



## Data Analyst Job Interview - Home Assignment

A B2B eCommerce site has multiple types of customers (=companies). Each company has multiple users, identified by User IDs, and a business vertical that the company belongs to (1, 2 or 3).

Every time a user from a certain company places an order on the site - it's saved in a table called *Orders*, along with his/her company's ID, timestamp in which the order was placed, the order ID, the total amount spent (\$) and his/her hashed User ID. The vertical identifier of each company is located in the *Companies* table, along with the company ID (key) and isActive field, which states whether the company is active today or not.

The growth manager of the B2B eCommerce site wants to examine the **monthly retention rates** (%) per business vertical (business type = 1,2,3). For that you'll need to examine how many users whose 1st order was on April 2020, for instance, also placed at least one order on May, June, etc. Same goes for every month (how users whose 1st order was on June behave on July, August, etc.)

Your mission:

1. Create 3 separate datasets (using SQL) of the orders of each business vertical.
2. Create a retention cohort analysis (using SQL) per vertical, and one unified for all verticals together
3. Create a visualization of each vertical (three separate cohorts) + one unified cohort, using any BI tool you wish (see examples of retention cohorts charts on the next page, though you can use any type of charts you wish).
4. Prepare 2 or 3 pages in Powerpoint/Google Slides with interesting insights, ideas, explanations, etc.

**Good luck!**

