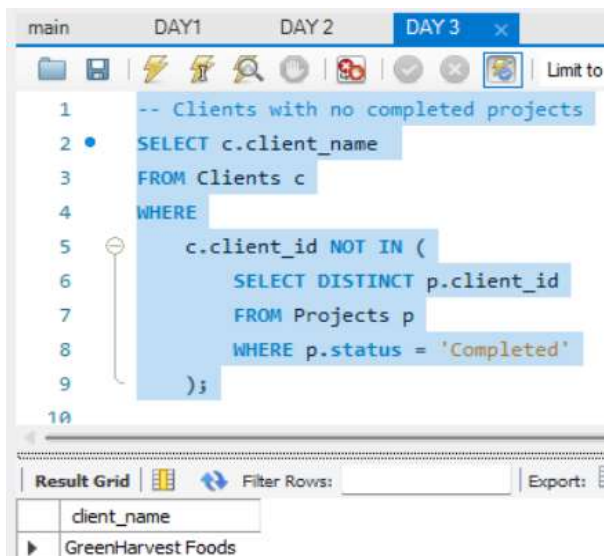


DAY 3-COUNTDOWN TO SQL MASTERY: 5-DAY CHALLENGE

PROJECT NAME-"SOFTWARE SOLUTIONS: PROJECT DELIVERY & REVENUE ANALYSIS."

TASK 1: Clients with no completed projects:

Identify client_name of clients who have no projects with a status of 'Completed'.



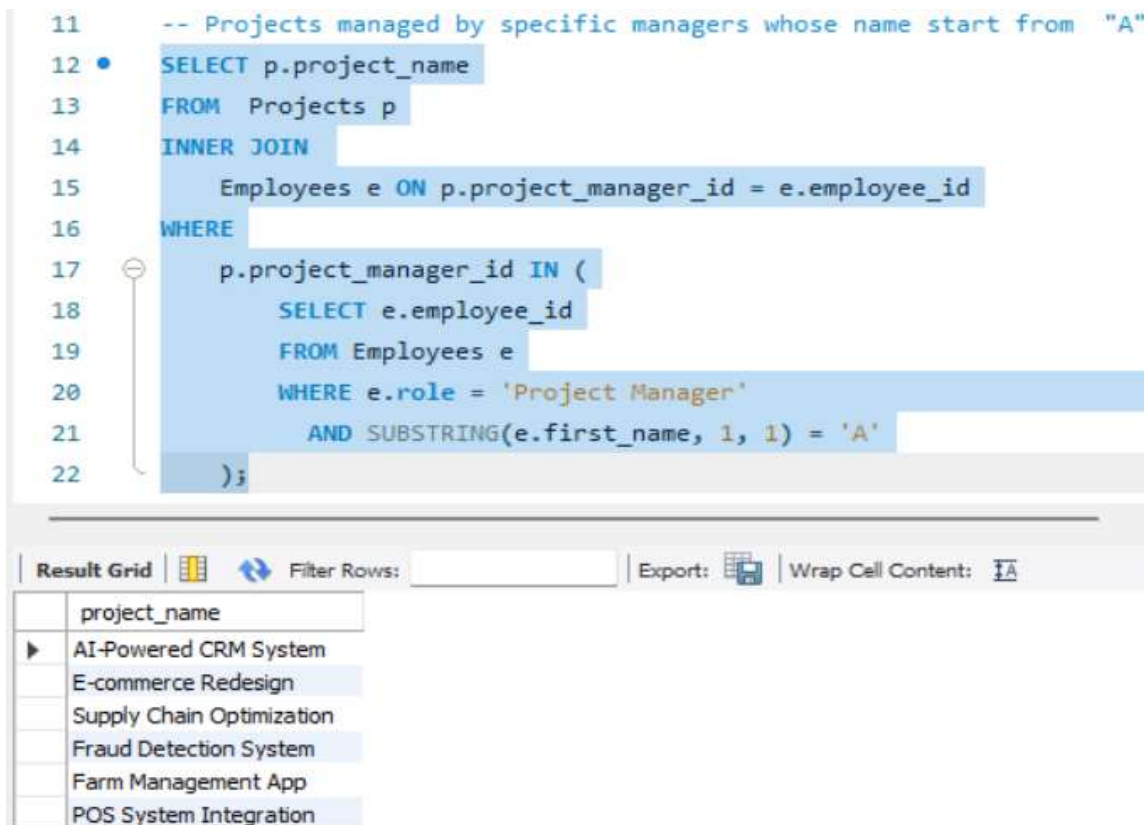
```
1  -- Clients with no completed projects
2  SELECT c.client_name
3  FROM Clients c
4  WHERE
5      c.client_id NOT IN (
6          SELECT DISTINCT p.client_id
7          FROM Projects p
8          WHERE p.status = 'Completed'
9      );
```

