

Name- Yash Jain

Course- B.Tech (H.)- CSE- 2nd Yr- III sem

RollNo-31

University RollNo- 2215800033

Assignment-2 DBMS

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

Department

Column Name	Data Type	Size	Constraint
Deptno	number	3	primary key
Dname	varchar2	20	Unique
Location	varchar2	20	not null, department are located in Delhi, Pune, Agra

Feedback Help yashjain_cs.h22@gla.ac.in

SQL Worksheet Clear Find Actions Save Run

```
1 create table department (Deptno number(3) primary key,  
2   Dname varchar(20) unique,  
3   location varchar(20) not null check(location in ('Delhi','Agra','Pune')) )
```

Employee

Column Name	Data Type	Size	Constraint
Empno	varchar2	5	primary key, should start with 'E'
Ename	varchar2	20	Unique
Designation	varchar2	20	not null
Salary	number	10	default 25000, must lie between 15000 and 50000
DOB	date		not null
Dno	number	3	foreign key (references department)

```
1 create table Employee(EmpNo varchar(5) primary key check(EmpNo like 'E%'),
2     Ename varchar(20) unique,
3     Designation varchar(20) not null,
4     salary number(10) default 25000 check(salary>=15000 and salary <=50000),
5     DOB date not null,
6     Dno number(3) references department
7 )
```

Candidate

Column Name	Data type	Size	Constraints
Candidate_ID	Number	6	Primary key of the table
Candidate_Name	Varchar2	20	Not Null
Candidate_Email	Varchar2	30	Unique, Must have '@' followed by '.' in between the email
Candidate_Dept	Varchar2	2	Default 'HR'
Manager_ID	Number	6	It can take only those values which are present in Candidate_ID column

```
1 create table Candidate(Candidate_ID Number(6) primary key ,
2     Candidate_Name varchar(20) not null,
3     Candidate_Email varchar(30) Unique check(Candidate_Email like '%@%.com'),
4     Candidate_Dept varchar(2) default 'HR',
5     Manager_ID Number(6) references Candidate
6 )
```

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

Table Creation:

Feedback Help yashjain_cs.h22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

```
1 create table College(cName varchar(10) ,
2     state varchar(10),
3     enrollment int
4
5 )
```

Feedback Help yashjain_cs.h22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

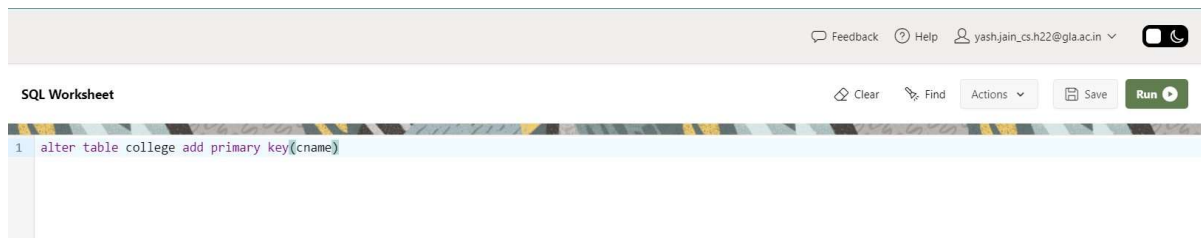
```
1 create table Student(sID int,
2     sName varchar(10),
3     GPA number(2,1),
4     sizeHS int
5
6 )
```

Feedback Help yashjain_cs.h22@glia.ac.in

SQL Worksheet Clear Find Actions Save Run

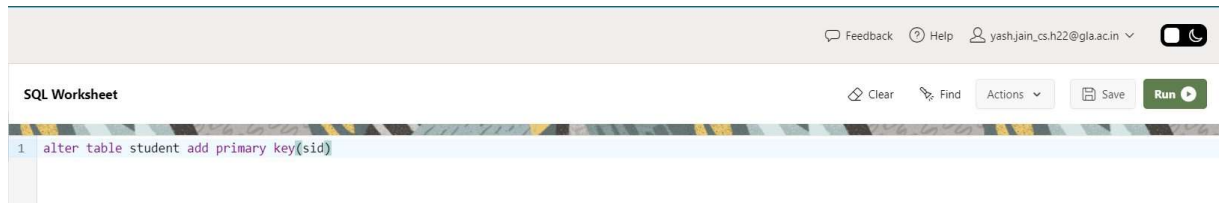
```
1 create table Apply (sID int,
2     cName varchar(10),
3     major varchar(20)
4
5 )
```

