Internship Report

CSCH Deployment Tool

Authored by: Rudresh Gaude | 2020

JUNE

IMMO INFORMATION TECHNOLOGY PVT. LTD.

Goa University

CSCH Deployment Tool

Completed by
Rudresh Gaude|2020

For the partial fulfilment of
MCA Degree for Semester VI
Discipline of Computer Science and Technology,
Goa Business School,
Goa University

At
IMMO INFORMATION TECHNOLOGY PVT. LTD.
1st Floor, CMM Commercial Complex, Renovadi, Merces, Goa

Under the guidance of
Mr. Prayut Parsekar (CDO / Associate Director,
IMMO INFORMATION TECHNOLOGY PVT. LTD)

&

Mr. Ismail Shaikh(HR Manager,
IMMO INFORMATION TECHNOLOGY PVT. LTD)

IMMO Information Technology

07th June 2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Rudresh Gaude**, student of Master of Computer Application (MCA) of Goa University, Goa, is currently undergoing his semester VI internship with our organization from 03rd January 2023, which will end on 30th June 2023.

During his tenure to date, he has met the expectations of his Team leader and was found to be sincere.

This certificate was issued on his request for project report submission at Goa University.

The final internship certificate will be issued on completing his internship tenure.

For IMMO Information Technology Private Limited.

Mr. Nimish Shikerkar
Director/COO

IMMO INFORMATION TECHNOLOGY PRIVATE LIMITED * PANAJI CO.

CMM Commercial Complex, 1st Floor, Survey No. 21/10 Renovadi, Merces, Tiswadi, Goa 403005
Phone: 8459649505, http://www.immoinfotech.com

GOA BUSINESS SCHOOL

CERTIFICATE OF EVALUATION

This is to certify that Mr. Rudresh Gaude has successfully completed his internship at IMMO INFORMATION TECHNOLOGY PVT. LTD, Merces Goa, in partial fulfillment for the award of the degree in Master of Computer Application.

Internal Examiner

External Examiner

Date:

Place: Goa University

Dean, Goa Business School,
Goa University

ACKNOWLEDGEMENT

I take absolute pleasure in presenting my project that I have completed during the duration from January 2023 to June 2023. The project period was a good learning experience for me, I take this opportunity to express my gratitude to all those who have offered a helping hand to me during the duration of the project.

Internship is a golden opportunity for learning and self-development, especially with professionals who have tremendous knowledge of all the aspects of the technology.

I am privileged to have done my internship in IMMO Information Technology Pvt. Ltd. I got a great opportunity for professional learning, development and growth. The internship would have not been possible without expressing my gratitude to all who made it possible.

I would like to thank Mr. Sudesh Mehta (CEO & Partner, IMMO Information Technology), Mr. Nimish Shikerkar (COO & Director, IMMO Information Technology) for giving me an opportunity to successfully complete my internship. My sincerest gratitude to Mr. Prayut Parsekar (CDO / Associate Director) for giving me all the necessary guidance and support as my team leader. I would also like to thank my team members for constant guidance and support.

I would like to thank my Department MCA, Goa university, for giving me the opportunity to carry out my internship and acquire real-world industrial experience. I thank Prof. Hanumant Redkar (Placement incharge, Department of Computer Science) and all the faculties for their constant encouragement and support.

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Table of Contents

INTRODUCTION

ABOUT THE PROJECT:

RER Data Deployment Tool

CSCH Stands for Cadastral Survey Data Which is Part of the Real Estate Registry (RER). Which is Development of a database which includes master data of all properties in Switzerland and consequently allows to appraise any flat/house automatically. This Data is gathered from publicly available datasets which is processed (cleaned, combined, segregated, etc). Due to changes in the properties, every three months, data is downloaded and processed. Since 3 months is one-fourth of the year, this time frame is called a quarter. To Identify the quarter from which the data belongs to, we use a field called as publish date, which corresponds to the respective quarter.

There are development/ testing Environments that any software/ data needs to go through. The CSCH Data Deployment tool assists in transferring the data to the Servers corresponding to the Respective development/testing Environments. The Data is then used for appraisal purpose and./or by other teams in the company. There is also a functionality to delete the data from the data base whenever required.

ABOUT THE COMPANY:

Established in 2005, IMMO InfoTech emerged with the aim to provide IT services to IAZI (www.iazi.ch), its parent company. It did not take us long to expand our expertise from real estate to specialized IT services, which we have designed to meet the specific needs of businesses operating in a competitive digital world.

We at IMMO InfoTech are a team of software experts who have been providing specialized IT services for over a decade now. Comprising of more than Seventy software engineers, our team is a highly diverse one and knows everything there is to know about software development. We are your one-stop solution for all software development requirements and come forward as your partner in fostering digital innovation.

As a team of software experts, we empower enterprises with our custom software solutions, which are tailored to their specific requirements. We help you go beyond off-the-shelf software solutions and speeding up your business processes. Improving operational efficiencies, reducing the time to market and establishing program/PLM processes are a few aspects that our software services cover.

Highly talented and motivated workforce of IT professionals with an experience of more than 14+ years in Windows Applications, Web Development, Mobile Apps and Statistical Modeling, supported by strong team of Testers and System Administrators. Successful team collaboration model for project development is our strength.

Website: **http://immoinfotech.com**
Industries: **Information Technology and Services**
Company size: **70+ employees**
Headquarters: **Merces, Goa**
Type: **Privately Held**
Founded: **2005**

SYSTEM REQUIREMENT ANALYSIS

CSCH Data Deployment Tool

1.1 Purpose: -

Since we are dealing with millions of rows of data, the transfer process is generally time consuming. The transfer process can take a few hours. Crashes/failure during transfer process, especially when the process ran for a few hours can be fatal.

The main purpose of the project is

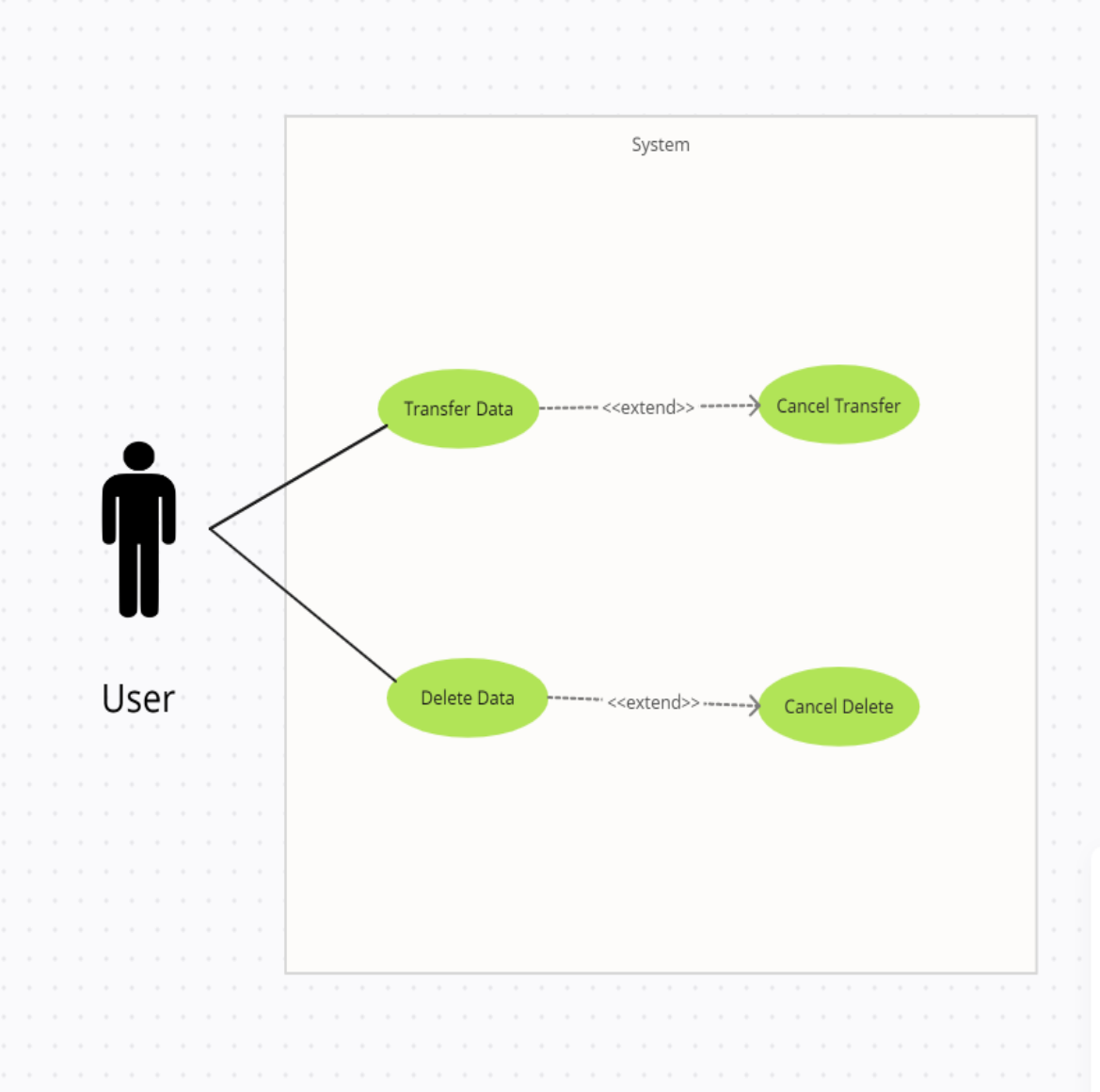
1. Transfer of data in a fast and efficient manner.
2. Validations and exception handling done properly
3. Delete functionality

1.2 Scope: -

The Tool will allow the user to transfer data through different development/testing environments in a fast-efficient manner. The user of the tool will be the members of the data team of the company. The user will also be able to delete the data based on the publish date whenever necessary.

System Design

1. Use Case Diagram:



Transfer Data

Primary Actor: User

Stakeholders & interest: User: Transfer Data from Source to Destination DB

Pre-Condition: User must be connected to virtual machine

Post-Condition: Data Transfer Successful

Main Success Scenario:

I. Select The Source and Destination Servers
II. Select The Source and Destination Databases
III. Select The Table Name
IV. Click On Transfer Button
V. Click on cancel if cancellation is required

Delete Data

Primary Actor: User

Stakeholders & interest: User: Delete Date from DB

Pre-Condition: User must be connected to virtual machine

Post-Condition: Data Deletion Successful

Main Success Scenario:

