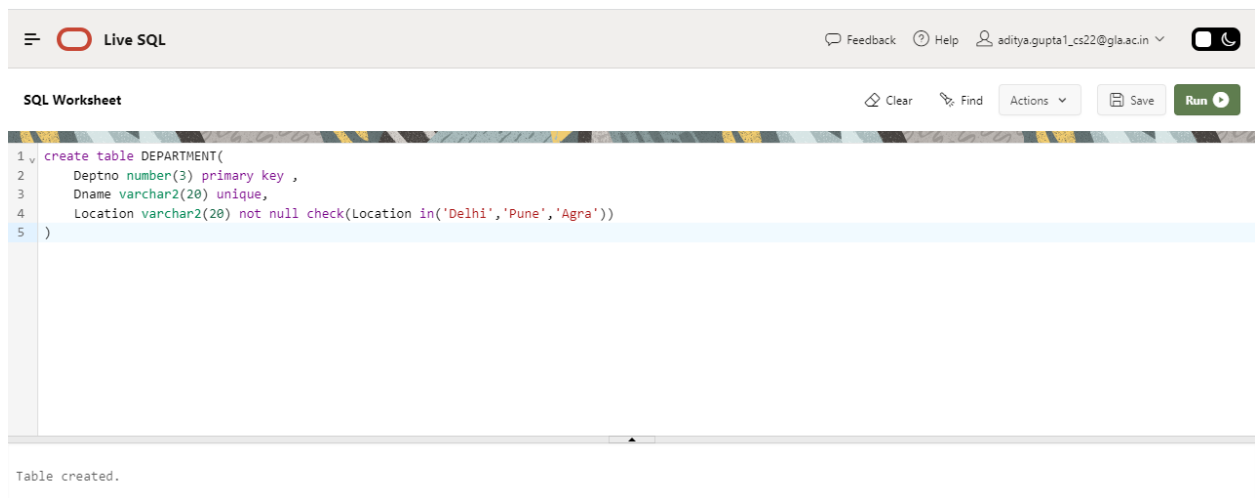


DBMS ASSIGNMENT-2

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

DEPARTMENT:-

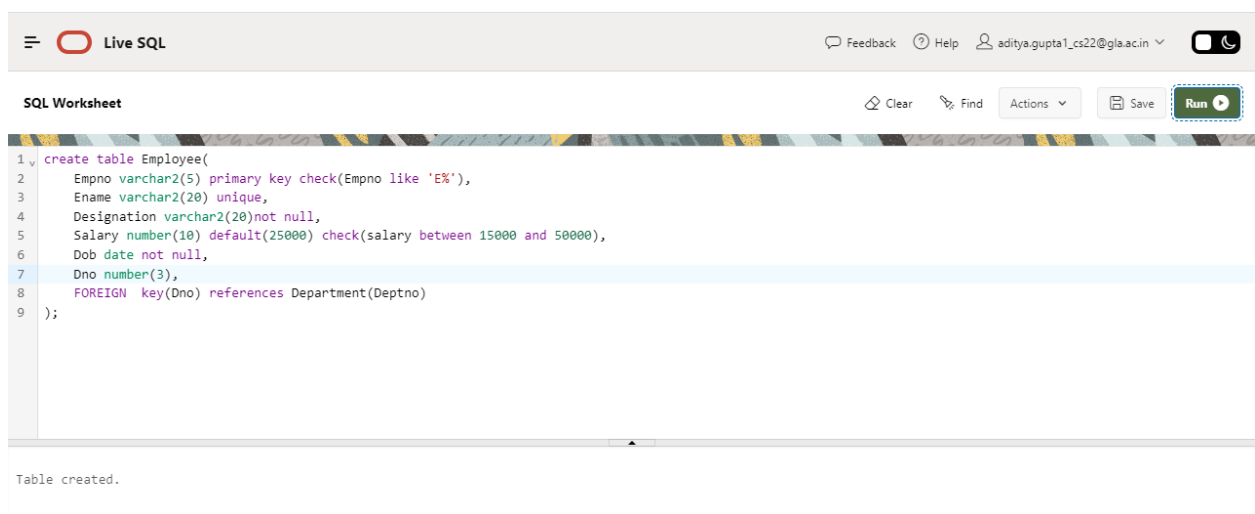


The screenshot shows a web-based SQL editor titled "Live SQL". The interface includes a top bar with a menu icon, the text "Live SQL", and links for "Feedback", "Help", and a user profile "aditya.gupta1_cs22@glia.ac.in". Below the top bar is a toolbar with "Clear", "Find", "Actions", "Save", and a "Run" button. The main area is a code editor with the following SQL code:

```
1 create table DEPARTMENT(  
2     Deptno number(3) primary key ,  
3     Dname varchar2(20) unique,  
4     Location varchar2(20) not null check(Location in('Delhi','Pune','Agra'))  
