DBMS ASSIGNMENT-2
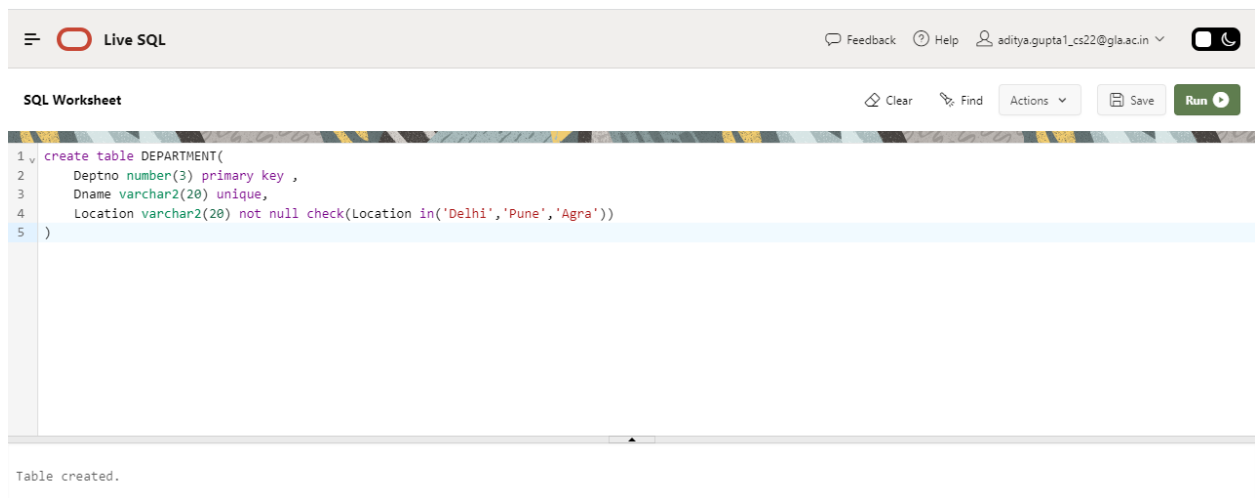
Question 1.:-Create the following tables and specify constraints at the time of creation.

