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Question 1:

STUDENTS (NAME, ROLL, ADDRESS, MAIN)
ADMISSION (ROLL, COURSE, SEMESTER)
FACULTY (COURSE, FACULTY, SEMESTER)
OFFERING (BRANCH, COURSE)
Write down the following SQL queries:

1. All courses taken by a given student.
2. Names of the students admitted in a particular course in a given semester.
3. Were two students (x and y) ever admitted in the same course in the same semester?
4. Students who have taken all courses offered by a given faculty.
5. Find the name of the faculty who taught maximum courses.

Tables:

Table STUDENTS (NAME, ROLL, ADDRESS, MAIN)

NAME	ROLL	ADDRESS	MAIN
AMIT MONDAL	260	BOLPUR	COMPUTER SCIENCE
RAJKUMAR DAS	261	BANKURA	COMPUTER SCIENCE
BISNU MONDAL	320	MALLARPUR	COMPUTER SCIENCE
SAPTARSHI GHOSH	333	KOLKATA	COMPUTER SCIENCE
SUKDEB MONDAL	340	DHALLA	COMPUTER SCIENCE
SURYA BHOWMIK	358	DUGRAPUR	COMPUTER SCIENCE
NULL	NULL	NULL	NULL

Table ADMISSION (ROLL, COURSE, SEMESTER)

ROLL	COURSE	SEMESTER
340	DATA STRUCTURE	Sem 1
340	ALGORITHM AND ANALYSIS	Sem 4
340	OPERATING SYSTEM	SEM 4
340	Machine Learning	Sem 5
261	DBMS	SEM 4
261	OPERATING SYSTEM	SEM 4
261	Machine Learning	SEM 5
320	DATA STRUCTURE	SEM 1
320	Machine Learning	Sem 5
320	OPERATING SYSTEM	SEM 4
358	DATA STRUCTURE	Sem 1
358	ALGORITHM AND ANALYSIS	Sem 4
358	Machine Learning	Sem 5
333	DATA STRUCTURE	SEM 1
333	DBMS	SEM 4
333	ALGORITHM AND ANALYSIS	Sem 4
333	OPERATING SYSTEM	SEM 4
333	Machine Learning	Sem 5

Table FACULTY (COURSE, FACULTY, SEMESTER)

	COURSE	FACULTY	SEMESTER
▶	DATA STRUCTURE	ANJAN G	Sem 1
	Machine Learning	SABRAJIT MANNA	Sem 5
	DBMS	SAMARESH M	Sem 4
	OPERATING SYSTEM	AVISHEK BARMAN	Sem 4
	ALGORITHM AND ANALYSIS	SABRAJIT MANNA	Sem 4

Table OFFERING (BRANCH, COURSE)

	BRANCH	COURSE
▶	Computer Science	ALGORITHM AND ANALYSIS
	Computer Science	DATA STRUCTURE
	Computer Science	DBMS
	Computer Science	Machine Learning
	Computer Science	OPERATING SYSTEM
*	NULL	NULL

1. All courses taken by a given student.

```sql
SELECT S.NAME,A.ROLL,A.COURSE FROM STUDENTS AS S
JOIN ADMISSION AS A
ON S.ROLL = A.ROLL
WHERE S.NAME="sukdeb mondal";
```

NAME	ROLL	COURSE
SUKDEB MONDAL	340	DATA STRUCTURE
SUKDEB MONDAL	340	ALGORITHM AND ANALYSIS
SUKDEB MONDAL	340	OPERATING SYSTEM
SUKDEB MONDAL	340	Machine Learning

2. Names of the students admitted in a particular course in a given semester.

```sql
SELECT S.NAME , A.ROLL,A.COURSE,A.SEMESTER FROM STUDENTS AS S
JOIN ADMISSION AS A
ON S.ROLL = A.ROLL
WHERE A.SEMESTER="SEM 5" AND A.COURSE="Machine Learning";
```

