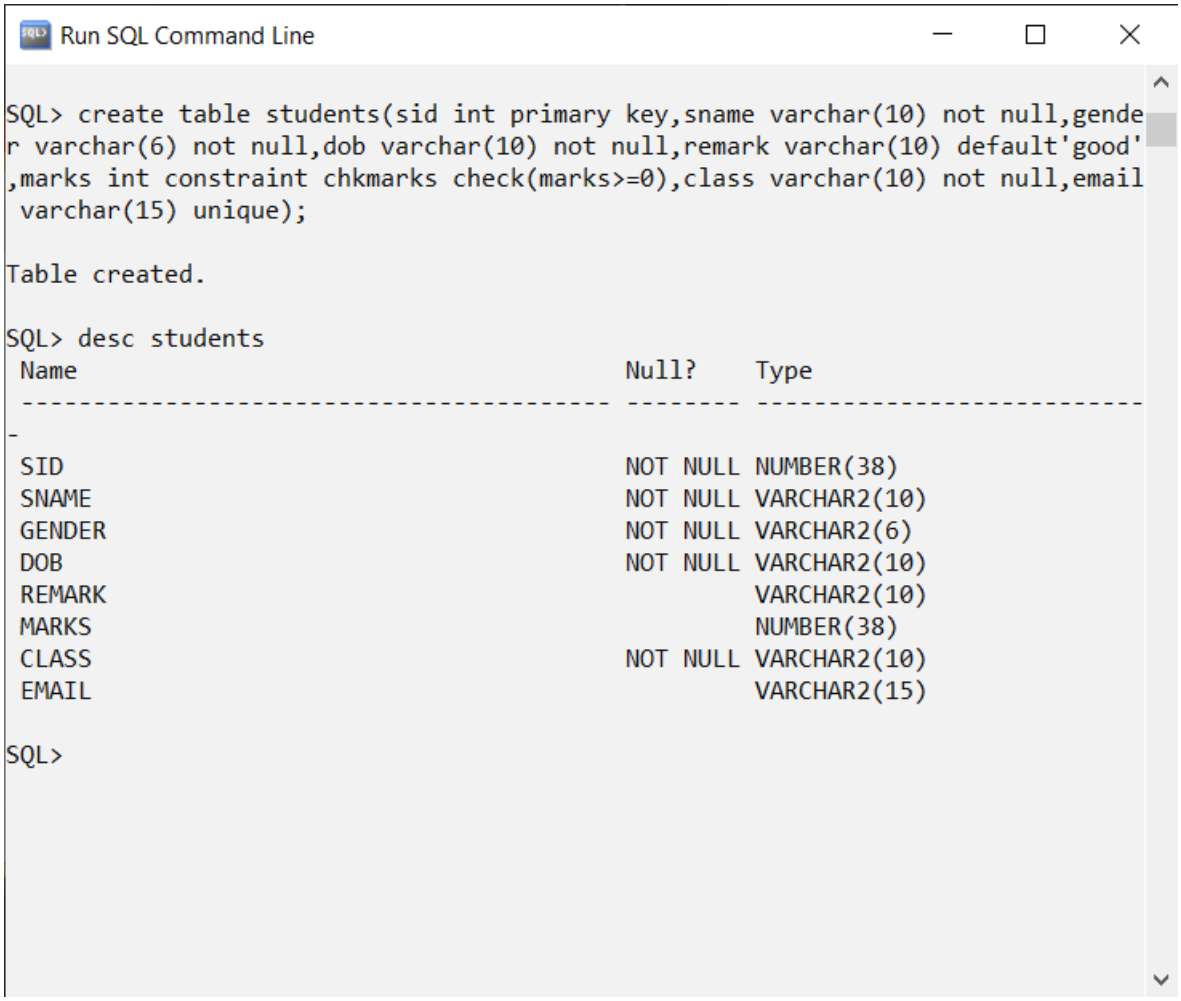
Practical 1: Study of Data Definition Language Statement

