

# Practical DBMS

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**Submitted to: Dr. Geethanjali Kher**

**Course: Bsc (P) Physical Science with Computer Science**

**I. Create and use the following student-society database schema for a college to answer the given (sample) queries using the standalone SQL editor.**

# create tables

**1. Create Student Table**

```
create table student(
    rollno char(6),
    studentname varchar(20),
    course varchar(10),
    dob date,
    primary key(rollno)
);
```

**2. Create Society Table**

```
create table society(
    socid char(6),
    socname varchar(20),
    mentorname varchar(15),
    totalseat integer,
    primary key(socid)
);
```

**3. Create Enrollment Table**

```
create table enrollment(
    rollno char(6),
    sid char(6),
    date_of_enrollment date,
    primary key (rollno),
    foreign key (rollno) REFERENCES student(rollno),
    foreign key (sid) REFERENCES society(socid)
);
```

```
# insert some data
```

### 1. Insert into Student Table

```
INSERT INTO student (rollno, studentname, course, dob) VALUES  
('S001','Asha Verma','BSc CS','2003-05-14'),  
('S002','Ravi Kumar','BCom','2002-11-23'),  
('S003','Meena Patel','BA Eng','2003-07-02'),  
('S004','Rahul Singh','BSc CS','2002-03-10'),  
('S005','Pooja Sharma','BBA','2003-12-29'),  
('S006','Anil Yadav','BSc Phy','2002-06-09'),  
('S007','Kiran Das','BSc CS','2003-09-17'),  
('S008','Neha Gupta','BCom','2002-04-19'),  
('S009','Suresh Rai','BA Hist','2001-12-05'),  
('S010','Divya Jain','BSc Math','2003-01-22'),  
('S011','Amit Roy','BSc Phy','2003-07-13'),  
('S012','Sneha Tiwari','BBA','2003-03-09'),  
('S013','Rohit Mehra','BA Eng','2002-09-21'),  
('S014','Manish Bansal','BSc CS','2003-11-03'),  
('S015','Priya Saini','BCom','2002-05-27'),  
('S016','Kavita Nair','BSc Phy','2003-10-15'),  
('S017','Harshit Malhotra','BSc Math','2003-02-12'),  
('S018','Tanya Sharma','BA Hist','2001-10-06'),  
('S019','Gaurav Joshi','BBA','2003-08-18'),  
('S020','Sakshi Verma','BSc CS','2002-09-25'),  
('S021','Mohit Rana','BSc Phy','2003-04-07'),  
('S022','Ananya Singh','BA Eng','2002-01-03'),  
('S023','Deepak Chauhan','BCom','2003-07-29'),  
('S024','Nisha Gupta','BSc Math','2002-06-11'),  
('S025','Abhishek Das','BSc CS','2003-11-26'),  
('S026','Kritika Bhat','BSc Phy','2003-12-02'),  
('S027','Kunal Jain','BBA','2003-10-19'),  
('S028','Shruti Patel','BA Hist','2002-08-30'),  
('S029','Vikas Mishra','BSc Math','2003-02-09'),
```

('S030','Riya Kapoor','BSc CS','2003-03-24');

