QUESTION

Write a query to return pairs of projects where the end date of one project matches the start date of another project.

Output Schema:

Column	Type
project_title_end	STRING
project_title_start	STRING
date	DATE

TABLE SCHEMA

```sql
CREATE TABLE projects (
id INTEGER PRIMARY KEY,
title VARCHAR(100),
start_date DATETIME,
end_date DATETIME,
budget FLOAT
);

INSERT INTO projects (id, title, start_date, end_date, budget) VALUES
(1, 'Website Redesign', '2024-01-01', '2024-02-15', 50000),
(2, 'Mobile App Phase 1', '2024-02-15', '2024-04-01', 75000),
(3, 'Database Migration', '2024-04-01', '2024-05-15', 60000),
(4, 'Cloud Integration', '2024-03-01', '2024-04-15', 45000),
(5, 'Security Audit', '2024-05-15', '2024-06-30', 30000);
```

SOLUTION

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```sql
SELECT
    p1.title AS project_title_end,
    p2.title AS project_title_start,
    p1.end_date AS date
FROM
    projects p1
JOIN
    projects p2
ON
    p1.end_date = p2.start_date;
```

OUTPUT

▼ Tables

project_title_end	project_title_start	date
Website Redesign	Mobile App Phase 1	2024-02-15
Mobile App Phase 1	Database Migration	2024-04-01
Database Migration	Security Audit	2024-05-15

My Thought Process:

When I saw the problem, I immediately thought of using a self-join. I imagined each project as a block on a timeline and wanted to see which ones were lined up back-to-back. So, I joined the projects table to itself using the condition where the end_date of one project matches the start_date of another. This helped me link the projects that are scheduled seamlessly.

Business Impact:

This kind of query can be super helpful for resource and workforce planning. For example, if a developer finishes Project A and immediately starts Project B, this insight helps managers ensure that there's no idle time between assignments and that workload transitions are smooth reducing both downtime and burnout risk.