I. Select the Server

II. Select the Database

III. Select the table.

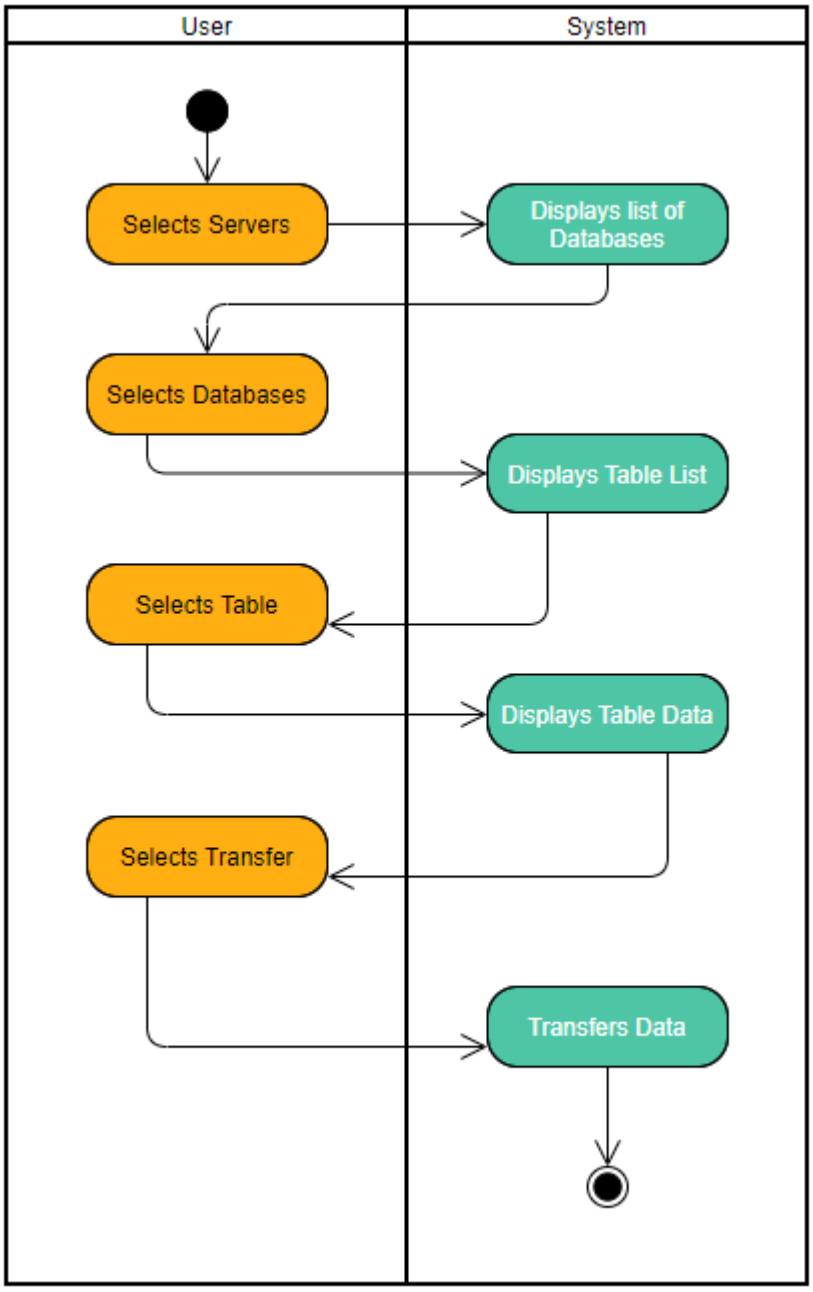
IV. Select the Publish date

V. Click on the delete button

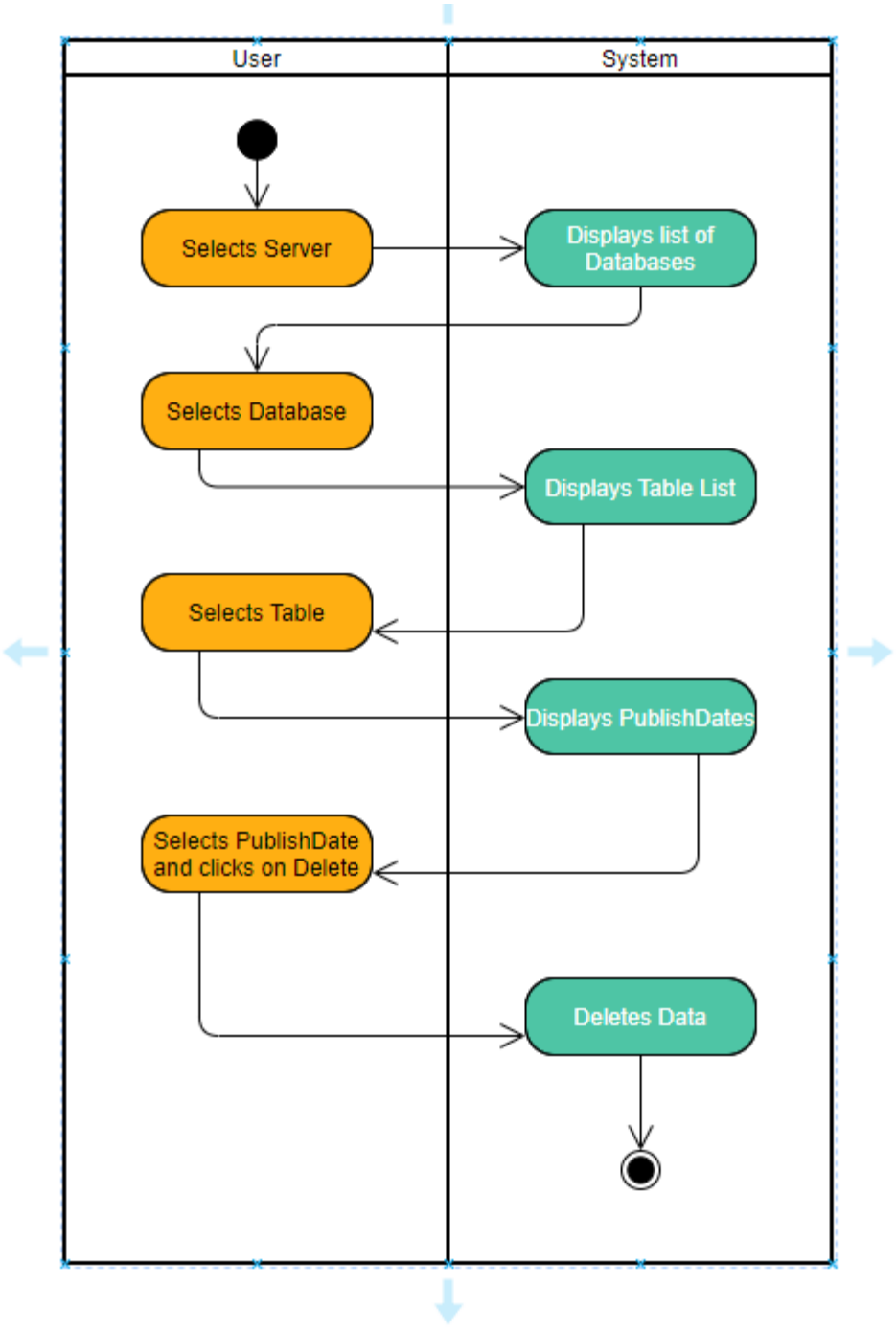
VI. Click on cancel if cancellation is required

2. Activity Diagram

Transfer Data



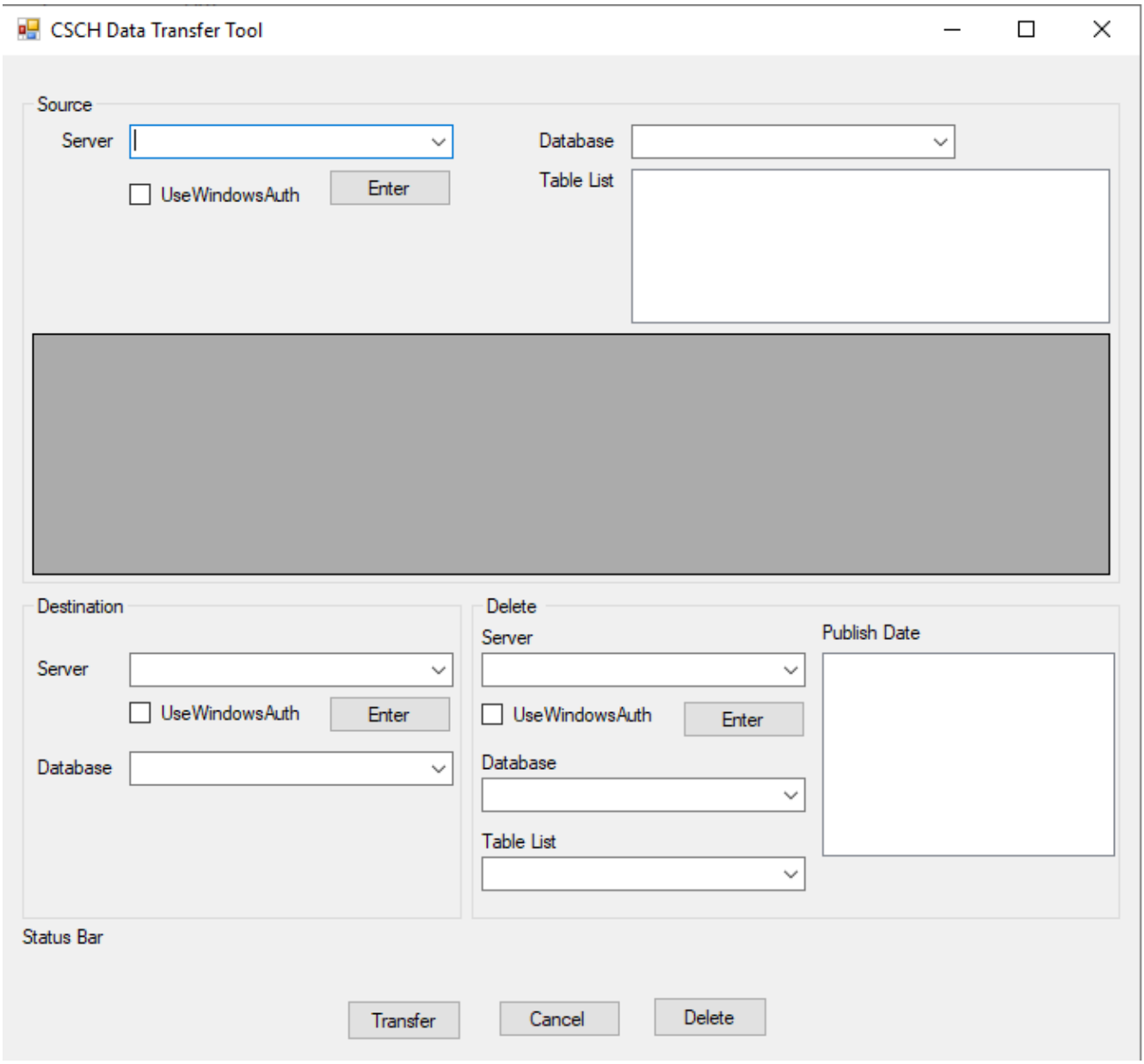
Delete Data


User
System
Selects Server
Displays list of Databases
Selects Database
Displays Table List
Selects Table
Displays PublishDates
Selects PublishDate and clicks on Delete
Deletes Data

