

## MySQL Challenge 2:

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### Instructions:

- Group Assignment
  - 3 Attempts (Maximum)
  - The commands should be filled with comments for explanation and more verification
  - Submit two files:
    - The pdf file that contains just screenshots of your SQL statements with the result (output) from the Workbench interface
    - The .SQL file that contains your SQL code (commands)
  - The field/column names or the labels that are shown below are just for guidelines, so use the proper format to name (label) your tables columns (headings)
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### Task 1:

Create a **new database** for a fictional commercial website with any name you prefer to have tables for customers and their invoices and make sure it's active (in use)

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### Task 2:

Create two tables:

- **Customers Table:** Contains the following fields
  - Primary Key, Auto incremented
  - First Name → Variable Character of maximum 20
  - Last Name → Variable Character of maximum 20
  - Email → Variable Character of maximum 50 and Not Null and Unique
  - Province → Variable Character of maximum 40 and Not Null
  - Birth Date → Date and Not Null
  - City → Variable Character of maximum 40 and Not Null
- **Invoices Table:**
  - Primary Key, Auto incremented
  - Invoice Date → Use the proper data type Not Null
  - Invoice Note → Text
  - Invoice Discount → Use the proper data type for this numeric field (Decimal Value)
  - Invoice Total (Total) → Use the proper data type for this numeric field (Decimal Value) Not Null

#### NOTE:

Every customer can have one or many invoices (1 to many relationship), which means that the table "invoices" has to be linked to the "customers" table using the primary key of the customers' table. So, add the required column/code to establish this relationship

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### Task 3:

- Modify the invoice table:
  - Remove (delete) this column: Invoice Discount

## Task 4:

- Modify the customer table by changing these two columns to have maximum characters of 40 (instead of 20) and CANNOT be NULL:
    - o First Name
    - o Last Name
  - Then add this column: Phone (After the email column), maximum characters of 20 (Yes, it can have null value)
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## Task 5:

- Insert at least 4 records in each table with any values (You might need to add more records for learning and demonstration as you like).

### NOTE:

Consider the following rules when you insert your data:

- o Every customer you insert must have at least one invoice in the invoice table
  - o Every invoice must have a customer in the customer table
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## Task 6:

- Run two statements:
  - o one to change/modify one or some rows in the customer table
  - o one to change/modify one or some rows in the invoice table

### NOTE:

You can use different criteria or conditions based on your choice

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## Task 7:

- Run three statements to display:
    - o The customer's full name as one column "Full Name" with their invoice's details
    - o The maximum invoice total with the customer's full name of this invoice
    - o The customer's full name with date of birth sorted from the older to the younger
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## Task 8:

- Run 2 statements of your choice using any criteria or condition you prefer using INNER JOIN