NAME	ROLL	COURSE	SEMESTER
SUKDEB MONDAL	340	Machine Learning	Sem 5
RAJKUMAR DAS	261	Machine Learning	SEM 5
BISNU MONDAL	320	Machine Learning	Sem 5
SURYA BHOWMIK	358	Machine Learning	Sem 5
SAPTARSHI GHOSH	333	Machine Learning	Sem 5

3. Were two students (x and y) ever admitted in the same course in the same semester?

```
SELECT S.NAME ,A.ROLL,A.COURSE,A.SEMESTER FROM STUDENTS AS S
JOIN ADMISSION AS A
ON S.ROLL = A.ROLL
WHERE A.ROLL IN (333,340) AND A.COURSE="DATA STRUCTURE";
```

	NAME	ROLL	COURSE	SEMESTER
▶	SUKDEB MONDAL	340	DATA STRUCTURE	Sem 1
	SAPTARSHI GHOSH	333	DATA STRUCTURE	SEM 1

4. Students who have taken all courses offered by a given faculty.

```
SELECT S.NAME, A.COURSE FROM STUDENTS AS S
 JOIN ADMISSION AS A
 ON S.ROLL = A.ROLL
 WHERE A.COURSE IN(
    SELECT COURSE FROM FACULTY WHERE FACULTY="ANJAN G"
 );
```

	NAME	COURSE
▶	SUKDEB MONDAL	DATA STRUCTURE
	BISNU MONDAL	DATA STRUCTURE
	SURYA BHOWMIK	DATA STRUCTURE
	SAPTARSHI GHOSH	DATA STRUCTURE

5. Find the name of the faculty who taught maximum courses.

```
SELECT FACULTY,COUNT(*)AS COUNT FROM FACULTY
GROUP BY FACULTY
ORDER BY COUNT(COURSE) DESC;
```

FACULTY	
SABRAJIT MANNA	2
ANJAN G	1
SAMARESH M	1
AVISHEK BARMAN	1

Question 2:

STUDENT (SID, SNAME, SEX, AGE, YEAR, GPA)
 DEPT (DNAME, NUMPHDS)
 PROF (PNAME, DNAME)
 COURSE (CNO, CNAME, DNAME)
 MAJOR (DNAME, SID)
 SECTION (DNAME, CNO, SECTNO, PNAME)
 ENROLL (SID, GRADE, DNAME, CNO, SECTNO)
 Write down the following SQL queries:
 1. List the names of professors who work in department that have fewer than 20 PhD.
 2. List the names of students with the lowest GPA.
 3. List the name and sid of student enrolled in maximum classes.
 4. List the name of student and department name whose sid='Bsc 2017'
 5. List the names of students who are taking both a Computer Science and Mathematics course.

Table STUDENT (SID, SNAME, SEX, AGE, YEAR, GPA)

SID	SNAME	SEX	AGE	YEAR	GPA
102	PRITAM DAS	M	20	1ST	7.9
125	SHIRSHA BHATTAVHARA	M	22	2ND	8.6
145	SHEYA MONDAL	F	19	1ST	7.3
165	ARGHASHI SAHA	F	24	3RD	9.2
212	ARKA BISWAS	M	21	2ND	9.2
220	RAJKUMAR BARMAN	M	20	2ND	8.1
232	BIRSTI MONDAL	F	18	1ST	7.8
254	SHOUMIK BISOYE	M	23	D	7.3
257	MANABI PATRA	M	25	3RD	9.3
261	RAJKUMAR DAS	M	21	2ND	8.7
340	SUKDEB MONDAL	M	20	2ND	9.3
358	SURYA BHOUMIK	M	20	2ND	8.7
412	SOHAN DA	M	19	1ST	7.9
414	RAHUL MONDAL	M	20	2ND	8.5
417	AMIT GHOSH	M	23	3RD	7.9
NULL	NULL	NULL	NULL	NULL	NULL

Table DEPT (DNAME, NUMPHDS)