5 )
```

Below the code editor, a message states "Table created."

EMPLOYEE:-

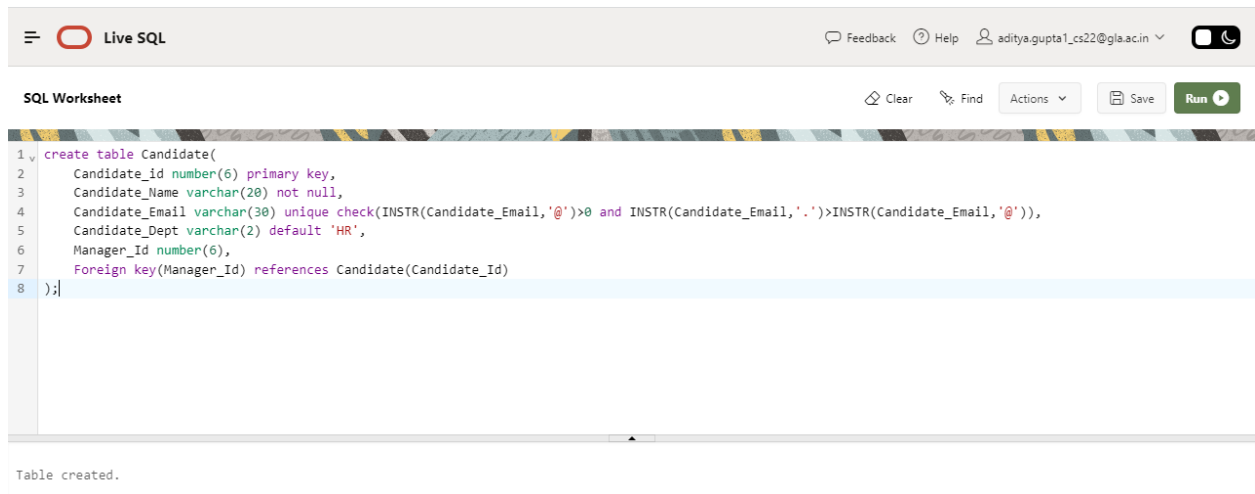


The screenshot shows the same "Live SQL" interface as above. The code editor contains the following SQL code:

```
1 create table Employee(  
2     Empno varchar2(5) primary key check(Empno like 'E%'),  
3     Ename varchar2(20) unique,  
4     Designation varchar2(20) not null,  
5     Salary number(10) default(25000) check(salary between 15000 and 50000),  
6     Dob date not null,  
7     Dno number(3),  
8     FOREIGN key(Dno) references Department(Deptno)  
9 );
```

Below the code editor, a message states "Table created."

