

LSMW : How to Upload Master Data by using a Batch Input Recording IN SAP

Legacy System Migration Workbench

Use

The Legacy System Migration Workbench (LSMW) is a tool that supports data migration from legacy systems (non-SAP systems) to SAP systems. It is a cross-platform component of the SAP system.

Implementation Considerations

Do not use the LSMW before the SAP system has been installed and application customizing has been completed.

Integration

The LSMW is a cross-application component (CA) of the SAP system.

The tool has interfaces with the Data Transfer Center and with batch input and direct input processing as well as standard interfaces BAPI and IDoc.

The Legacy System Migration Workbench is called using **transaction LSMW**.

Features

Instead of individual tables or field contents, the tool migrates user-defined datasets (known as objects), which are combined according to business criteria. In addition to using standard import techniques, you can also generate user-specific objects. For more information, see [Recordings](#).

The LSMW comprises the following **main functions**:

1. Read data (legacy data in spreadsheet tables and/or sequential files). You can use any combination of PC and server files.
2. Convert data (from the source into the target format).
3. Import data (to the database used by the SAP application).

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The following **additional functions** are available:

- [Import techniques](#): Apart from standard batch/direct input and recordings, BAPI and IDocs are available as additional import methods.
- [Global Functions](#): You can call certain functions from an ABAP code location of your choice, and so influence the procedure used to migrate your data.
- [Editor Function](#): The source code for a target field can be checked. You can insert source fields, global variables, and global functions as well as use the Pretty Printer.
- [Action Log](#): All the actions associated with an object are stored in an *action log*.
- The field assignments for all parts of a project can be downloaded/uploaded in one step.
- [Unassigned Source Fields](#): Neglected data can be displayed.
- [Source Fields](#): You can create source fields by copying them from other sources.
[Copy](#).
- [Processing Times](#): The ABAP code can be added to at different times.
- [Authorizations](#): The LSM Workbench is independent from the client. Access to the LSMW is controlled by authorizations. The assignment of these authorizations is basically independent from the client. The *Display, Execute, Change*, and *Administration* functions can be controlled by assigning authorizations.
- [Documentation](#): User-specific documentation can be stored at different levels and formatted into an overall documentation by pressing the appropriate button.

Constraints

Restrictions The LSMW supports a one-time transfer of data (initial data load) and also offers a restricted support of permanent interfaces. Thus, a periodic transfer of data is possible. The LSMW, however, does not include any functions for monitoring of permanent interfaces. The tool does not support any data export interfaces (outbound interfaces).

More Information

More information about data conversion with the LSMW:

- [Conceptional Preprocessing](#)
- [Authorizations](#)
- [Exporting a Project](#)

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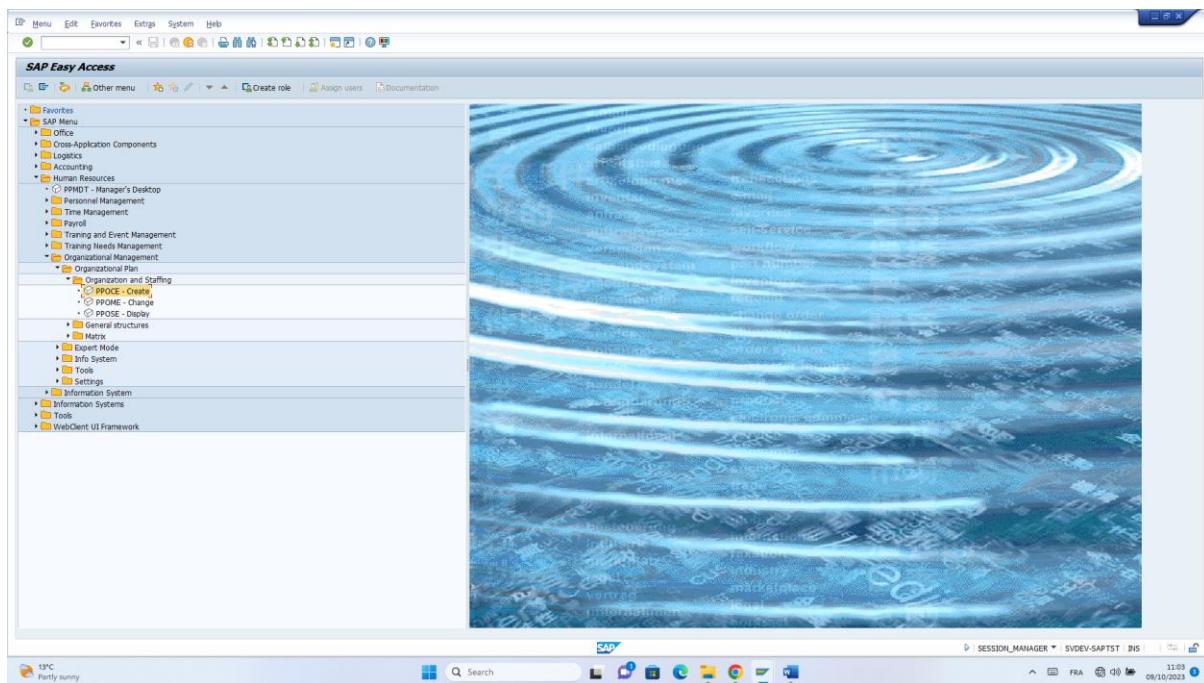
- [Importing a Project](#)
- [Migration of Data with LSMW](#)
- [Troubleshooting](#)