## **2. Insert into Society Table**

INSERT INTO society (socid, socname, mentorname, totalseat) VALUES

('SO001','Music Club','Mr. Rao',25),

('SO002','Dance Club','Ms. Neha',20),

('SO003','Drama Society','Mr. Amit',15),

('SO004','Art Circle','Mrs. Joshi',18),

('SO005','Science Forum','Dr. Nair',30),

('SO006','Photography','Mr. Anand',20),

('SO007','Robotics Club','Dr. Mehta',25),

('SO008','Literary Club','Ms. Rekha',20),

('SO009','Coding Hub','Mr. Arjun',30),

('SO010','Eco Society','Dr. Sharma',18),

('SO011','Sports Club','Mr. Raj',40),

('SO012','Yoga Club','Ms. Divya',25),

('SO013','Astronomy','Dr. Kiran',20),

('SO014','Finance Club','Mr. Ravi',25),

('SO015','Film Society','Ms. Priya',15),

('SO016','Social Work','Mr. Suresh',20),

('SO017','AI Club','Dr. Tiwari',25),

('SO018','Math Circle','Dr. Rao',30),

('SO019','Gaming Club','Mr. Nikhil',20),

('SO020','CyberSec Club','Mr. Adarsh',25),

('SO021','Electronics','Dr. Kapil',30),

('SO022','Quiz Club','Ms. Jaya',15),

('SO023','Nature Club','Mr. Ghosh',20),

('SO024','Entrepreneurship','Mr. Manoj',25),

('SO025','Public Speaking','Ms. Anu',20),

('SO026','Film Makers','Mr. Rohan',15),

('SO027','Design Club','Ms. Tanvi',18),

('SO028','Poetry Society','Mr. Vivek',20),

('SO029','Data Science','Dr. Lal',25),

('SO030','Chess Club','Mr. Deep',15);

### **3. Insert into Enrollment Table**

INSERT INTO enrollment (rollno, sid, date\_of\_enrollment) VALUES

('S001','SO001','2023-08-01'),

('S002','SO009','2023-08-02'),

('S003','SO004','2023-08-03'),

('S004','SO007','2023-08-03'),

('S005','SO002','2023-08-04'),

('S006','SO005','2023-08-04'),

('S007','SO009','2023-08-05'),

('S008','SO011','2023-08-06'),

('S009','SO015','2023-08-07'),

('S010','SO018','2023-08-07'),

('S011','SO017','2023-08-08'),

('S012','SO006','2023-08-09'),

('S013','SO014','2023-08-09'),

('S014','SO009','2023-08-10'),

('S015','SO010','2023-08-10'),

('S016','SO021','2023-08-11'),

('S017','SO018','2023-08-12'),

('S018','SO023','2023-08-13'),

('S019','SO025','2023-08-14'),

('S020','SO017','2023-08-14'),

('S021','SO029','2023-08-15'),

('S022','SO008','2023-08-16'),

('S023','SO020','2023-08-16'),

('S024','SO018','2023-08-17'),

('S025','SO027','2023-08-17'),

('S026','SO030','2023-08-18'),

('S027','SO003','2023-08-18'),

('S028','SO028','2023-08-19'),

('S029','SO026','2023-08-19'),

('S030','SO001','2023-08-20');

**Question1:** Retrieve names of students enrolled in any society.

select distinct s.studentname from student s join enrollment e on s.rollno = e.rollno;

studentname
Asha Verma
Ravi Kumar
Meena Patel
Rahul Singh
Pooja Sharma
Anil Yadav
Kiran Das
Neha Gupta
Suresh Rai
Divya Jain
Amit Roy
Sneha Tiwari
Rohit Mehra
Manish Bansal
Priya Saini
Kavita Nair
Harshit Malhotra
Tanya Sharma
Gaurav Joshi
Sakshi Verma
Mohit Rana
Ananya Singh
Deepak Chauhan
Nisha Gupta
Abhishek Das
Kritika Bhat
Kunal Jain
Shruti Patel
Vikas Mishra
Riya Kapoor

**Question2:** Retrieve all society names.

select socname from society;

socname
Music Club
Dance Club
Drama Society
Art Circle
Science Forum
Photography
Robotics Club
Literary Club
Coding Hub
Eco Society
Sports Club
Yoga Club
Astronomy
Finance Club
Film Society
Social Work
AI Club
Math Circle
Gaming Club
CyberSec Club
Electronics
Quiz Club
Nature Club
Entrepreneurship
Public Speaking
Film Makers
Design Club
Poetry Society
Data Science
Chess Club

**Question3:** Retrieve students' names starting with the letter 'A'.

select studentname from student where studentname like 'a%';

studentname
Asha Verma
Anil Yadav
Amit Roy
Ananya Singh
Abhishek Das

**Question4:** Retrieve students' details studying in courses 'computer science' or 'chemistry'.  
 select \* from student where course in ('computer science', 'chemistry');

rollno	studentname	course	dob
S010	Divya Jain	BSc Math	2003-01-22
S017	Harshit Malho...	BSc Math	2003-02-12
S024	Nisha Gupta	BSc Math	2002-06-11
S029	Vikas Mishra	BSc Math	2003-02-09
NULL	NULL	NULL	NULL

