4) Creation of Employee, Department table with following specification.

Employee table consists of columns **EMPNO, EMPNAME, BASIC, HRA, DA, ,commission, GROSS_SAL, DATE-OF-BIRTH**. The calculation of HRA, DA are as per the rules of the college. Initially only EMPNO, EMPNAME, BASIC, Date-of Birth have valid values. Other values are to be computed and updated later.

Department table contains **deptno, deptname, and location** columns. Deptno is the primary key in department table and referential integrity constraint exists between employee and department tables. Perform the following operations on the 'database:

- Create tables employee, department with required constraints.
- Initially only the few columns (essential) are to be added in employee table. Add the remaining columns separately by using appropriate SQL command
- Basic column should not be null
- Primary key constraint on empno
- Add constraint that basic should not be less than 5000.
- Calculate DA= 30%, HRA = 25% of the BASIC Salary.
- Calculate Gross Salary as the sum of BASIC SALARY, DA, HRA
- Primary key constraint on deptno of department
- Foreign key constraint on deptno of employee references to deptno of department.
- Answer the different quires on the Employee and department tables

Description :

SQL SELECT Statement :

The most commonly used SQL command is SELECT statement. The SQL SELECT statement is used to query or retrieve data from a table in the database. A query may retrieve information from specified columns or from all of the columns in the table. To create a simple SQL SELECT Statement, you must specify the column(s) name and the table name. The whole query is called SQL SELECT Statement.

Syntax of SQL SELECT Statement:

SELECT column_list FROM table-name
[WHERE Clause]
[GROUP BY clause]
[HAVING clause]
[ORDER BY clause];

Table-name is the name of the table from which the information is retrieved.
• column list includes one or more columns from which data is retrieved.
• The code within the brackets is optional.

FOREIGN KEY:

An integrity constraint involving two relations must specified if a DBMS is to make checks, called foreign key constraint. It is also called as referential integrity constraint

SYNTAX:

Define columnname <size>references <tablename>(columnname);

```
SQL>      create table department(deptno number(2) primary key,
                                  dname varchar2(15),
                                  location varchar2(15));
```

Table created.

```
SQL> insert into department values(&deptno,'&dname','&location');
```

```
SQL > create table  emp(empno number(6) primary key,
                        empname varchar2(20) not null,
                        designation varchar2(15),
                        deptno number(2) references department(deptno),
                        Basic  number(8,2) not null,
                        HRA   number(7,2),
                        DA     number(7,2),
                        Comm number(7,2),
                        Gross_sal number(7,2),
                        Date_of_Birth DATE,
                        Constraint c1 check(basic>5000);
      Table created;

    SQL > insert into
    emp(empno,empname,designation,deptno,basic,comm.,date_of_birth)
            Values (&empno,'&empname','&designation',&deptno,&basic,&comm.,
    '&Date_of_Birth);
```

Q) Display all the information of the EMP table

```
SQL> SELECT * FROM EMP;
```

Q) Calculating DA, HRA, GSAL

```
SQL > UPDATE EMP SET HRA= (BASIC*25/100);

SQL>  UPDATE EMP SET GROSS_SAL= BASIC + DA + HRA;
;
```

Q) Displaying the information of EMP

SQL> SELECT * FROM EMP;

Q) Display employeename, DA for all the employees

SQL > select DA, ENAME from emp;

Q) Display unique designations from EMP table?
SQL>) select distinct designation from EMP;

Q) List the EMPnumbers in the asc order of their Salaries?
SQL>) select EMPno from EMP order by Gross_sal asc;

Q) List the EMPs Whos Gross sal ranging from 22000 and 45000.

SQL>)SELECT * FRM EMP WHERE Gross_SAL*12 BETWEEN 30000 AND 50000;

Q) List the Enames those are having five characters in their Names.

SQL>)SELECT ENAME FROM EMP WHERE LENGTH(ENAME)=5

Q) List the Enames those are starting with 'S' and with five characters.

SQL>)SELECT ENAME FROM EMP WHERE ENAME LIKE 'S%' AND LENGTH(ENAME)=5;

Q) List the EMPs those are having four chars and third character must be 'r'.

SQL>)SELECT ENAME FROM EMP WHERE LENGTH(ENAME)=4 AND ENAME LIKE('__r%');

Q) List the Five character names starting with 'S' and ending with 'H'.

SQL>)SELECT ENAME FROM EMP WHERE ENAME LIKE 'S%H' AND LENGTH(ENAME)=5;

Q) List the EMPs whose EMPno not starting with digit78.

SQL>)SELECT * FROM EMP WHERE EMPNO NOT LIKE '78%';

Q) Display the names and salaries of all EMPloyees in reverse salary order.

SQL > SELECT ename, sal FROM EMP ORDER BY sal DESC;

Q) Display the sum of Gross salaries in Emp table

SQL > select sum(Gross_sal) as total from emp;

Q) List the EMP who are working for the Deptno 10 or20.

SQL>) SELECT * FROM EMP WHERE DEPTNO IN (10,20);

Q) List the EMPs who does not belong to Deptno 20.

SQL>) SELECT * FROM EMP WHERE DEPTNO N0T<>'20';

Q) Display all the details of the EMPs whose Comm. is more than their Sal.

SQL>)SELECT * FROM EMP WHERE COMM > SAL;