DNAME	NUMPHDS
CHEMISTRY	10
COMPUTER SCIENCE	12
ENGLISH	7
MATHEMATICS	8
PHYSICS	6
NULL	NULL

Table PROF (PNAME, DNAME)

PNAME	DNAME
JURAIN D	CHEMISTRY
UTSAB M	CHEMISTRY
ABHISEKH B	COMPUTER SCIENCE
SAMARESH M	COMPUTER SCIENCE
SARBAJIT M	COMPUTER SCIENCE
ARCHISMAN D	ENGLISH
TAPASH G	ENGLISH
DEBANJAN M	MATHEMATICS
SAPTARSHI K	MATHEMATICS
SOUGATA M	MATHEMATICS
ARKIT D	PHYSICS
JOYDIPM	PHYSICS
SWAGATA D	PHYSICS
NULL	NULL

Table COURSE (CNO, CNAME, DNAME)

CNO	CNAME	DNAME
101	ML	COMPUTER SCIENCE
102	DL	COMPUTER SCIENCE
103	DBMS	COMPUTER SCIENCE
201	REAL ANALYSIS	MATHEMATICS
202	GRAPH THEORY	MATHEMATICS
203	GROUP THEORY	MATHEMATICS
301	OPTICS	PHYSICS
302	GEOPHYSICS	PHYSICS
303	HARMONIK	PHYSICS
401	THE MIDNIGHT EXPRESS	ENGLISH
402	THE EYES HAVE IT	ENGLISH
403	THE BLUE UMBRELLA	ENGLISH
501	ORIGANIK CHEMISTEY	CHEMISTRY
502	PHYSICAL CHEMISTRY	CHEMISTRY
503	BONDING STRUCTURE	CHEMISTRY
NULL	NULL	NULL

Table MAJOR (DNAME, SID)

DNAME	SID
COMPUTER SCIENCE	340
COMPUTER SCIENCE	145
COMPUTER SCIENCE	261
MATHEMATICS	257
MATHEMATICS	232
MATHEMATICS	358
PHYSICS	212
PHYSICS	220
PHYSICS	254
ENGLISH	102
ENGLISH	125
ENGLISH	165
CHEMISTRY	412
CHEMISTRY	414
CHEMISTRY	417

Table SECTION (DNAME, CNO, SECTNO, PNAME)

DNAME	CNO	SECTNO	PNAME
COMPUTER SCIENCE	101	1	SAMARESH M
COMPUTER SCIENCE	102	2	SARBAJIT M
COMPUTER SCIENCE	103	3	ABHISEKH B
MATHEMATICS	201	4	DEBANJAN M
MATHEMATICS	202	5	SAPTARSHI K
MATHEMATICS	203	6	SOUGATA M
PHYSICS	301	7	SWAGATA D
PHYSICS	302	8	JOYDIPM
PHYSICS	303	9	ARKIT D
ENGLISH	401	10	ARCHISMAN D
ENGLISH	402	11	TAPASH G
ENGLISH	403	12	ARCHISMAN D
CHEMISTRY	501	13	JURAIN D
CHEMISTRY	502	14	UTSAB M
CHEMISTRY	503	15	JURAIN D
NULL	NULL	NULL	NULL

Table ENROLL (SID, GRADE, DNAME, CNO, SECTNO)

SID	GRADE	DNAME	CNO	SECTNO
340	A	COMPUTER SCIENCE	102	2
340	A	MATHEMATICS	201	4
145	B	COMPUTER SCIENCE	103	3
145	B	MATHEMATICS	202	5
261	A	COMPUTER SCIENCE	101	1
261	B	PHYSICS	301	7
257	A	MATHEMATICS	201	4
232	A	MATHEMATICS	202	5
358	B	MATHEMATICS	203	6
212	A	PHYSICS	302	8
220	B	PHYSICS	303	9
254	A	PHYSICS	301	7
102	A	ENGLISH	401	10
125	A	ENGLISH	402	11
165	A	ENGLISH	403	12
412	A	CHEMISTRY	501	13
414	B	CHEMISTRY	502	14
417	C	CHEMISTRY	503	15

