

# Querying with Transact-SQL

## Overview

In this lab, you will use SELECT queries to retrieve, sort, and filter data from 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>-lab4.sql
- Eg: BDA-01-KISHAN-lab4.sql
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## Challenge 1: Retrieve Data for Transportation Reports

The logistics manager at Adventure Works has asked you to generate some reports containing details of the company's customers to help to reduce transportation costs.

### 1. Retrieve a list of cities

Initially, you need to produce a list of all of your customers' locations. Write a Transact-SQL query that queries the Address table and retrieves all values for **City** and **StateProvince**, removing duplicates.

### 2. Retrieve the heaviest products

Transportation costs are increasing and you need to identify the heaviest products. Retrieve the names of the top ten percent of products by weight.

### 3. Retrieve the heaviest 100 products not including the heaviest ten

The heaviest ten products are transported by a specialist carrier; therefore, you need to modify the previous query to list the heaviest 100 products not including the heaviest ten.

## Challenge 2: Retrieve Product Data

The Production Manager at Adventure Works would like you to create some reports listing details of the products that you sell.

**Tip:** Review the documentation for the [WHERE](#) and [LIKE](#) keywords in the Transact-SQL Reference.

### 1. Retrieve product details for product model 1

Initially, you need to find the names, colors, and sizes of the products with a product model ID 1.

### 2. Filter products by color and size

Retrieve the product number and name of the products that have a color of 'black', 'red', or 'white' and a size of 'S' or 'M'.

### 3. Filter products by product number

Retrieve the product number, name, and list price of products whose product number begins 'BK-'.