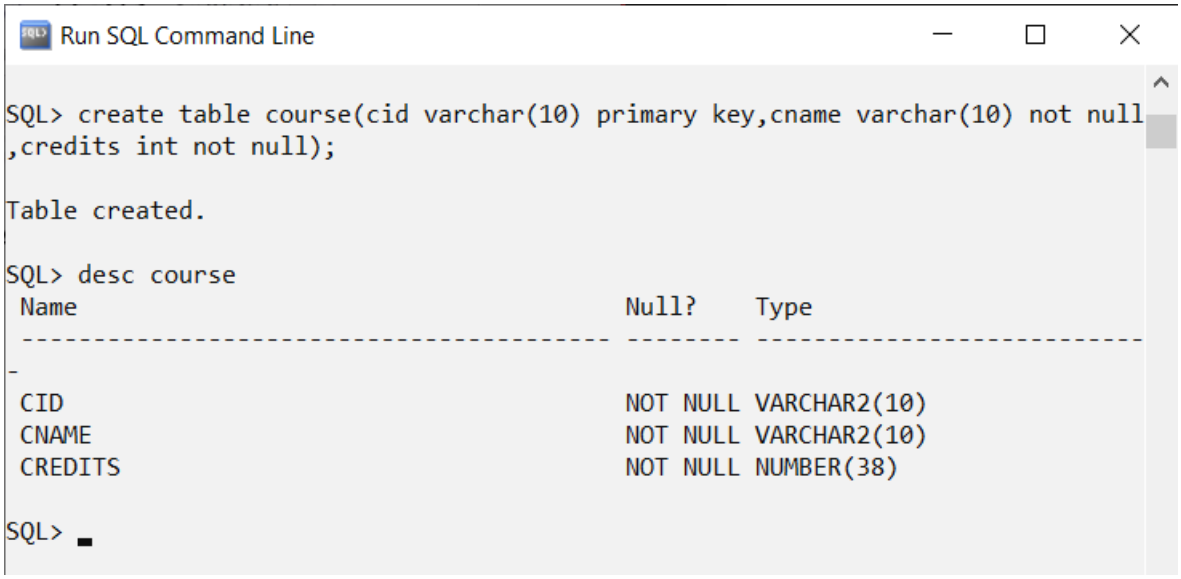
A) Write the query for the following

1) Create the following tables and include the necessary constraints NOT NULL,DEFAULT, CHECK, PRIMARY KEY, UNIQUE.

a) Student (sid, sname, gender, dob, remark,marks, class, email)

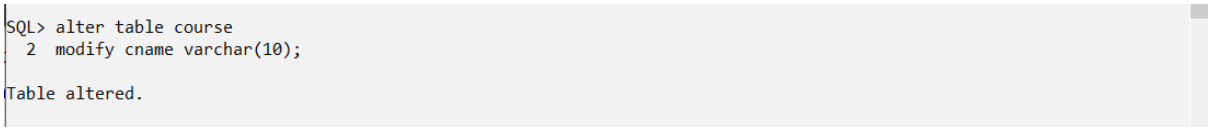


b) Course (cid, cname, credits)

