

# Homework 4 - (Cohort 2 offset)

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## Homework 4: Advanced SQL

- Please upload your completed assignments to Google Drive.
- Due on Saturday, March 2 at 11:59pm
- Weight: 8% of total grade
- Upload one .sql file with your queries

## COALESCE

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1. Our favourite manager wants a detailed long list of products, but is afraid of tables! We tell them, no problem! We can produce a list with all of the appropriate details.

Using the following syntax you create our super cool and not at all needy manager a list:

```
SELECT
product_name || ', ' || product_size || ' (' || product_qty_type || ')'
FROM product
```

But wait! The product table has some bad data (a few NULL values).

Find the NULLs and then using COALESCE, replace the NULL with a blank for the first problem, and 'unit' for the second problem.

**HINT:** keep the syntax the same, but edited the correct components with the string. The `||` values concatenate the columns into strings. Edit the appropriate columns -- you're making two edits -- and the NULL rows will be fixed. All the other rows will remain the same.

## Windowed Functions

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1. Write a query that selects from the customer\_purchases table and numbers each customer's visits to the farmer's market (labeling each market date with a different number). Each customer's first visit is labeled 1, second visit is labeled 2, etc.

You can either display all rows in the customer\_purchases table, with the counter changing on each new market date for each customer, or select only the unique market dates per customer (without purchase details) and number those visits.

**HINT:** One of these approaches uses ROW\_NUMBER() and one uses DENSE\_RANK().

2. Reverse the numbering of the query from a part so each customer's most recent visit is labeled 1, then write another query that uses this one as a subquery (or temp table) and filters the results to only the customer's most recent visit.

3. Using a COUNT() window function, include a value along with each row of the customer\_purchases table that indicates how many different times that customer has purchased that product\_id.

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