1. Add cName as Primary key in College.



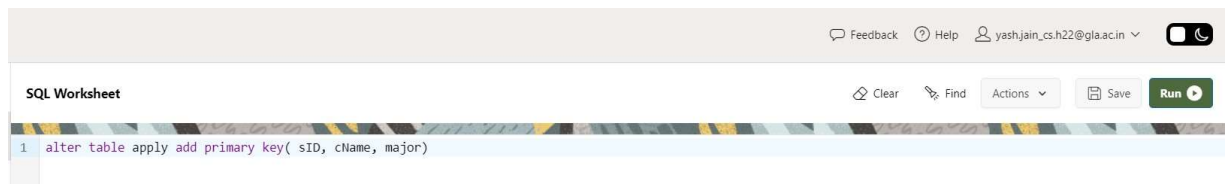
The screenshot shows a web-based SQL Worksheet interface. At the top, there is a header bar with a feedback icon, a help icon, a user profile icon labeled 'yashjain_cs.h22@glia.ac.in', and a dark mode toggle. Below the header, the title 'SQL Worksheet' is displayed on the left, and a toolbar with 'Clear', 'Find', 'Actions', 'Save', and 'Run' buttons is on the right. The main text area contains a single line of SQL code: `1 alter table college add primary key(cname)`.

2. Add sID as Primary key in Student.



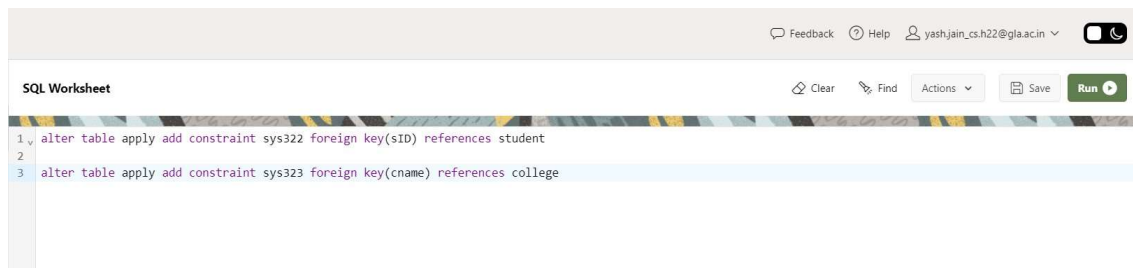
The screenshot shows the SQL Worksheet interface with the SQL code: `1 alter table student add primary key(sID)`.

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



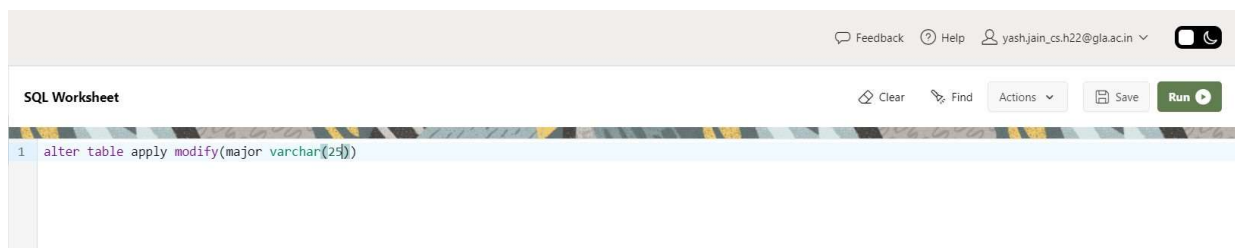
The screenshot shows the SQL Worksheet interface with the SQL code: `1 alter table apply add primary key(sID, cName, major)`.

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



The screenshot shows the SQL Worksheet interface with two lines of SQL code: `1 alter table apply add constraint sys322 foreign key(sID) references student` and `3 alter table apply add constraint sys323 foreign key(cname) references college`.

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



The screenshot shows the SQL Worksheet interface with the SQL code: `1 alter table apply modify(major varchar(25))`.

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

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

1 alter table apply add(decision varchar(3) not null)

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

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

1 alter table apply modify(decision char(1))

8. Drop foreign key on column name cName from Apply table.

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

1 alter table apply drop constraint sys323

9. Remove column sizeHS from Student table.

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

1 alter table student drop column sizehs

10. Drop primary key from College

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

1 alter table college drop primary key

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

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

```
1 alter table apply add constraint sys420 unique(cname, major)
```

12. Add cName as Foreign Key in Apply table referring table College using on delete cascade.

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

```
1 alter table apply add constraint sys323 foreign key(cname) references college on delete cascade
2
3
```

13. Modify foreign key on sID in Apply table to foreign key on delete set null.

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

```
1 alter table apply add foreign key (sid) references student on delete set null
```

14. Rename column enrollment to enroll in College Table.

FeedbackHelpyashjain_cs.h22@gla.ac.in

SQL Worksheet

ClearFindActionsSaveRun

```
1 alter table college rename column enrollment to enroll
```