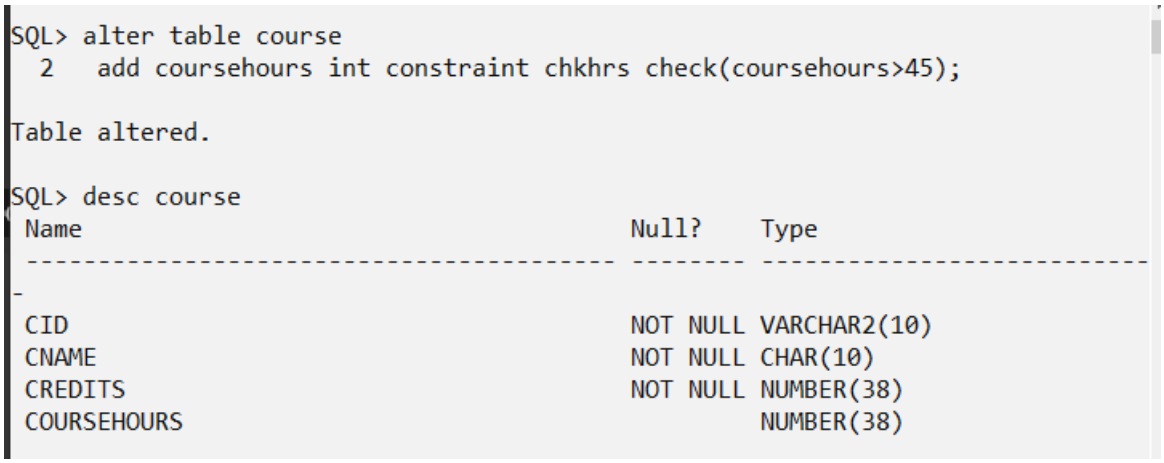


2) Alter the structure of the Course table

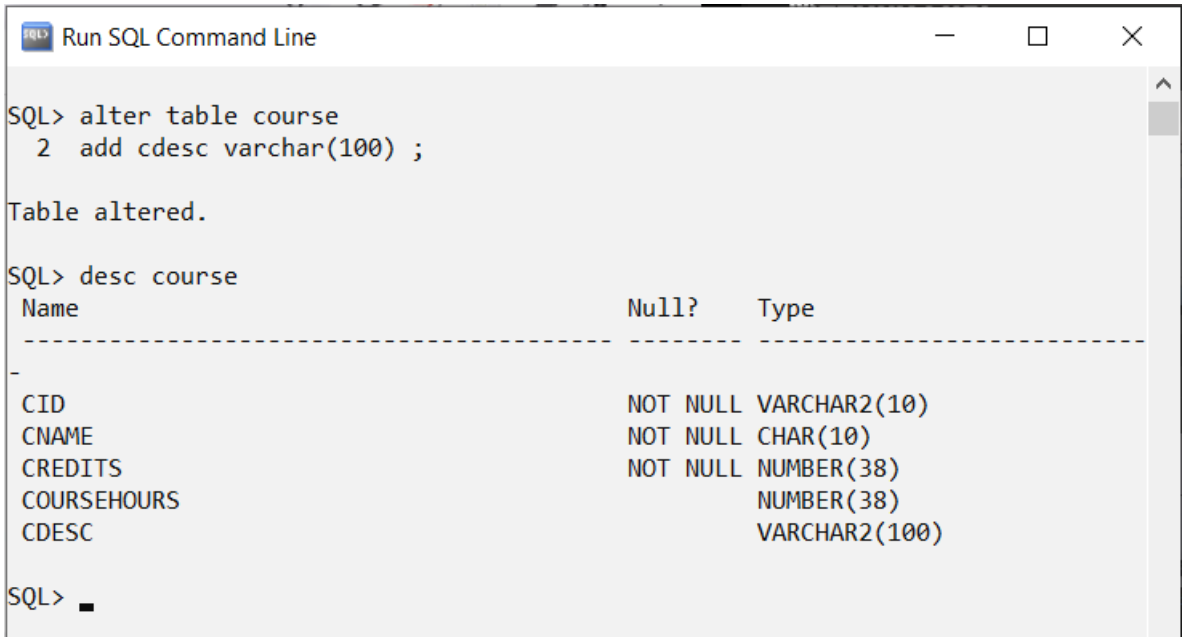
a) Modify datatype of cname



b) Add a column coursehours with minimum course hours greater than 45.

