

# SQL - Case Study

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## **Problem Statement:**

You are a database developer of an international bank. You are responsible for managing the bank database. You want to use the data to answer a few questions about your customers regarding withdrawal, deposit etc especially about the transaction amount on a particular date across various regions of the world. Perform SQL queries to get the key insights of a customer.

## Dataset:

The 3 key datasets for this case study are -

#### Continent

The Continent Table has two attributes i.e. region\_id and region\_name where region\_name consists of different continents such as Asia, Europe, Africa etc assigned with the unique region id.

#### Customers

The Customers Table has four attributes named customer\_id, region\_id, start\_date and end\_date which consists of 3500 records.

## Transaction

Finally, the Transaction Table contains around 5850 records and has four attributes named customer\_id, txn\_date, txn\_type and txn\_amount.

- 1) Display the count of customer in each region who has done the transaction in year 2020
- 2) Display the maximum, minimum of transaction amount of each transaction type.
- 3) Display customer id, region name and transaction amount where transaction type is deposit and transaction amount > 2000.
- 4) Find duplicate records in a customer table.
- 5) Display the detail of customer id, region name, transaction type and transaction amount for the minimum transaction amount in deposit.
- 6) Create a stored procedure to display details of customer and transaction table where transaction date is greater than Jun 2020.
- 7) Create a stored procedure to insert a record in the continent table.

- 8) Create a stored procedure to display the details of transactions that happened on a specific day.
- 9) Create a user defined function to add 10% of the transaction amount in a table.
- 10) Create a user defined function to find the total transaction amount for a given transaction type.
- 11) Create a table value function which comprises of the following columns customer\_id, region\_id ,txn\_date , txn\_type , txn\_amount which will retrieve data from the above table.
- 12) Create a try catch block to print a region id and region name in a single column.
- 13) Create a try catch block to insert a value in the continent table.
- 14) Create a trigger to prevent deleting a table in a database.
- 15) Create a trigger to audit the data in a table.
- 16) Create a trigger to prevent login of the same user id in multiple pages.
- 17) Display top n customers on the basis of transaction type.
- 18) Create a pivot table to display the total purchase, withdrawal and deposit for all the customers.