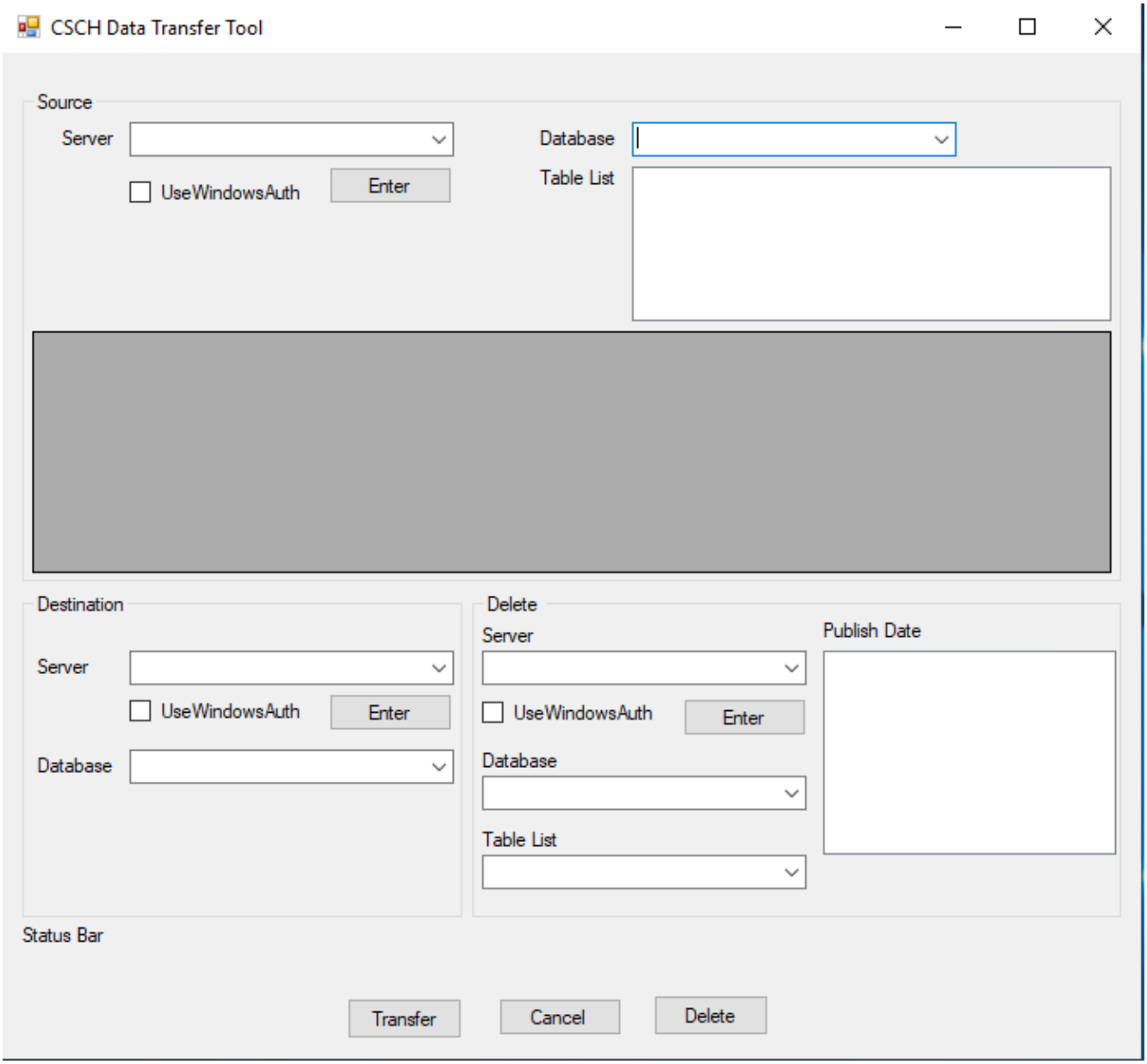
IMPLEMENTATION

UI

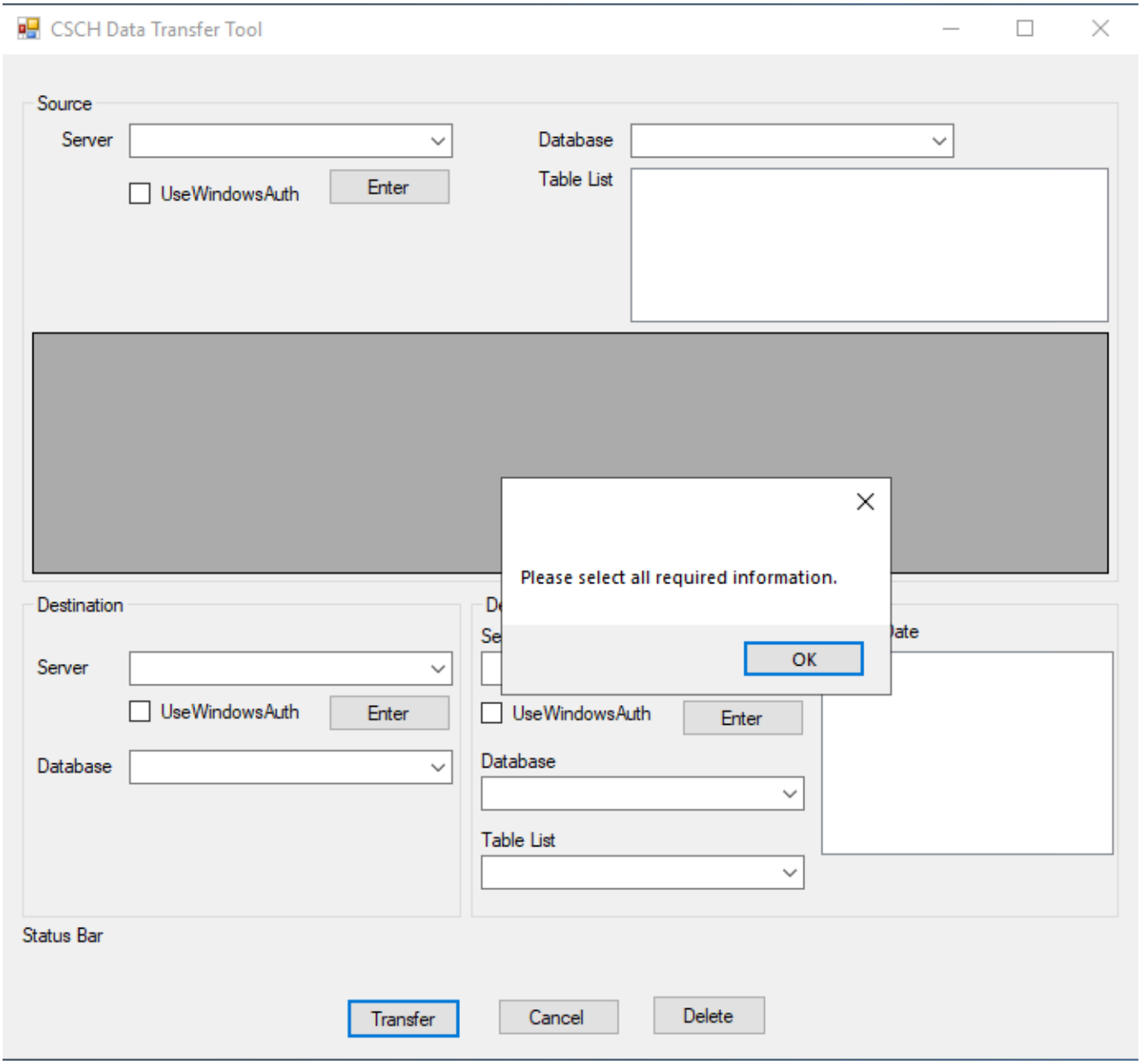
The form is divided into two parts: Source and destination. Each has a field for Server and Database. The Table list in Source is a checked list box and multiple tables can be selected for transfer at a time. The table list field in the destination section is used only for delete purpose, once the table is selected, the publish dates will show up, the user can select the publish date of the quarter that needs to be deleted. Only 1 table can be selected for deletion at a time



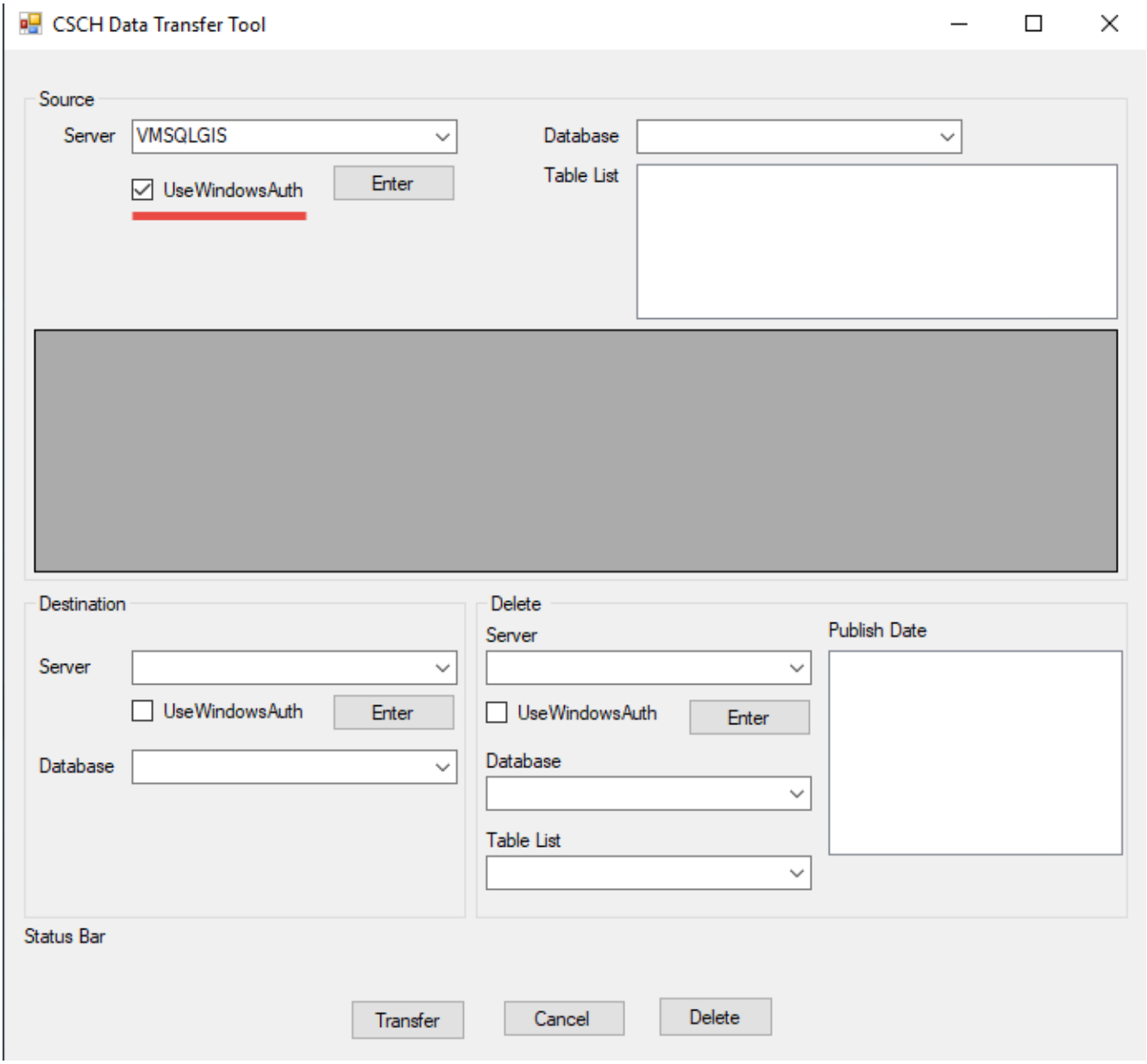
Empty DB list (before Selecting Server)

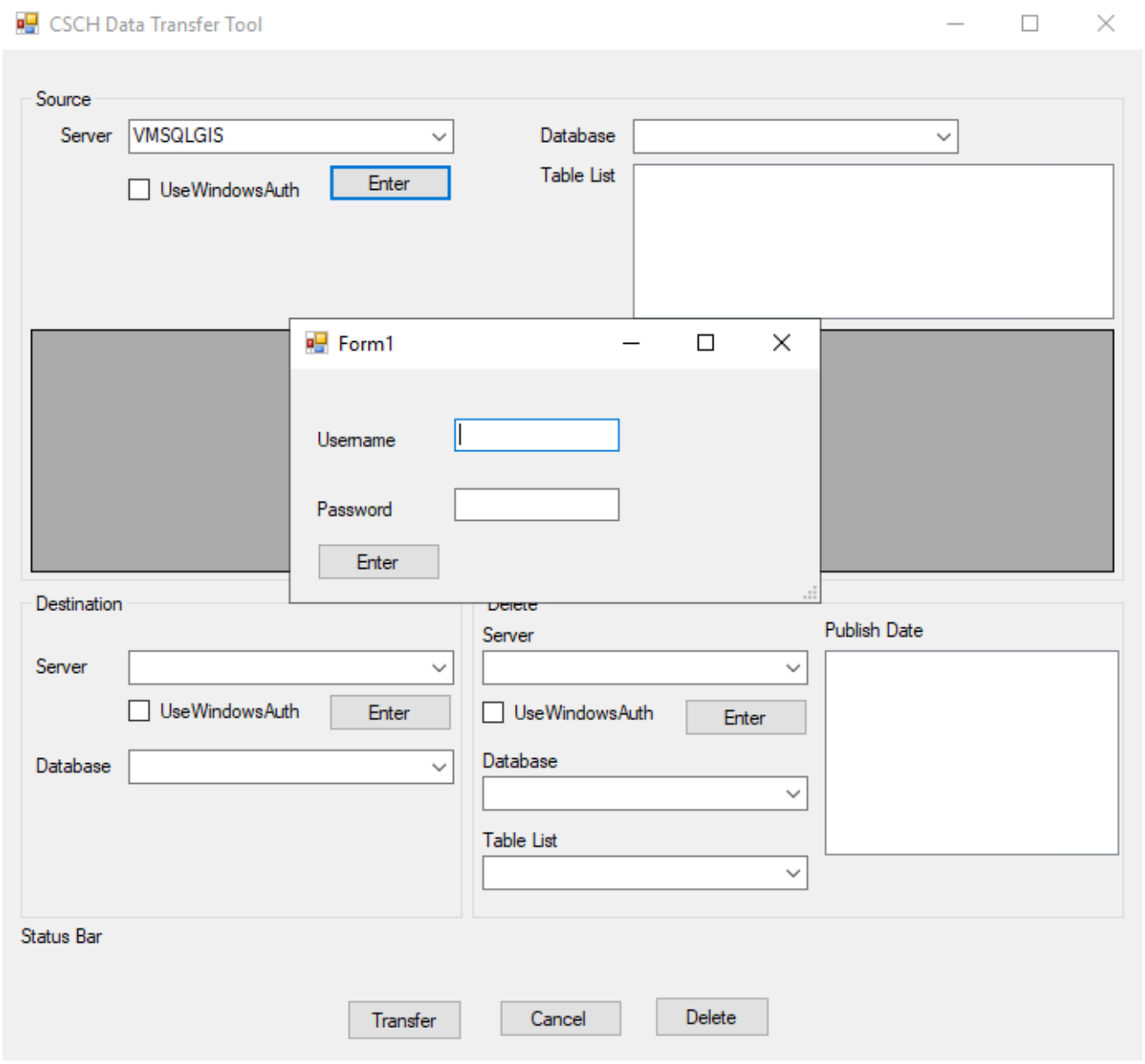


Clicking on Transfer Button Before Entering respective Fields



Select Server Use Window Authentication OR Login Credentials to connect to server.




CSCH Data Transfer Tool
Source
Server
VMSQLGIS
Database
UseWindowsAuth
Enter
Table List
Form1
Username
Password
Enter
Destination
Server
UseWindowsAuth
Enter
Database
Server
UseWindowsAuth
Enter
Database
Table List
Publish Date
Status Bar
Transfer
Cancel
Delete

