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Roll No:- 27

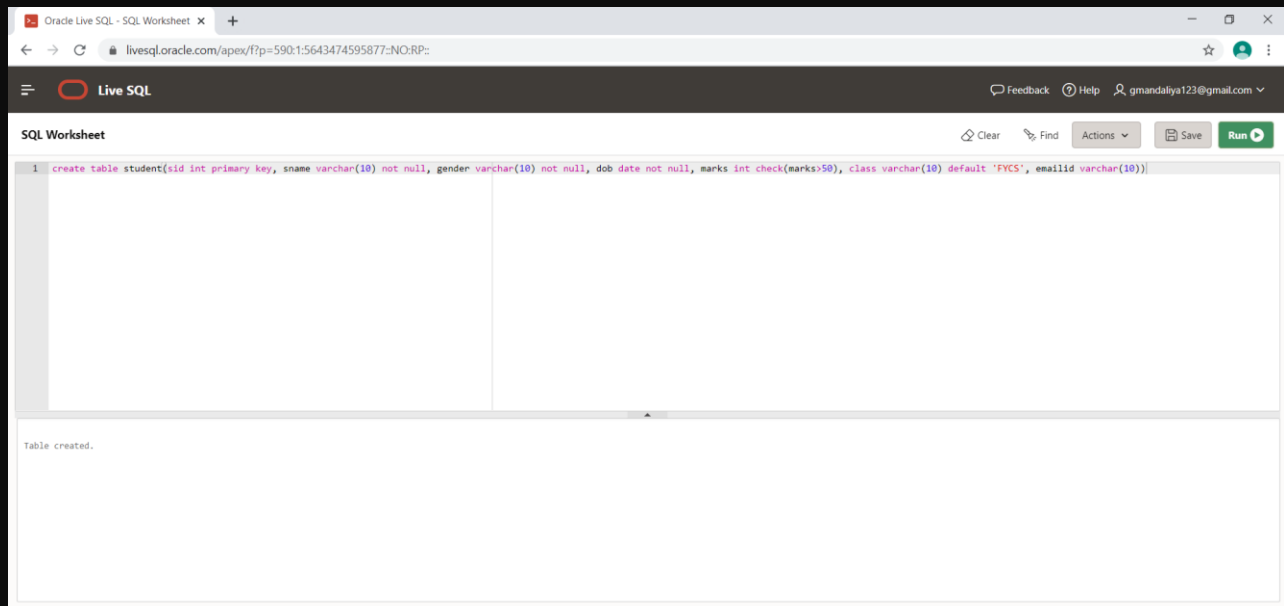
Class:-FYCS

Subject:- Data Base Management system

## PRACTICAL 1:- Study of Data Definition Language Statement

A) Write the query for the following:-

1. Create the following tables and includes the necessary constraints NOT NULL, DEFAULT, CHECK, PRIMARY KEY, UNIQUE.
  - a. Student (sid, sname, gender, dob, remark, marks, class, email)



The screenshot shows the Oracle Live SQL web interface. The browser address bar displays the URL: `livesql.oracle.com/apex/f?p=590:1:5643474595877::NO:RP::`. The page header includes the "Live SQL" logo and user information "gmmandaliya123@gmail.com". The main content area is titled "SQL Worksheet" and contains a single SQL statement: `1 create table student(sid int primary key, sname varchar(10) not null, gender varchar(10) not null, dob date not null, marks int check(marks>50), class varchar(10) default 'FYCS', emailid varchar(10))`. Below the code editor, a message states "Table created." The interface also features buttons for "Clear", "Find", "Actions", "Save", and "Run".

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SQL Worksheet Clear Find Actions Save Run

```
1 create table student(sid int primary key, sname varchar(10) not null, gender varchar(10) not null, dob date not null, marks int check(marks>50), class varchar(10) default 'FYCS', emailid varchar(10))
2 desc student
```

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
DOB	NOT NULL	DATE
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)

Download CSV  
7 rows selected.

b. Course (cid, cname, credits)

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SQL Worksheet Clear Find Actions Save Run

```
1 create table course(cid int primary key, cname varchar(10) not null, credits int not null)
```

Table created.

Oracle Live SQL - SQL Worksheet

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SQL Worksheet

Clear Find Actions Save Run

```
1 create table course(cid int primary key, cname varchar(10) not null, credits int not null)
2 desc course
```

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(10)
CREDITS	NOT NULL	NUMBER

Download CSV  
3 rows selected.