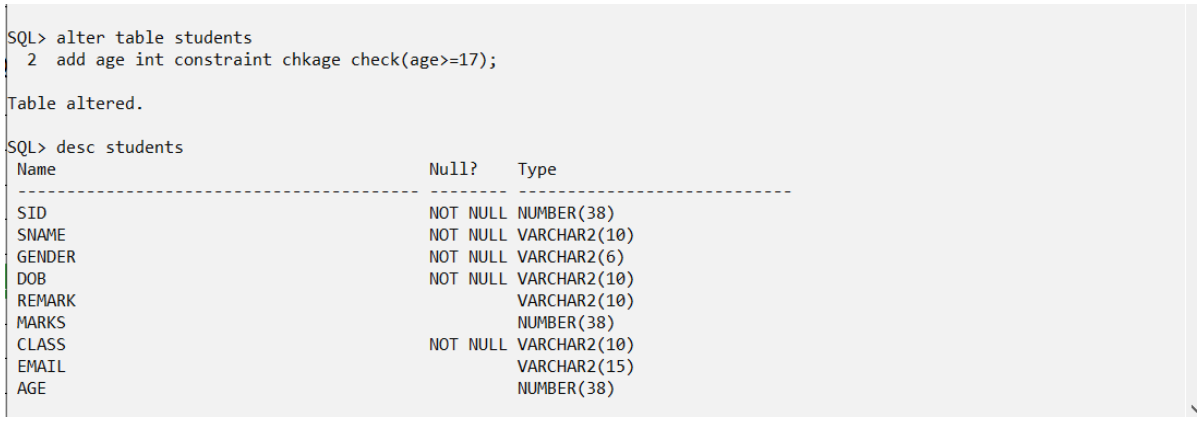


c) Add a column cdesc



3) Alter the structure of Student Table

a) Add column age with minimum age as 17



b) Delete the column dob

c) Add a column phoneno.

```
SQL> alter table students
  2  add phoneno int;

Table altered.

SQL> desc students
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 SID                                       NOT NULL NUMBER(38)
 SNAME                                     NOT NULL VARCHAR2(10)
 GENDER                                    NOT NULL VARCHAR2(6)
 REMARK                                             VARCHAR2(10)
 MARKS                                              NUMBER(38)
 CLASS                                     NOT NULL VARCHAR2(10)
 EMAIL                                              VARCHAR2(15)
 AGE                                                NUMBER(38)
 PHONENO                                            NUMBER(38)

SQL>
```

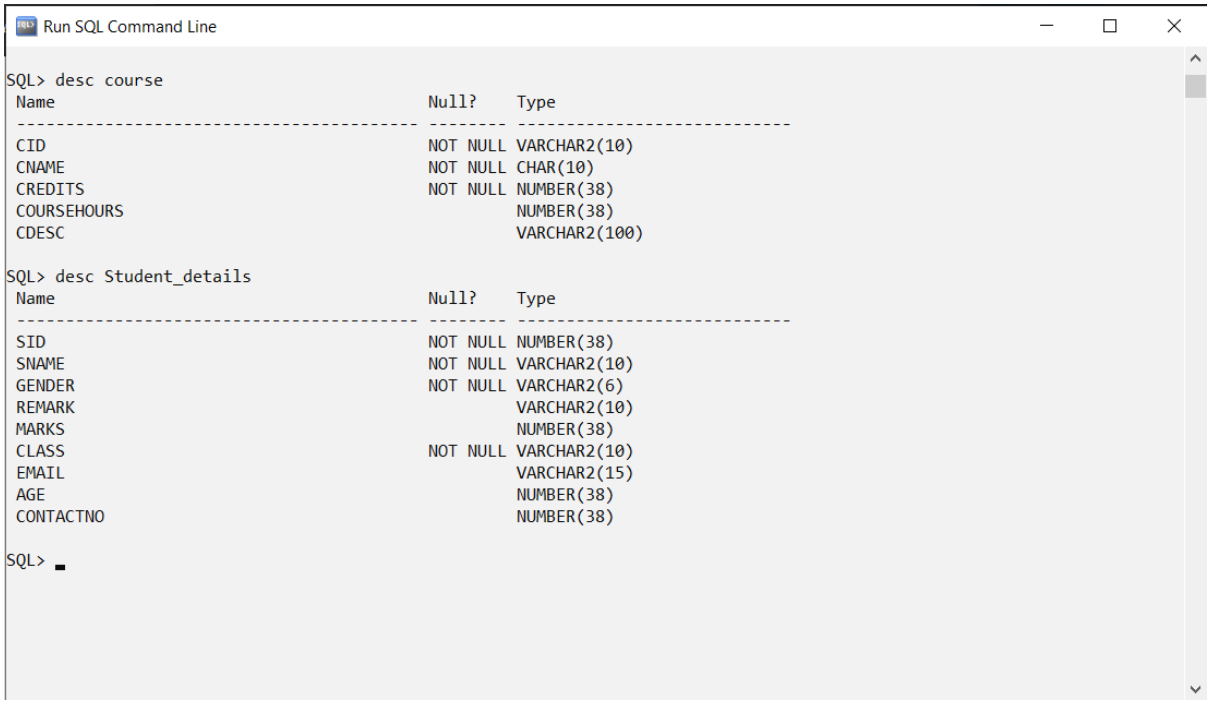
d) Rename phoneno to contactno

```
Run SQL Command Line
SQL> alter table students
  2  rename column phoneno to contactno;

Table altered.

SQL> desc students
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 SID                                       NOT NULL NUMBER(38)
 SNAME                                     NOT NULL VARCHAR2(10)
 GENDER                                    NOT NULL VARCHAR2(6)
 REMARK                                             VARCHAR2(10)
 MARKS                                              NUMBER(38)
 CLASS                                     NOT NULL VARCHAR2(10)
 EMAIL                                              VARCHAR2(15)
 AGE                                                NUMBER(38)
 CONTACTNO                                          NUMBER(38)

SQL>
```

