**Dynamic Excel Data Type Highlighting and Validation**

Given a query of data to export to excel, dynamically determine the data type for each column in the query (varchar, int, float, etc..). Then, apply a format and data validation rule determined based on the eligible data for the field.

For example - column, “First Name’ which is nvarchar(50), not null, and thus allowing valid data between 1-50 characters. The validation rule should then be dynamically created to limit the excel input to 1-50 characters.

**Instructions**

Connect to eligible postgres database by filling out .env.example. Or – use example files generated in the ‘/out’ folder. Or drop the sheet.cfc component into eligible app and call the ‘exportWithDynamicValidation(required query data, required string tableName)’ function.

**Challenges**

Due to the time constraint, I was only able to confirm working with integers, doubles, and strings using a Postgres connection. I wanted to add dynamic validation for dates and lists but ran out of time. The function so far only supports a simple select on one table, but extended the metadata query to get information with joins should be possible.

For other database engines, the metadata query would have to be modified, but the gist of the information should be the same.

I couldn’t quite get the process to work with a streamingSpreadsheet open and using spreadsheetwrite. I am not sure if this function was supported in the streaming, but nonetheless, an extremely useful edition, especially when people download excel files, modify the contents, and re-upload to a system.