2. Alter the structure of Course table
  - a. Modify datatype of cname

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table course
2 modify cname varchar(20)
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table course
2 modify cname varchar(20)
3 desc course
```

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(20)
CREDITS	NOT NULL	NUMBER

Download CSV  
3 rows selected.

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

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table course
2 add coursehours int check(coursehours>45)
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table course
2 add coursehours int check(coursehours>45)
3 desc course
```

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(20)
CREDITS	NOT NULL	NUMBER
COURSEHOURS	-	NUMBER

Download CSV  
4 rows selected.

c. Add a column cdesc

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table course
2 add cdesc varchar(10)
```

Table altered.

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SQL Worksheet Clear Find Actions Save Run

```
1 alter table course
2 add cddsec varchar(10)
3 desc course
```

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(20)
CREDITS	NOT NULL	NUMBER
COURSEHOURS	-	NUMBER
CDDSEC	-	VARCHAR2(10)

Download CSV  
5 rows selected.

3. Alter the structure of Student table
  - a. Add column age with minimum age as 17.

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SQL Worksheet Clear Find Actions Save Run

```
1 alter table student
2 add age int check(age>17)
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table student
2 add age int check(age>17)
3 desc student
```

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
DOB	NOT NULL	DATE
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER

Download CSV  
8 rows selected.

b. Delete the column dob.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table student
2 drop column dob
3 desc student
```

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER

Download CSV  
7 rows selected.

c. Add a column phoneno.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 alter table student
2 add phoneno int
3 desc student
```

Below the code, the table structure for 'STUDENT' is displayed:

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER
PHONENO	-	NUMBER

Below the table structure, it says: Download CSV, 8 rows selected.

d. Rename phoneno to contactno.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 alter table student
2 rename column phoneno to contactno
```

Below the code, the message "Table altered." is displayed.



Oracle Live SQL - SQL Worksheet

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table student
2 rename column phoneno to contactno
3 desc student
```

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER
CONTACTNO	-	NUMBER

Download CSV  
8 rows selected.

#### 4. Rename Student table to Student\_details.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table student
2 rename to student_details
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table student
2 rename to student_details
3 desc student_details
```

TABLE STUDENT\_DETAILS

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER
CONTACTNO	-	NUMBER

Download CSV  
8 rows selected.

5. Drop the table Student\_details and Course.

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SQL Worksheet

Clear Find Actions Save Run

```
1 drop table course
```

Table dropped.

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SQL Worksheet Clear Find Actions Save Run

```
1 drop table course
2 desc course
```

ORA-20001: object COURSE does not exist

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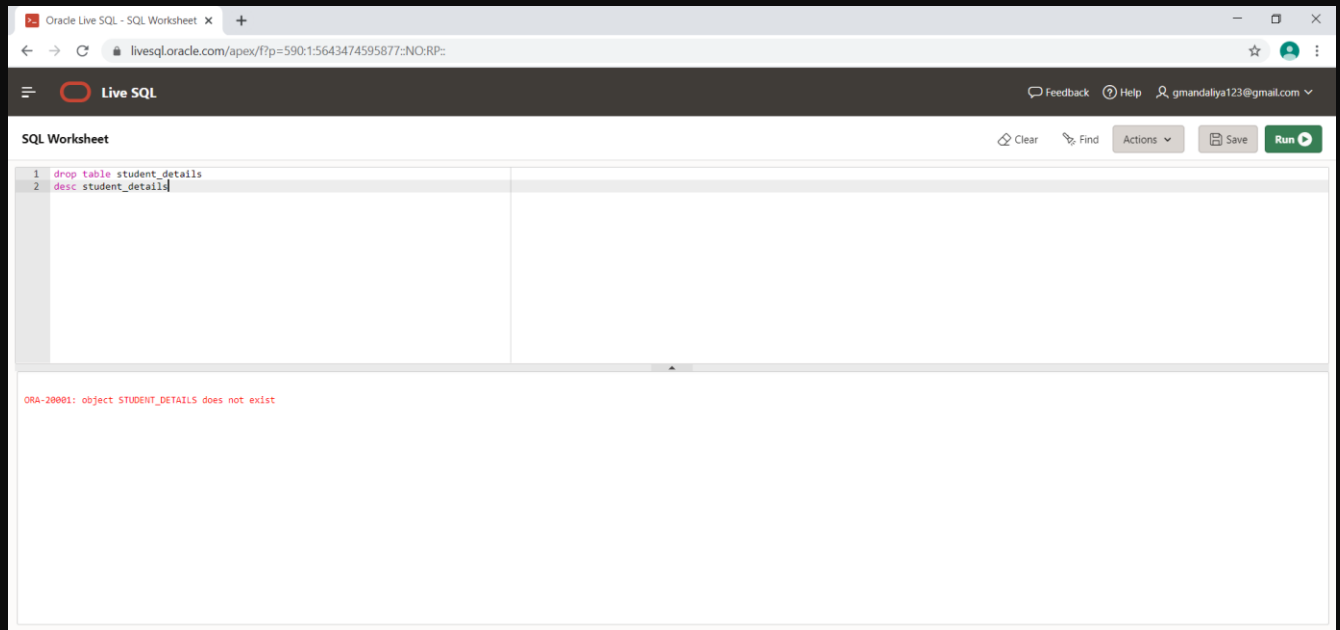
livesql.oracle.com/apex/?p=590:1:5643474595877:NO:RP::

