# Querying Multiple Tables with Joins

Individual assignment

## Overview

In this lab, you will use joins to combine data from multiple tables in the **AdventureWorksLT** database.

## What You'll Need

- An Azure SQL Database instance with the **AdventureWorksLT** sample database.
- Create the Query from File menu and save the Query using naming convention as below
- BDA-<WAVEno>-<learnernameasperIC>-lab6.sql
- Eg: BDA-01-KISHAN-lab6.sql

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## Challenge 1: Generate Invoice Reports

Adventure Works Cycles sells directly to retailers, who must be invoiced for their orders. You have been tasked with writing a query to generate a list of invoices to be sent to customers.

### 1. Retrieve customer orders

As an initial step towards generating the invoice report, write a query that returns the company name from the **SalesLT.Customer** table, and the sales order ID and total due from the **SalesLT.SalesOrderHeader** table.

## 2. Retrieve customer orders with addresses

Extend your customer orders query to include the *Main Office* address for each customer, including the full street address, city, state or province, postal code, and country or region

# Challenge 2: Retrieve Sales Data

As you continue to work with the Adventure Works customer and sales data, you must create queries for reports that have been requested by the sales team.

## 1. Retrieve a list of all customers and their orders

The sales manager wants a list of all customer companies and their contacts (first name and last name), showing the sales order ID and total due for each order they have placed. Customers who have not placed any orders should be included at the bottom of the list with NULL values for the order ID and total due.

## 2. Retrieve a list of customers with no address

A sales employee has noticed that Adventure Works does not have address information for all customers. You must write a query that returns a list of customer IDs, company names, contact names (first name and last name), and phone numbers for customers with no address stored in the database.

## 3. Retrieve a list of customers and products without orders

Some customers have never placed orders, and some products have never been ordered. Create a query that returns a column of customer IDs for customers who have never placed an order, and a column of product IDs for products that have never been ordered. Each row with a customer ID should have a NULL product ID (because the customer has never ordered a product) and each row with a product ID should have a NULL customer ID (because the product has never been ordered by a customer).