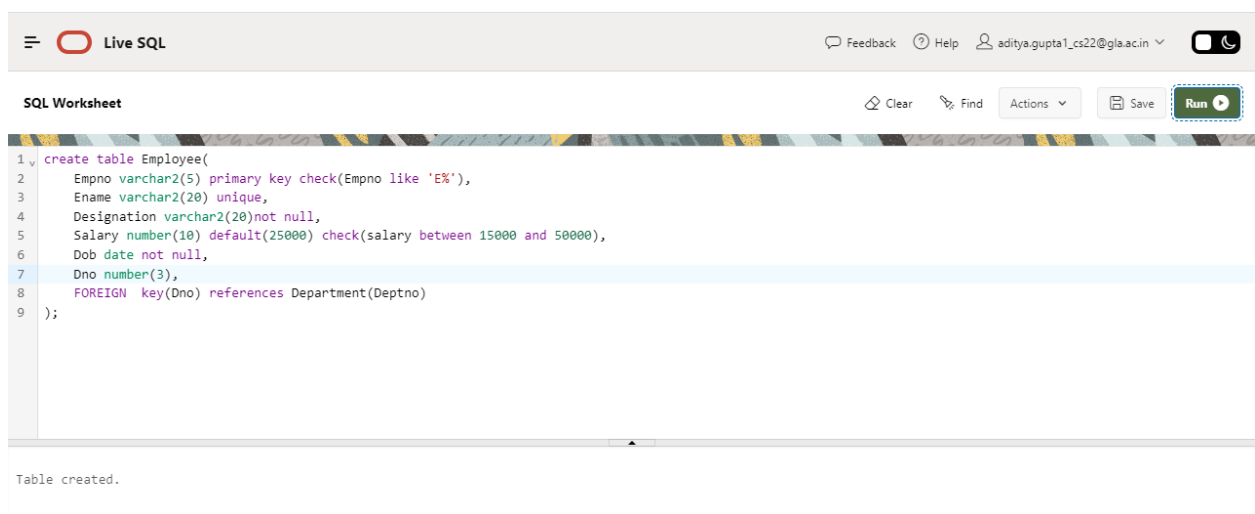## DEPARTMENT:-

```sql
create table DEPARTMENT(
    Deptno number(3) primary key ,
    Dname varchar2(20) unique,
    Location varchar2(20) not null check(Location in('Delhi','Pune','Agra'))
)
```
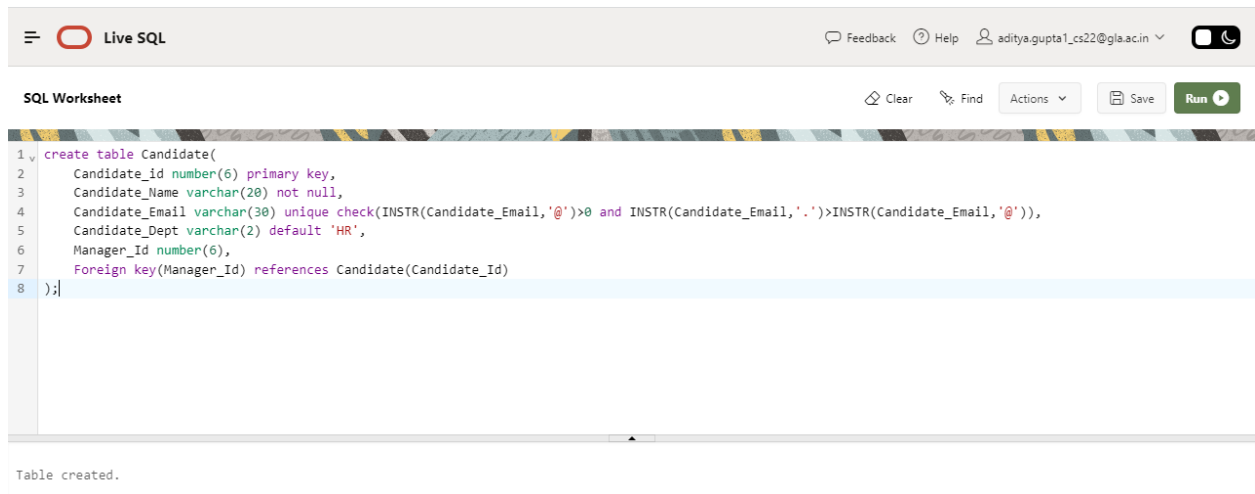
Table created.

EMPLOYEE:-

```sql
create table Employee(
    Empno varchar2(5) primary key check(Empno like 'E%'),
    Ename varchar2(20) unique,
    Designation varchar2(20)not null,
    Salary number(10) default(25000) check(salary between 15000 and 50000),
    Dob date not null,
    Dno number(3),
    FOREIGN  key(Dno) references Department(Deptno)
);
```

Table created.