CANDIDATE:-



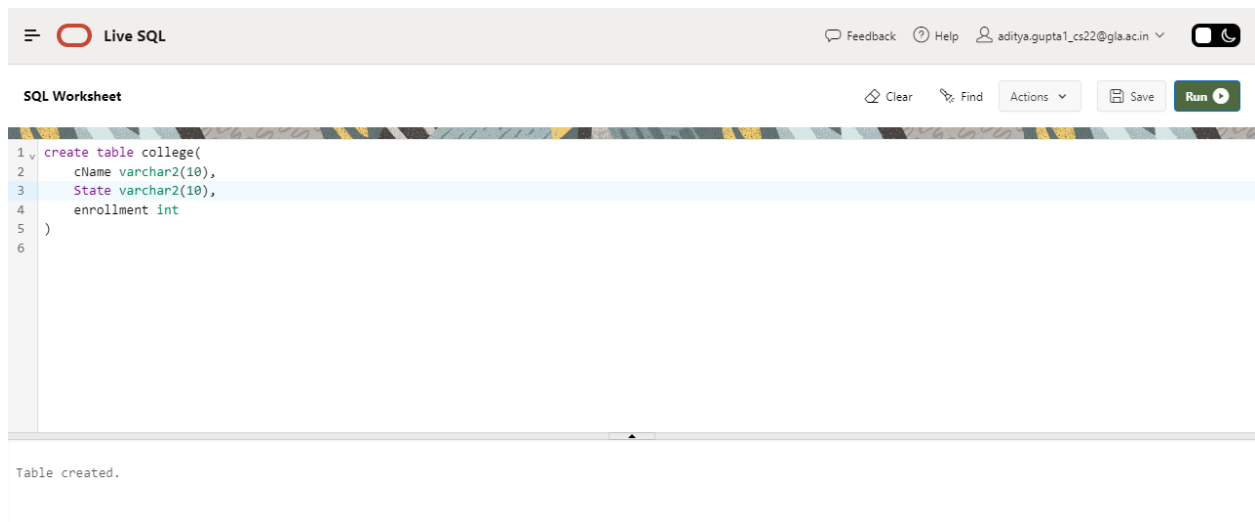
The screenshot shows a web-based SQL editor titled "Live SQL". The interface includes a top navigation bar with a menu icon, the text "Live SQL", and links for "Feedback", "Help", and a user profile "aditya.gupta1_cs22@glia.ac.in". Below the navigation bar is a toolbar with "Clear", "Find", "Actions", "Save", and a "Run" button. The main area is labeled "SQL Worksheet" and contains the following SQL code:

```
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 );
```

Below the code editor, a status message indicates "Table created."

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

COLLEGE:-





The screenshot shows the same "Live SQL" interface as above. The SQL code in the worksheet is:

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

Below the code editor, a status message indicates "Table created."

STUDENT:-

  Live SQL



Feedback Help aditya.gupta1_cs22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

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

Table created.

APPLY:-

  Live SQL

Feedback Help aditya.gupta1_cs22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

```
1 v 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.

Live SQL

Feedback Help aditya.gupta1_cs22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