Database List After Selecting Server

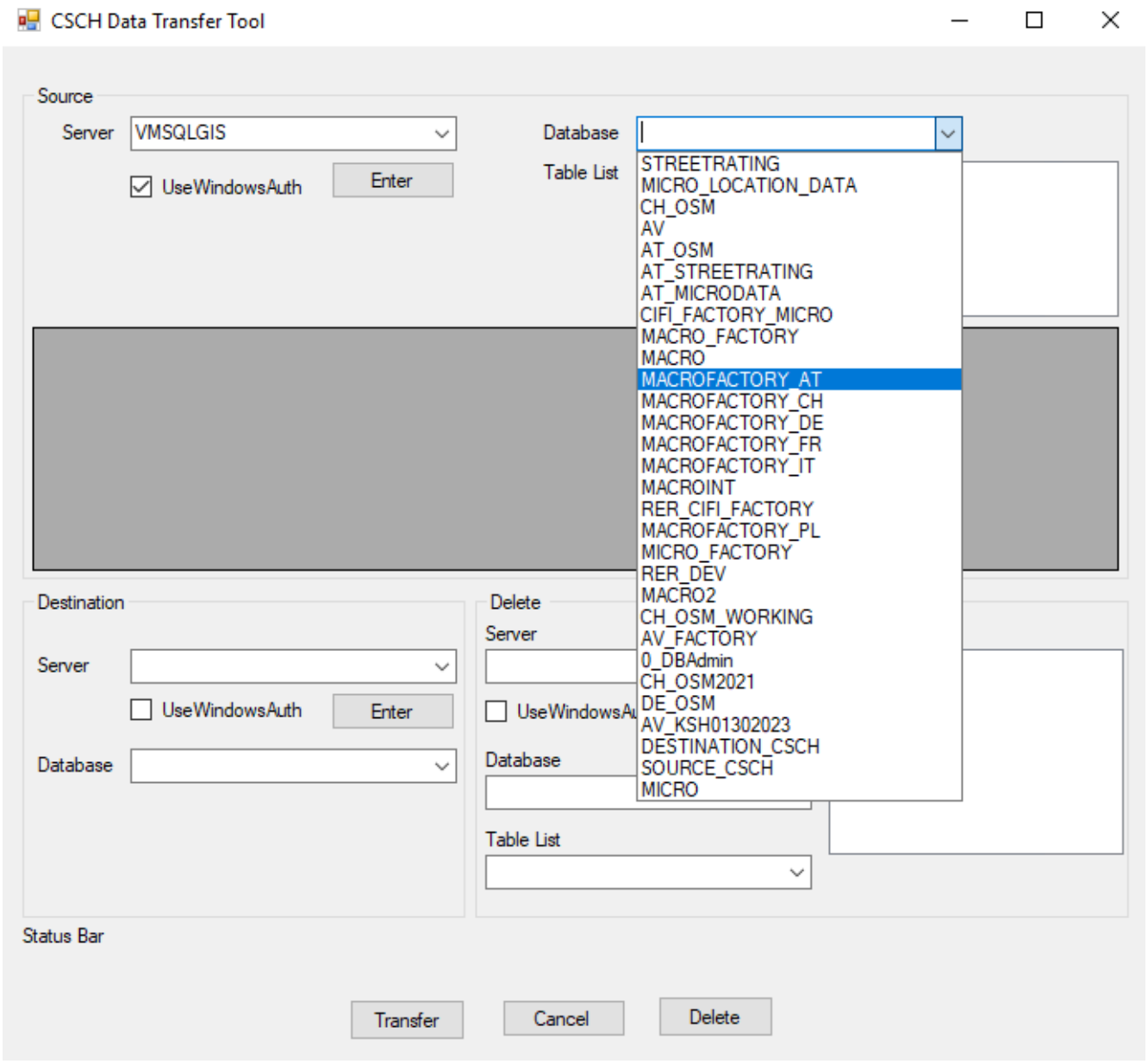
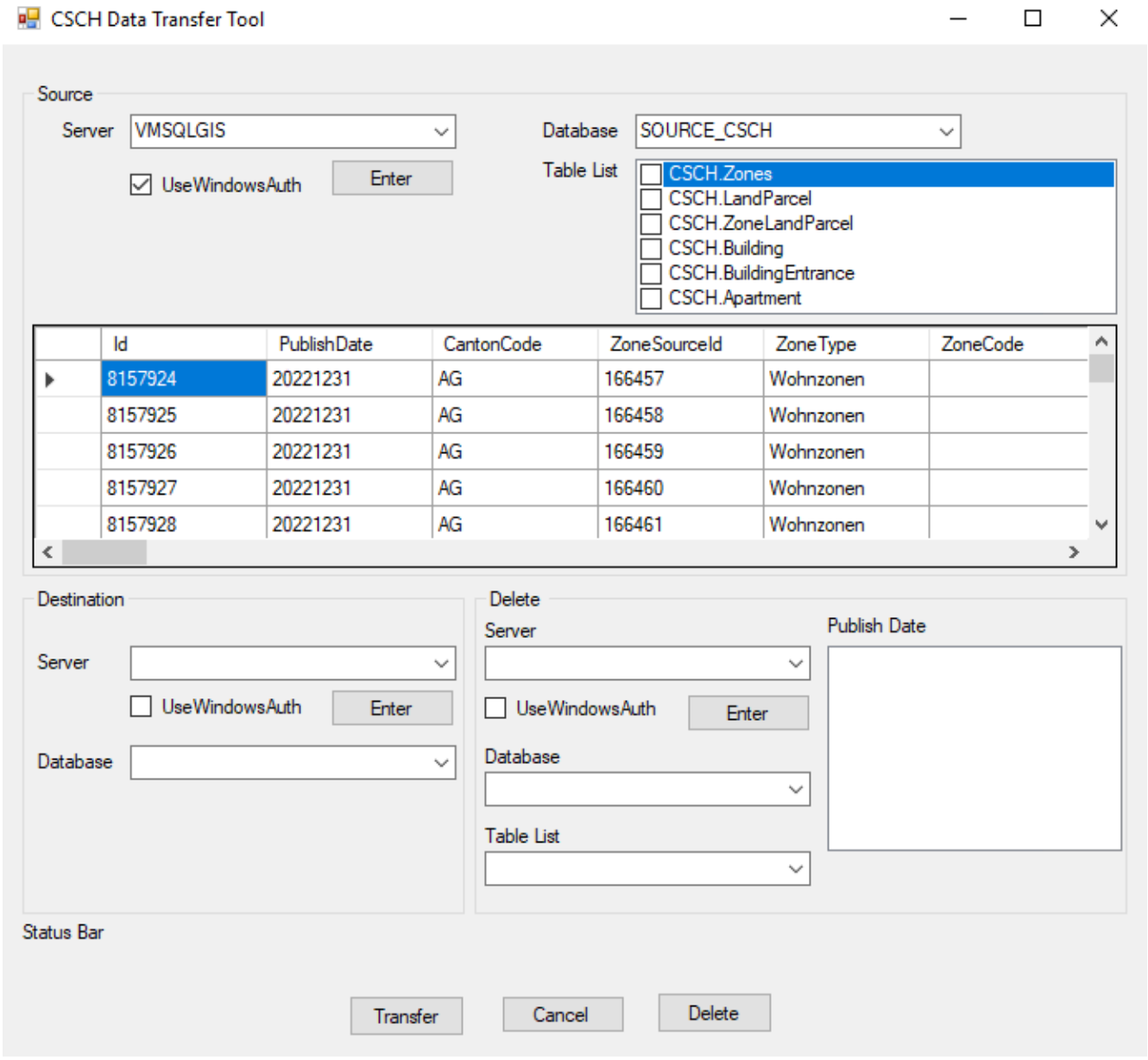
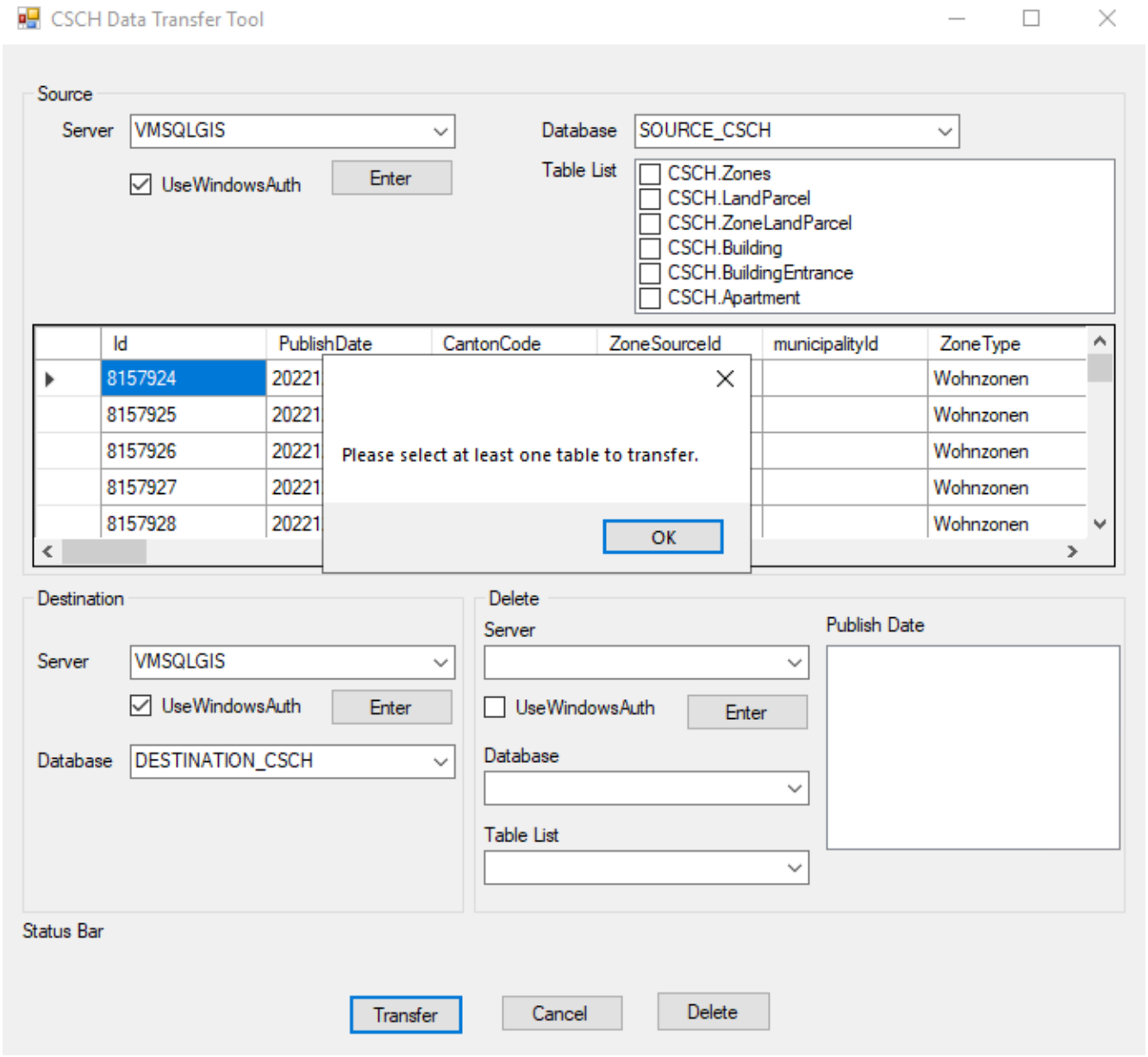