4) Rename Student table as Student_details.

```
Run SQL Command Line
SQL> rename students to Student_details;

Table renamed.

SQL>
```

5) Describe the structure of both the tables



6) Drop the table student_details and Course.

B) 1. Create a table EMPLOYEE with following attributes and specific data types and constraints required.

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

```
Run SQL Command Line
SQL> create table employee(emp_no int primary key,e_name varchar(10) not null,e_address varchar(40) not null,e_ph_no int
 unique,dept_no int not null,dept_name char(15) not null,job_id char(10) unique,salary int not null);

Table created.

SQL> desc employee
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 EMP_NO                                    NOT NULL NUMBER(38)
 E_NAME                                    NOT NULL VARCHAR2(10)
 E_ADDRESS                                 NOT NULL VARCHAR2(40)
 E_PH_NO                                            NUMBER(38)
 DEPT_NO                                   NOT NULL NUMBER(38)
 DEPT_NAME                                 NOT NULL CHAR(15)
 JOB_ID                                             CHAR(10)
 SALARY                                    NOT NULL NUMBER(38)

SQL>
```

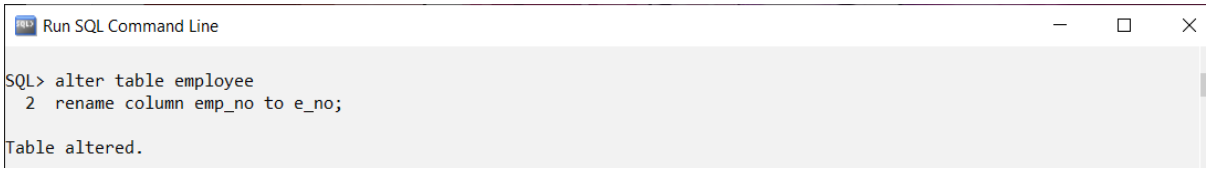
2. Add a new column HIREDATE to the existing relation.

```
Run SQL Command Line

SQL> alter table employee
  2  add hiredate varchar(10) not null;

Table altered.

SQL>
```

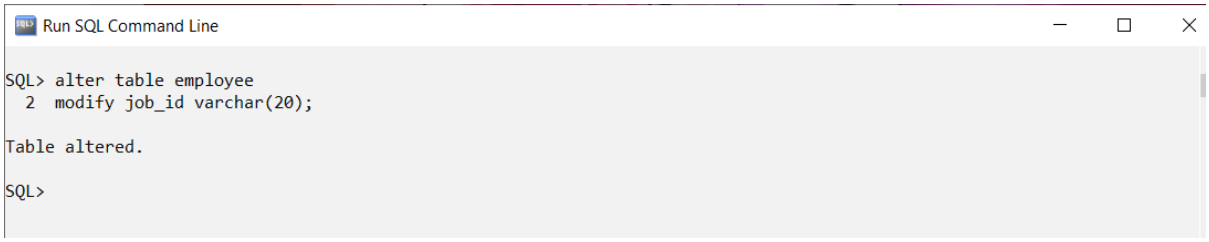
3. Change the datatype of JOB_ID from char to varchar2.

```
Run SQL Command Line

SQL> alter table employee
  2  modify job_id varchar(10);

Table altered.

SQL>
```