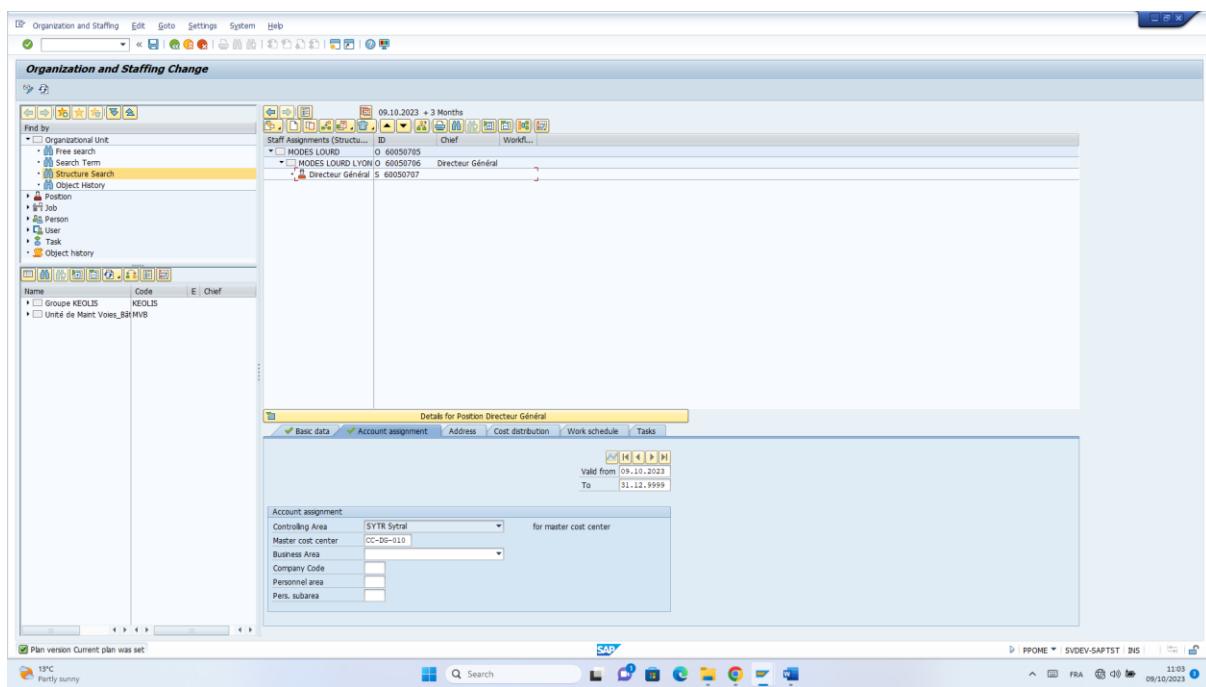
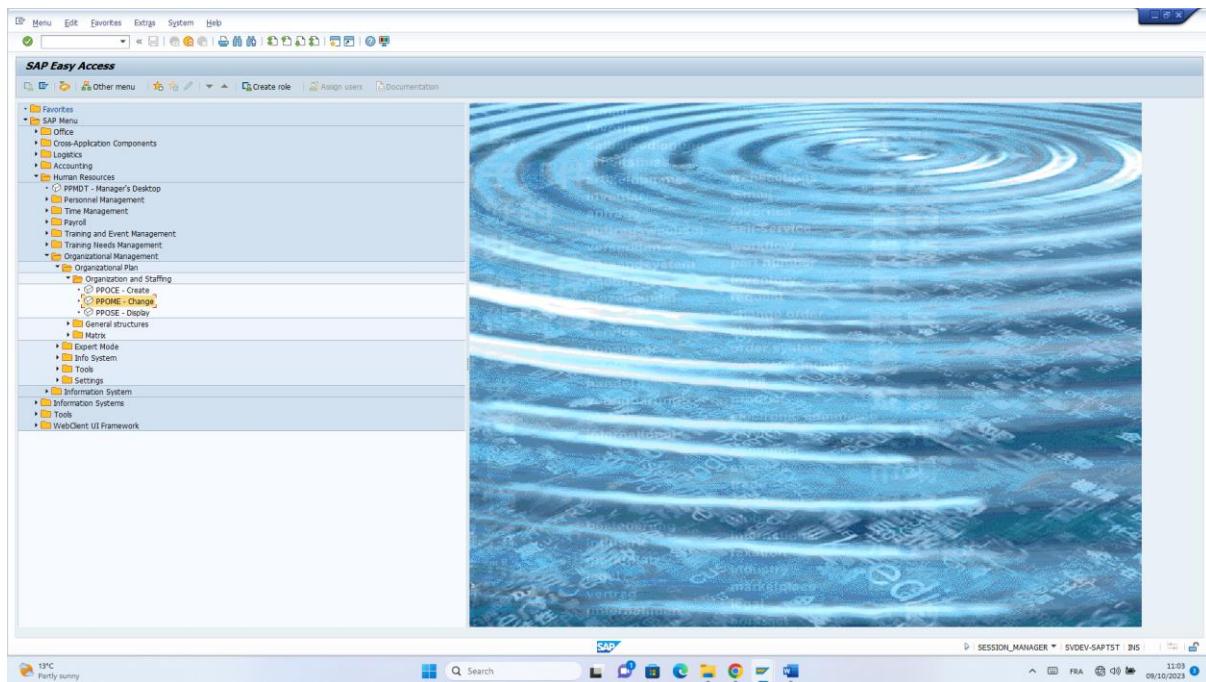
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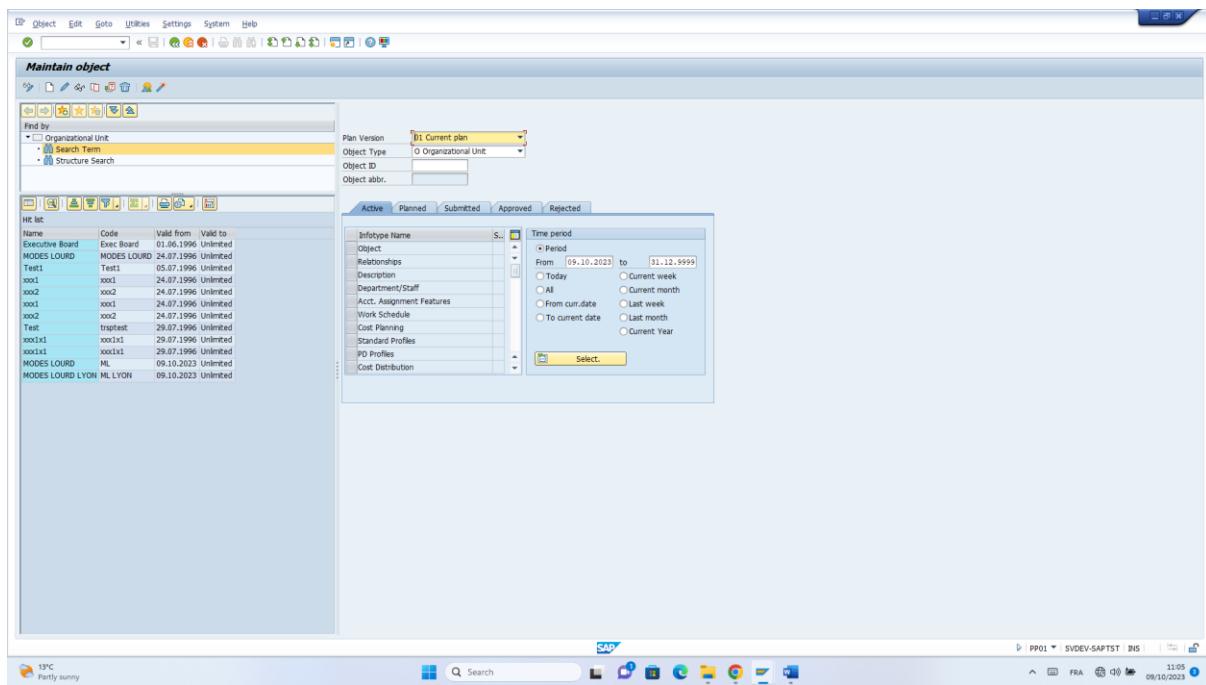
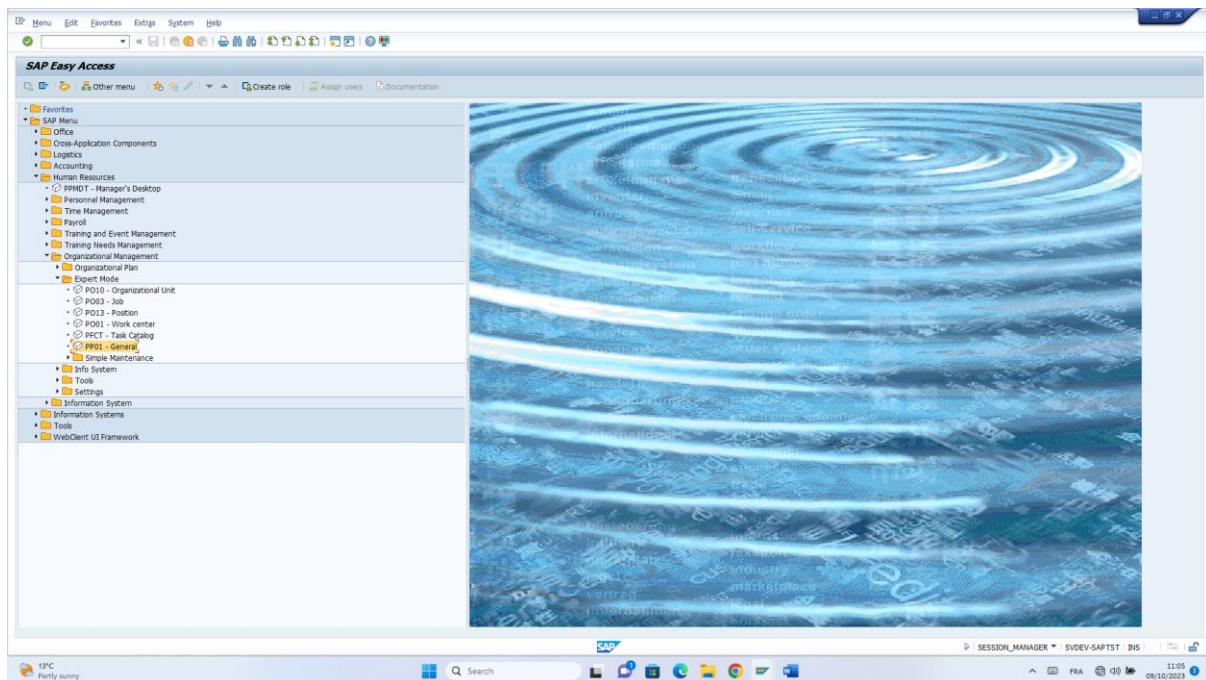
Introduction

The Legacy System Migration Workbench (LSMW) is a instrument to transmit data from legacy systems into an SAP System. LSMW supports a step-by-step process; if one step is executed and saved then next step automatically follows. Apart from formation of project/ subproject/ object and recording, there are 14 basic steps included in LSMW. This article explains clearly about each and every step.

