# MDM SQL Test

## Problem Definition

Each document in our CAD tool has a collection of entities drawn inside the 3d model space. For each entity (eg. A line, circle, sphere, etc.) ‘properties’ can be defined.

Properties are first configured on the document, setting the type and default value.

* Type **0**: Text
* Type **1**: Numeric

When clicking on an entity in the model space, we show all property values for that entity. The default value is shown if the entity has no value set for that property.

## Schema

To save space in the database, we store all strings in a unique table called ‘StringValue’. This avoids storing duplicate values in the PropertyValues table.

A PropertyValue row is inserted only when an entity has a value for a property that is different from the default value. This is also specifically used to save storage space, as we can just get the value from the Property table if no row is found in the PropertyValue table.

## Test Goal

1. Create a SQL server database based on the excel workbook provided.
2. Create the tables, setup keys and referential integrity
3. Import the data
4. Write a stored procedure to return a list of property values for a provided entity. The entity should be a parameter passed into the stored procedure. The property name and property type also need to be returned with the value so the client code knows the name and what type to convert to.

Connectivity components:

<https://www.microsoft.com/en-us/download/details.aspx?id=23734>