1. List the names of professors who work in department that have fewer than 20 PhD.

```
SELECT P.PNAME
FROM PROF P
JOIN DEPT D ON P.DNAME = D.DNAME
WHERE D.NUMPHDS < 20;
```

PNAME
JURAIN D
UTSAB M
ABHISEKH B
SAMARESH M
SARBAJIT M
ARCHISMAN D
TAPASH G
DEBANJAN M
SAPTARSHI K
SOUGATA M
ARKIT D
JOYDIPM
SWAGATA D

2. List the names of students with the lowest GPA.

```
SELECT SNAME
FROM STUDENT
WHERE GPA = (SELECT MIN(GPA) FROM STUDENT);
```

SNAME
SHEYA MONDAL
SHOUMIK BISOYE

3. List the name and sid of student enrolled in maximum classes.

```
SELECT S.SID, S.SNAME
FROM STUDENT S
JOIN ENROLL E ON S.SID = E.SID
GROUP BY S.SID, S.SNAME
ORDER BY COUNT(*) DESC
LIMIT 1;
```

SID	SNAME
340	SUKDEB MONDAL

4. List the name of student and department name whose sid='Bsc 2017'

```
SELECT S.SNAME, M.DNAME
FROM STUDENT S
JOIN MAJOR M ON S.SID = M.SID
WHERE S.SID = 340;
```

SNAME	DNAME
SUKDEB MONDAL	COMPUTER SCIENCE

5. List the names of students who are taking both a Computer Science and Mathematics course.

```
SELECT S.SNAME
FROM STUDENT S
WHERE S.SID IN (
    SELECT E1.SID
    FROM ENROLL E1
    JOIN ENROLL E2 ON E1.SID = E2.SID
    WHERE E1.DNAME = 'COMPUTER SCIENCE'
      AND E2.DNAME = 'MATHEMATICS'
);
```

SNAME
▶ SUKDEB MONDAL
SHEYA MONDAL

Question 3:

EMPLOYEE (EMP_ID, EMP_NAME, SALARY)
DEPARTMENT (DEPT_ID, DEPT_NAME, MGR_ID, FLOOR_NO)
Write down the following SQL queries:
1. Display the names of all employees who work on 10th floor and earn less than Rs. 10,000.
2. List names of all managers who manage two or more departments on the same floor.
3. Give 10% hike to the salary to every employee who works in sales department and display the appropriate record.
4. Display the names of employee who earn more than every employee of IT department.
5. Print the names of employees who earn more than Rs. 50,000 and work in either sales or marketing departments.
Question 4:
DEPOSIT (BR_NAME, ACC_NO, CUST_NAME, BALANCE)
CUSTOMER (CUST_NAME, STREET, CITY)
BRANCH (BR_NAME, ASSETS, CITY)
BORROW (BR_NAME, LOAN_NO, CUST_NAME, AMOUNT)

Table EMPLOYEE (EMP_ID, EMP_NAME, SALARY)

EMP_ID	EMP_NAME	SALARY	DEPT_ID
101	ANIKET SENGUPTA	35200	1
102	SOURAV PAL	28000	2
103	TAMAL DAS	9500	3
104	BISWAJIT ROY	45000	4
105	PRIYANKA MUKHERJEE	48000	5
106	RAHUL NANDI	52000	6
107	DEBAYAN SARKAR	8500	3
108	ANANYA BASU	7200	6
109	ARPITA SARKAR	61600	1
110	AVIK MAJUMDER	67000	5
NULL	NULL	NULL	NULL

Table DEPARTMENT (DEPT_ID, DEPT_NAME, MGR_ID, FLOOR_NO)