```
1 ALTER TABLE college add primary key(cName);
```

Table altered.

2. Add sID as Primary key in Student.

Live SQL

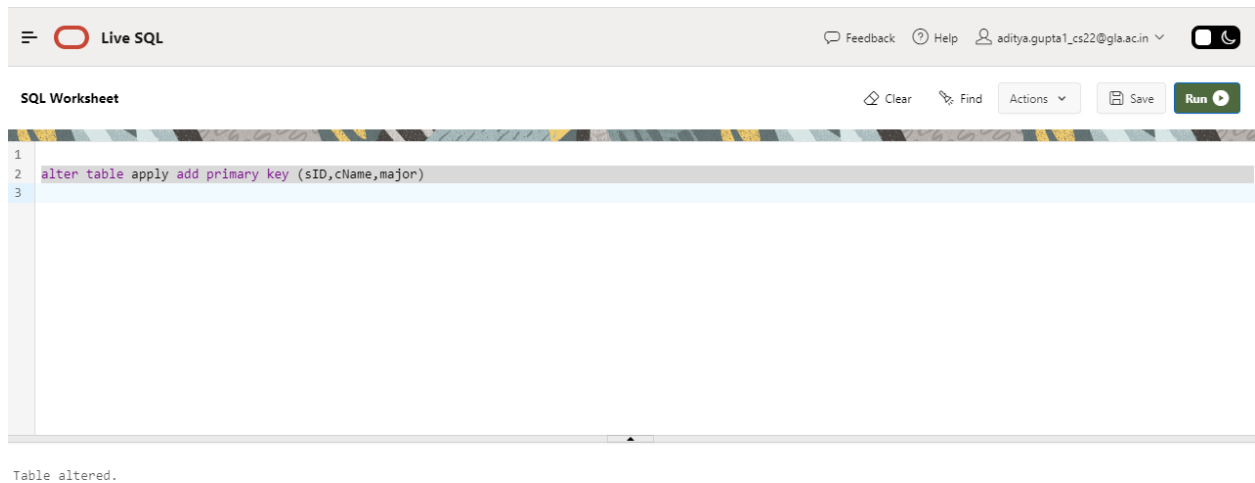
Feedback Help aditya.gupta1_cs22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

```
1 alter table Student add primary key(sID);
```

Table altered.

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



The screenshot shows the Live SQL interface. The top bar includes a hamburger menu, the 'Live SQL' logo, and user information. Below the top bar, the 'SQL Worksheet' section contains a text area with the following SQL command:

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

Below the text area, the message 'Table altered.' is displayed.

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



The screenshot shows the Live SQL interface. The top bar includes a hamburger menu, the 'Live SQL' logo, and user information. Below the top bar, the 'SQL Worksheet' section contains a text area with the following SQL commands:

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

Below the text area, the message 'Table altered.' is displayed.

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

Live SQL

Feedback Help aditya.gupta1_cs22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

```
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)**.

Live SQL

Feedback Help aditya.gupta1_cs22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

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

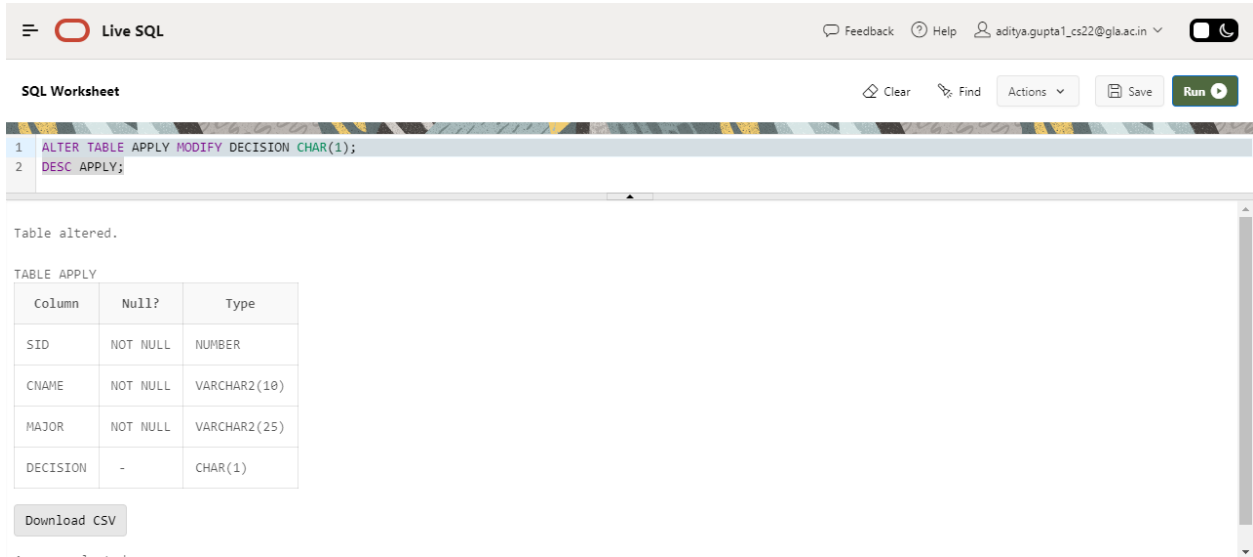
TABLE APPLY

| 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)**.