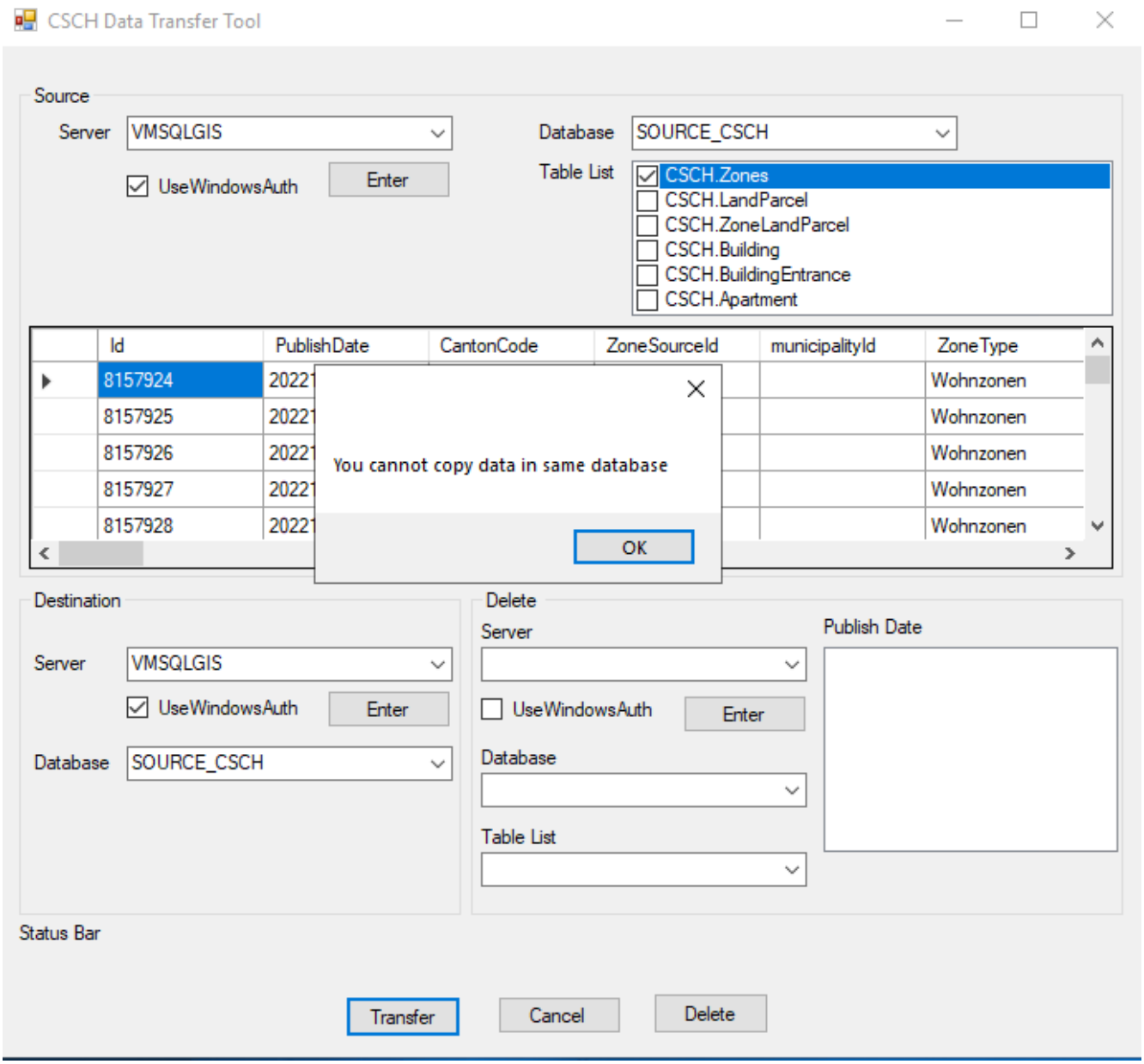
Table List and Displaying Table Data



Validation For not Selecting Table Before Transferring

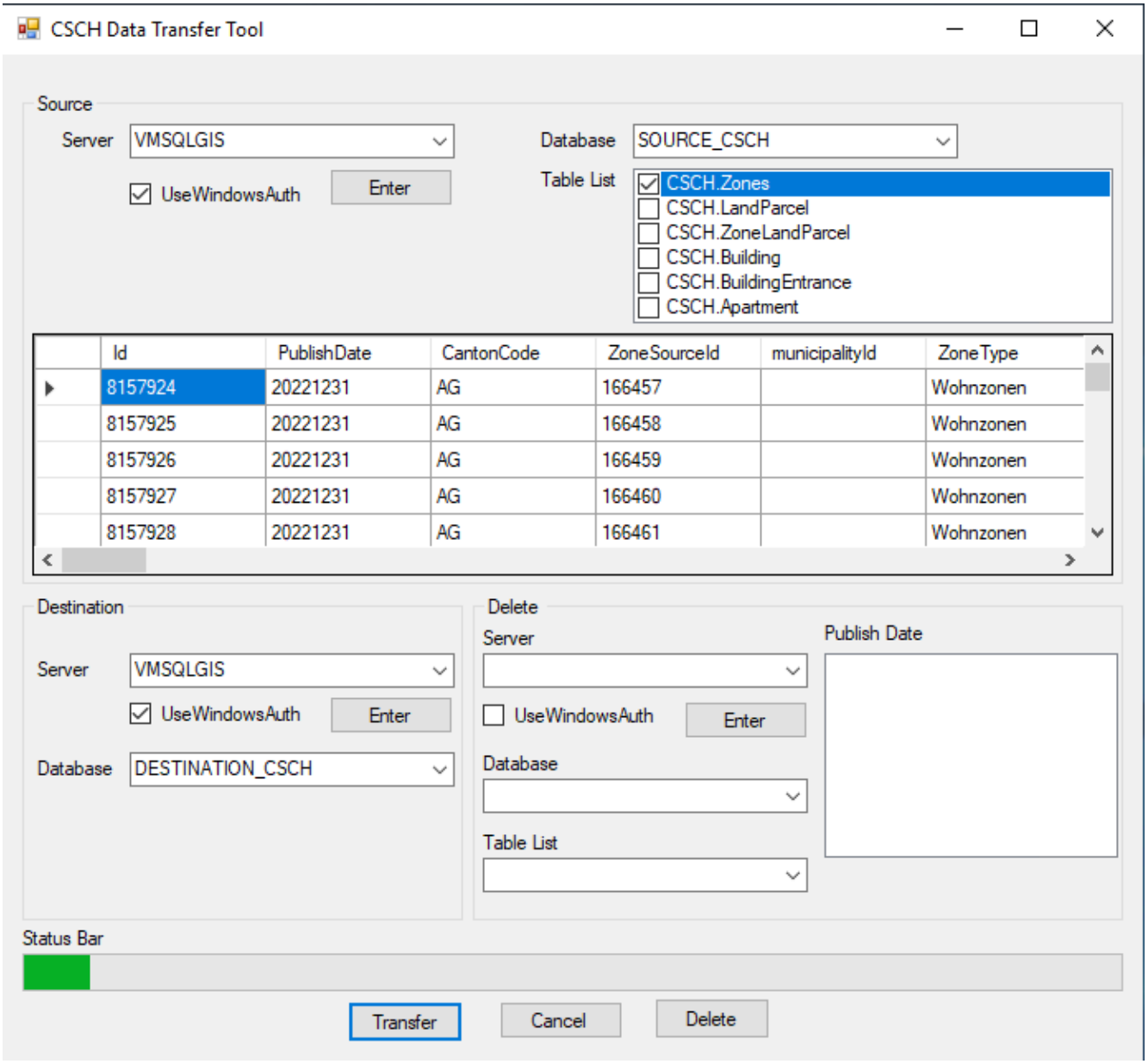


Validation While Transferring To the Same Database

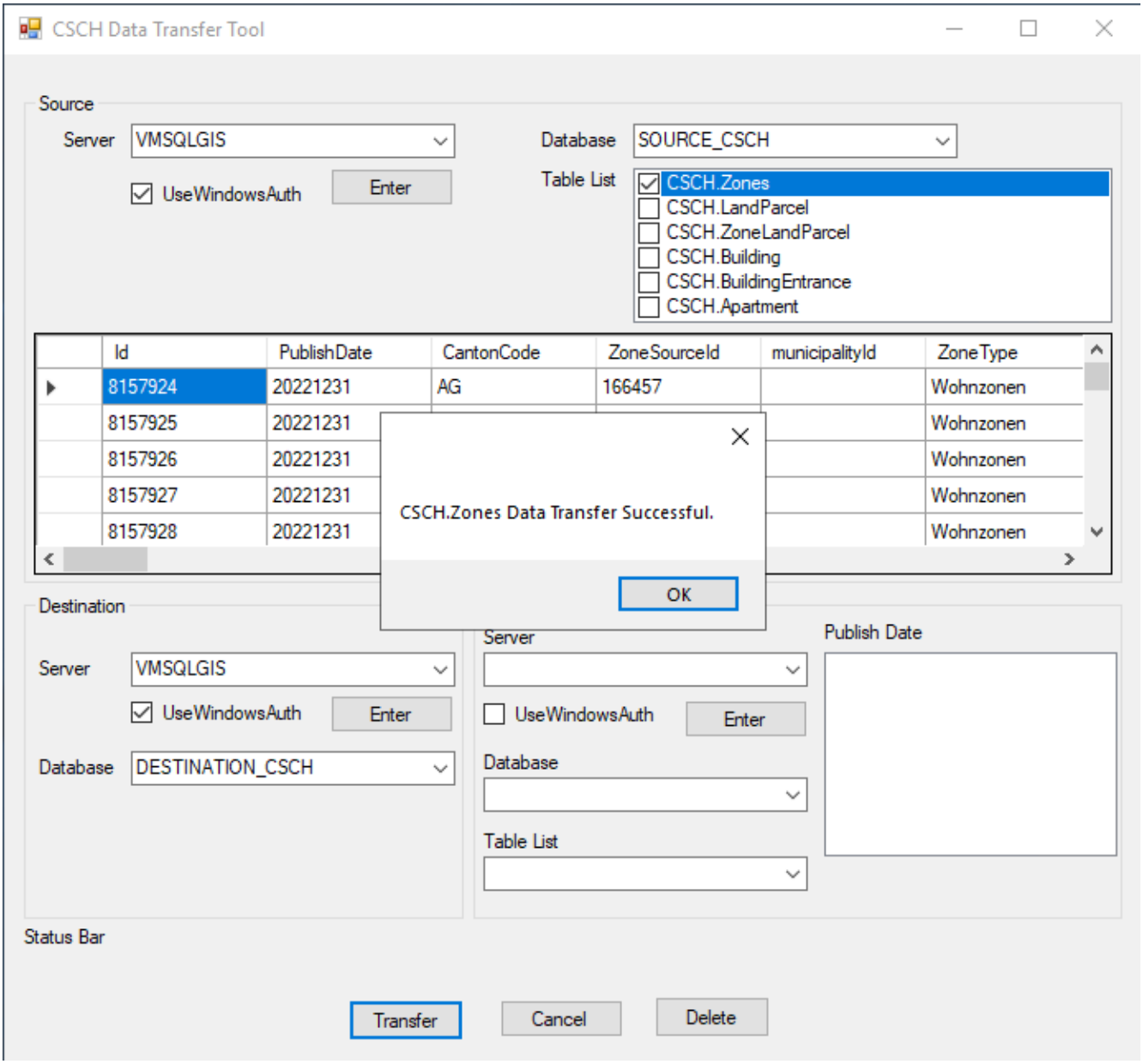


On Clicking the Transfer Button

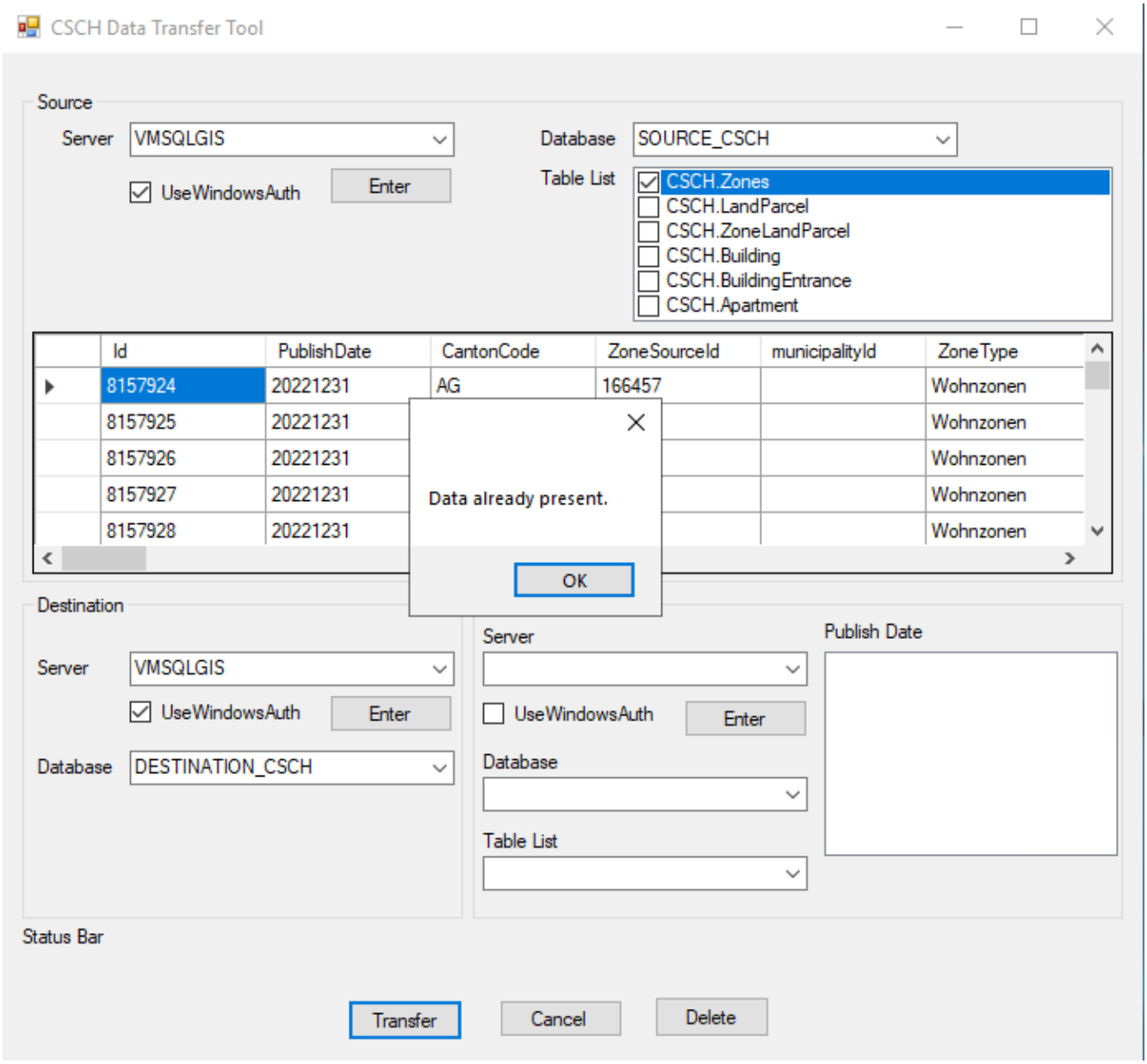
Note: Only the latest quarter data gets transferred if the source table has data from multiple tables.