4. Change the name of column/field Emp_no to E_no.

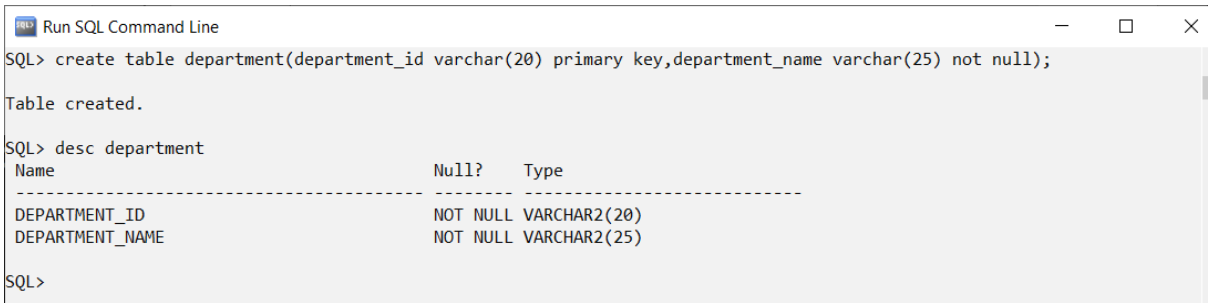


5. Modify the column width of the job field of the emp table.

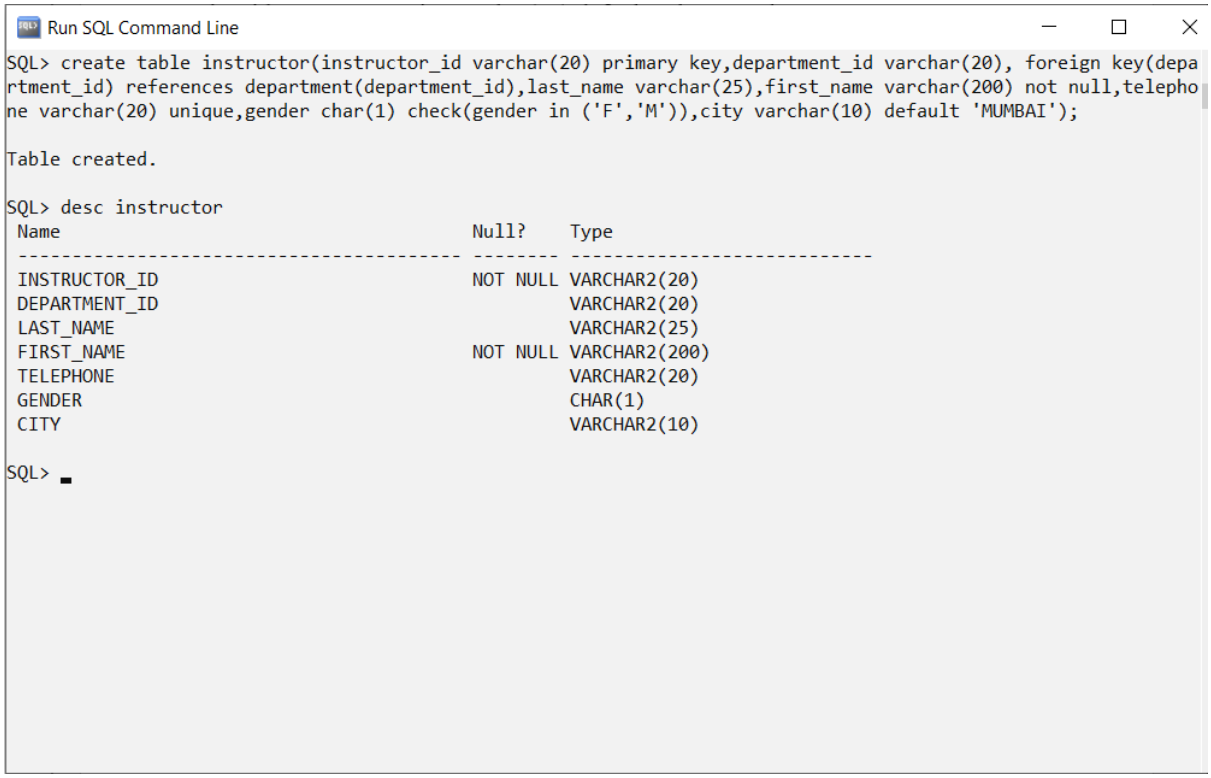


C) Create the following tables with specified attributes and constraints.

