List all customers and their accounts with balances.

SELECT

c.FirstName,

c.LastName,

a.AccountType,

a.Balance

FROM

Customers c

JOIN

Accounts a ON c.CustomerID = a.CustomerID;

List all employees who manage branches where the total account balances exceed $20,000.

SELECT

e.FirstName,

e.LastName,

e.Role,

e.Salary,

b.BranchName

FROM

Employees e

JOIN

Branches b ON e.BranchID = b.BranchID

JOIN

Accounts a ON b.BranchID = a.BranchID

GROUP BY

e.EmployeeID, e.FirstName, e.LastName, e.Role, e.Salary, b.BranchName

HAVING

SUM(a.Balance) > 20000;

Identify accounts whose balance is higher than the average balance of accounts within their branch.

SELECT

a.AccountID,

a.AccountType,

a.Balance,

a.BranchID

FROM

Accounts a

JOIN

(SELECT BranchID, AVG(Balance) AS avg\_balance

FROM Accounts

GROUP BY BranchID) avg\_balance\_table

ON a.BranchID = avg\_balance\_table.BranchID

WHERE a.Balance > avg\_balance\_table.avg\_balance;

**Find customers who have at least one transaction of more than $1,000.**

SELECT DISTINCT

c.FirstName,

c.LastName

FROM

Customers c

JOIN

Accounts a ON c.CustomerID = a.CustomerID

JOIN

Transactions t ON a.AccountID = t.AccountID

WHERE

t.Amount > 1000;

Get the total deposits and total withdrawals for each account, along with the account type.

SELECT

a.AccountID,

a.AccountType,

SUM(CASE WHEN t.TransactionType = 'Deposit' THEN t.Amount ELSE 0 END) AS TotalDeposits,

SUM(CASE WHEN t.TransactionType = 'Withdrawal' THEN t.Amount ELSE 0 END) AS TotalWithdrawals

FROM

Accounts a

JOIN

Transactions t ON a.AccountID = t.AccountID

GROUP BY

a.AccountID, a.AccountType;

Find pairs of customers who have accounts with the same account type and belong to the same branch.

SELECT

c1.FirstName AS Customer1FirstName,

c1.LastName AS Customer1LastName,

c2.FirstName AS Customer2FirstName,

c2.LastName AS Customer2LastName,

a1.AccountType

FROM

Accounts a1

JOIN

Accounts a2 ON a1.AccountType = a2.AccountType AND a1.BranchID = a2.BranchID

JOIN

Customers c1 ON a1.CustomerID = c1.CustomerID

JOIN

Customers c2 ON a2.CustomerID = c2.CustomerID

WHERE

c1.CustomerID < c2.CustomerID;

Find customers who do not have any transactions recorded.

SELECT

c.FirstName,

c.LastName

FROM

Customers c

LEFT JOIN

Accounts a ON c.CustomerID = a.CustomerID

LEFT JOIN

Transactions t ON a.AccountID = t.AccountID

WHERE

t.TransactionID IS NULL;

Rank customers based on their total balance across all accounts.

SELECT

c.FirstName,

c.LastName,

SUM(a.Balance) AS TotalBalance,

RANK() OVER (ORDER BY SUM(a.Balance) DESC) AS Rank

FROM

Customers c

JOIN

Accounts a ON c.CustomerID = a.CustomerID

GROUP BY

c.CustomerID, c.FirstName, c.LastName;

List employees whose salary is above the average salary of all employees in their branch.

SELECT

e.FirstName,

e.LastName,

e.Salary,

e.BranchID

FROM

Employees e

JOIN

(SELECT BranchID, AVG(Salary) AS avg\_salary

FROM Employees

GROUP BY BranchID) avg\_salary\_table

ON e.BranchID = avg\_salary\_table.BranchID

WHERE e.Salary > avg\_salary\_table.avg\_salary;