Example, I am showing how to upload Organization and Staffing (Human Resources) > PPOME - Change



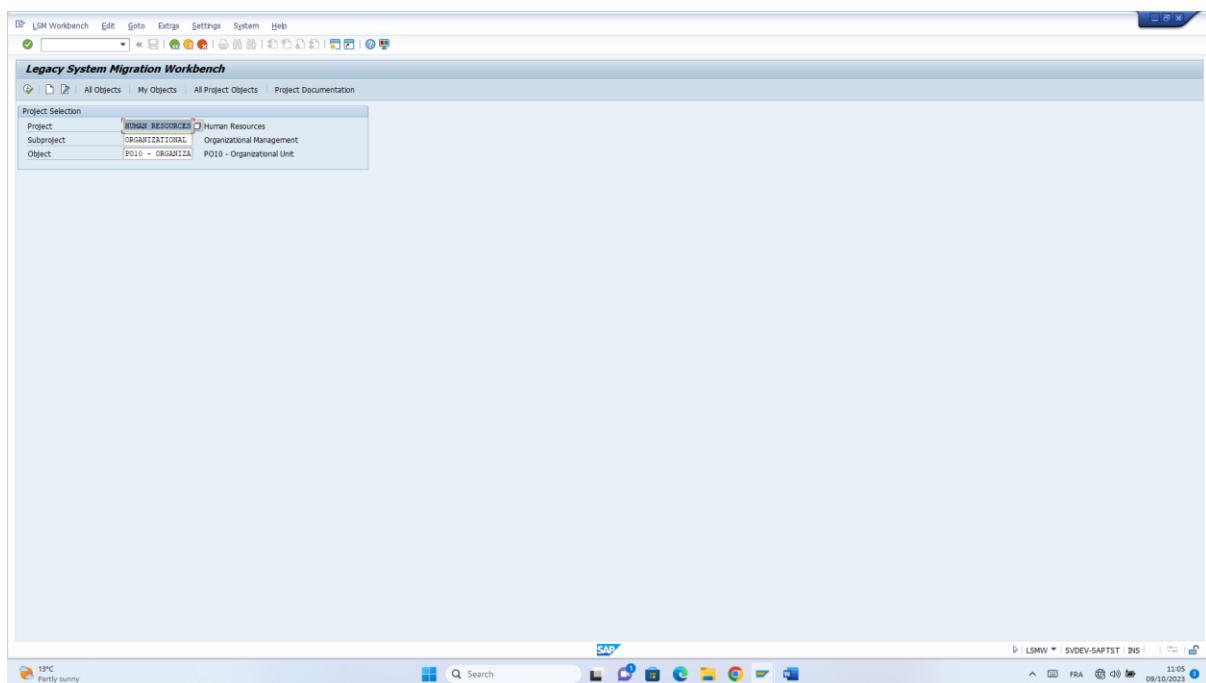
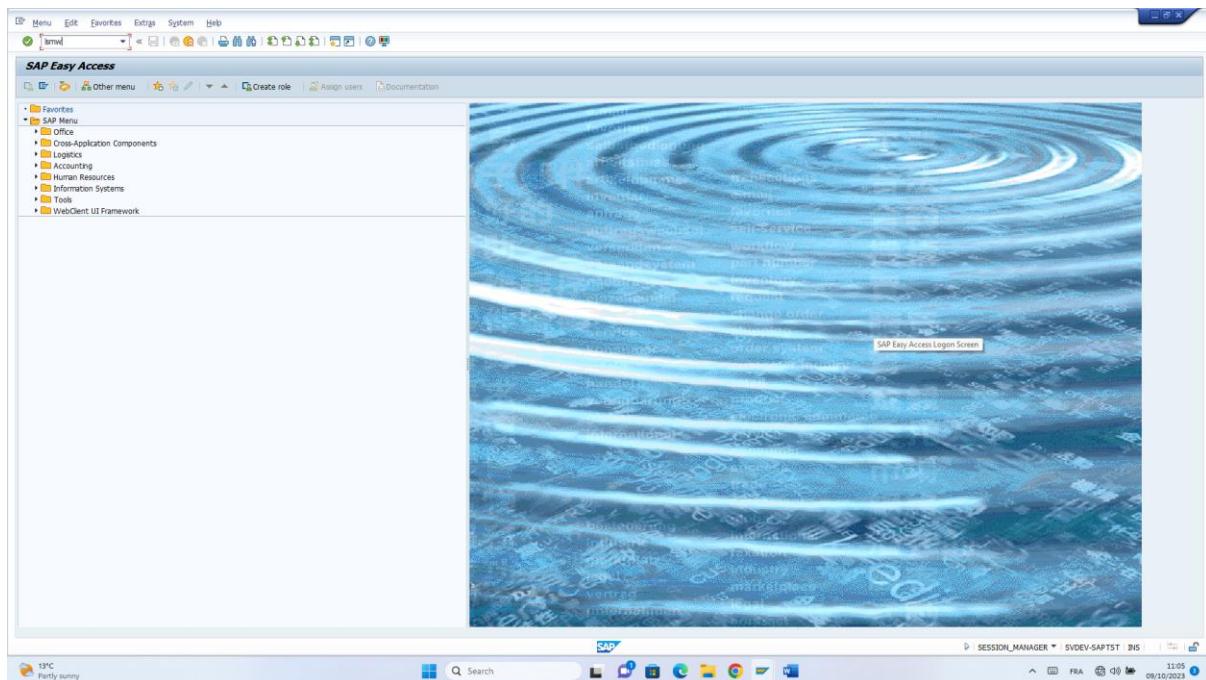