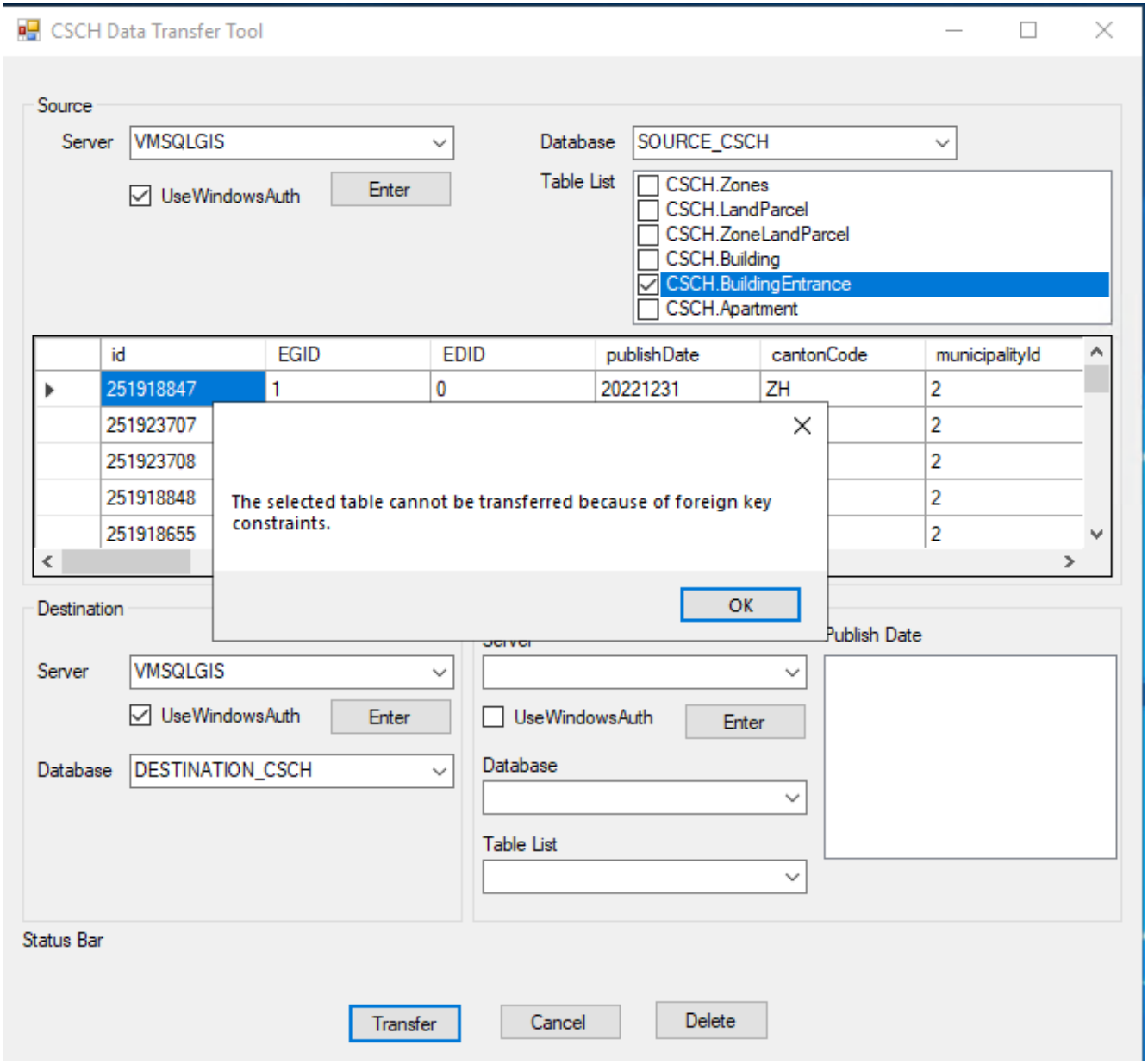
Successfully Data Transferred



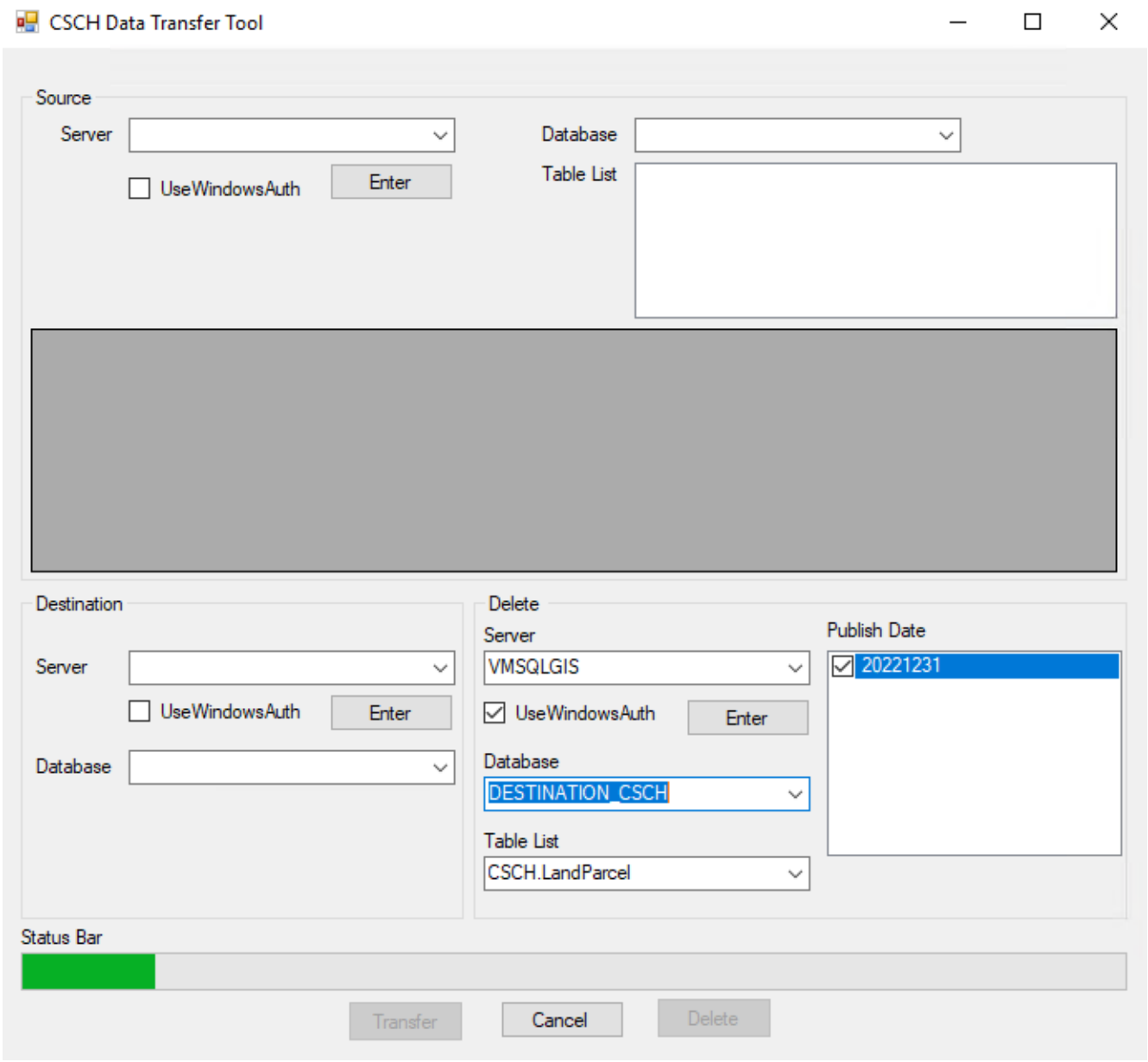
When attempting to transfer the same data



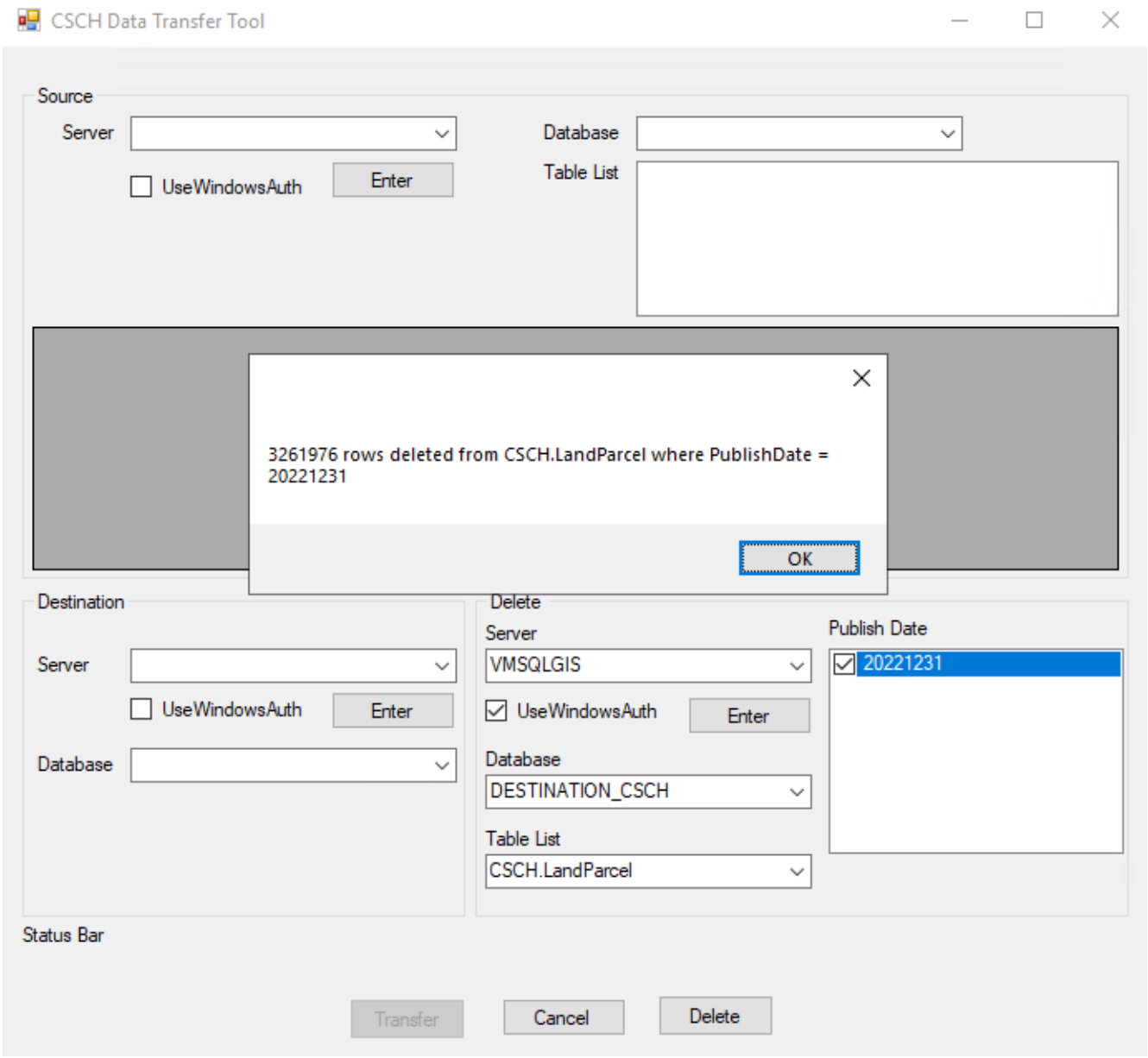
Attempting to Transfer Data to a table without filling the previous table



Deleting Data



Data Deletion Successful



Maintainence

Jira Issues

Jira to track different kinds of issues, which can represent anything from a software bug, to a project task, or a leave request form.
Issues are the building blocks of any Jira project. An issue could represent a story, a bug, a task, or another issue type in your project.

Maintaining repositories in Bitbucket using Git

Bitbucket is a Git-based version control repository solution by Atlassian. It provides central management of source code and collaborates on the same among the developer community.
With Bitbucket, it provides features to restrict access to the source code, project workflow, the pull request for code review and most importantly its integration with Jira for traceability.

IAZI Pedia documentation

IAZI Pedia is a management portal mostly used for documentation purposes. We have maintained documentation for Rent App Usage Dashboard which includes specification, analysis, design and implementation details. We have also maintained test cases reported by other developers in their iterations and have fixed if any bugs or issues have been reported.

INTEGRATION AND TESTING

Integration and Testing

- The Tool was tested to see if the Data transferred was correct. It was also tested for all possible exceptions/ crashes.
- Once the tool was tested, delete functionality was asked to be added.
- Once that was added a final test was done by 2 users.
- Then the app was released to be used.

CONCLUSION

Conclusion:

The main aim of this project was to transfer data of every quarter through the different development/testing cycle in a fast and efficient way. While take care of various exceptions/ error handling.
In Addition to that, the tool also has a delete functionality that allows the user to delete data from the required quarter.
The data transfer and delete functionality have been successfully implemented.
As a result of working on this project, I have gained a lot of knowledge about new technologies and teamwork.

My Learnings:

Microsoft SQL Server

Microsoft SQL Server Management Studio (SSMS) is an integrated environment to manage a SQL Server infrastructure. It provides a user interface and a group of tools with rich script editors that interact with SQL Server.

BitBucket

Bitbucket Cloud is a Git based code hosting and collaboration tool, built for teams. Bitbucket best-in-class Jira and Trello integrations are designed to bring the entire software team together to execute on a project.

Jira

Jira is a proprietary issue tracking product developed by Atlassian that allows bug tracking and agile project management.

Visual Studio IDE

The Visual Studio IDE is a creative launching pad that you can use to edit, debug, and build code, and then publish an app. IT includes compilers, code completion tools, graphical designers, and many more features to enhance the software development process.

C#

C# is a simple & powerful object-oriented programming language developed by Microsoft. C# can be used to create various types of applications, such as web, windows, console applications, or other types of applications using Visual studio.

Angular

Angular is a development platform, built on TypeScript. As a platform, Angular includes: A component-based framework for building scalable web applications. A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more.

Node.js

Node.js (Node) is an open source, cross-platform runtime environment for executing JavaScript code. Node is used extensively for server-side programming, making it possible for developers to use JavaScript for client-side and server-side code without needing to learn an additional language.

The technologies listed above are the ones I primarily used for my project.

FUTURE SCOPE

Future Scope:

Filters can be added to transfer particular data.

The tool could be used to transfer data from other databases

Update Feature can be added

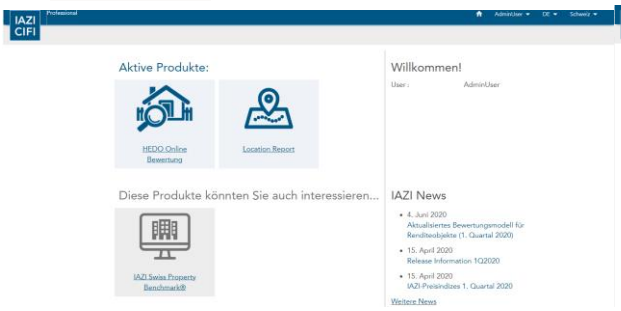
INTERNSHIP

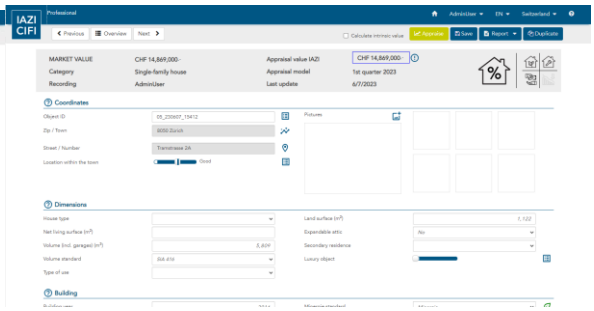
TIMELINE

Timeline:

January 2023

- Introduction to company and system training.
- Angular 14 tutorial learnings and practice.
- Introduction Webapphedo_dev database.
- Introduction Web.apphedo.



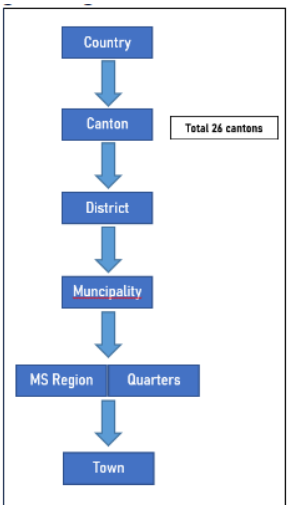


- Web.apphedo workspace setup.
- Webapphedolight workspace setup.
- Introduction Building Insurance.
- SQL server tutorial learnings and practice.

February

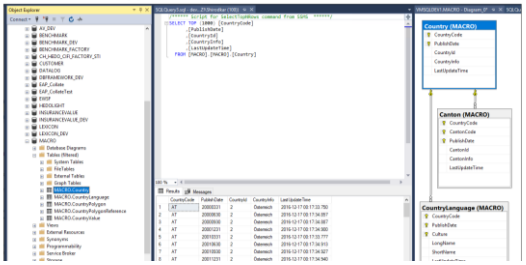
- Introduction to Macro DB

Macro Tree Structure



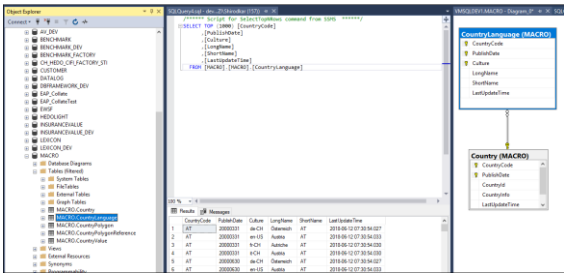
MACRO.Country

- Contains information about the country. Like, country code and id.
- This table doesn't depend on anything.
- But some objects like Canton and CountryLanguage are dependent on it for CountryCode and PublishDate.