**Question5:** Retrieve students' names whose roll number starts with 'X' or 'Z' and ends with '9'.  
 select studentname from student where (rollno like 'x%9' or rollno like 'z%9');

studentname

**Question6:** Find society details with more than N total seats (input by user).

set @n = 20; -- user input

select \* from society WHERE totalseat > @n;

socid	socname	mentorname	totalseat
SO001	Music Club	Mr. Rao	25
SO005	Science Forum	Dr. Nair	30
SO007	Robotics Club	Dr. Mehta	25
SO009	Coding Hub	Mr. Arjun	30
SO011	Sports Club	Mr. Raj	40
SO012	Yoga Club	Ms. Divya	25
SO014	Finance Club	Mr. Ravi	25
SO017	AI Club	Dr. Tiwari	25
SO018	Math Circle	Dr. Rao	30
SO020	CyberSec Club	Mr. Adarsh	25
SO021	Electronics	Dr. Kapil	30
SO024	Entrepreneurship	Mr. Manoj	25
SO029	Data Science	Dr. Lal	25
NULL	NULL	NULL	NULL

**Question7:** Update mentor name for a specific society.

update society

```
set mentorname = 'new mentor' where socid = 'SO001';  
select distinct mentorname from society order by socid;
```

mentorname
new mentor
Ms. Neha
Mr. Amit
Mrs. Joshi
Dr. Nair
Mr. Anand
Dr. Mehta
Ms. Rekha
Mr. Arjun
Dr. Sharma
Mr. Raj
Ms. Divya
Dr. Kiran
Mr. Ravi
Ms. Priya
Mr. Suresh
Dr. Tiwari
Dr. Rao
Mr. Nikhil
Mr. Adarsh
Dr. Kapil
Ms. Jaya
Mr. Ghosh
Mr. Manoj
Ms. Anu
Mr. Rohan
Ms. Tanvi
Mr. Vivek
Dr. Lal
Mr. Deep

**Question8:** Find society names in which more than five students have enrolled.

select s.socname from society s join enrollment e on s.socid = e.sid group by s.socid having count(e.rollno) > 5;

socname

**Question9:** Find youngest student enrolled in society ‘NSS’.

```
select s.studentname, s.dob from student s join enrollment e on s.rollno = e.rollno join society so on e.sid = so.socid where so.socname = 'nss' order by s.dob desc limit 1;
```

**Question10:** Find the most popular society (maximum enrollments).

select s.socname, count(e.rollno) as total from society s join enrollment e on s.socid = e.sid group by s.socid order by total desc limit 1;

socname	total
Math Circle	3

**Question11:** Least popular society (minimum enrollments).

```
select s.socname, count(e.rollno) as total from society s join enrollment e on s.sid = e.sid group by s.sid order by total asc limit 1;
```

socname	total
Nature Club	1

**Question12:** Students not enrolled in any society.

select studentname from student where rollno not in (select rollno from enrollment);

studentname

**Question13:** Students enrolled in at least two societies.

```
select s.studentname from student s join enrollment e on s.rollno = e.rollno  
group by s.rollno  
having count(e.sid) >= 2;
```

studentname

**Question14:** Societies with maximum students enrolled.

```
select s.socname, count(e.rollno) as total from society s join enrollment e on s.socid = e.sid group by s.socid
having total = (
    select max(cnt)
    from (
        select count(e2.rollno) as cnt
        from enrollment e2
        group by e2.sid
    ) as t
);
```