CANDIDATE:-
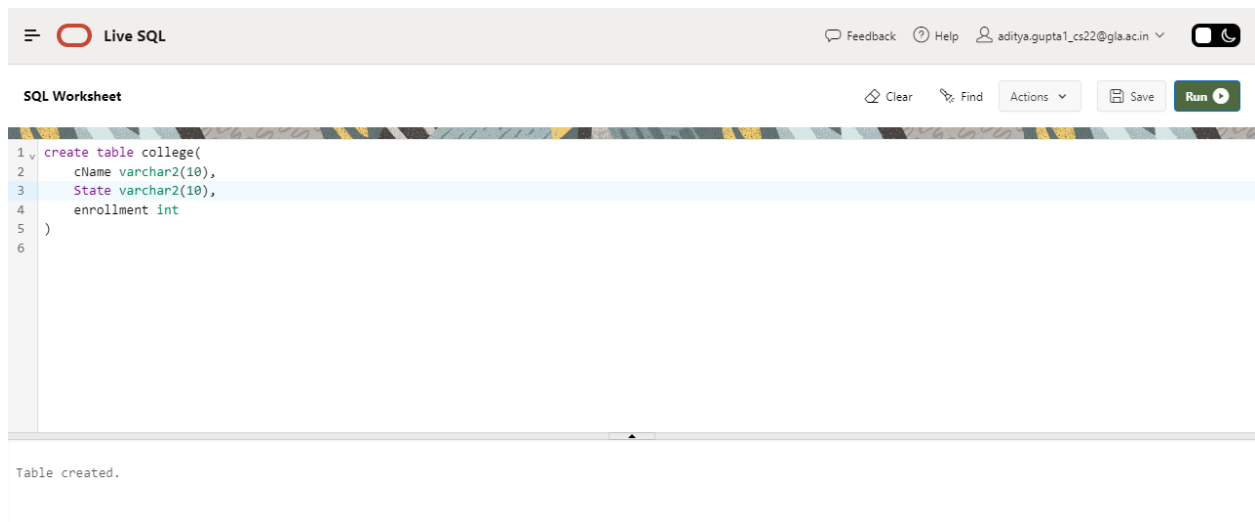
SQL Worksheet   ◇ Clear   ✎ Find   Actions ∨   💾 Save   Run ▶

```
1  create table Candidate(
2      Candidate_id number(6) primary key,
3      Candidate_Name varchar(20) not null,
4      Candidate_Email varchar(30) unique check(INSTR(Candidate_Email,'@')>0 and INSTR(Candidate_Email,'.')>INSTR(Candidate_Email,'@')),
5      Candidate_Dept varchar(2) default 'HR',
6      Manager_Id number(6),
7      Foreign key(Manager_Id) references Candidate(Candidate_Id)
8  );
```

Table created.

Question 2:-Create the schemas as specified above without specifying any constraints.

COLLEGE:-

SQL Worksheet   ◇ Clear   ✎ Find   Actions ∨   💾 Save   Run ▶

```
1  create table college(
2      cName varchar2(10),
3      State varchar2(10),
4      enrollment int
5  )
6
```

Table created.

STUDENT:-

SQL Worksheet   Clear   Find   Actions   Save   Run

```
1   create table student(
2       sID int,
3       sName varchar2(10),
4       GPA number(2,1),
5       sizeHS int
6   )
```

Table created.

APPLY:-

SQL Worksheet   Clear   Find   Actions   Save   Run

```
1   create table apply(
2       sID int,
3       cName varchar2(10),
4       major varchar2(20)
5
6   )
```

Table created.

1. Add **cName** as **Primary key** in **College**.

2. Add **sID** as **Primary key** in **Student**.
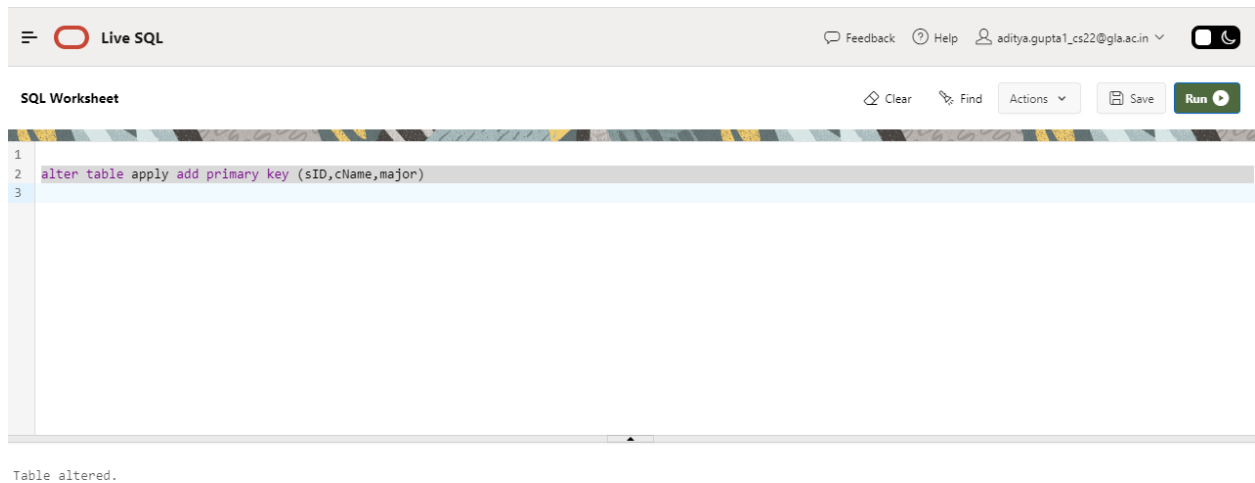
3. Add **sID**, **cName**, **major** as **Primary key** in **Apply**.