Live SQL interface showing the execution of an SQL command to alter the data type of the **decision** column in the **Apply** table to **char(1)**.

SQL Worksheet:

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

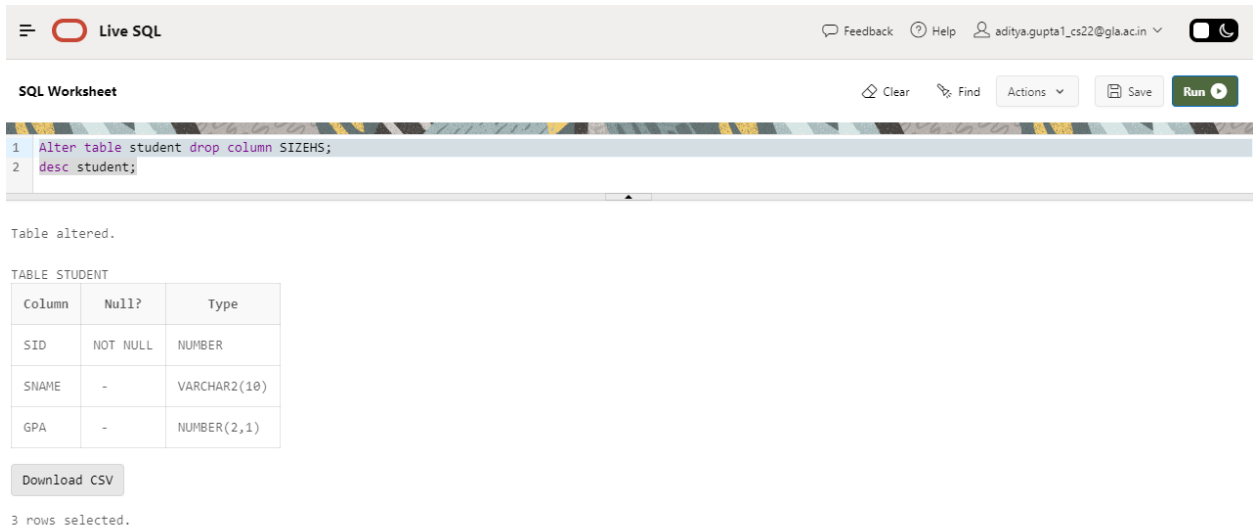
Table altered.

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.



Live SQL interface showing the execution of an SQL command to drop the **sizeHS** column from the **Student** table.

SQL Worksheet:

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

Table altered.