	Coding Hub	3	
	Math Circle	3	

**Question15:** Students enrolled in any society and their society names.

```
select st.studentname, so.socname from student st
join enrollment e on st.rollno = e.rollno
join society so on e.sid = so.socid;
```

studentname	socname	
Asha Verma	Music Club	
Ravi Kumar	Coding Hub	
Meena Patel	Art Circle	
Rahul Singh	Robotics Club	
Pooja Sharma	Dance Club	
Anil Yadav	Science Forum	
Kiran Das	Coding Hub	
Neha Gupta	Sports Club	
Suresh Rai	Film Society	
Divya Jain	Math Circle	
Amit Roy	AI Club	
Sneha Tiwari	Photography	
Rohit Mehra	Finance Club	
Manish Bansal	Coding Hub	
Priya Saini	Eco Society	
Kavita Nair	Electronics	
Harshit Malho...	Math Circle	
Tanya Sharma	Nature Club	
Gaurav Joshi	Public Speaking	
Sakshi Verma	AI Club	
Mohit Rana	Data Science	
Ananya Singh	Literary Club	
Deepak Chau...	CyberSec Club	
Nisha Gupta	Math Circle	
Abhishek Das	Design Club	
Kritika Bhat	Chess Club	
Kunal Jain	Drama Society	
Shruti Patel	Poetry Society	
Vikas Mishra	Film Makers	
Riya Kapoor	Music Club	

**Question16:** Students enrolled in any of the three societies ‘Debating’, ‘Dancing’, or ‘Sashakt’.

```
select distinct st.studentname from student st
join enrollment e on st.rollno = e.rollno
join society so on e.sid = so.socid
where so.socname in ('debating', 'dancing', 'sashakt');
```

studentname

**Question17:** Societies whose mentor has ‘Gupta’ in the name.

```
select * from society where mentorname like '%gupta%';
```

socid	socname	mentorname	totalseat
NULL	NULL	NULL	NULL

**Question18:** Societies where enrolled students are only 10% of total capacity.

```
select s.socname from society s left join enrollment e on s.socid = e.sid group by s.socid, s.socname, s.totalseat
having count(e.rollno) = 0.1 * s.totalseat;
```

socname
Coding Hub
Math Circle

**Question19:** Display vacant seats for each society.

```
select s.socname, s.totalseats - count(e.rollno) as vacant_seats from society s
left join enrollment e on s.socid = e.sid
group by s.socid;
```

socname	vacant_seats
Music Club	23
Dance Club	19
Drama Society	14
Art Circle	17
Science Forum	29
Photography	19
Robotics Club	24
Literary Club	19
Coding Hub	27
Eco Society	17
Sports Club	39
Yoga Club	25
Astronomy	20
Finance Club	24
Film Society	14
Social Work	20
AI Club	23
Math Circle	27
Gaming Club	20
CyberSec Club	24
Electronics	29
Quiz Club	15
Nature Club	19
Entrepreneurship	25
Public Speaking	19
Film Makers	14
Design Club	17
Poetry Society	19
Data Science	24
Chess Club	14

**Question20:** Increment total seats by 10%.

```
update society set totalseat = totalseat * 1.10;
select * from society;
```

socid	socname	mentorname	totalseat
S0001	Music Club	new mentor	28
S0002	Dance Club	Ms. Neha	22
S0003	Drama Society	Mr. Amit	17
S0004	Art Circle	Mrs. Joshi	20
S0005	Science Forum	Dr. Nair	33
S0006	Photography	Mr. Anand	22
S0007	Robotics Club	Dr. Mehta	28
S0008	Literary Club	Ms. Rekha	22
S0009	Coding Hub	Mr. Arjun	33
S0010	Eco Society	Dr. Sharma	20
S0011	Sports Club	Mr. Raj	44
S0012	Yoga Club	Ms. Divya	28
S0013	Astronomy	Dr. Kiran	22
S0014	Finance Club	Mr. Ravi	28
S0015	Film Society	Ms. Priya	17
S0016	Social Work	Mr. Suresh	22
S0017	AI Club	Dr. Tiwari	28
S0018	Math Circle	Dr. Rao	33
S0019	Gaming Club	Mr. Nikhil	22
S0020	CyberSec Club	Mr. Adarsh	28
S0021	Electronics	Dr. Kapil	33
S0022	Quiz Club	Ms. Jaya	17
S0023	Nature Club	Mr. Ghosh	22
S0024	Entrepreneurship	Mr. Manoj	28
S0025	Public Speaking	Ms. Anu	22
S0026	Film Makers	Mr. Rohan	17
S0027	Design Club	Ms. Tanvi	20
S0028	Poetry Society	Mr. Vivek	22
S0029	Data Science	Dr. Lal	28
S0030	Chess Club	Mr. Deep	17
NULL	NULL	NULL	NULL