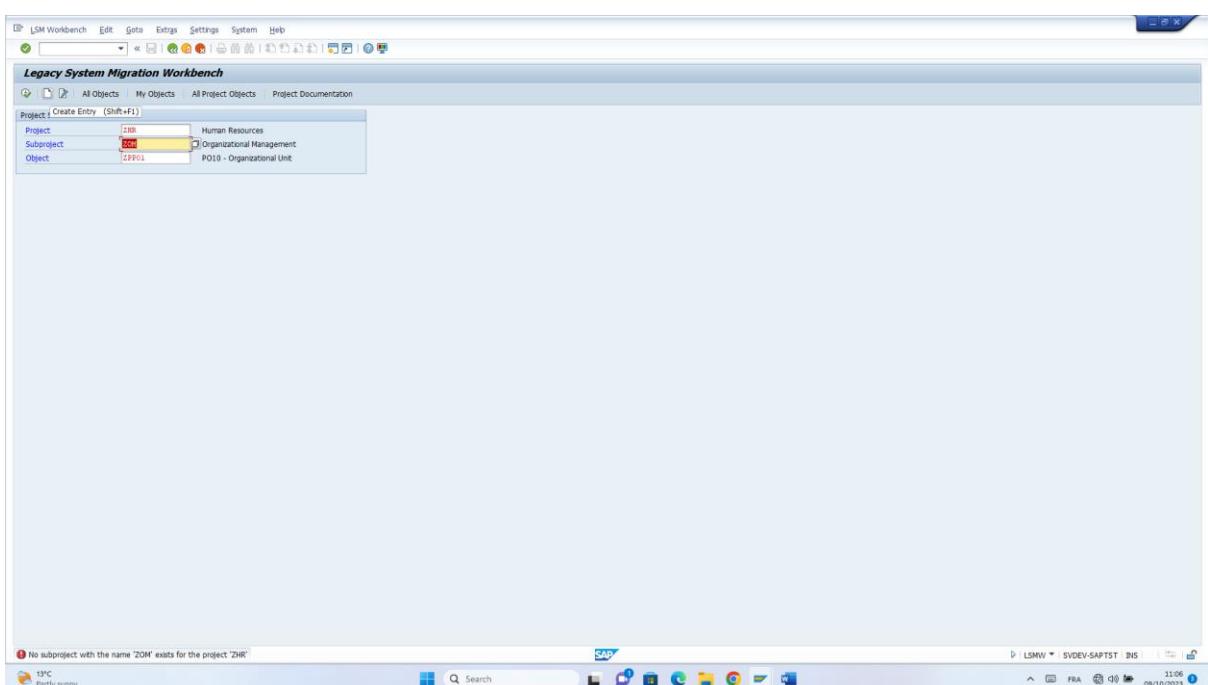
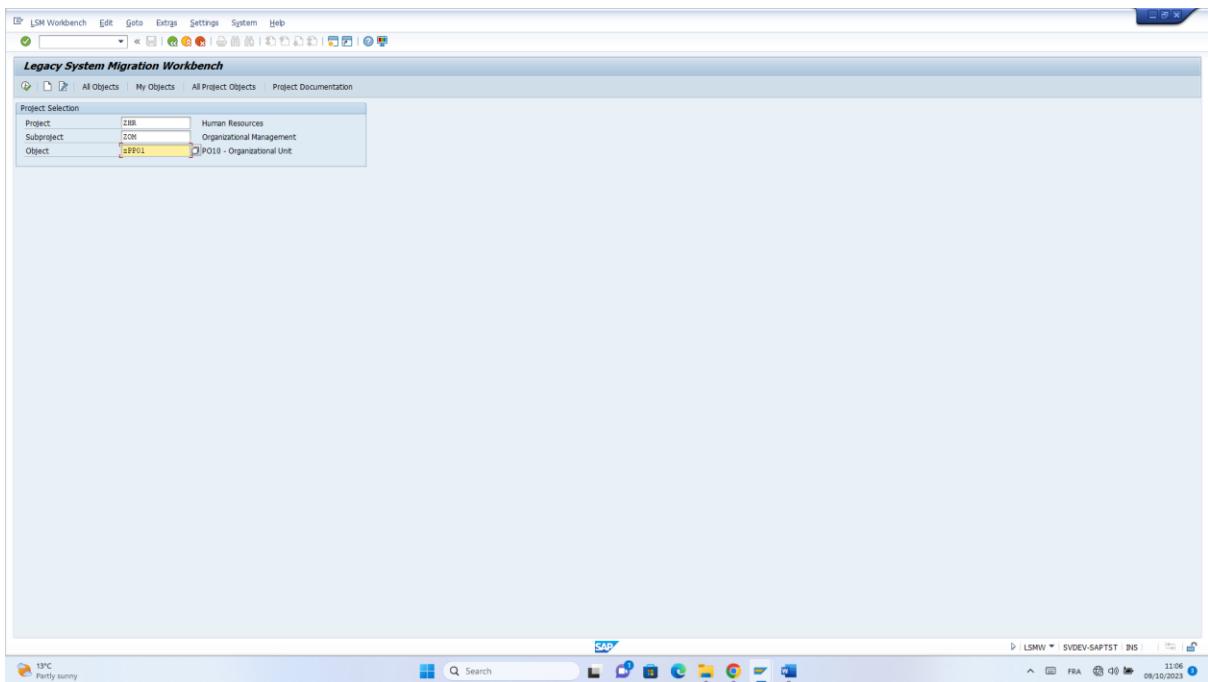


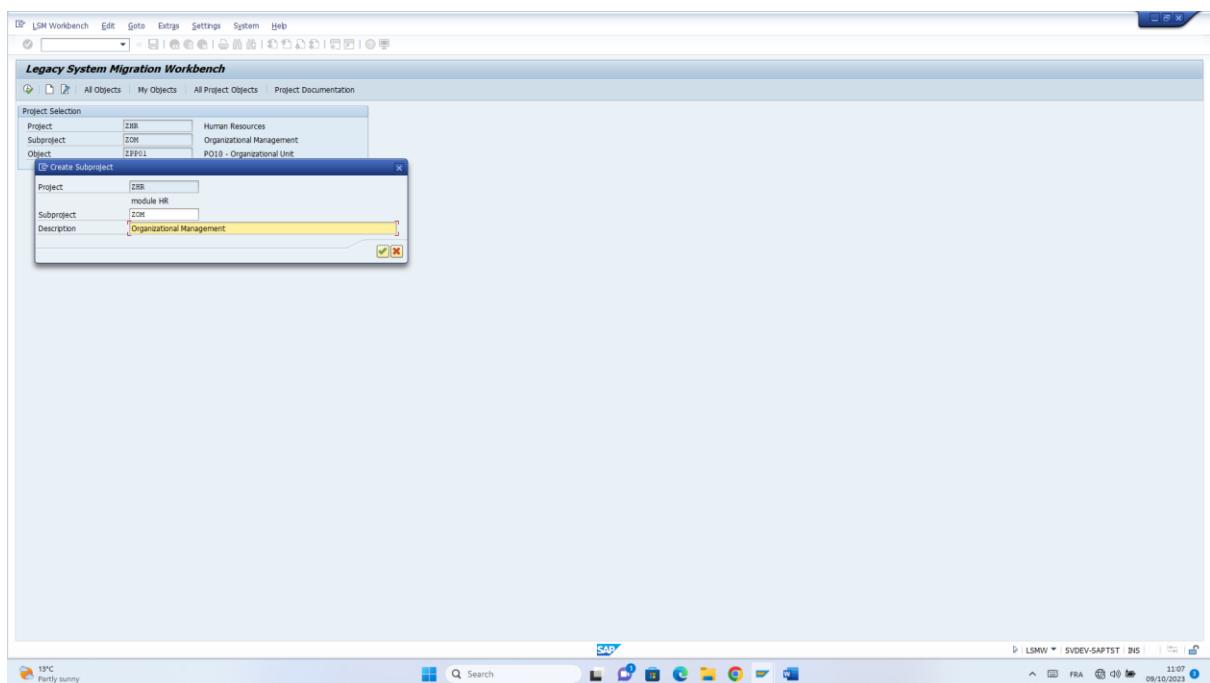
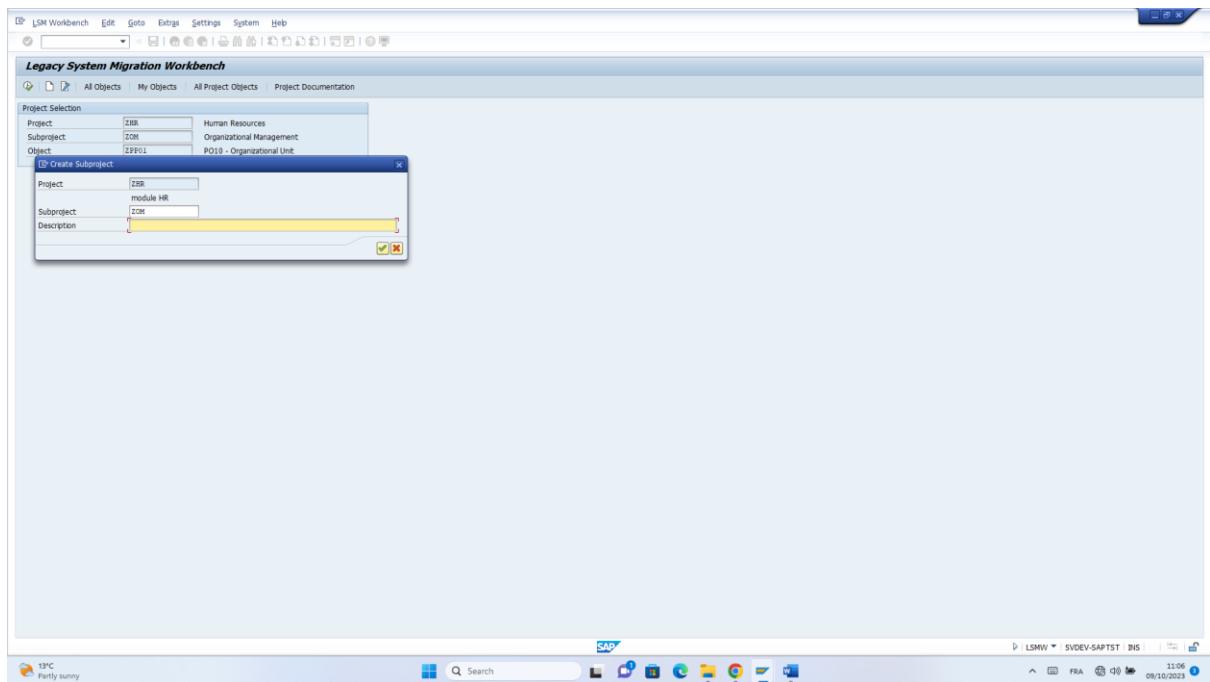
Creating Project/ Subproject and Object:

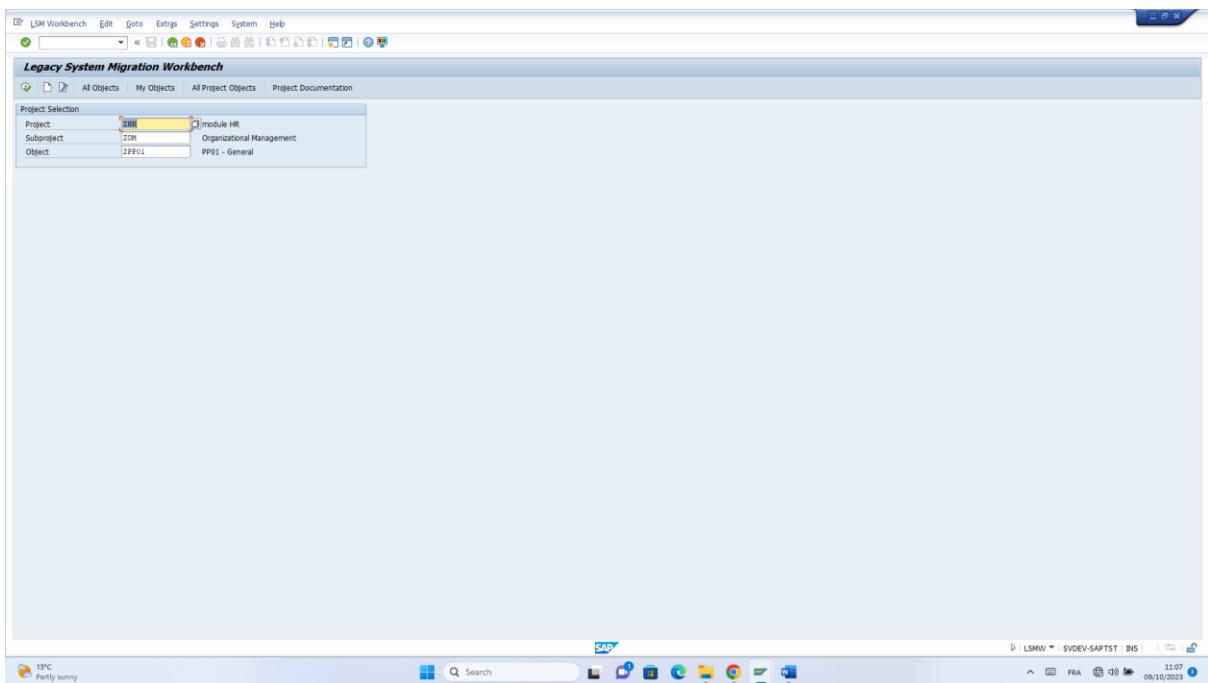
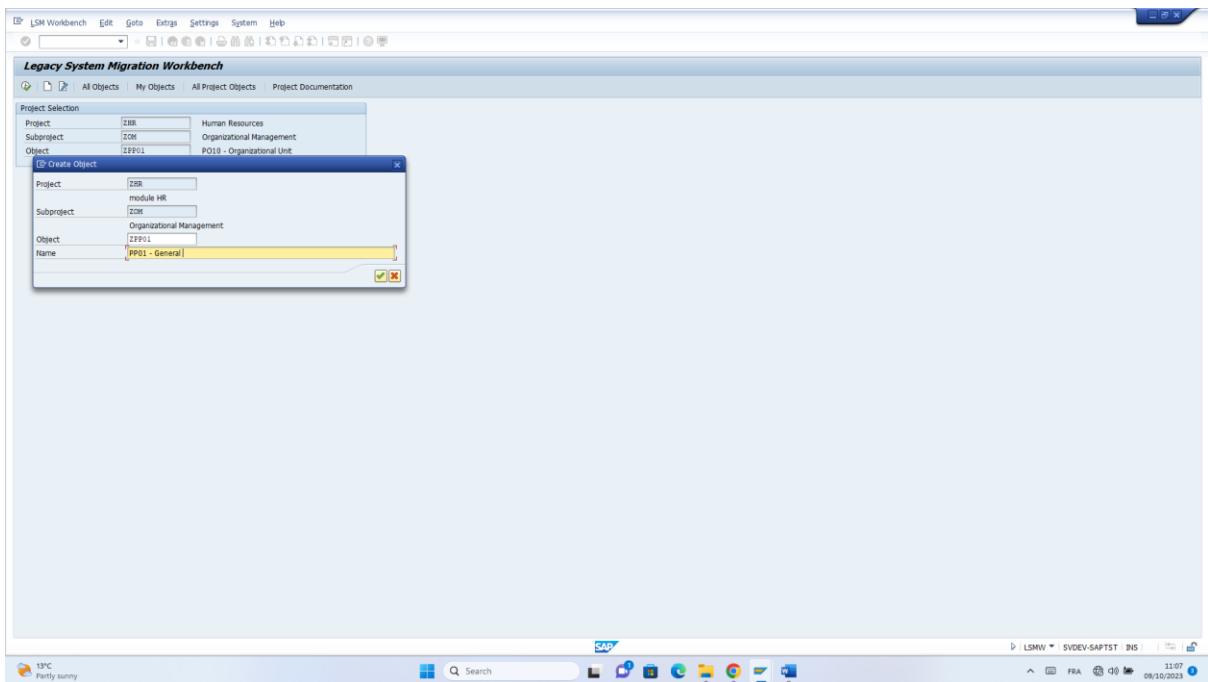
Go to LSMW