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SQL Worksheet Clear Find Actions Save Run

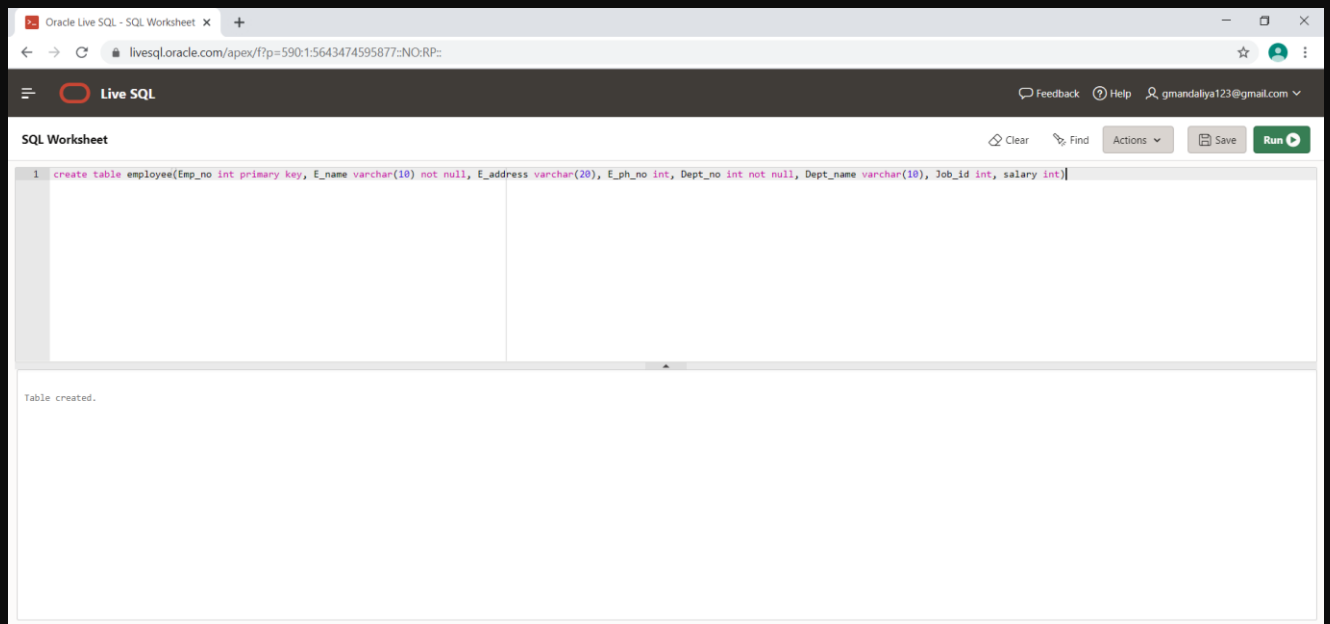
```
1 drop table student_details
```

Table dropped.



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)



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SQL Worksheet

Clear Find Actions Save Run

```
1 create table employee(emp_no int primary key, E_name varchar(10) not null, E_address varchar(20), E_ph_no int, Dept_no int not null, Dept_name varchar(10), Job_id int, salary int)
2 desc employee
```

TABLE EMPLOYEE

Column	Null?	Type
EMP_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	NUMBER
SALARY	-	NUMBER

Download CSV  
8 rows selected.

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

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table employee
2 add hiredate date
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table employee
2 add hiredate date
3 desc employee
```

TABLE EMPLOYEE

Column	Null?	Type
EMP_ID	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PHONE	-	NUMBER
DEPT_ID	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	NUMBER
SALARY	-	NUMBER
HIREDATE	-	DATE

Download CSV

### 3. Change the datatype of JOB\_ID from char to varchar2.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table employee
2 modify job_id varchar(20)
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```

1 alter table employee
2 modify job_id varchar(20)
3 desc employee

```

TABLE EMPLOYEE

Column	Null?	Type
EMP_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	VARCHAR2(20)
SALARY	-	NUMBER
HIREDATE	-	DATE

Download CSV

4. Change the name of column/field Emp\_no to E\_no.

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SQL Worksheet

Clear Find Actions Save Run

```

1 alter table employee
2 rename column Emp_no to E_no

```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table employee
2 rename column Emp_no to E_no
3 desc employee
```

TABLE EMPLOYEE

Column	Null?	Type
E_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	VARCHAR2(20)
SALARY	-	NUMBER
HIREDATE	-	DATE

Download CSV

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

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table employee
2 modify Job_id varchar(10)
```

Table altered.