**Question21:** Add new column FeesPaid ('Yes'/'No') in ENROLLMENT table.

alter table enrollment

add column feepaid enum('yes', 'no') default 'no';

select \* from enrollment;

rollno	sid	date_of_enrollment	feepaid	
S001	SO001	2023-08-01	no	
S002	SO009	2023-08-02	no	
S003	SO004	2023-08-03	no	
S004	SO007	2023-08-03	no	
S005	SO002	2023-08-04	no	
S006	SO005	2023-08-04	no	
S007	SO009	2023-08-05	no	
S008	SO011	2023-08-06	no	
S009	SO015	2023-08-07	no	
S010	SO018	2023-08-07	no	
S011	SO017	2023-08-08	no	
S012	SO006	2023-08-09	no	
S013	SO014	2023-08-09	no	
S014	SO009	2023-08-10	no	
S015	SO010	2023-08-10	no	
S016	SO021	2023-08-11	no	
S017	SO018	2023-08-12	no	
S018	SO023	2023-08-13	no	
S019	SO025	2023-08-14	no	
S020	SO017	2023-08-14	no	
S021	SO029	2023-08-15	no	
S022	SO008	2023-08-16	no	
S023	SO020	2023-08-16	no	
S024	SO018	2023-08-17	no	
S025	SO027	2023-08-17	no	
S026	SO030	2023-08-18	no	
S027	SO003	2023-08-18	no	
S028	SO028	2023-08-19	no	
S029	SO026	2023-08-19	no	
S030	SO001	2023-08-20	no	
NULL	NULL	NULL	NULL	

**Question22:** Update enrollment date for specific societies.

update enrollment

set dateofenrollment = '2018-01-02'

where sid in ('s1', 's2', 's3');

rollno	sid	date_of_enrollment	feepaid	
S001	SO001	2018-01-02	no	
S002	SO009	2023-08-02	no	
S003	SO004	2023-08-03	no	
S004	SO007	2023-08-03	no	
S005	SO002	2018-01-02	no	
S006	SO005	2023-08-04	no	
S007	SO008	2023-08-05	no	
S008	SO011	2023-08-06	no	
S009	SO015	2023-08-07	no	
S010	SO018	2023-08-07	no	
S011	SO017	2023-08-08	no	
S012	SO006	2023-08-09	no	
S013	SO014	2023-08-09	no	
S014	SO009	2023-08-10	no	
S015	SO010	2023-08-10	no	
S016	SO021	2023-08-11	no	
S017	SO018	2023-08-12	no	
S018	SO023	2023-08-13	no	
S019	SO025	2023-08-14	no	
S020	SO017	2023-08-14	no	
S021	SO028	2023-08-15	no	
S022	SO008	2023-08-16	no	
S023	SO020	2023-08-16	no	
S024	SO018	2023-08-17	no	
S025	SO027	2023-08-17	no	
S026	SO030	2023-08-18	no	
S027	SO003	2018-01-02	no	
S028	SO028	2023-08-19	no	
S029	SO026	2023-08-19	no	
S030	SO001	2018-01-02	no	
NULL	NULL	NULL	NULL	

if we use (where sid = 'SO001' or 'SO002' or 'SO003';)