Give the name of the Project, Subproject and Object as desired



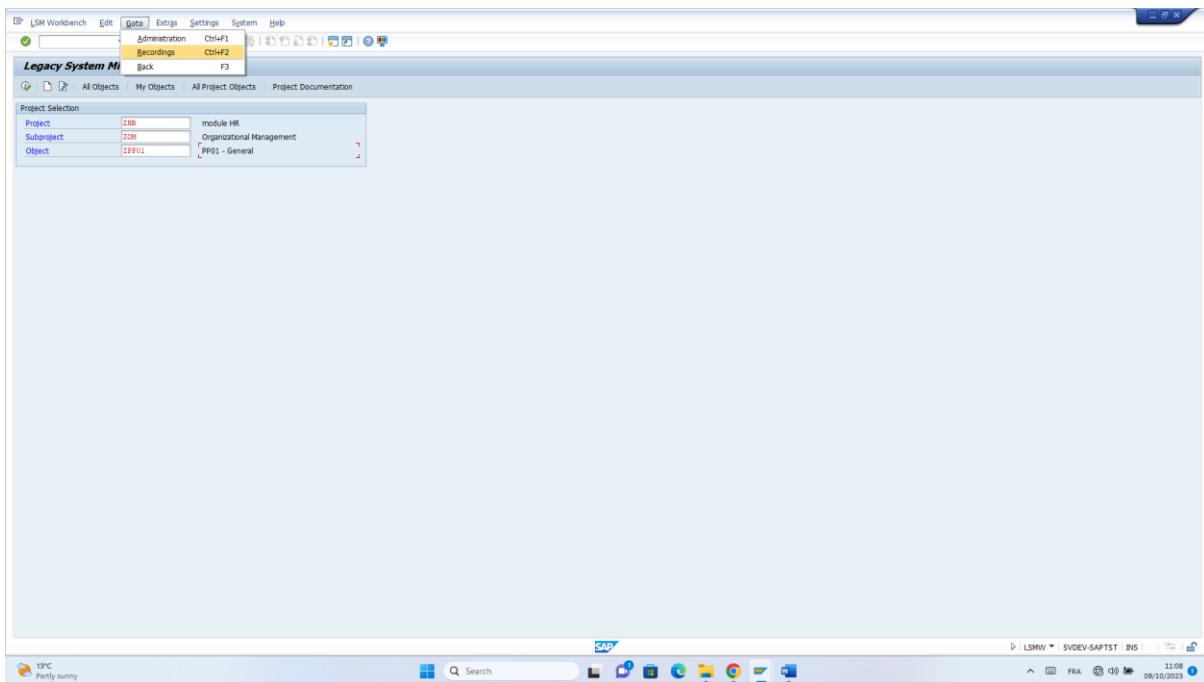




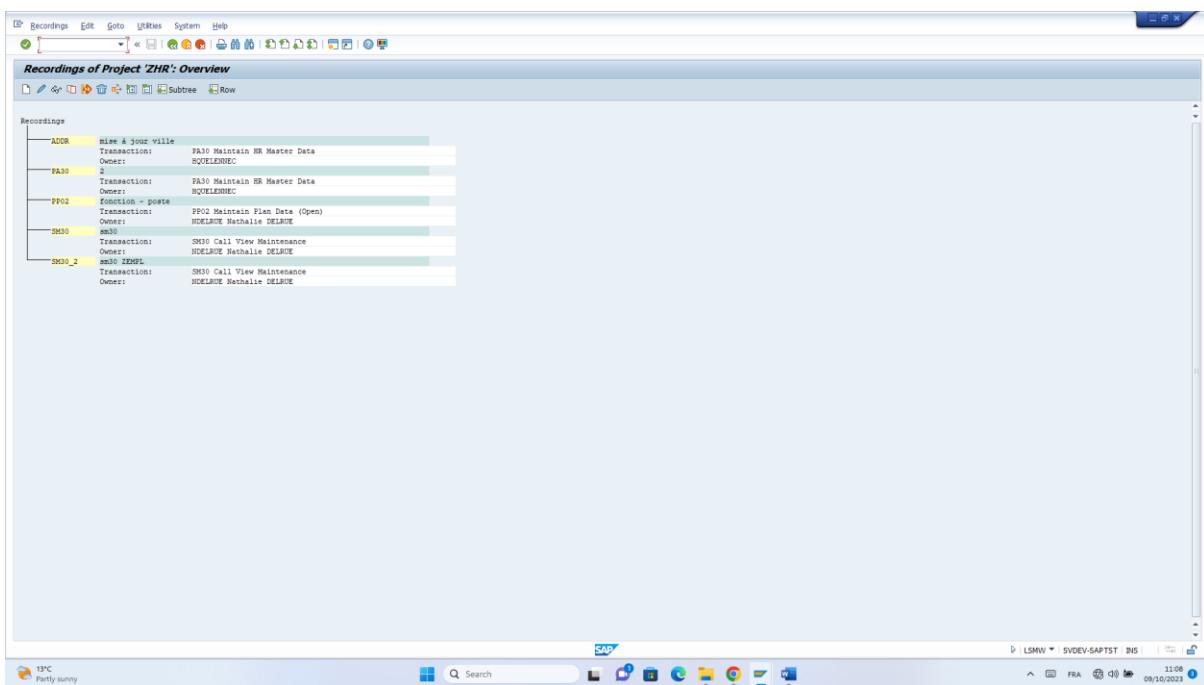


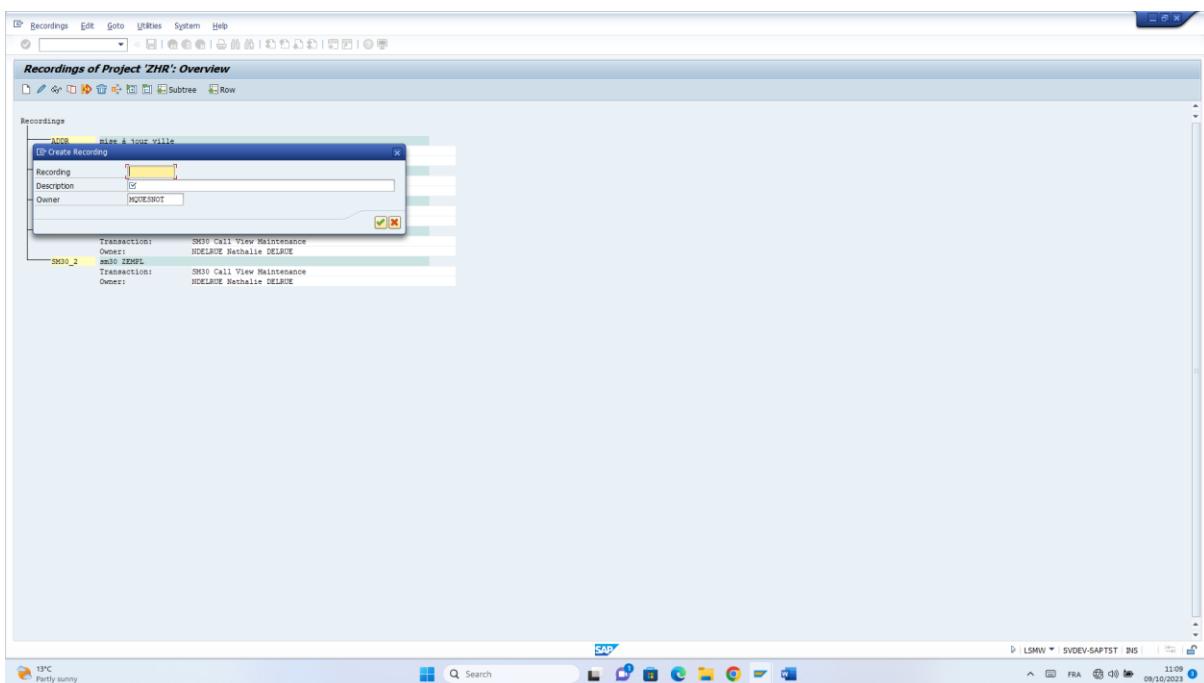
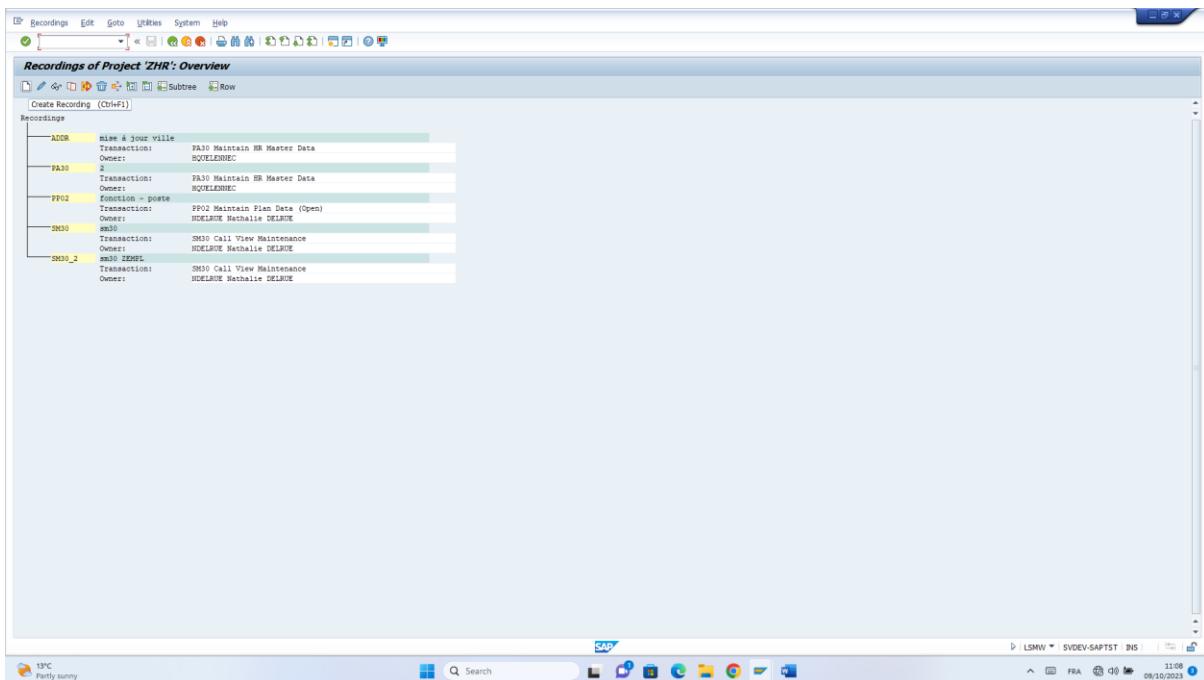
Recording:

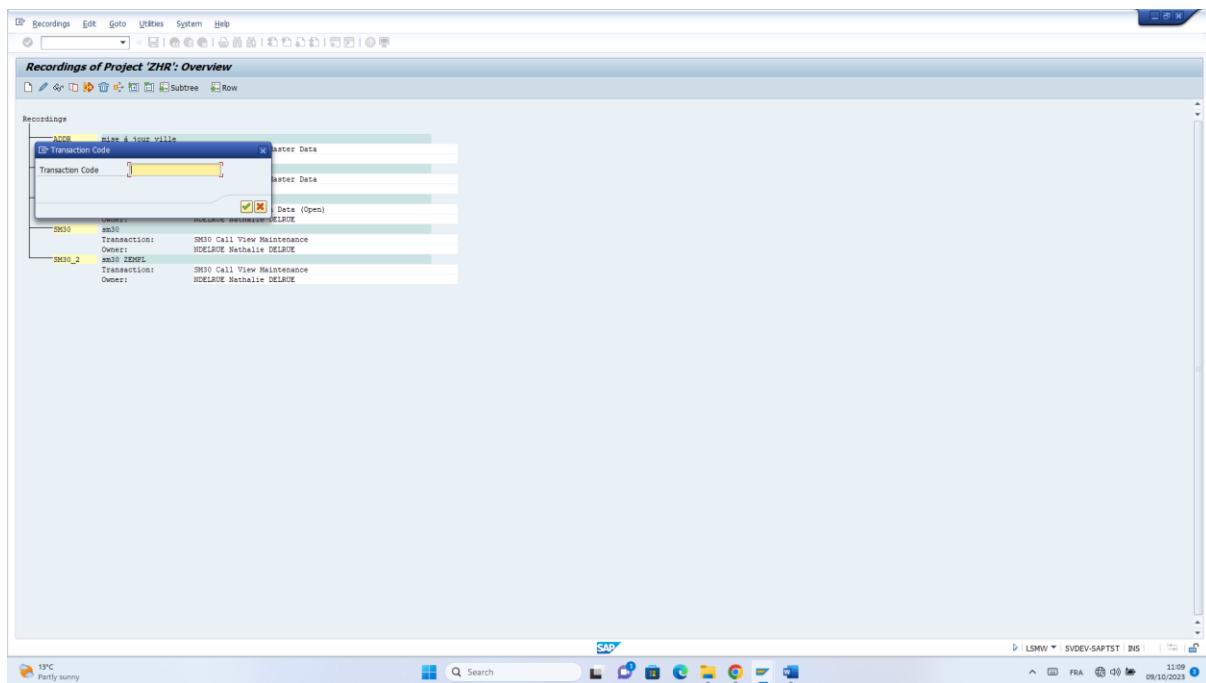
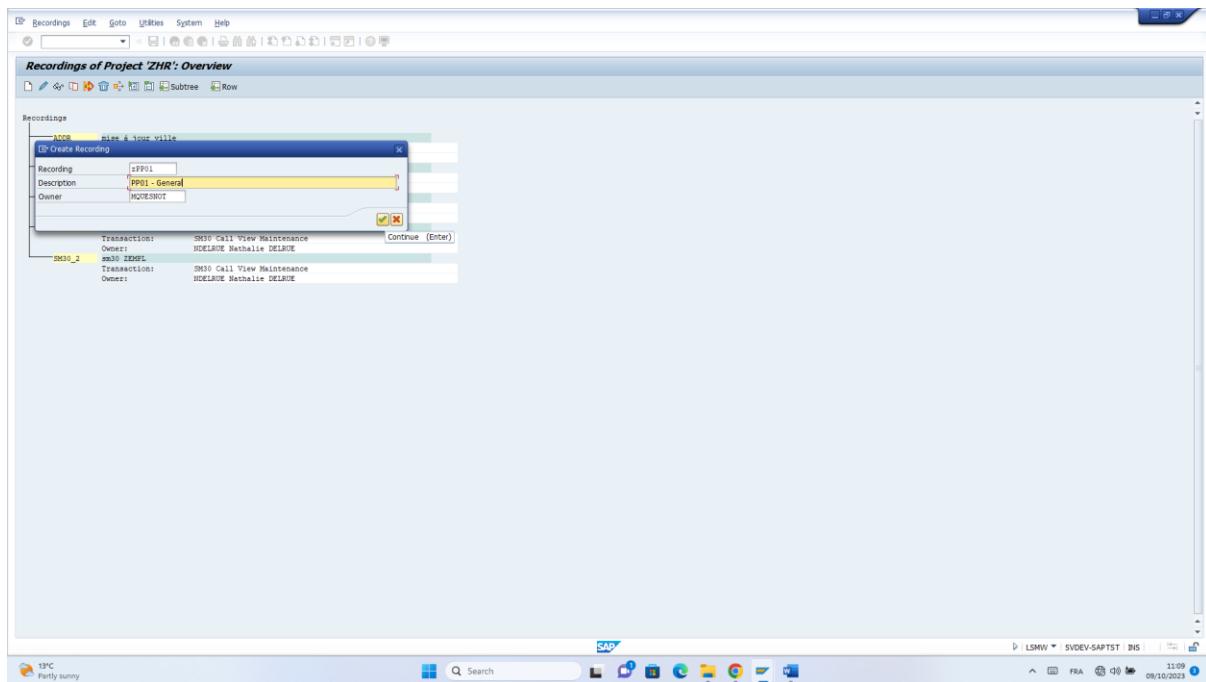
In menu bar, Goto—>Recordings



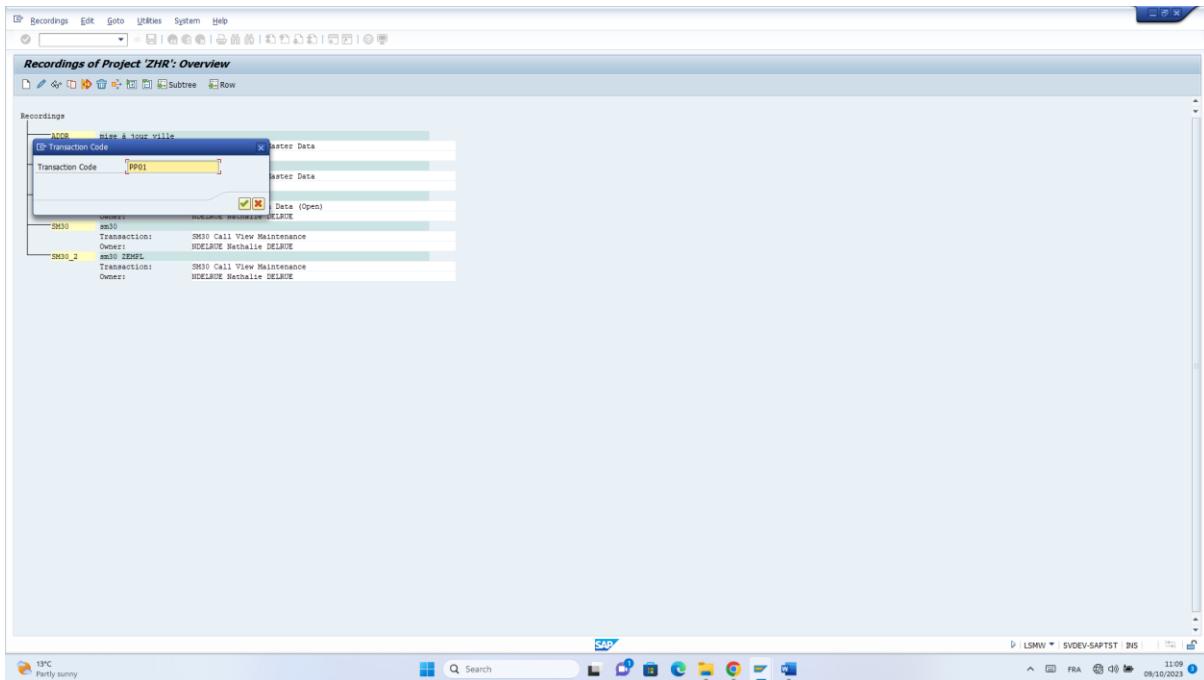
Now, Select 'Recordings' and create —>Give recording name and description