DEPT_ID	DEPT_NAME	MGR_ID	FLOOR_NO
1	DATA SCIENCE	301	10
2	ASTROPHYSICS	302	9
3	ELECTRICAL	303	10
4	BIOLOGY	304	8
5	STATISTICS	305	9
6	ENVIRONMENTAL SCIENCE	306	10
7	STATISTICS	306	7
8	ENVIRONMENTAL SCIENCE	307	10
NULL	NULL	NULL	NULL

1. Display the names of all employees who work on 10th floor and earn less than Rs. 10,000.

```
SELECT e.emp_name, d.floor_no, e.salary
FROM employee AS e
JOIN department AS d ON e.dept_id = d.dept_id
WHERE d.floor_no = 10 AND e.salary < 10000;
```

emp_name	floor_no	salary
TAMAL DAS	10	9500
DEBAYAN SARKAR	10	8500
ANANYA BASU	10	7200

2.List names of all managers who manage two or more departments on the same floor.

```
SELECT mgr_id
FROM department
GROUP BY mgr_id
HAVING COUNT(*) >= 2;
```
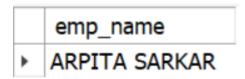
mgr_id
306

3. Give 10% hike to the salary to every employee who works in sales department and display the appropriate record.

```sql
SELECT e.emp_name, e.salary, e.salary * 1.10 AS hiked_salary
FROM employee e
JOIN department d ON e.dept_id = d.dept_id
WHERE d.dept_name = 'DATA SCIENCE';

UPDATE employee
SET salary = salary * 1.10
WHERE dept_id IN (
    SELECT dept_id FROM department WHERE dept_name = 'DATA SCIENCE'
);

SELECT e.emp_name, e.salary, d.dept_name
FROM employee e
JOIN department d ON e.dept_id = d.dept_id
WHERE d.dept_name = 'DATA SCIENCE';
```

emp_name	salary	hiked_salary
ANIKET SENGUPTA	35200	38720.00
ARPITA SARKAR	61600	67760.00

emp_name	salary	dept_name
ANIKET SENGUPTA	38720	DATA SCIENCE
ARPITA SARKAR	67760	DATA SCIENCE

4.Display the names of employee who earn more than every employee of IT department.

```
SELECT emp_name
FROM employee
WHERE salary = (SELECT MAX(salary) FROM employee);
```

	emp_name
▶	ARPITA SARKAR

5.Print the names of employees who earn more than Rs. 50,000 and work in either sales or marketing departments.

```
SELECT e.emp_name, e.salary, d.dept_name
FROM employee e
JOIN department d ON e.dept_id = d.dept_id
WHERE e.salary > 50000 AND d.dept_name IN ('BIOLOGY', 'STATISTICS');
```

	emp_name	salary	dept_name
▶	AVIK MAJUMDER	67000	STATISTICS

Question 4:

DEPOSIT (BR_NAME, ACC_NO, CUST_NAME, BALANCE)
CUSTOMER (CUST_NAME, STREET, CITY)
BRANCH (BR_NAME, ASSETS, CITY)
BORROW (BR_NAME, LOAN_NO, CUST_NAME, AMOUNT)

Write down the following SQL queries:

1. Find all customers who have either account or loan or both in SBI, Belur Math Branch
2. Find customers with names and cities in which they live who have taken loan from SBI, Kolkata Branch.
3. Find customers name and amount including name of the branch for loan over Rs.50,000.
4. Find customer having highest balance.
5. Find branch having highest loan.

Table DEPOSIT (BR_NAME, ACC_NO, CUST_NAME, BALANCE)

BR_NAME	ACC_NO	CUST_NAME	BALANCE
SBI, Belur Math	1001	SUKDEB MONDAL	58000
SBI, Belur Math	1002	RITWIKA CHOWDHURY	75000
SBI, Kolkata	1003	ARITRA BANERJEE	90000
PNB, Durgapur	1004	PRIYANKA SARKAR	30000

Table CUSTOMER (CUST_NAME, STREET, CITY)