Department Table: Department_Id varchar2(20) primary key, Department_Name varchar2(25) with required data



Instructor Table: Instructor_Id varchar2(20) primary key, Department_Id varchar2(20) Foreign key, Last_Name varchar2(25), First_Name varchar2(200) must have value, Telephone varchar2(20) must be unique, gender char(1) must be either ‘F’or ‘M’,city varchar(10) default value must be ‘MUMBAI’.



D) Create the following described below:

Table Name: EMP

Column	Data Type	Length	Precision	Scale	Primary Key	Nullable
EMPNO	Int	-	-	-	Yes	-
ENAME	Varchar2	10	-	-	-	No
JOB	Varchar2	9	-	-	-	✓
MGR	Int	-	-	-	-	✓
HIREDATE	Date	-	-	-	-	✓
SAL	Number	-	7	2	-	✓
COMM	Int	-	-	-	-	✓
DEPTNO	Int	-	-	-	-	✓

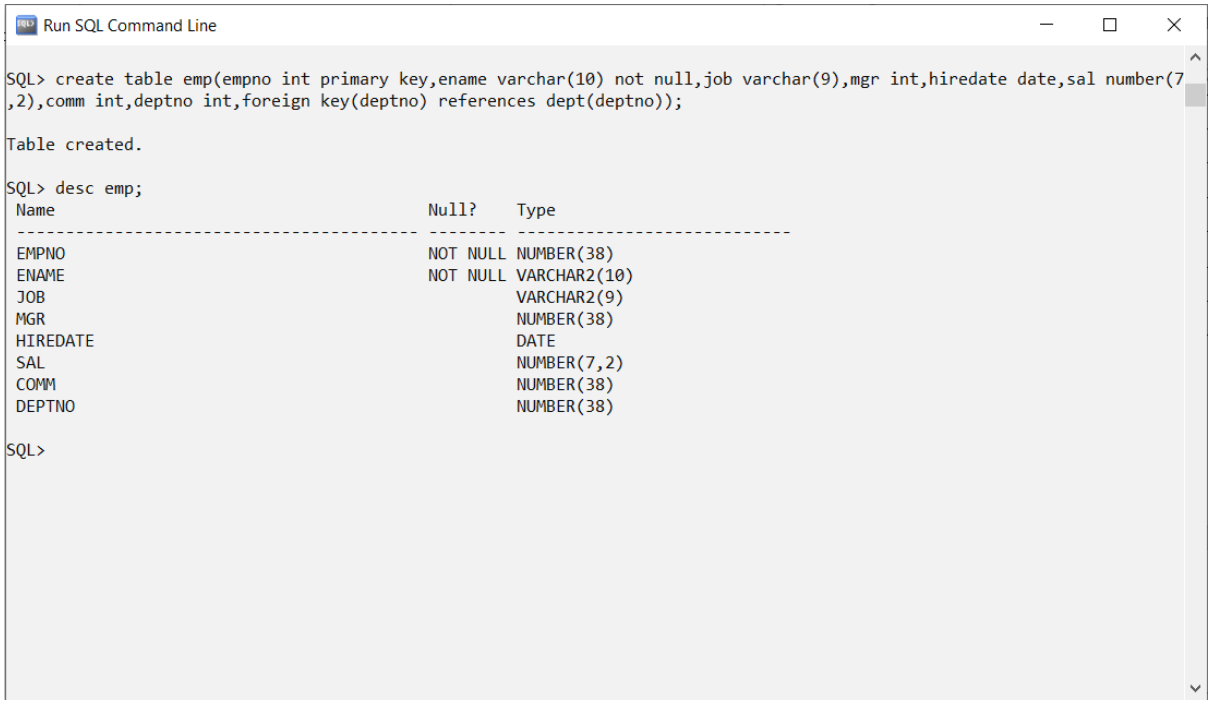


Table Name: DEPT

Column	Data Type	Length	Precision	Scale	Primary Key	Nullable
DEPTNO	Int	-	-	-	Yes	-
DNAME	Varchar	14	-	-	-	No
LOC	Varchar	13	-	-	-	✓