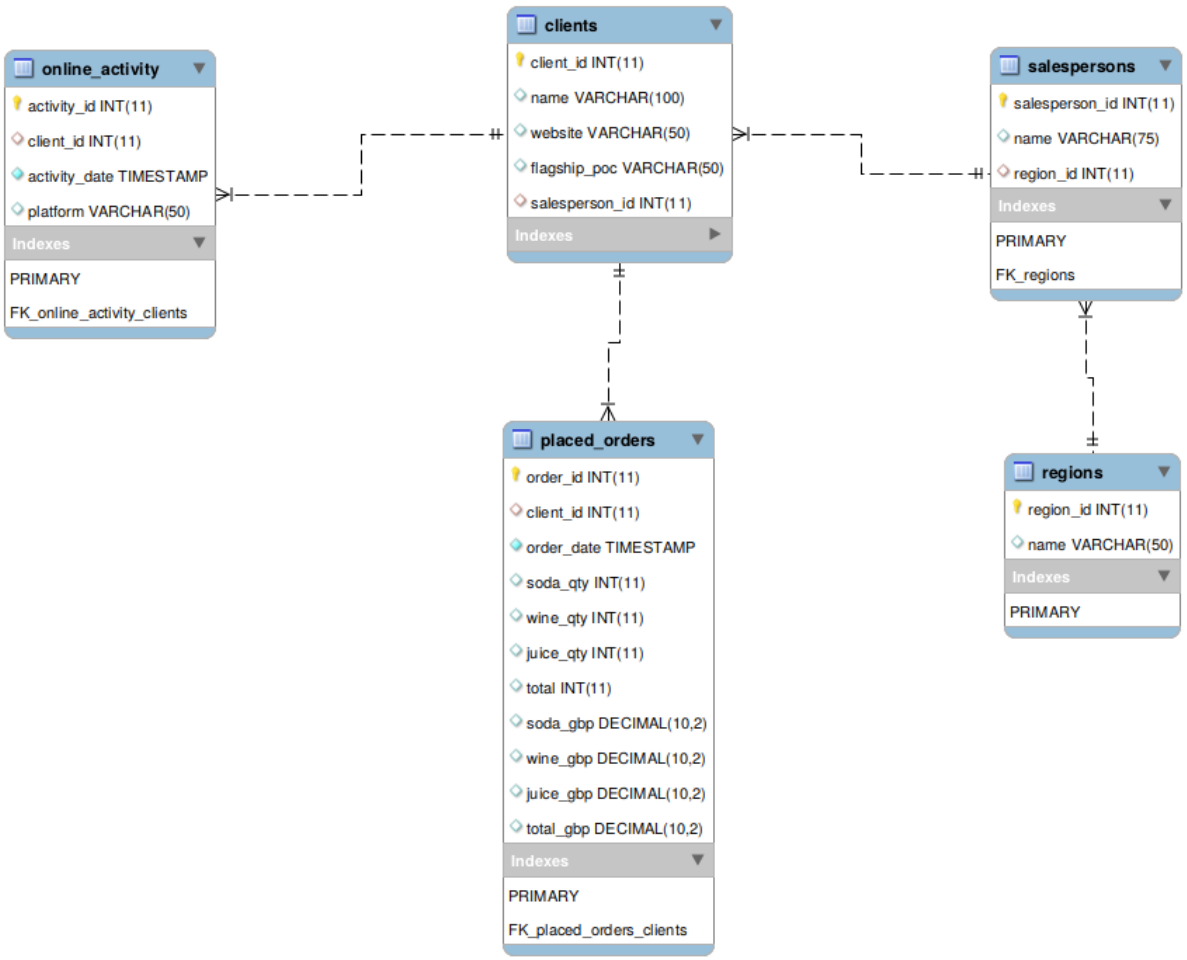
SQL Basics - Practical Exercise - SQL (I)

OBJECTIVES

Become familiar with basic SQL statements

Exercise 1 – Cardiff Drinks

- You are provided with two scripts, one for creating the schema, and one for populating a database which we will call **Cardiff Drinks**. It is a fictitious company that sells soda, juice and wine, with customers all over the world. Run the schema creation and population scripts. Hint: You can enter the mysql console, create and use the database (name of your choice), then run the **source [filename.sql]** command. You will then be able to successfully execute all the INSERT statements.
- Write a small summary of the challenges you encountered (e.g., child-parent table relationships), and draw/describe the Entity Relationship Diagram for that database. Hint: In MySQL Workbench you do so by going to Database > Reverse Engineer > follow the steps. You should get this:



Exercise 2 – SQL Basics

1. Pull out the 10 earliest orders. The output table should include order_id, order_date, and total_gbp.

2. Write a query to retrieve the top 5 orders in terms of largest total_gbp. Include the order_id, client_id, and total_gbp.

3. Write a query to return the bottom 20 orders in terms of least total. Include the order_id, account_id, and total_gbp.

4. Get the full rows of the five newest orders

5. Get the full rows of the five oldest orders

6. Select the 5 first rows and all their columns from the placed_orders table that have an amount of wine_gbp greater than or equal to 1000.

7. Pull the first 10 rows and all their columns from placed_orders that have a total_gbp less than 500.

8. Filter the clients table to include the company name, website and the flagship person of contact (flagship_poc) for 'Kellogg_Company'

9. Create a column that divides the juice_gbp amount by the juice_qty to find the unit price for juice bottles for each order. Don't show more than 10 orders, complement the info with order id and client_id. Anything unexpected?

10. What is the percentage of juice bottles purchased in each order? Your query should return order_id, client_id and juice_bottle_percent.

Exercise 3 – SQL LIKE, IN, NOT, BETWEEN

1. From the clients table, find name, flagship_poc and salesperson for Apple, Sunny Real Estate Investments, and SanDisk. Give two alternative options: only using LIKE and only using IN

2. List all enterprise names that start with 'A'.

3. List all enterprise names that end with 'X'.

4. Retrieve all companies whose name has the string 'tech' somewhere in the name.

5. Let's explore the online activity. Get all the info for those people who were contacted via online coupons and youtube ads. Make sure to present the latest contacts first, and then sort alphabetically by platform.

6. From the clients table, retrieve the following information: Client name, flagship poc and salesperson id for all stores except Fluor Corp., Xerox and Duke Energy.

7. Retrieve all information available for the remaining of the clients listed in the previous exercise.

8. List all business names not starting with 'F'.

9. List all business names not containing 'earth' in their name.

10. List all information of business whose last letter is not 'E'.

11. Define a select query to obtain all the placed orders where the soda_qty is above 500, the juice_qty is 0, and not a lot of wine was ordered.

12. From the clients table find all the companies with names not starting with 'S' and with 'z'. Which company are we leaving out with the first WHERE?

13. We need information of people who were contacted via youtube ads or online coupons

and who became clients in 2016. Sort from newest to oldest. Explain your decision for the date filter (i.e., when does a year start and end in mysql?).

14. We only need a list of ids of placed orders. Specifically, those where either the number of wine or juice bottles was above 4k.

15. Same as above, but this time only those where no soda was purchased, and either of the other two drinks were above 1000 each.

16. Let's pull out orders dominated by wine. I.e., those orders which, by including wine (because it was the largest order), amounted to an overall of more than 1000 bottles.

17. Pull out those business names starting with an 'A' or 'B', and the flagship poc contains 'jess' or 'stev', but it doesn't contain 'stevenson'. Which row are leaving out?