CUST_NAME	STREET	CITY
SUKDEB MONDAL	Bally Road	Howrah
ARITRA BANERJEE	BT Road	Kolkata
RITWIKA CHOWDHURY	Shibpur	Howrah
ANIRBAN DEY	Salt Lake	Kolkata
PRIYANKA SARKAR	City Centre	Durgapur
RAHUL HALDER	College Road	Siliguri

Table BRANCH (BR_NAME, ASSETS, CITY)

BR_NAME	ASSETS	CITY
SBI, Belur Math	1000000	Howrah
SBI, Kolkata	2000000	Kolkata
PNB, Durgapur	800000	Durgapur
UCO, Siliguri	600000	Siliguri

Table BORROW (BR_NAME, LOAN_NO, CUST_NAME, AMOUNT)

BR_NAME	LOAN_NO	CUST_NAME	AMOUNT
SBI, Belur Math	201	ANIRBAN DEY	40000
SBI, Belur Math	202	SUKDEB MONDAL	30000
SBI, Kolkata	203	ARITRA BANERJEE	60000
SBI, Kolkata	204	RAHUL HALDER	80000
UCO, Siliguri	205	RAHUL HALDER	20000

1. Find all customers who have either account or loan or both in SBI, Belur Math Branch

```
SELECT DISTINCT CUST_NAME
FROM (
    SELECT CUST_NAME FROM DEPOSIT WHERE BR_NAME = 'SBI, Belur Math'
    UNION
    SELECT CUST_NAME FROM BORROW WHERE BR_NAME = 'SBI, Belur Math'
) AS RESULT;
```

CUST_NAME
SUKDEB MONDAL
RITWIKA CHOWDHURY
ANIRBAN DEY

2. Find customers with names and cities in which they live who have taken loan from SBI, Kolkata Branch.

```
SELECT DISTINCT C.CUST_NAME, C.CITY
FROM CUSTOMER C
JOIN BORROW B ON C.CUST_NAME = B.CUST_NAME
WHERE B.BR_NAME = 'SBI, Kolkata';
```

CUST_NAME	CITY
ARITRA BANERJEE	Kolkata
RAHUL HALDER	Siliguri

3. Find customers name and amount including name of the branch for loan over Rs.50,000.

```
SELECT CUST_NAME, AMOUNT, BR_NAME
FROM BORROW
WHERE AMOUNT > 50000;
```

CUST_NAME	AMOUNT	BR_NAME
ARITRA BANERJEE	60000	SBI, Kolkata
RAHUL HALDER	80000	SBI, Kolkata

4. Find customer having highest balance.

```
SELECT CUST_NAME, BALANCE
FROM DEPOSIT
WHERE BALANCE = (
    SELECT MAX(BALANCE) FROM DEPOSIT
);
```

CUST_NAME	BALANCE
ARITRA BANERJEE	90000

5. Find branch having highest loan.

```
SELECT BR_NAME, SUM(AMOUNT) AS TOTAL_LOAN
FROM BORROW
GROUP BY BR_NAME
ORDER BY TOTAL_LOAN DESC
LIMIT 1;
```

BR_NAME	TOTAL_LOAN
SBI, Kolkata	140000

Question 5:

STUDENT(SNUM: INTEGER, SNAME: STRING, MAJOR: STRING,LEVEL: STRING, AGE: INTEGER)
CLASS(NAME: STRING, MEETS AT: STRING, ROOM: STRING,FID: INTEGER)
ENROLLED(SNUM: INTEGER, CNAME: STRING)
FACULTY(FID: INTEGER, FNAME: STRING, DEPTID: INTEGER)
The meaning of these relations is straightforward; for example, Enrolled has one record per student-class pair such that the student is enrolled in the class.
Write the following queries in SQL. No duplicates should be printed in any of the answers.

1. Find the names of faculty members for whom the combined enrollment of the courses that they teach is less than five.
2. For each level, print the level and the average age of students for that level.
3. For all levels except JR, print the level and the average age of students for that level.
4. For each faculty member that has taught classes only in room R128, print the faculty member's name and the total number of classes she or he has taught.
5. Find the names of students enrolled in the maximum number of classes.

