

SECTION A: INNER JOIN (2 Questions)

The INNER JOIN selects only the rows with matching values in both tables.

Question 1: Personal Details with Admission Year

Write a query to list the **Name**, **Phone Number** (from *Student Details (Personal)*), and the **Year** of admission (from *Student Details (Admission)*) for **only** those students who have a matching entry in both tables.

Question 2: Course Name and Performance

Write a query to find the **Course Name** (from *Student Details (Course)*) and the student's **CGPA** (from *Student Performance*) for all students who are currently enrolled in a course and have recorded performance data.

SECTION B: LEFT JOIN (OUTER) (3 Questions)

The LEFT JOIN returns all rows from the left table, and the matched rows from the right table.

Question 3: All Students and Their Course Name

Write a query to list the **Student ID** and **Name** of **ALL** students (from *Student Details (Personal)*) and, if available, their associated **Course Name** (from *Student Details (Course)*). If a student is not linked to a course, the Course Name should display as NULL.

Question 4: Admission Details and Optional Performance

A student's admission record is considered complete even if they haven't finished a semester. Write a query to display all records from *Student Details (Admission)* (including **Registration** and **Roll**), and their **CGPA** from *Student Performance*. Ensure all admission records are shown, even those without performance data.

Question 5: Student Details and Missing Performance

Write a query to identify the **Name** and **Student ID** of all students who have a record in *Student Details (Personal)* but **DO NOT** yet have any entries in the *Student Performance* table.

SECTION C: RIGHT JOIN (OUTER) (3 Questions)

The RIGHT JOIN returns all rows from the right table, and the matched rows from the left table.

Question 6: All Courses and Associated Admissions

Write a query to list all **Course Names** and their associated **Batch** (from *Student Details (Course)*) and the **Registration** number (from *Student Details (Admission)*) of students enrolled in them. Ensure **ALL** courses are listed, even if they currently have no students registered.

Question 7: Courses with Missing Admission Links

Using a **RIGHT JOIN**, write a query to list the **Course Code** and **Course Name** for any courses that currently have **NO** students linked via the *Student Details (Admission)* table.

Question 8: Performance Data and Associated Personal Info

Write a query using a **RIGHT JOIN** to show the **CGPA** and **SGPA** (from *Student Performance*) and the corresponding **Name** (from *Student Details (Personal)*). Assume that the *Student Performance* table might have been entered first, before full personal details were completed, and you must display all performance records.

SECTION D: FULL JOIN (OUTER) and Complexity (2 Questions)

The FULL JOIN returns all rows when there is a match in one of the tables.

Question 9: Complete Student-Course Roster (FULL JOIN)

Write a query that displays the **Student ID**, **Name** (from Personal), and the **Course Name** (from Course), ensuring you list:

- All students who are in a course.
- All students who are **not** in a course.
- All courses that have no students enrolled.

(Note: Use the appropriate syntax for FULL OUTER JOIN, which may be FULL JOIN or simulated using UNION of LEFT JOIN and RIGHT JOIN depending on the DBMS.)

Question 10: Triple Join Challenge

Write a single query using **two joins** (any type) to list the **Name** (Personal), **Roll** (Admission), and **CGPA** (Performance) for students who are admitted in the '**2025**' Year.