2: Create an employee table with the following fields

Employee number number (6) as a Primary Key, employee name varchar2 (10),

department ID number (3) salary number(10)

STEP 3: Describe the table structure

STEP 4: Insert rows into the employee table.

STEP 5: Select the minimum and maximum salary from employee table using group function.

STEP 6: Find the average salary from the employee table using group function.

STEP 7: Stop the process.

CODING:

SQL> create table emp(empno number(2),constraint empno\_pk primary key(empno),

empname varchar2(20),deptid number(3),salary number(10));

Table Created

SQL>insert into emp values(100,'ramki',11,50000);

SQL>insert into emp values(101,'abi',12,30000);

SQL>insert into emp values(102,'kumar',13,25000);

SQL>insert into emp values(103,'zon',14,60000);

SQL>insert into emp values(104,'jasmin',15,70000);

SQL> select \*from emp;

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **EMPNAME** | **DEPTID** | **SALARY** |
| 100 | ramki | 11 | 50000 |
| 101 | abi | 12 | 30000 |
| 102 | kumar | 13 | 25000 |
| 103 | zon | 14 | 60000 |
| 104 | jasmin | 15 | 70000 |

SQL> select min(salary),max(salary),avg(salary) from emp;

MIN(SALARY) MAX(SALARY) AVG(SALARY)

25000 70000 47000