

SQL LAB – 10

RIGHT JOIN, SELF-JOIN, NATURAL JOIN

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QUESTIONS

1. Assume a university where students can enroll in various courses. Now, write down a FULL outer JOIN query to retrieve the details.
2. Assume a university where students can enroll in various courses. Now, write down a Natural JOIN query to retrieve the details.

ChatGPT Exercise

Using ChatGPT generates SQL queries of the below problem.

Scenario 1: We have an "inventory" Table with following columns: ProductID, ProductName, StockQuantity and "sales" Table with following columns: SaleID, ProductID (foreign key), SaleQuantity, SaleDate. Now you need to use full outer join to generate a report that includes all products in the inventory and their sales, displaying NULL values for products that haven't been sold. Generate the ChatGPT prompt for the above scenario.

1. Assume a university where students can enroll in various courses.
Now, write down a FULL outer JOIN query to retrieve the details.

Code:

```
SELECT * FROM student as s LEFT JOIN enrollment as e ON s.StudentID=e.StudentID
UNION
SELECT * FROM student as s RIGHT JOIN enrollment as e ON s.StudentID=e.StudentID;
```

Output:

StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone	EnrollmentID	EnrollmentDate	StudentID	CourseID	InstructorID
1	Alice	Johnson	1995-03-18	Female	alice.johnson@gmail.com	1234567890	1001	2024-01-24	1	101	1
3	Carol	Taylor	2000-11-11	Female	carol.taylor@yahoo.com	3456789012	1003	2024-01-01	3	103	3
4	David	Brown	1997-02-05	Male	david.brown@gmail.com	4567890123	1004	2024-01-12	4	104	4
5	Eva	Davis	1999-05-09	Female	eva.davis@yahoo.com	5678901234	1005	2024-01-21	5	105	5
7	Roger	White	2000-08-21	Male	rogerwhite@example.com	9876543210	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	1002	2024-01-24	2	102	2

2. Assume a university where students can enroll in various courses.
Now, write down a Natural JOIN query to retrieve the details.

Code:

```
SELECT * FROM student NATURAL JOIN enrollment;
```

Output:

StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone	EnrollmentID	EnrollmentDate	CourseID	InstructorID
1	Alice	Johnson	1995-03-18	Female	alice.johnson@gmail.com	1234567890	1001	2024-01-24	101	1
3	Carol	Taylor	2000-11-11	Female	carol.taylor@yahoo.com	3456789012	1003	2024-01-01	103	3
4	David	Brown	1997-02-05	Male	david.brown@gmail.com	4567890123	1004	2024-01-12	104	4
5	Eva	Davis	1999-05-09	Female	eva.davis@yahoo.com	5678901234	1005	2024-01-21	105	5

ChatGPT Exercise

Using ChatGPT generates SQL queries of the below problem.

Scenario 1: We have an "inventory" Table with following columns: ProductID, ProductName, StockQuantity and "sales" Table with following columns: SaleID, ProductID (foreign key), SaleQuantity, SaleDate. Now you need to use full outer join to generate a report that includes all products in the inventory and their sales, displaying NULL values for products that haven't been sold. Generate the ChatGPT prompt for the above scenario.

sql

```
SELECT
    I.ProductID,
    I.ProductName,
    I.StockQuantity,
    S.SaleQuantity,
    S.SaleDate
FROM
    inventory I
FULL OUTER JOIN
    sales S ON I.ProductID = S.ProductID
```