



Mission ImposSQL

Lab to Querying Iowa's Data

SITUATION

You are a business analyst working at Deloitte. You already know SQL, and you have both a more junior analyst and a more senior analyst working on your team. In this exercise, you will help the junior analyst make their SQL commands work correctly and help the more senior analyst finish off some of their queries and write some queries of your own.

Your client, the state of Iowa, has some urgent questions that need answering. They are evaluating the tax revenue and its implication of consumption. They'd like to better understand the dynamics of the alcohol market in their state.

They hire your team of query writers and problem solvers to analyze their data. Your team is counting on your expertise and guidance to answer the stakeholder's questions!

EXERCISES

QUESTION 1:

The junior analyst wants to get the item numbers and descriptions of products with a case cost of at least 100 and pack size at least 12. She writes:

```
SELECT item_no item_description
FROM products
WHERE case_cost >=100
WHERE pack >= 12
```

Why isn't this query working?

QUESTION 2:

She now wants to get a list of all combinations of "category" and "vendor" in the data. She knows that she can select these two columns using:

```
SELECT category_name, vendor_name
FROM products
```

What else does she need to add to accomplish her goal?

QUESTION 3:

Her query to get all the products where proof is greater than 85 seems right, but it's generating an error:

```
SELECT * FROM products WHERE proof > 85;
```

How could you fix it?

QUESTION 4:

This analyst likes sweet drinks, and she wants to write a query that shows all the vendors that have products in a few categories she has identified:

'PEACH BRANDIES'

'FLAVORED VODKA'

'FLAVORED RUM'

Her SQL has improved based on your feedback, so she correctly writes:

```
SELECT DISTINCT vendor_name  
FROM products  
WHERE category_name = 'PEACH BRANDIES'  
      OR category_name = 'FLAVORED VODKA'  
      OR category_name = 'FLAVORED RUM'
```

How could you make this query shorter and more consistent with SQL best practices?

QUESTION 5:

Now you are given an area to analyze independently: the state of Iowa now wants you to do analysis on all "IMPORTED" products, as they want to know which foreign products are coming into their state.

First, select all products with "IMPORTED" in the category name.

QUESTION 6:

Now, get the top 10 vendors of imported products, ranked by sales.

QUESTION 7:

Now, of the vendors that have greater than \$100,000 in sales, which one has the highest average sales price? Order these vendors by highest to lowest average sales price.