

# Querying with Transact-SQL

## Lab 2 – Querying Tables with SELECT

### Overview

In this lab, you will use SELECT queries to retrieve, sort, and filter data from the **AdventureWorksLT** database.

Before starting this lab, you should view **Module 2 – Querying Tables with SELECT** in the course *Querying with Transact-SQL*. Then, if you have not already done so, follow the instructions in the **Getting Started** document for this course to set up the lab environment.

If you find some of the challenges difficult, don't worry – you can find suggested solutions for all of the challenges in the **Lab Solution** folder for this module.

### What You'll Need

- An Azure SQL Database instance with the **AdventureWorksLT** sample database. Review the **Getting Started** document for information about how to provision this.

### 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.

**Tip:** Review the documentation for the [SELECT](#) and [ORDER BY](#) clauses in the Transact-SQL Reference.

#### 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-'.

### 4. Retrieve specific products by product number

Modify your previous query to retrieve the product number, name, and list price of products whose product number begins 'BK-' followed by any character other than 'R', and ends with a '-' followed by any two numerals.

## Next Steps

Well done! You've completed the lab, and you're ready learn how to retrieve data from more than one table in **Module 3 – Querying Multiple Tables with Joins** in the course *Querying with Transact-SQL*.