The screenshot shows a SQL IDE window with a query editor and a result grid. The query is designed to find clients who have no completed projects. The result grid shows one client: GreenHarvest Foods.

client_name
GreenHarvest Foods

TASK 2: Projects managed by specific managers:

List project_name for projects managed by project managers whose first_name starts with 'A'.



```
11  -- Projects managed by specific managers whose name start from "A"
12  SELECT p.project_name
13  FROM Projects p
14  INNER JOIN
15      Employees e ON p.project_manager_id = e.employee_id
16  WHERE
17      p.project_manager_id IN (
18          SELECT e.employee_id
19          FROM Employees e
20          WHERE e.role = 'Project Manager'
21              AND SUBSTRING(e.first_name, 1, 1) = 'A'
22      );
```

The screenshot shows a SQL IDE window with a query editor and a result grid. The query is designed to find project names managed by project managers whose first name starts with 'A'. The result grid shows six project names.

project_name
AI-Powered CRM System
E-commerce Redesign
Supply Chain Optimization
Fraud Detection System
Farm Management App
POS System Integration

TASK 3: Top 3 industries by total revenue:

DAY 3-COUNTDOWN TO SQL MASTERY: 5-DAY CHALLENGE

PROJECT NAME-"SOFTWARE SOLUTIONS: PROJECT DELIVERY & REVENUE ANALYSIS."

Find the industry that generated the highest total revenue. (This might be a simple GROUP BY and ORDER BY with LIMIT/TOP, or you could think about it with a subquery if you want to explicitly find *only* the top one).

```
24 -- Top 3 industries by total revenue:
25 • SELECT c.industry,SUM(s.revenue) AS total_revenue
26 FROM Clients c
27 INNER JOIN Sales s ON s.client_id=c.client_id
28 GROUP BY c.industry
29 ORDER BY total_revenue DESC
30 LIMIT 3;
```

industry	total_revenue
Finance	665000.00
Automotive	550000.00
Healthcare	390000.00

TASK 4: Projects with above-average budget for their industry:

For each project, show project_name, budget, and the industry it belongs to, but only if its budget is higher than the average budget of projects in that same industry.

```
32 -- Projects with above-average budget for their industry:
33 • SELECT p.project_name, p.budget,c.industry
34 FROM Projects p
35 INNER JOIN Clients c ON p.client_id = c.client_id
36 WHERE
37     p.budget > (
38         SELECT AVG(sub_p.budget)
39         FROM Projects sub_p
40         INNER JOIN Clients sub_c ON sub_p.client_id = sub_c.client_id
41         WHERE sub_c.industry = c.industry
42     );
```

project_name	budget	industry
Supply Chain Optimization	160000.00	Technology
Telemedicine Platform	200000.00	Healthcare
E-commerce Redesign	120000.00	Retail
Personalized Marketing Engine	110000.00	Retail
Fraud Detection System	220000.00	Finance
Student Management System	100000.00	Education
Autonomous Driving Software	300000.00	Automotive

TASK 5: Sales impact of highly-rated projects:

DAY 3-COUNTDOWN TO SQL MASTERY: 5-DAY CHALLENGE

PROJECT NAME-"SOFTWARE SOLUTIONS: PROJECT DELIVERY & REVENUE ANALYSIS."

Calculate the total revenue generated from sales associated with projects that have a delivery_rating of 5.

```

44  -- Sales impact of highly-rated projects
45  • SELECT p.project_name,p.delivery_rating,SUM(s.revenue) as total_revenue
46  FROM Projects p
47  INNER JOIN Sales s ON s.project_id=p.project_id
48  WHERE delivery_rating='5'
49  GROUP BY p.project_name
50  ORDER BY total_revenue DESC;
51

```

project_name	delivery_rating	total_revenue
Investment Analytics Tool	5	180000.00
AI-Powered CRM System	5	150000.00
E-commerce Redesign	5	120000.00
POS System Integration	5	95000.00

TASK 6: Categorize projects by profit/loss:

Create a query that shows project_name, budget, actual_cost, and a new column called profit_status. profit_status should be 'Profitable' if budget > actual_cost, 'Break-even' if budget = actual_cost, and 'Loss' if budget < actual_cost.

```

52  -- Categorize projects by profit/loss:
53  • SELECT
54      project_name,
55      budget,
56      actual_cost,
57      CASE
58          WHEN budget > actual_cost THEN 'Profitable'
59          WHEN budget = actual_cost THEN 'Break-even'
60          WHEN budget < actual_cost THEN 'Loss'
61          ELSE 'Unknown'
62      END AS profit_status
63  FROM
64      Projects;
--

```

project_name	delivery_rating	total_revenue
Investment Analytics Tool	5	180000.00
AI-Powered CRM System	5	150000.00
E-commerce Redesign	5	120000.00
POS System Integration	5	95000.00