SQL Worksheet   ⬦ Clear   ⬩ Find   Actions ⌄   ⬚ Save   **Run ▶**

```
1
2   alter table apply add primary key (sID,cName,major)
3
```

Table altered.

4. Make **sID** in **Apply foreign key** referring table **student** and **cName** referring table **college**.

SQL Worksheet   ⬦ Clear   ⬩ Find   Actions ⌄   ⬚ Save   **Run ▶**

```
1   alter table apply add foreign key(sID) references student(sID);
2   alter table apply add foreign key (cName) references collage(CName);
3
```

Table altered.

5.Increase data type size of **major** from 20 to **25**.

```
1   alter table apply modify MAJOR varchar(25);
2   desc apply;
3
```

Table altered.

TABLE APPLY

Column	Null?	Type
SID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(10)
MAJOR	NOT NULL	VARCHAR2(25)

Download CSV

3 rows selected.

6.Add a new column **decision** in the **Apply** table keeping a constraint of **not null** for this column with data type **varchar2(3)**.

```
1   ALTER TABLE APPLY ADD DECISION VARCHAR2(3);
2   DESC APPLY;
```

TABLE APPLY

Column	Null?	Type
SID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(10)
MAJOR	NOT NULL	VARCHAR2(25)
DECISION	-	VARCHAR2(3)

Download CSV

4 rows selected.

7. Change data type of **decision** in **Apply** to **char(1).**

```
1  ALTER TABLE APPLY MODIFY DECISION CHAR(1);
2  DESC APPLY;
```