rollno	sid	date_of_enrollment	feepaid
S001	SO001	2018-01-02	no
S002	SO009	2023-08-02	no
S003	SO004	2023-08-03	no
S004	SO007	2023-08-03	no
S005	SO002	2023-08-04	no
S006	SO005	2023-08-04	no
S007	SO009	2023-08-05	no
S008	SO011	2023-08-06	no
S009	SO015	2023-08-07	no
S010	SO018	2023-08-07	no
S011	SO017	2023-08-08	no
S012	SO006	2023-08-09	no
S013	SO014	2023-08-09	no
S014	SO009	2023-08-10	no
S015	SO010	2023-08-10	no
S016	SO021	2023-08-11	no
S017	SO018	2023-08-12	no
S018	SO023	2023-08-13	no
S019	SO025	2023-08-14	no
S020	SO017	2023-08-14	no
S021	SO029	2023-08-15	no
S022	SO008	2023-08-16	no
S023	SO020	2023-08-16	no
S024	SO018	2023-08-17	no
S025	SO027	2023-08-17	no
S026	SO030	2023-08-18	no
S027	SO003	2023-08-18	no
S028	SO028	2023-08-19	no
S029	SO026	2023-08-19	no
S030	SO001	2018-01-02	no
NULL	NULL	NULL	NULL

2 row(s) affected, 4 warning(s): 1292 Truncated incorrect DOUBLE value: 'SO002' 1292 Truncated incorrect DOUBLE value: 'SO003' 1292 Truncated incorrect DOUBLE value: 'SO002' 1292 Truncated incorrect DOUBLE value: 'SO003' Rows matched: 2 Changed: 2 Warnings: 4

**Question23:** Create a view to track society name and total number of students enrolled.

```
create view society_enrollment_view as
select s.socname, count(e.rollno) as total_enrolled
from society s
left join enrollment e on s.socid = e.sid
group by s.socid;
select * from society_enrollment_view;
```

socname	total_enrolled
Music Club	2
Dance Club	1
Drama Society	1
Art Circle	1
Science Forum	1
Photography	1
Robotics Club	1
Literary Club	1
Coding Hub	3
Eco Society	1
Sports Club	1
Yoga Club	0
Astronomy	0
Finance Club	1
Film Society	1
Social Work	0
AI Club	2
Math Circle	3
Gaming Club	0
CyberSec Club	1
Electronics	1
Quiz Club	0
Nature Club	1
Entrepreneurship	0
Public Speaking	1
Film Makers	1
Design Club	1
Poetry Society	1
Data Science	1
Chess Club	1

**Question24:** Find student names enrolled in all societies.

```
select s.studentname
from student s
join enrollment e on s.rollno = e.rollno
group by s.rollno
having count(distinct e.sid) = (select count(*) from society);
```

studentname		

**Question25:** Count societies with more than 5 students enrolled.

```
select count(*) as society_count
from (
  select sid
  from enrollment
  group by sid
  having count(rollno) > 5
) as t;
```

society_count	
0	

**Question26:** Add column Mobile number in student table with default value '9999999999'

```
alter table student
add column mobilenumber varchar(15) default '9999999999';
select * from student;
```

rollno	studentname	course	dob	mobilenumb...
S001	Asha Verma	BSc CS	2003-05-14	9999999999
S002	Ravi Kumar	BCom	2002-11-23	9999999999
S003	Meena Patel	BA Eng	2003-07-02	9999999999
S004	Rahul Singh	BSc CS	2002-03-10	9999999999
S005	Pooja Sharma	BBA	2003-12-29	9999999999
S006	Anil Yadav	BSc Phy	2002-06-09	9999999999
S007	Kiran Das	BSc CS	2003-09-17	9999999999
S008	Neha Gupta	BCom	2002-04-19	9999999999
S009	Suresh Rai	BA Hist	2001-12-05	9999999999
S010	Divya Jai	BSc Math	2003-01-22	9999999999
S011	Amit Roy	BSc Phy	2003-07-13	9999999999
S012	Sneha Tiwari	BBA	2003-03-09	9999999999
S013	Rohit Mehra	BA Eng	2002-09-21	9999999999
S014	Manish Bansal	BSc CS	2003-11-03	9999999999
S015	Priya Saini	BCom	2002-05-27	9999999999
S016	Kavita Nair	BSc Phy	2003-10-15	9999999999
S017	Harshit Malhotra	BSc Math	2003-02-12	9999999999
S018	Tanya Sharma	BA Hist	2001-10-06	9999999999
S019	Gaurav Joshi	BBA	2003-08-18	9999999999
S020	Sakshi Verma	BSc CS	2002-09-25	9999999999
S021	Mohit Rana	BSc Phy	2003-04-07	9999999999
S022	Ananya Singh	BA Eng	2002-01-03	9999999999
S023	Deepak Chauhan	BCom	2003-07-29	9999999999
S024	Nisha Gupta	BSc Math	2002-06-11	9999999999
S025	Abhishek Das	BSc CS	2003-11-26	9999999999
S026	Kritika Bhat	BSc Phy	2003-12-02	9999999999
S027	Kunal Jain	BBA	2003-10-19	9999999999
S028	Shruti Patel	BA Hist	2002-08-30	9999999999
S029	Vikas Mishra	BSc Math	2003-02-09	9999999999
S030	Riya Kapoor	BSc CS	2003-03-24	9999999999