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SQL Worksheet

Clear Find Actions Save Run

```

1 alter table employee
2 modify job_id varchar(10)
3 desc employee

```

TABLE EMPLOYEE

Column	Null?	Type
E_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	VARCHAR2(10)
SALARY	-	NUMBER
HIREDATE	-	DATE

Download CSV

C) Create the following tables with specified attributes and constraints  
(Department\_Id varchar(20) primary key, Department\_name varchar2(25))  
with required data.

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SQL Worksheet

Clear Find Actions Save Run

```

1 create table Department(Department_Id varchar(20) primary key, Department_name varchar(25))

```

Table created.

Oracle Live SQL - SQL Worksheet

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SQL Worksheet

Clear Find Actions Save Run

```
1 create table Department(Department_Id varchar(20) primary key, Department_Name varchar(25))
2 desc Department
```

Column	Null?	Type
DEPARTMENT_ID	NOT NULL	VARCHAR2(20)
DEPARTMENT_NAME	-	VARCHAR2(25)

Download CSV  
2 rows selected.

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SQL Worksheet

Clear Find Actions Save Run

```
1 alter table Department
2 modify Department_Name varchar(25) not null
```

Table altered.

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SQL Worksheet

Clear Find Actions Save Run

```

1 alter table Department
2 modify Department_Name varchar(25) not null
3 desc Department

```

TABLE DEPARTMENT

Column	Null?	Type
DEPARTMENT_ID	NOT NULL	VARCHAR2(20)
DEPARTMENT_NAME	NOT NULL	VARCHAR2(25)

Download CSV  
2 rows selected.

Instructor table: Instructor\_id varchar(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'.

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SQL Worksheet

Clear Find Actions Save Run

```

1 create table Instructor(Instructor_id varchar(20) primary key, Department_id varchar(20) references Department(Department_ID), Last_name varchar(20), First_name varchar(200) not null, Telephone varchar(20) unique, gender char(1)

```

Table created.

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SQL Worksheet

Clear Find Actions Save Run

```

1 create table Instructor(Instructor_id varchar(20) primary key, Departmant_id varchar(20) references Department(Department_ID), Last_name varchar(20), First_name varchar(200) not null, Telephone varchar(20) unique, gender char(1)
2 desc Instructor

```

TABLE INSTRUCTOR

Column	Null?	Type
INSTRUCTOR_ID	NOT NULL	VARCHAR2(20)
DEPARTMANT_ID	-	VARCHAR2(20)
LAST_NAME	-	VARCHAR2(20)
FIRST_NAME	NOT NULL	VARCHAR2(200)
TELEPHONE	-	VARCHAR2(20)
GENDER	-	CHAR(1)
CITY	-	VARCHAR2(10)

Download CSV  
7 rows selected.

D) Create the following described below:

Table Name:- EMP

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SQL Worksheet

Clear Find Actions Save Run

```

1 create table gautam_EMP(EMP_no int primary key, Ename varchar(10) not null, Job varchar(9), MGR int, Hiredate date, SAL decimal(7,2), Comm int, Dept_no int references gautam_DEPT(Dept_no))

```

Table created.

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SQL Worksheet

Clear Find Actions Save Run

```
1 create table gautam_EMP(EMP_no int primary key, Ename varchar(10) not null, Job varchar(9), MGR int, Hiredate date, SAL decimal(7,2), Comm int, Dept_no int references gautam_DEPT(Dept_no))
2 desc gautam_EMP
```

TABLE: GAUTAM\_EMP

Column	Null?	Type
EMP_NO	NOT NULL	NUMBER
ENAME	NOT NULL	VARCHAR2(10)
JOB	-	VARCHAR2(9)
MGR	-	NUMBER
HIREDATE	-	DATE
SAL	-	NUMBER(7,2)
COMM	-	NUMBER
DEPT_NO	-	NUMBER

Download CSV  
8 rows selected.

## Table Name:- DEPT

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SQL Worksheet

Clear Find Actions Save Run

```
1 create table gautam_DEPT(Dept_no int primary key, Dname varchar(14) not null, Loc varchar(13));
```

Table created.

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SQL Worksheet

ClearFindActionsSaveRun

1 create table gautam\_DEPT(Dept\_no int primary key, Dname varchar(14) not null, Loc varchar(13))

2 desc gautam\_DEPT

TABLE: GAUTAM\_DEPT

Column	Null?	Type
DEPT_NO	NOT NULL	NUMBER
DNAME	NOT NULL	VARCHAR2(14)
LOC	-	VARCHAR2(13)

Download CSV

3 rows selected.

-----X-----