Table STUDENT(SNUM: INTEGER, SNAME: STRING, MAJOR: STRING,LEVEL: STRING, AGE:INTEGER)

SNUM	SNAME	MAJOR	LEVEL	AGE
1	Rohit Das	CS	FR	18
2	Sneha Roy	EE	SO	19
3	Arijit Sen	CS	JR	20
4	Moumita Ghosh	BIO	SR	21
5	Debraj Dey	MATH	FR	18
6	Sayani Pal	EE	SO	20
7	Aniket Mondal	CS	SR	22
NULL	NULL	NULL	NULL	NULL

Table CLASS(NAME: STRING, MEETS AT: STRING, ROOM: STRING,FID: INTEGER)

NAME	MEETS_AT	ROOM	FID
DBMS	MWF 9AM	R128	101
Networks	TTh 10AM	R128	101
Maths	MWF 10AM	R130	102
Physics	TTh 9AM	R128	103

Table ENROLLED(SNUM: INTEGER, CNAME: STRING)

SNUM	CNAME
1	DBMS
2	DBMS
3	Networks
4	Physics
5	Maths
6	Physics
7	Maths

Table FACULTY(FID: INTEGER, FNAME: STRING, DEPTID: INTEGER)

FID	FNAME	DEPTID
101	Dr. S. Mukherjee	1
102	Dr. A. Banerjee	2
103	Dr. T. Bhattacharya	3
NULL	NULL	NULL

1 Find the names of faculty members for whom the combined enrollment of the courses that they teach is less than five.

```
SELECT DISTINCT F.FNAME
FROM FACULTY F
JOIN CLASS C ON F.FID = C.FID
LEFT JOIN ENROLLED E ON C.NAME = E.CNAME
GROUP BY F.FNAME
HAVING COUNT(E.SNUM) < 5;
```

	FNAME
▶	Dr. S. Mukherjee
	Dr. A. Banerjee
	Dr. T. Bhattacharya

2. For each level, print the level and the average age of students for that level.

```
SELECT LEVEL, AVG(AGE) AS AVG_AGE
FROM STUDENT
GROUP BY LEVEL;
```

	LEVEL	AVG_AGE
▶	FR	18.0000
	SO	19.5000
	JR	20.0000
	SR	21.5000

3. For all levels except JR, print the level and the average age of students for that level.

```
SELECT LEVEL, AVG(AGE) AS AVG_AGE
FROM STUDENT
WHERE LEVEL <> 'JR'
GROUP BY LEVEL;
```

LEVEL	AVG_AGE
FR	18.0000
SO	19.5000
SR	21.5000

4. For each faculty member that has taught classes only in room R128, print the faculty member's name and the total number of classes she or he has taught.

```
SELECT F.FNAME, COUNT(*) AS TOTAL_CLASSES
FROM FACULTY F
JOIN CLASS C ON F.FID = C.FID
GROUP BY F.FNAME
HAVING SUM(CASE WHEN C.ROOM = 'R128' THEN 0 ELSE 1 END) = 0;
```

FNAME	TOTAL_CLASSES
Dr. S. Mukherjee	2
Dr. T. Bhattacharya	1

5. Find the names of students enrolled in the maximum number of classes.

```
SELECT S.SNAME
FROM STUDENT S
JOIN ENROLLED E ON S.SNUM = E.SNUM
GROUP BY S.SNUM, S.SNAME
HAVING COUNT(*) = (
    SELECT MAX(CLASS_COUNT)
    FROM (
        SELECT COUNT(*) AS CLASS_COUNT
        FROM ENROLLED
        GROUP BY SNUM
    ) AS CLASS_COUNTS
);
```

SNAME
Rohit Das
Sneha Roy
Arijit Sen
Moumita Ghosh
Debraj Dey
Sayani Pal
Aniket Mondal