# CSV file to MySQL DB Update

# Introduction

This process will take the contents of a CSV file, create an MySQL Update statement and execute it. See [CSV File – Example Content](#_Json_File_–) for example input. The table name is provided to the process as parameters, see [Parameters](#_Parameters) below.

# Triggering

| **Type** | **System** | **Settings** | **Comments** |
| --- | --- | --- | --- |
| Manual | Frends |  |  |

# Process Variables

| **Name** | **Comment** |
| --- | --- |
| FilePath | Full path of the target file to be read |
| FileName | Name of the target file to be read |
| ServerAddress | Address of the SFTP Server |
| ServerUser | User for the SFTP Server |
| ServerPassword | Password the SFTP Server |
| TableName | Name of the database table into which the data is to be inserted |
| ServerAddress | Address of the SFTP Server |
| ConnectionString | Connection details for the database. |

# Process Details

## Process Diagram

A diagram of a flowchart

Description automatically generated

## Process Steps

| **Step No** | **Process Step** | **Implementation Details** |
| --- | --- | --- |
| 1 | Process starts | A manual trigger is activated with the [Process Variables](#_Process_Variables) described above. |
| 2 | Read File Contents from SFTP Server | Use the SFTP ReadFile task to get the contents of the Json file |
| 3 | Was the read successful? | If the “Success” field in the result from the file read in **step 2** was false go to the next step (**step 4**), otherwise continue from **step 5**. |
| 4 | Stop processing and return error message | Return a meaningful, plain English error message. |
| 5 | Convert the CSV content to Json | Use the ConvertToJSON task to convert the CSV data to Json. |
| **For Each Line in File from step 5** | | |
| 6 | Initialise SQL Statement | Set to the text “UPDATE “ + <<TableName>> (Process Variable) + “ SET “ |
| **For Each Property in the current object** | | |
| 7 | Create Update Data | Build the Set clause. Use property name for the column name and the property value for the update value adding them to the SQL Statement created in **step 6. Exclude the** **“Where” property.**  i.e. Title = ‘Mr’, Firstname = ‘Fred’,……. |
| **End Of For Each Property** | | |
| 8 | Add Where Clause to SQL Statement | Add Where clause to the SQL Statement created in **step 6.** Use the “Where” property from the current object.  i.e “WHERE = “ + line.Where  If the “Where” property is empty or null then do not include the Where clause in the SQL statement. |
| 9 | MySQL ExecuteQuery | Execute the Update statement from **steps 6,7 and 8** on the database using the MySQL ExecuteQuery task. |
| 10 | Was the Update successful? | If the “Success” field in the result from the execution of the Update in **step 9** was false go to the next step (**step 11**), otherwise continue from **step 12**. |
| 11 | Stop processing and return error message | Return a meaningful, plain English error message. |
| **End Of For Each Line** | | |
| 12 | Stop processing | Terminate the process and return success message. |

# Solution components

| **Subprocess** | **Description** | **Tags** |
| --- | --- | --- |
|  |  |  |

# Data flow

## Environment variables

These are process specific environment variables. General environment variables can be found at <TBD>

| **Variable name** | **Description** | **Dev** | **Test** | **Prod** |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

## Interfaces and data transfers

#### SFTP File Read – Step 2

|  |  |
| --- | --- |
| Parameter Name | Source |
| Input - Path | [Process Variables](#_Parameters) – FilePath + FileName i.e. /input/order.json |
| Connection - Address | [Process Variables](#_Parameters) - ServerAddress |
| Connection - UserName | [Process Variables](#_Parameters) - ServerUser |
| Connection - Password | [Process Variables](#_Parameters) - ServerPassword |

##### CSV File – Example Content

Example CSV content.

email;address1;address2;country;state;city;zipcode;phone;firstname;lastname;title:Where

dave21@frends.com;1440 River Drive;" #100";USA;CA;Rivertown;12345;123456789;Dave;Twenty-One;Mr;title = ‘Mr’

dave21@frends.com;1440 River Drive;" #100";USA;CA;Rivertown;12345;123456789;Dave;Twenty-One;Mr;address1 = ‘1440 River Drive’

dave22@frends.com;1440 River Drive;" #101";USA;CA;Rivertown;12345;123487689;

………

#### Sample Error Message ****- Step 4****

**“An error occurred reading the input file <<FileName>>. Please contact support.”**

**<<FileName>> =** [Process Variables](#_Parameters) **– FileName.**

#### ****Sample Json from Conversion – Step 5****

[

{

"email": "dave21@frends.com",

"address2": "Flat 3",

"state": "NH",

"firstname": "Fred",

"Where": "title = 'title'"

},

{

"email": "dave99@frends.com",

"address1": "Flat 23 SomeStreet",

"state": "NY",

"firstname": "Bill",

"Where": "address1 = '1440 River Drive'"

}

]

#### MicrosoftSQL ExecuteQuery ****- Step 9****

|  |  |
| --- | --- |
| **Parameter Name** | **Source** |
| Input – Connection string | Process Variable - ConnectionString |
| Input - Query | Update statement created in **steps 6,7 and 8** |

##### Query Example

UPDATE contact

SET address1 = "street 1", address2 = "street 2", zipcode = "02700"

WHERE email = "user1@frends.com"

#### Sample Error Message ****- Step 11****

**“An error occurred updating the database table <<** TableName **>>. Please contact support.”**

**<<** TableName **>> =** [Process Variables](#_Parameters) **–** TableName**.**

#### Sample Success Message ****- Step 12****

**“The table <<** TableName **>> was successfully updated.”**

**<<** TableName **>> =** [Process Variables](#_Parameters) **–** TableName**.**