Guided Lab - 304.6.2 - Joins and Clauses - Banking Database

Introduction:

- JOIN queries allow us to walk through the relationships between two or more tables in the FROM clause.
- Joins are queries that combine the data of multiple tables based on their common ***columns (primary key and foreign key)*** and ***constraints*** to produce a combined result set.

Objective

In this lab, we will demonstrate and utilize SQL join predicates, SQL clauses, and aggregate functions.

Objective

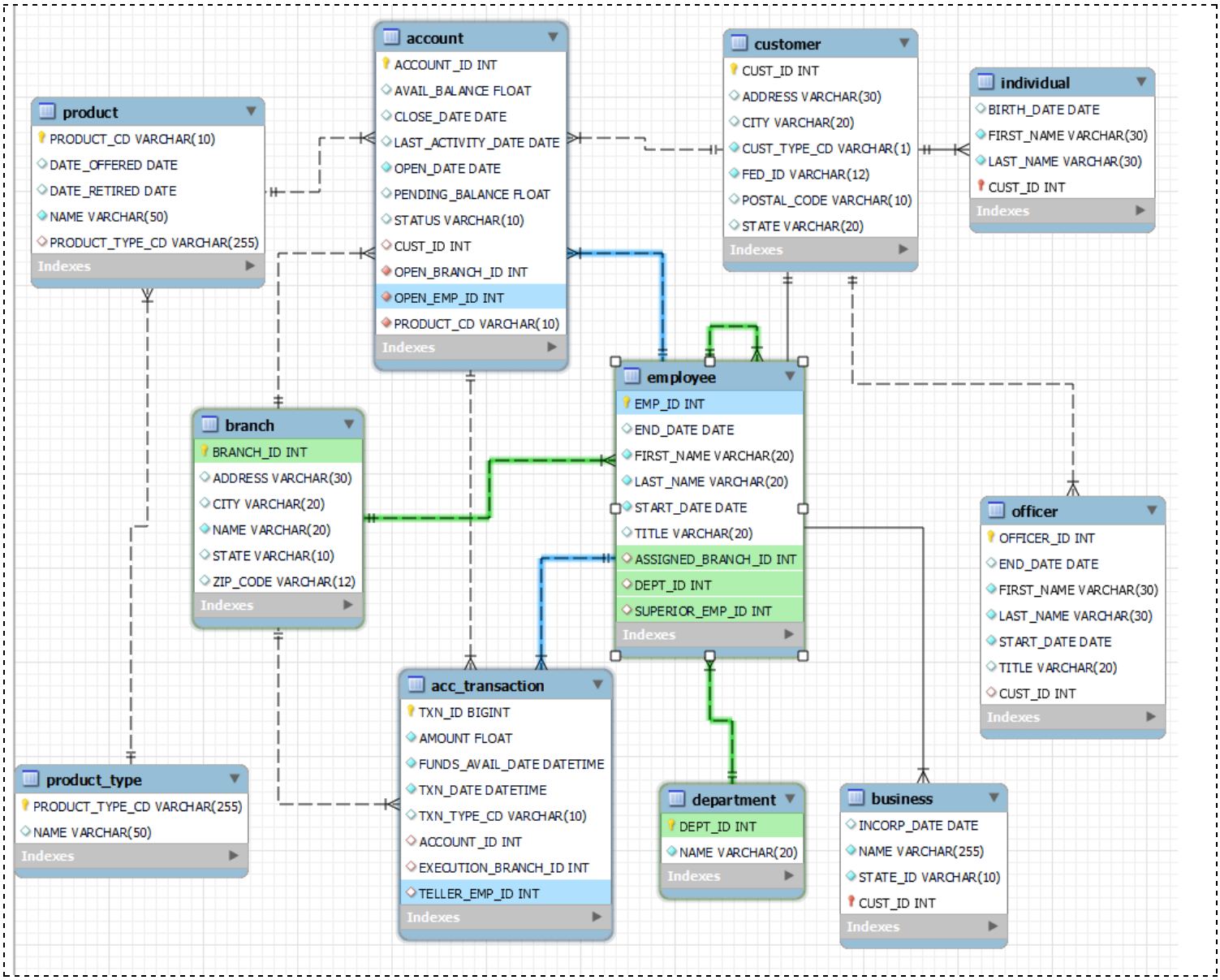
After this lab, learners will have demonstrated the ability to:

- Use SQL Joins predicates
- Use SQL Clauses

Prerequisites:

- For this interactive lab, we will use the Banking Database.
- Click here to download the Banking Database, and set up this database in your MySQL instance.

Schema Diagram



Instruction:

Run the following solution (queries) on Banking Database by using MySQL workbench

1: Problem Statement:

For each product, show the product name "Product" and the product type name "Type.

Solution: Run the below query on MySQL:

```
SELECT p.`NAME` AS "Product", pt.`NAME` AS "Type"
FROM product p INNER JOIN product_type pt
ON p.product_type_cd = pt.product_type_cd;
```

2: Problem Statement:

For each branch, list the branch name and city, plus the last name and title of each employee who works in that branch.

Solution: Run the below query on MySQL:

```
SELECT b.`name`, b.city, e.LAST_NAME, e.TITLE
FROM employee e INNER JOIN branch b
ON b.BRANCH_ID = e.ASSIGNED_BRANCH_ID;
```

3: Problem statement:

Show a list of each unique employee title.

Solution: Run the below query on MySQL:

```
SELECT distinct TITLE FROM employee;
```

4: Problem statement:

Show the last name and title of each employee, along with the last name and title of that employee's boss.

Solution: Run the below query on MySQL

```
SELECT e.LAST_NAME AS "Name", e.TITLE AS "Title", m.LAST_NAME
AS "Boss Name", m.TITLE AS "Boss Title"
FROM employee e LEFT JOIN employee m
ON e.SUPERIOR_EMP_ID = m.EMP_ID;
```

5: Problem Statement:

For each account, show the name of the account's product, the available balance, and the customer's last name.

Solution: Run the below query on MySQL:

```
SELECT p.NAME, a.AVAIL_BALANCE, i.LAST_NAME FROM account a
INNER JOIN product p ON a.PRODUCT_CD = p.PRODUCT_CD
LEFT JOIN customer c ON a.CUST_ID = c.CUST_ID
LEFT JOIN individual i ON c.CUST_ID = i.CUST_ID;
```

6: Problem Statement:

List all account transaction details for individual customers whose last name starts with 'T'.

Solution: Run the below query on MySQL

```
SELECT ac.*, i.LAST_NAME FROM acc_transaction ac
INNER JOIN account a ON ac.ACCOUNT_ID = a.ACCOUNT_ID
INNER JOIN customer c ON a.CUST_ID = c.CUST_ID
INNER JOIN individual i ON c.CUST_ID = i.CUST_ID
WHERE i.LAST_NAME RLIKE "T.*"; -- same as LIKE "T%"
```

Canvas submission Instructions: Please include the following deliverables in your submission -

- All queries should be written and submitted in a single SQL script file.
  - Example: **<your_name_labname>.sql**.
- Submit your SQL script file using the **Start Assignment** button in the top-right corner of the assignment page in Canvas.

CANVAS STAFF USE ONLY: Canvas Submission Guideline:

Instructions for Canvas Assignment Creation
Assignment Name: GLAB - 304.6.2 - Joins and Clauses - Banking Database **Points:** 100 **Assignment Group:** Module 304 - Relational Databases and SQL - (Not Graded) **Display Grade As:** Non-graded (This assignment does not count toward the final grade.). Complete/Incomplete **Do not count this assignment towards the final grade:** Checked **Submission Types:** Document File or Source Code Files **Allowed Attempts:** Unlimited **Everything else is the default.**