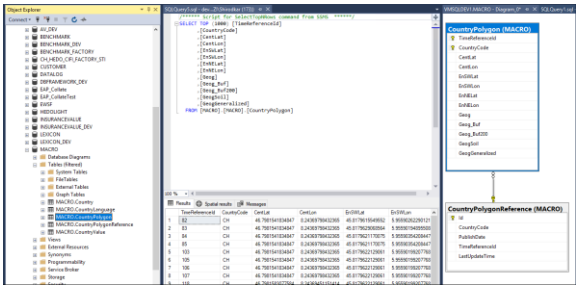
MACRO.CountryLanguage

- Contains languages of the country.
- This table is dependent on Country table for CountryCode and PublishDate.



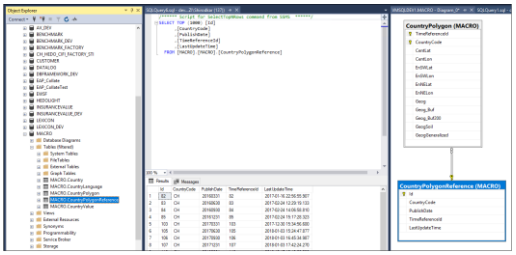
MACRO.CountryPolygon

- This table stores the geographical locations of the country in the form of polygon.
- It is dependent on CountryPolygonReference table for CountryCode and TimeReferenceId.



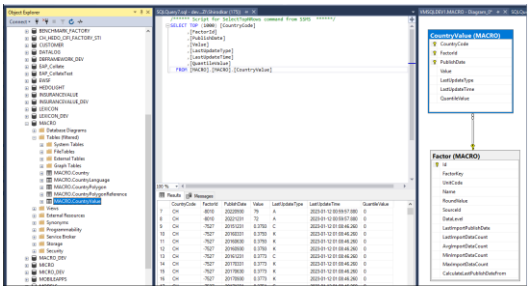
MACRO.CountryPolygonReference

- This table stores the TimeReferenceId of the country's polygon
- CountryPolygon table is dependent on this for TimeReferenceId.

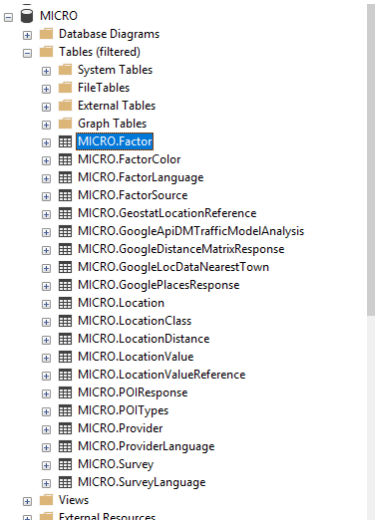


MACRO.CountryValue

- This table depends on Factor table for FactorId.
- Value of Factor can be retrieved from this table using FactorId.



Micro DB tables



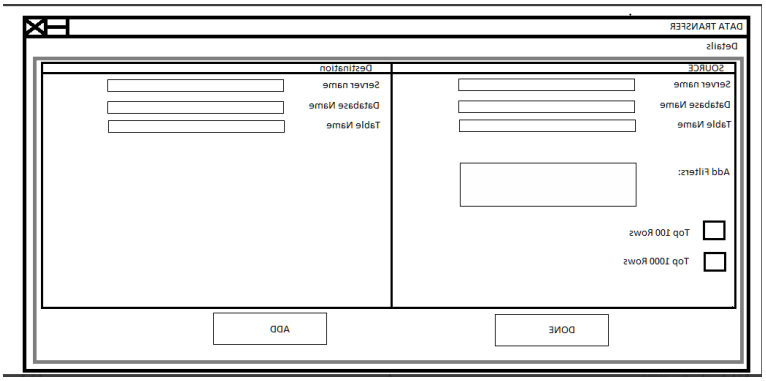
- Introduction to OCH process and workspace setup.
- RER datastreams.

- **Started implementation on RER CSCH deployment tool development.**

Database connection in c#

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <startup>
    <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.5" />
  </startup>
    <connectionStrings>
      <add name="SOURCE_CSCH" connectionString="Data Source=VMSQLGIS;Initial Catalog=SOURCE_CSCH;Integrated Security=True" providerName="System.Data.SqlClient"/>
    </connectionStrings>
</configuration>
```

UI Design.



- Fetching database names after entering server name.
- Fetching table names after selecting database.
- Displaying contents of the tables.
- Transfer data from Source to destination.
- ServerName Combobox.
- Database Name Combo box after taking server name.
- Displaying table list in checked list box after selection DB name.
- Displaying Data of table in Grid View.
- Use Sqlbulk copy function to transfer data.

March

- Updating tool adding new features, Bug fix.
- Adding keep Identity Constraint to Sqlbulkcopy.
- Transferring 100000 Rows of data (Testing).
- Transferring all rows from one table to another.
- Adding Foreign key constraint.
- Validations for Empty fields.
- Implementing Progress bar.
- Adding Anchors to UI.

- Working on pause and cancel buttons.
- Handling duplicate key exception when table is partially transferred.
- Fixing freeing UI issue.
- Accessing passwords protected sql servers.
- Adding Rollback function..
- RER Quarterly production process understanding.
- Introduction to CSCHNumeric/StringValueDistribution.

Data Transfer Process

- GWR Download Process.
- RER-710 - Authenticate to see issue details use this path to download.
- Steps to convert swisslat/lon to wgs84 lat/lon.
- Amtiche Vermessung Download Process and Import.
- Download meta file.
- Import into Mysql DB.
- Run Node.js App to download shapefiles.
- store in separately for every canton and extract zip.
- QGIS Merging and Reprojecting Shapefiles.
- Import into DB.

April

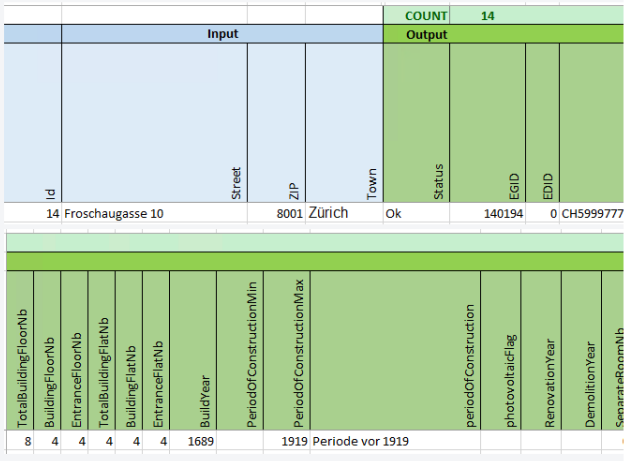
- Introduction to Macro data Production 20230331.
- CSCH Deployment to DEV and QC data.

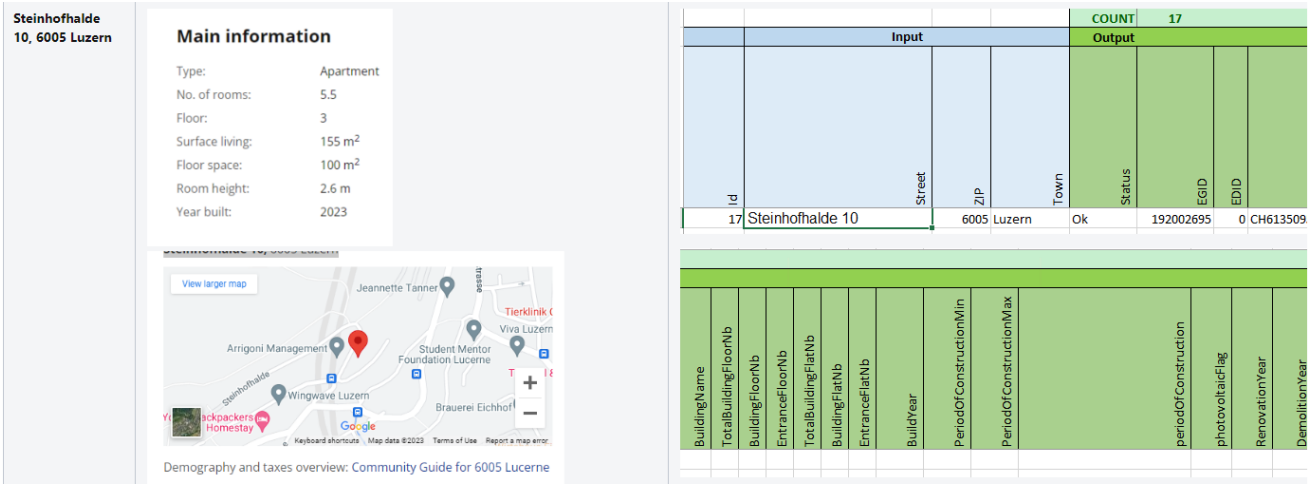
Test Iterations

Iteration 1

Item	Value
Test-User:	RUG
Test-Status	OPEN
Database-Server:	VMSQLDEV1
Database-Name:	RER
Login-User:	Gaude

DEV

Address	Homegate.ch	Excel Tool
Froschaugasse 10, 8001 Zürich	Main information Type: Apartment No. of rooms: 2 Floor: 2 Surface living: 35 m² Last refurbishment: 2018 Year built: 1689 Features and furnishings • Quiet neighborhood • Elevator • Old building 	



- CSCH Deployment to INT.
- Macro data sp changes and update.
- Delete older data from INT
- Introduction to CRAWL-388

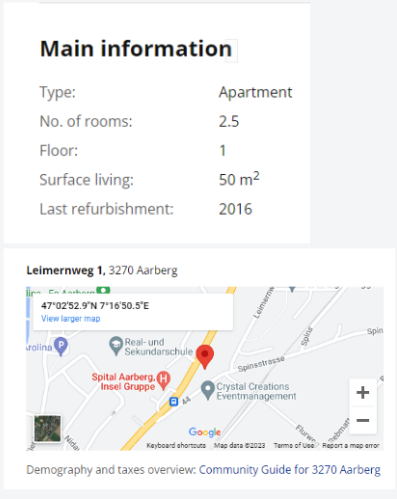
- QC data from INT.

Iteration 2

Item	Value
Test-User:	RUG
Test-Status:	OPEN
Database-Server:	VMSQLINT
Database-Name:	RER
Login-User:	Gaude

Address | **Homegate.ch** | **Excel Tool**

Leimernweg 1, 3270 Aarberg



Main information

Type:	Apartment
No. of rooms:	2.5
Floor:	1
Surface living:	50 m²
Last refurbishment:	2016

Leimernweg 1, 3270 Aarberg

Demography and taxes overview: Community Guide for 3270 Aarberg

Input | **Output**

Id	Street	ZIP	Town	Status	EGID	EDID	EGRID	
23	Rue Pierre-Ardieu 22	1630	Bulle	Ok	191263650	0	CH980810948720	1254
24	**Leimernweg 1**	3270	Aarberg	Ok	190134375	0	CH313552463178	1662

EntranceFlatNb	BuildYear	PeriodOfConstructionMin	PeriodOfConstructionMax	periodOfConstruction	photovoltaicFlag	RenovationYear	DemolitionYear	SeparateRoomNb	RoofTypeCode	SurfaceFootprint	UndevelopedArea	UndevelopedAreaShare	SurfaceUtilisationRate
12	2017	2015		Periode nach 2015				0	2	209.8	1517	0.7112	1.7376
14	2009	2006	2010	Periode von 2006 bis 2010				0	1	371.21	726	0.6618	1.3536

Lindenheimstr. 7, 6032 Emmen

Main information

Type:	Apartment
No. of rooms:	3.5
Floor:	6
Number of floors:	8
Surface living:	83 m²
Year built:	2020

Lindenheimstr. 7 / Lindegg 7, 6032 Emmen

Demography and taxes overview: Community Guide for 6032 Emmen

Input | **Output**

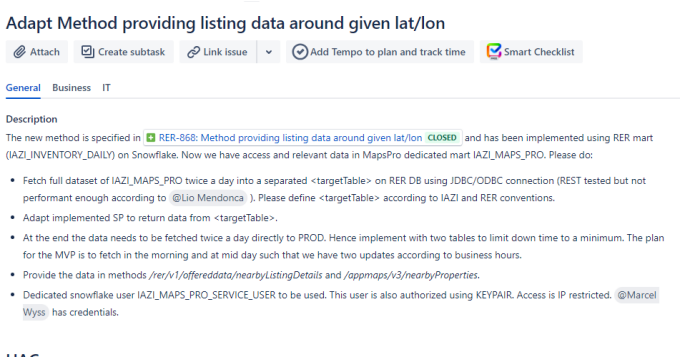
Id	Street	ZIP	Town	Status	EGID	EDID	EGRID	
27	**Lindenheimstr. 7**	6032	Emmen	Ok	191700231	0	CH243550801889	376

EntranceFlatNb	BuildYear	PeriodOfConstructionMin	PeriodOfConstructionMax	periodOfConstruction	photovoltaicFlag	RenovationYear	DemolitionYear	SeparateRoomNb	RoofTypeCode	SurfaceFootprint	UndevelopedArea	UndevelopedAreaShare	SurfaceUtilisationRate
30	2020	2015		Periode nach 2015				30		394			

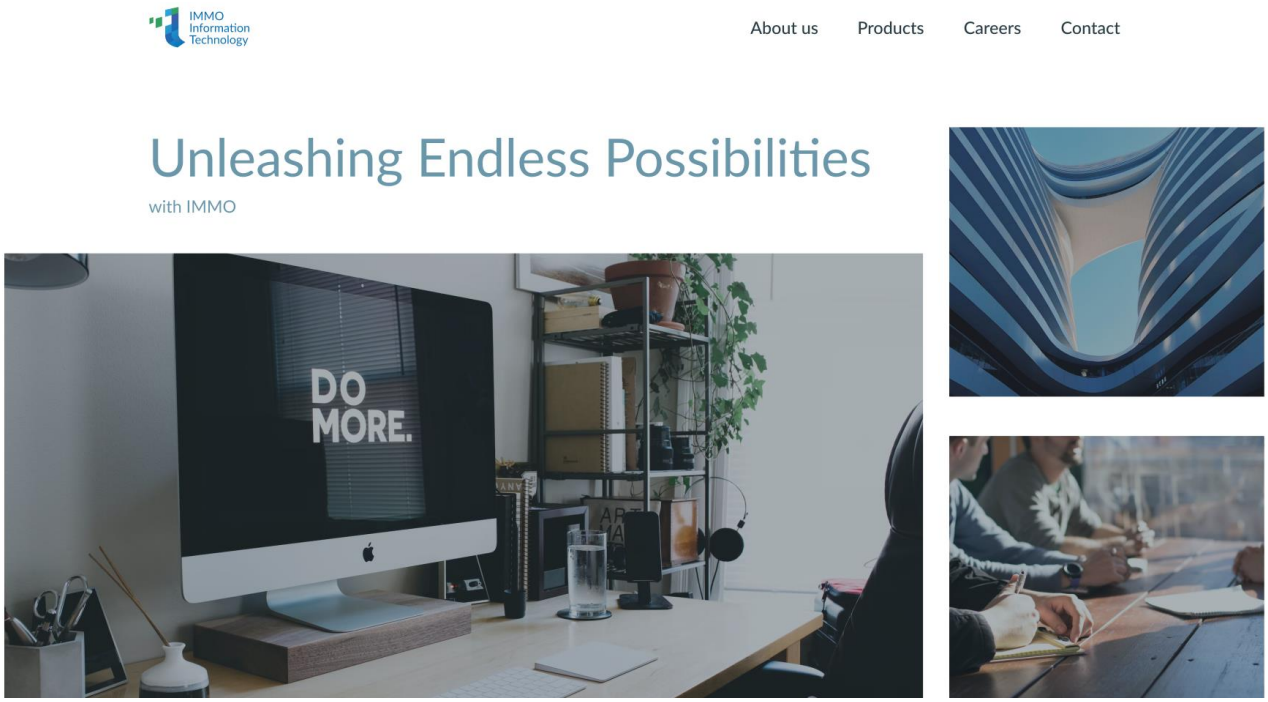
- Call with team for new IIT website.
- Research for new IIT website.
- CSCH Deployment tool: Getting System/master servers in combobox.

May

- Uploaded CSCH Deployment tool code on bitbucket.
- Worked on RER-891 jeera issue.



- Checked data in snowflake db.
- Created table to copy data from snowflake.
- Created sp to fetch data from snowflake.
- Checking IIT website wireframe suggested changes to design team.
- Co-ordinating with design team for IIT website.



- Created table and sp for address validation.
- Writing code for Address validation in node.js
- Created sp to transfer validated data in main table.
- created job schedulers for RER-891 issue.

June

- Worked on RER-877 CSCH AV.

Update missing Lat, Lon in BuildingEntrace using GWR API

Attach | Create subtask | Link issue | Add Tempo to plan and track time | Smart Checklist

General Business IT

Description

This is a quarterly task which has to be run after quarterly CSCH Import

Create python script to call the GWR api for missing geLatitude & geoLongitude in BuildingEntrance table
https://api3.geo.admin.ch/rest/services/api/SearchServer?features=ch.bfs.gebaeude_wohnungs_register&type=featuresearch&searchText='

Analyze the results and update the table

- Running script for building entrance AV.
- Documentation on RER-877 CSCH AV works.

1. Check the AV process for CSCH Production for 20230630
2. Open the below giving path in mssql
   a. W:\IT_Product - Service\Service.RER\2_Specification\RER-877 CSCH Production 20230331\20230309_AV Update.sql
   b. Note : Run 1 step at a time.

1. **Step 1**
   a. Make the columns null

