**Software Design Documentation**

For

**Project: (DTSC) Database Table Script Creator**

**Windows Application**

Date created: 6/14/2017

Date updated: 6/24/2017

# Audience

The audience of this document is intended to contain only Anthony Charles Nicholls, (hereinafter, “**The Author**”), and those interested in engaging **The Author** in the testing, financing, and marketing (hereinafter “**Assisting Party**”) of a project entitled the **Database Table Script Creator** (hereinafter “**The Program**.”)

# Disclosure

In order to obtain such assistance it is necessary for the author to share confidential proprietary information with the undersigned relating to **The Program**. The purpose of this Agreement is to set forth the terms and conditions under which **The Author** will disclose to **Assisting Party** such Information.

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2. **Assisting Party** agrees to hold in strict confidence and not to disclose to third parties and not to use commercially, without the prior written consent of **The Author**, any and all Information received from or revealed as a result of disclosure by **The Author**.

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Dated at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ this \_\_\_day of \_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_.

Name of Assisting Party:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Author Signature:

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Anthony Charles Nicholls

# Document Versions

| **Version** | **Changes** | **Author** |
| --- | --- | --- |
| 1.3.0.0 | Initial Document | Anthony Nicholls |
| 1.4.0.0 | Adds requirement details for MySQL data connections and scripts  Adds changes to registry key setup  Adds information in the Install/Uninstall requirements section | Anthony Nicholls |

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# Background and Overview

This program was designed to create a script for a single MSSQL Database Table and its values. Later it was enhanced to connect to XML files and write MSSQL Scripts to mimic the Data Structure inside the file in a database. This was to allow the program that used the XML file to store data, to send its data to a SOAP web service, which would in turn, insert that data into a MSSQL database.

# Audience

This application is aimed at the Developer with a home or small shop.

# Licensing

There is no real licensing. The program uses a text file to store the “key” which is ready by the program. It is not generated in anyway, the program expects the file to exist and contain a certain value. The file is not included in the installer, it is hoped that anyone wanting to use the application will contact the owner for a licence file. A pop-up message asks the user to do so if the file does not exist.

## Payment

None.

## Server Side

No licence server

### Receipt of payment

Not handled

### Activations

Not recorded

### Uninstall

Not recorded

## Client Side

### Install

The application expects a file in the same location as the executable to contain a specified value.

### Registration

None

### Uninstall

Uninstalling the application will leave the licence file.

# Data Requirements

The program has no data of its own, except a connection string to the last used database, which is stored in a registry key.

HIVE : HKEY\Current User

LOCATION: SOFTWARE\Database Table Script Creator

KEY(S): ConnectionString, Provider, AdapterString

# Data Flow

## Application Flow Chart

## Application Run Flow Chart

# Application Requirements

## Licensing Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Requirement Name** | **Requirement Criteria** | **Requirement Data** |
|  | Run application | The application will not run if a specific sequence of alphanumeric characters does not exist in a file called “Licence.txt”.  The characters will have several breaks where a hyphen is used (-). |  |

## Main Application Requirements:

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Requirement Name** | **Requirement Criteria** | **Requirement Data** |
|  | Connect to a MSSQL Database | The application uses OLEDB Data Links form to connect to any database that conforms to ODBC standards. |  |
|  | Connect to an XML File | The application is able to connect to an XML file and treat the contained dataset as a database, from which it can gather information to create scripts for tables and the contained data. | Some XML files do not specify the contained datatypes. This causes all columns to be created as nvarchar (MAX) |
|  | Connect to a MySQL Server Database | The application uses the MySQL .Net Connector to connect to a MySQL Database server. |  |
|  | Allow user to manually enter a connection string | A custom form was written to allow the user to enter properties for the data connection string, and to test that the properties are correct and will allow the application to connect. | Properties required:   1. Server or IP 2. Database name 3. User name 4. Password |
|  | Allow user to select a single Table and view it’s data | The application will list the tables in the connected database in a user selectable manner. Once the user selects a table, its data rows will show in the central grid. | Under the “Tables” Menu option |
|  | Allow user to select the type of script they want output. | The user can choose what parts of the database to create scripts for. | Selections are   1. Table Only 2. Table and Values 3. Values Only 4. All Tables Only 5. All Tables and Values |
|  | Table Only | This option creates a “CREATE TABLE” script for the currently selected table. Primary Keys are included, datatypes are copied and size/nullness are also taken into account. | Only creates scripts for PRIMARY fileset. |
|  | Table and Values | This option creates a “CREATE TABLE” script for the selected table with all attributes copied as in “Table Only” selection. It then includes INSERT INTO scripts for each row of data. | Only creates scripts for PRIMARY fileset. |
|  | Values Only | This option creates INSERT INTO scripts for each row of data in the currently selected table (data on screen). |  |
|  | All Tables Only | This option creates “CREATE TABLE” scripts for each table in the database. | Only creates scripts for PRIMARY fileset |
|  | All Tables and Values | This option creates a “CREATE TABLE” script for every user table in the database, and then creates INSERT INTO scripts for each table’s datarows. | Only creates scripts for PRIMARY fileset |
|  | Allow user to select the Server Type the script is output for | Since SQL Server and MySQL have some subtle differences in the scripting syntax, in order to allow the user to output a script that will allow cross database creation, the application needs to output in each “flavor.” Allow the user to select the output type with a drop down. | Types Required   1. SQL Server 2. MySQL 3. Optional: XML (my be another project) |
|  | About Form | The application has a form that displays a copyright statement and describes the application’s use and its creator and creation dates. |  |
|  | Error Reporting | The application writes all errors to a file in the same folder as the executable. That file is named “debug.txt. |  |

## Command Line Requirements:

The following commandline options are available

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Requirement Name** | **Requirement Criteria** | **Requirement Data** |
|  | DEBUG | Written as : /debug  Causes: main process to allow execution message to write to a file in the same folder as the executable.  Conflicts with: n/a  Requires: n/a |  |