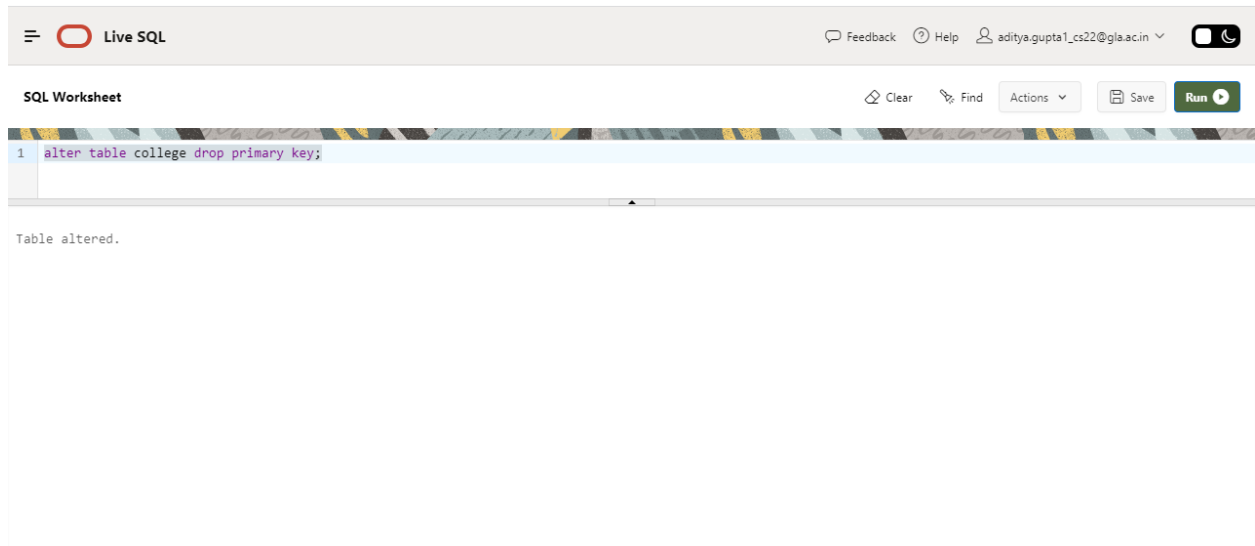
TABLE STUDENT

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

Download CSV

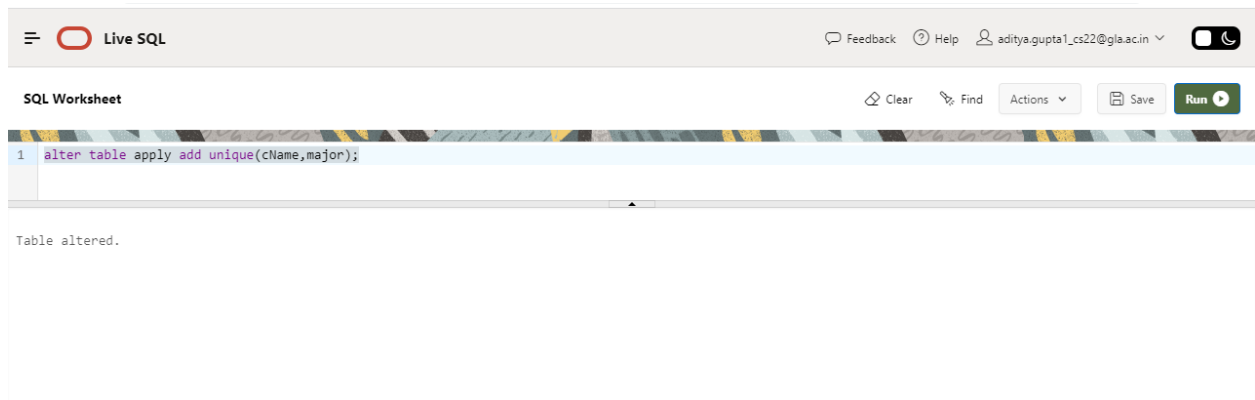
3 rows selected.

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



The screenshot shows the Live SQL web interface. The top navigation bar includes the 'Live SQL' logo, a 'Feedback' link, a 'Help' link, a user profile 'aditya.gupta1_cs22@glia.ac.in', and a dark mode toggle. Below the navigation bar, the 'SQL Worksheet' section contains a code editor with the SQL command `alter table college drop primary key;` on line 1. To the right of the editor are buttons for 'Clear', 'Find', 'Actions', 'Save', and a green 'Run' button. Below the code editor, the output area displays the message 'Table altered.'

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



The screenshot shows the Live SQL web interface. The top navigation bar is identical to the previous one. In the 'SQL Worksheet' section, the code editor contains the SQL command `alter table apply add unique(cName,major);` on line 1. The 'Run' button is visible. Below the code editor, the output area displays the message 'Table altered.'

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

Live SQL

Feedback Help aditya.gupta1_cs22@glia.ac.in

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