```
UPDATE A
SET A.addressid=NULL,A.locationid=NULL,A.avGeoLatitude=NULL ,A.avGeoLongitude=NULL ,A.avResponseLevel=NULL,A.avResponseStatus=NULL
,A.avZip=NULL,A.avTown=NULL,A.avStreet=NULL,A.avType=NULL,A.ortId=NULL,A.avDistance=NULL,A.hashCode=NULL
FROM CSCH.BuildingEntrance  A
WHERE publishDate=20230331
```

2. **Step 2**
   a. Drop table TEMP.LocationAv is exists.
   b. copy data from av.location from vmsqldev1 to TEMP.LocationAv in vmsqlgis

```
--DROP TABLE TEMP.Locationav
SELECT * into TEMP.LocationAV FROM OPENQUERY(VMSQLDEV1,'select * From AV.AV.location where countrycode=''CH''')
```

3. **Step 3**

a. Updates table `A` by setting its columns to values from tables `B` and `L`, joining them based on matching conditions, and filtering the rows accordingly.

```
UPDATE A
SET A.addressid=B.id,
A.locationid=B.locationid,
A.avGeoLatitude=L.GeoLatitude ,
A.avGeoLongitude=L.GeoLongitude ,
A.avResponseLevel=addresslevel,
A.avResponseStatus=1 --address having correct value to our database like streetnumber town and zip
,A.avStreet=B.StreetAddress ,A.avZip=B.Zip,A.avTown=B.Town,A.avType=B.StreetType
,A.ortId=L.ortId
,A.hashCode=B.HashCode
 FROM CSCH.BuildingEntrance  A
LEFT  JOIN vmsqldev1.AV.AV.AddressPrimary B ON  A.zip=B.zip AND A.town=B.town AND A.streetAddress=B.streetAddress
LEFT JOIN TEMP.LocationAV  L ON L.id=B.LocationId
WHERE B.zip NOT  LIKE '%,%' AND A.publishDate=20230331 AND L.countrycode='CH'
```

4. **Step 4**

a. Updates table `A` by setting its columns based on joins with tables `S`, `B`, and `L`, and applies certain conditions for column values.

```
UPDATE A
SET A.addressid=S.addressprimaryid,
A.locationid=b.LocationId,A.avResponseLevel=B.AddressLevel
,A.avGeoLatitude=L.GeoLatitude , avGeoLongitude=L.GeoLongitude
,A.avStreet=B.StreetAddress ,A.avZip=B.Zip,A.avTown=B.Town,A.avType=B.StreetType
,A.ortId=L.ortId
,A.avResponseStatus=CASE WHEN S.AddressLevel<B.AddressLevel THEN 3 ELSE 1 END
FROM CSCH.BuildingEntrance   A
LEFT  JOIN vmsqldev1.AV.AV.addressSecondary S ON  A.zip=LEFT(S.zip,4) AND A.town=S.town AND A.streetAddress=S.streetAddress AND S.zip NOT  LIKE '%,%'
LEFT  JOIN vmsqldev1.AV.AV.addressprimary B ON  S.AddressPrimaryId=B.id AND B.zip NOT  LIKE '%,%'
LEFT JOIN TEMP.LocationAV  L ON L.id=B.LocationId
WHERE A.locationid IS NULL  AND A.publishDate=20230331
```

5. **Step 5**

a. CONNECT TO VMSQLDEV1 server AV_DATA db.

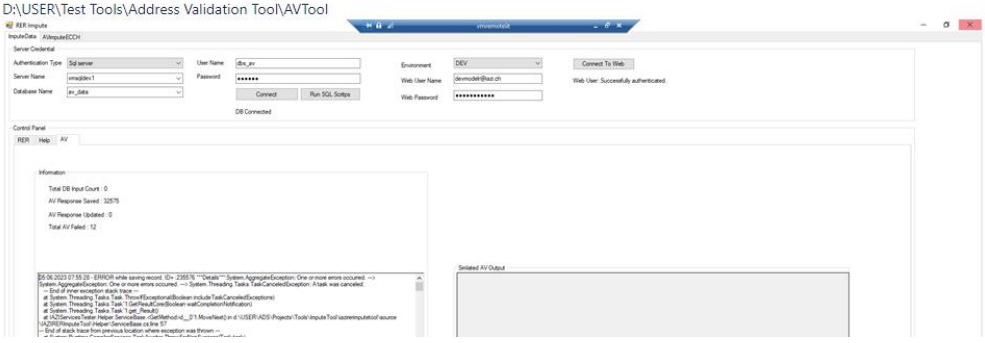
b. Truncate the `[VALIDATE].AVResponse` table, delete records from `validate.avrequest`, and insert new records into `[VALIDATE].AVRequest` by selecting data from an open query.

```
TRUNCATE TABLE [VALIDATE].AVResponse
DELETE FROM validate.avrequest
INSERT INTO [VALIDATE].AVRequest
(
    COUNTRYCODE,
    ZIP,
    TOWN,
    STREET
)
SELECT 'CH', zip, town, Street
FROM OPENQUERY(VMSQLGIS,'select zip,town,streetaddress street  FROM RER_DEV.CSCH.BuildingEntrance
where  avResponseLevel is null and PublishDate =20230331')
GROUP BY zip, town, Street
```

6. **Step 6**

a. Use the tool On VMREMOTEIIT to Validate data

b. D:\USER\Test Tools\Address Validation Tool\AVTool



7. **Step 7**

   a. Import data from vmsqldev1 server AVResponse to vmsqlgis server [FACTORYCSCH].[BuidlingEntranceAV20230331]

```
SELECT *INTO  [FACTORYCSCH].[BuidlingEntranceAV20230331]
FROM OPENQUERY(VMSQLDEV1, 'select  R1.street Bstreet ,R1.zip BZIP,R1.Town BTOWN ,R2.* FROM  AV_DATA.VALIDATE.AVRequests R1
INNER JOIN AV_DATA.VALIDATE.AVResponse R2
ON R2.AVRequestId = R1.Id ')
```

8. **Step 8**

   a. To updates the `CSCH.BuildingEntrance` table by matching rows from the `[FACTORYCSCH].[BuidlingEntranceAV20230331_01]` table based on zip, town, and street address, and sets the corresponding columns in `BE` with values from `AV`.

```
UPDATE BE SET
    BE.locationId= AV.locationId,
    BE.addressId=AV.addressId,
    BE.avGeoLatitude= AV.lat,
    BE.avGeoLongitude= AV.lon,
    BE.ortId= AV.ortId,
    BE.avResponseLevel= AV.level,
    BE.avResponseStatus= AV.validationStatus,
    BE.avGeoLocation= geography::Point(ISNULL(AV.lat,0), ISNULL(AV.lon,0), 4326),
    BE.avZip = av.zip,
    BE.avTown = av.town,
    BE.avStreet = street,
    BE.hashCode= hashCode
    FROM CSCH.BuildingEntrance BE
    INNER JOIN [FACTORYCSCH].[BuidlingEntranceAV20230331_01] AV ON CAST(AV.bzip AS INT) = BE.zip  AND CAST(AV.btown AS NVARCHAR(100)) = BE.town
    AND CAST (AV.bstreet AS NVARCHAR(200)) = BE.streetAddress
    WHERE BE.PublishDate =20230331 AND BE.avResponseLevel IS NULL --AND av.lon IS NOT NULL
```

9. **Step 9**

   a. To calculates and updates the avdistance between geographical coordinates in the `CSCH.BuildingEntrance` table for a specific date.

```
UPDATE CSCH.BuildingEntrance
SET avDistance= 111120*SQRT(POWER((GeoLatitude-AVGeoLatitude),2)+POWER((COS((Geolatitude+AVGeoLatitude)*PI()/360)*(Geolongitude-AVGeoLongitude)),2))
WHERE publishDate=20230331 AND avDistance IS NULL
```

- Worked on OCH - Betterhomes data import

OCH - Betterhomes data import

Attach | Create subtask | Link issue | Add Tempo to plan and track time | Smart Checklist

General | Business | IT

Description

Betterhomes delivers data via CSV files which are then imported by Sreekant into SESQLP01\MOD2008R2.REPMHEDOEU.

Once Sreekanth imports the data we need to execute the process to import data into RER

Steps 1

here data are transpose,cleaned and stored it.

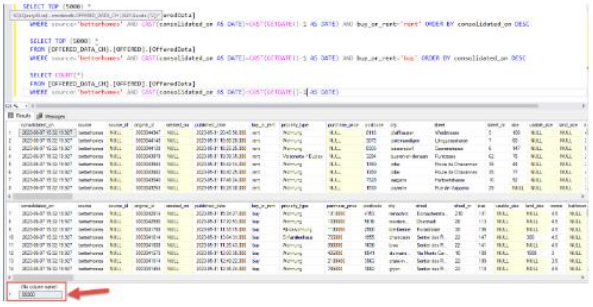
SERVER	VMSQLMODELS
DATABASE	REPMHEDOEU
SP	EXEC dbo.spr_BetterhomesDataImmoParamsTransposeBatch
TABLE	dbo.BetterhomesDataImmoParamsTranspose
SP	EXEC dbo.spr_BetterhomesDataImmoParamsClean
TABLE	dbo.BetterhomesDataImmoParamsCleans

Steps 2

later its stored in final table in server and DB given below from VMSQLMODELS DB → REPMHEDOEU

SERVER	SESQLP01\MOD2008R2
DATABASE	OFFERD_DATA_CH
SP	EXEC dbo.BetterhomesFillintoOfferedData
TABLE	OFFERED.OfferedData
SOURCE	betterhomes

2. Run the Select query to check the data.



- Working on Offered data AV.

BIBLIOGRAPHY

BIBLIOGRAPHY:

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4. **C#:** https://learn.microsoft.com/en-us/dotnet/csharp/
5. **Jira:** https://www.atlassian.com/software/jira/
6. **BitBucket:** https://bitbucket.org
7. **Node.js:** https://nodejs.org/en