

Instructions :

- **Solve any 15 query.**

1. College Table :

Field	Type	Null	Key	Default	Extra
college_id	INT	NO	PRI	NULL	
college_name	VARCHAR(100)	YES		NULL	
location	VARCHAR(100)	YES		NULL	

2. Department Table :

Field	Type	Null	Key	Default	Extra
dept_id	INT	NO	PRI	NULL	
dept_name	VARCHAR(100)	YES		NULL	
college_id	INT	YES	MUL	NULL	

3. Students Table :

Field	Type	Null	Key	Default	Extra
student_id	INT	NO	PRI	NULL	
student_name	VARCHAR(100)	YES		NULL	
dept_id	INT	YES	MUL	NULL	
age	INT	YES		NULL	

4. Course Table :

Field	Type	Null	Key	Default	Extra
course_id	INT	NO	PRI	NULL	
course_name	VARCHAR(100)	YES		NULL	
student_id	INT	YES	MUL	NULL	

Solve This Queries :-

1. List all students with their department and college name.
2. Show all departments and the number of students in each.
3. Display students who have not enrolled in any course.
4. List each course, its student, their department, and college.
5. Show total number of courses enrolled by students in each department.
6. Display department names and number of students enrolled in at least one course.
7. List colleges along with the number of students enrolled in courses from each college.
8. Find students who are the only ones in their department.
9. List all departments that have students but none of them are enrolled in any course.
10. Display all courses along with student name and their college location.
11. Find the names of students who belong to the department that is located in the college named 'ABC College' using subquery.
12. Find the names of students who are enrolled in the maximum number of courses using subquery.
13. Create a view **StudentDepartmentView** that displays the student name, age, department name, and college name for all students.
14. Create a view **CollegeCourseSummary** that shows the college name, student name, and course name for all students enrolled in at least one course. If a student is not enrolled in any course, they should not appear.
15. Create a trigger whenever a new student is inserted into the **Student** table, automatically insert a default course "Orientation" into the **Course** table for that student.
16. Create a trigger to automatically update a student's age by adding 1 when their department changes (i.e., on **UPDATE** of **dept_id** in the **Student** table).
17. Create a procedure to get the list of students along with their department and college, filtered by a given college location.
18. Create a procedure to get the count of students enrolled in each course along with the department and college details. Include courses with zero students as well.
19. Create a function to check if a number is perfect number or not.
20. Create a function to check if a number is strong number or not.