Stefanie Taushanoff
Foundations of SQL – Summer 2025

Assignment 07

1. A user defined function (UDF) is helpful when (a) you have a application-specific task that you expect to repeat frequently or (b) when you want to use input parameters to help craft your view.

   A scalar function returns a scalar value and can be used to calculate quantities (that aren't already included in the SQL defined functions).

   A table function returns a table, and is similar to a view EXCEPT you could pass parameters to the function that crafts how the table is complied. An example from the homework is being able to parse the inventory table based on if the KPIs were met or not. Last assignment it was hard to tell why we'd want a function when we could just use a view, but this assignment really cleared that up.

2. A scalar function takes in parameters (or doesn't, user choice) and returns a single value. Simple examples in the notes used simple operations like adding or multiplying, but you'd expect to have SQL-defined functions to take care of those. A more sophisticated use might be data transformations that are important to your application, but not so general that SQL would have a prebuilt function handy.

   An inline table valued function returns multiple values in the form of a table. This is a simple function that is most similar to a view, almost like taking the view syntax and sticking it in a function. It returns the output of a single select statement. But unlike a view, a table valued function can accept and act on input parameters.

   A multi-statement function is more complex and can include insert, update and delete statements. This is good for complex repeated processed that can be called from other queries (provided the user knows what parameters to pass). This is almost like a modular script for Matlab or Python.