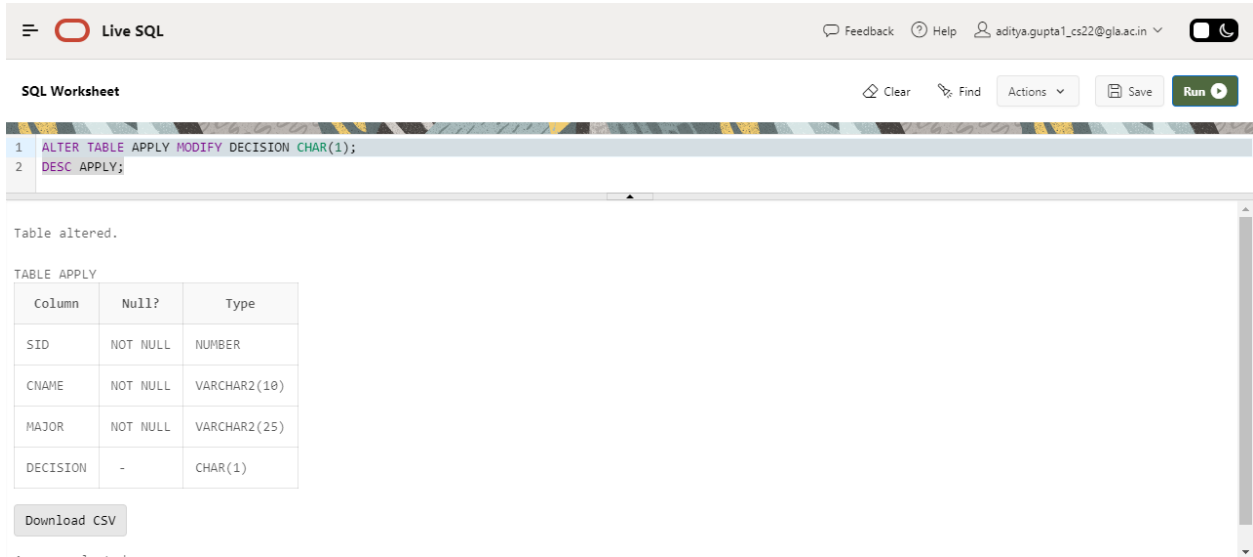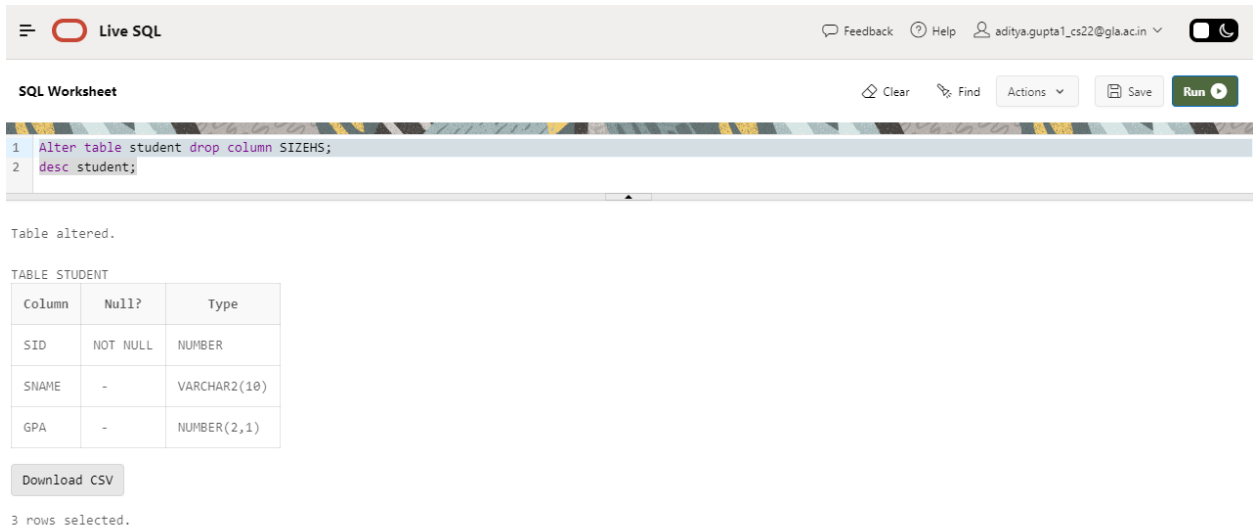Table altered.

TABLE APPLY

Column	Null?	Type
SID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(10)
MAJOR	NOT NULL	VARCHAR2(25)
DECISION	-	CHAR(1)