**Question27:** Find total students older than 20 years.

```
select count(*) as total_students
from student
where timestampdiff(year, dob, curdate()) > 20;
```

total_students
30

**Question28:** Students born in 2001 and enrolled in at least one society.

```
select distinct s.studentname
from student s
join enrollment e on s.rollno = e.rollno
where year(s.dob) = 2001;
```

studentname
Suresh Rai
Tanya Sharma

**Question29:** Count societies starting with 'S' and ending with 't' with  $\geq 5$  students enrolled.

```
select count(*) as total_socities
from society s
join enrollment e on s.socid = e.sid
where s.socname like 's%t'
group by s.socid
having count(e.rollno) >= 5;
```

total_socities

**Question30:** Display Society name, Mentor name, Total capacity, Total enrolled, and Unfilled seats.

```
select s.socname, s.mentorname, s.totalseat, count(e.rollno) as total_enrolled, s.totalseat - count(e.rollno) as
unfilled_seats
from society s
left join enrollment e on s.socid = e.sid
group by s.socid;
```

socname	mentorname	totalseat	total_enrolled	unfilled_seats
Music Club	new mentor	28	2	26
Dance Club	Ms. Neha	22	1	21
Drama Society	Mr. Amit	17	1	16
Art Circle	Mrs. Joshi	20	1	19
Science Forum	Dr. Nair	33	1	32
Photography	Mr. Anand	22	1	21
Robotics Club	Dr. Mehta	28	1	27
Literary Club	Ms. Rekha	22	1	21
Coding Hub	Mr. Arjun	33	3	30
Eco Society	Dr. Sharma	20	1	19
Sports Club	Mr. Raj	44	1	43
Yoga Club	Ms. Divya	28	0	28
Astronomy	Dr. Kiran	22	0	22
Finance Club	Mr. Ravi	28	1	27
Film Society	Ms. Priya	17	1	16
Social Work	Mr. Suresh	22	0	22
AI Club	Dr. Tiwari	28	2	26
Math Circle	Dr. Rao	33	3	30
Gaming Club	Mr. Nikhil	22	0	22
CyberSec Club	Mr. Adarsh	28	1	27
Electronics	Dr. Kapil	33	1	32
Quiz Club	Ms. Jaya	17	0	17
Nature Club	Mr. Ghosh	22	1	21
Entrepreneurship	Mr. Manoj	28	0	28
Public Speaking	Ms. Anu	22	1	21
Film Makers	Mr. Rohan	17	1	16
Design Club	Ms. Tanvi	20	1	19
Poetry Society	Mr. Vivek	22	1	21
Data Science	Dr. Lal	28	1	27
Chess Club	Mr. Deep	17	1	16

## II. Do the following database administration commands:

Create user, create role, grant privileges to a role, revoke privileges from a role, create index

1. CREATE USER 'college\_user'@'localhost' IDENTIFIED BY 'password123';
2. CREATE ROLE 'society\_manager';
3. GRANT SELECT, INSERT, UPDATE, DELETE ON CollegeDB.\* TO 'society\_manager';
4. GRANT 'society\_manager' TO 'college\_user';
5. REVOKE DELETE ON CollegeDB.\* FROM 'society\_manager';
6. CREATE INDEX idx\_studentname ON STUDENT(StudentName);