SQL QUERIES

INDEPENDENT PRACTICE: BASIC SQL

As you practice the queries from this exercise, notice that the specific method you select to ask the question will create changes in the results, as measured by row count. Practice asking the question with different approaches and explore the reasons for the variances using sorted order, looking for null records, and differences created by using or omitted "distinct".

Which products come in packs larger than 12?

SELECT DISTINCT item_description FROM products WHERE pack > 12; (897 rows)

SELECT item_description FROM products WHERE pack > 12; (1106 rows)

How many unique products have less than 12 in a pack?

SELECT DISTINCT * FROM products WHERE pack < 12; (4433 unique rows)

SELECT DISTINCT item_description FROM products WHERE pack < 12 ORDER BY 1; (3595 rows)

SELECT DISTINCT COUNT(item_description) FROM products WHERE pack>12;
Solution Output: 1106

Which products have a case price of less than $70?

SELECT DISTINCT item_description FROM products WHERE case_cost < 70; (2863 rows)

SELECT item_description FROM products WHERE case_cost < 70; (3938 rows)

SELECT * FROM products WHERE case_cost < 70; (3938 rows)

SELECT DISTINCT * FROM products WHERE case_cost < 70; (776 rows)

Which products come in packs larger than 12 AND have a case_cost of less than $70?

SELECT DISTINCT item_description FROM products WHERE case_cost < 70 AND pack > 12; (553)

SELECT item_description FROM products WHERE case_cost < 70 AND pack > 12; (632 rows)

SELECT DISTINCT * FROM products WHERE case_cost < 70 AND pack > 12; (632 rows)

What do the above differences tell you about the contents of item_description?

Which types of products have a proof of 85 or more?

Example: SELECT DISTINCT category_name FROM products WHERE proof > 85;

Problem: proof is a text field => See error message generated by pgAdmin.

SELECT DISTINCT item_description FROM products WHERE CAST(proof AS integer) > 85;

(1146 rows)

SELECT DISTINCT item_no FROM products WHERE CAST(proof AS integer) > 85; (1518 rows)

What does the difference between the two query row counts imply about the contents of item_no and item_description? Which would be the more accurate answer? Explore and see if DISTINCT is even needed for these results?

Review the results from the following sample solution query, which also produces 1518 output rows – also note that proof can be casted as an integer or a numeric data type:

```
SELECT item_no, item_description, proof
FROM products WHERE CAST(proof AS integer) > 85
ORDER BY CAST(proof AS numeric) ASC;
```

Which products are Scotch Whiskies OR are over 85 proof?

```
SELECT item_description FROM products
WHERE CAST(proof AS integer) > 85 OR category_name = 'SCOTCH WHISKIES';
--(1733 rows)
```

```
SELECT DISTINCT item_description FROM products
WHERE CAST(proof AS integer) > 85 OR category_name = 'SCOTCH WHISKIES';
--(1285 rows)
```

Write a query that allows you to see the results in a way that can verify the proof boundary results. In the following sample solution, note the use of an alias in the SELECT statement Experiment with changing the order to see the boundary values. (1733 rows)

```
SELECT item_description, CAST(proof AS numeric) AS proof_number
FROM products
WHERE CAST(proof AS numeric) > 85 OR category_name='SCOTCH WHISKIES'
ORDER BY proof_number DESC;
```

How many stores are active (using store_status)? Inactive?

```
SELECT COUNT(STORE) AS store_count
FROM stores
WHERE store_status = 'A';
```

Solution output = 1425

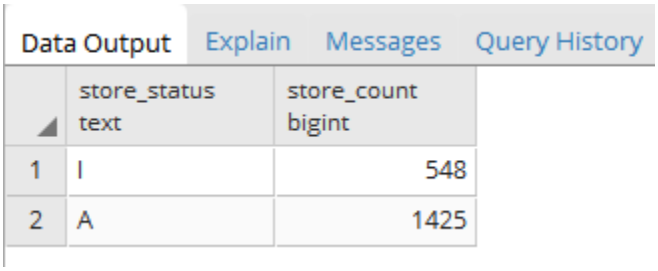
```
SELECT COUNT(STORE) AS store_count
FROM stores
WHERE store_status = 'I';
```

Solution output = 548

To create a query to reveals the store count for each status in one query, use GROUP BY as shown by the following sample query:

```
SELECT store_status, COUNT(STORE) AS store_count
FROM stores
GROUP BY store_status;
```

The resulting output looks like this:



Data Output | Explain | Messages | Query History

	store_status text	store_count bigint
1	I	548
2	A	1425