Download CSV

9. Remove column **sizeHS** from **Student** table.

```
1  Alter table student drop column SIZEHS;
2  desc student;
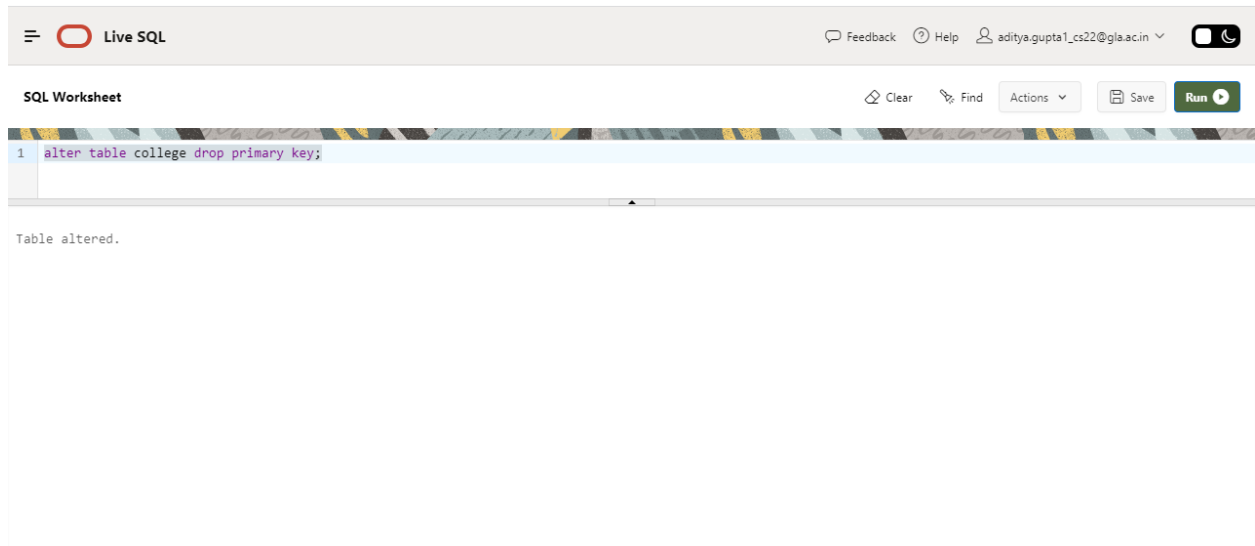```

Table altered.

TABLE STUDENT

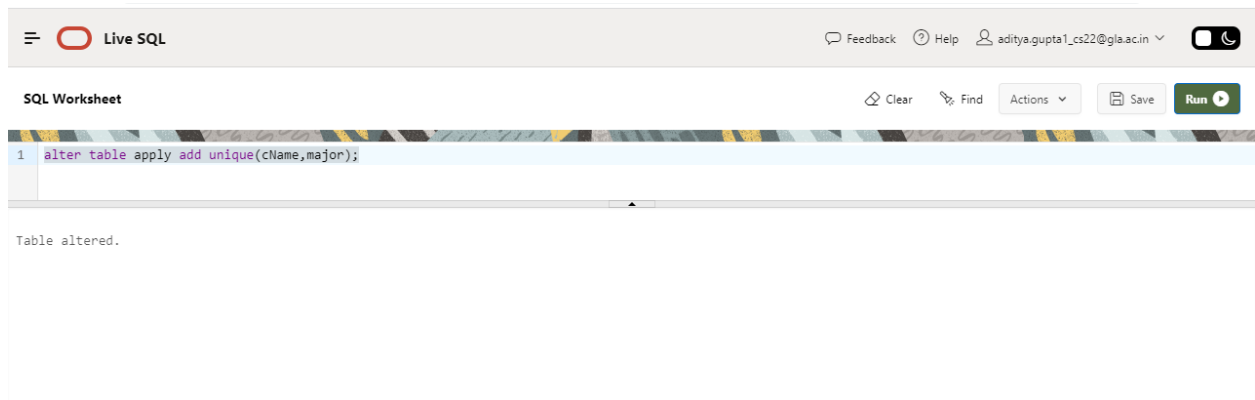| Column | Null?    | Type         |
|--------|----------|--------------|
| SID    | NOT NULL | NUMBER       |
| SNAME  | -        | VARCHAR2(10) |
| GPA    | -        | NUMBER(2,1)  |

Download CSV

3 rows selected.

## 10. Drop **primary key** from College.

SQL Worksheet    Clear    Find    Actions    Save    Run

```
1   alter table college drop primary key;
```

Table altered.

11. Make **cName, major** unique pairwise such as Stanford CS, Stanford EE.

SQL Worksheet   Clear   Find   Actions   Save   Run

```
1   alter table apply add unique(cName,major);
```

Table altered.

14. Rename column **enrollment** to **enroll** in College Table.

SQL Worksheet   Clear   Find   Actions ∨   Save   Run ▶

```
1  alter table college rename column enrollment to enroll;
2  desc college;
```

Table altered.

TABLE COLLEGE

Column	Null?	Type
CNAME	-	VARCHAR2(10)
STATE	-	VARCHAR2(10)
ENROLL	-	NUMBER

Download CSV

3 rows selected.

NAME → ADITYA GUPTA
SECTION → B
UNIV ROLLNO. → 2215000094
CLASS ROLLNO. →47