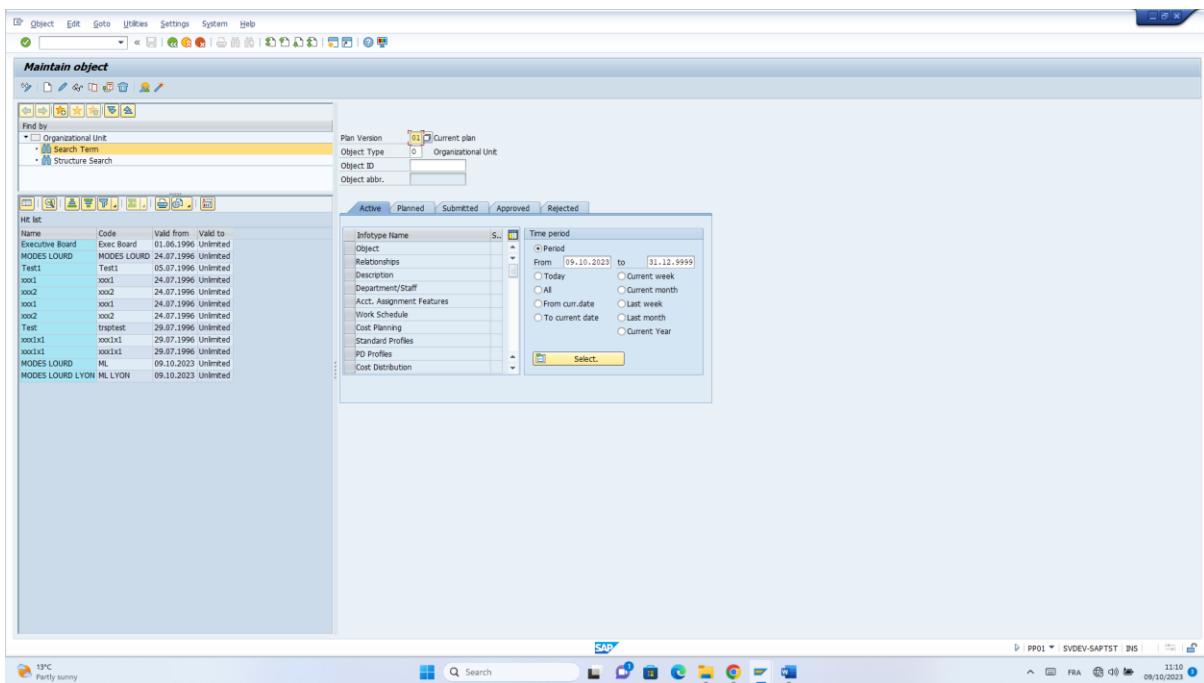




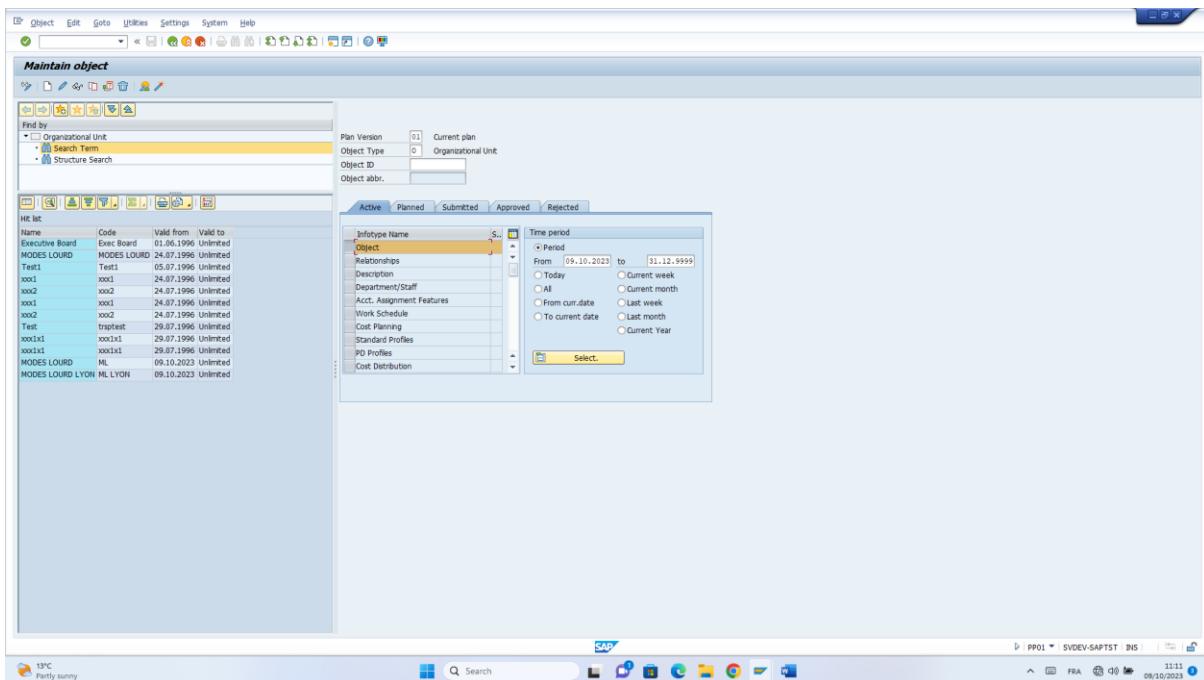
Go to Transaction PP01 - General



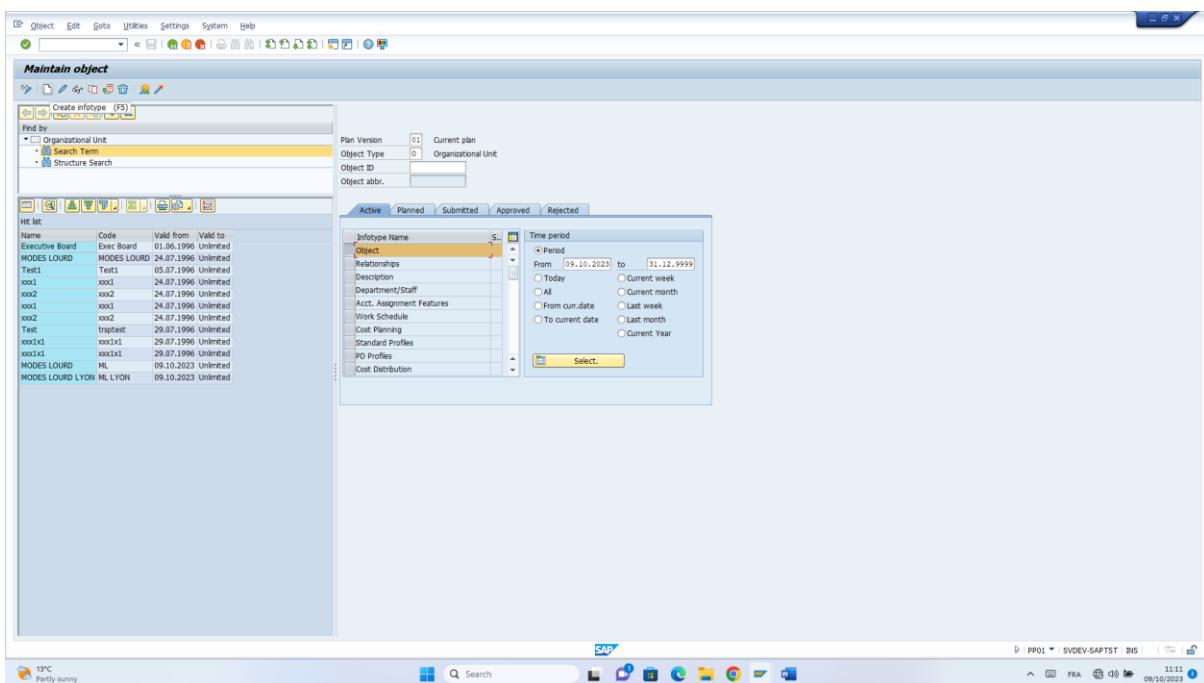
In Maintain object screen, you can proceed as follow:



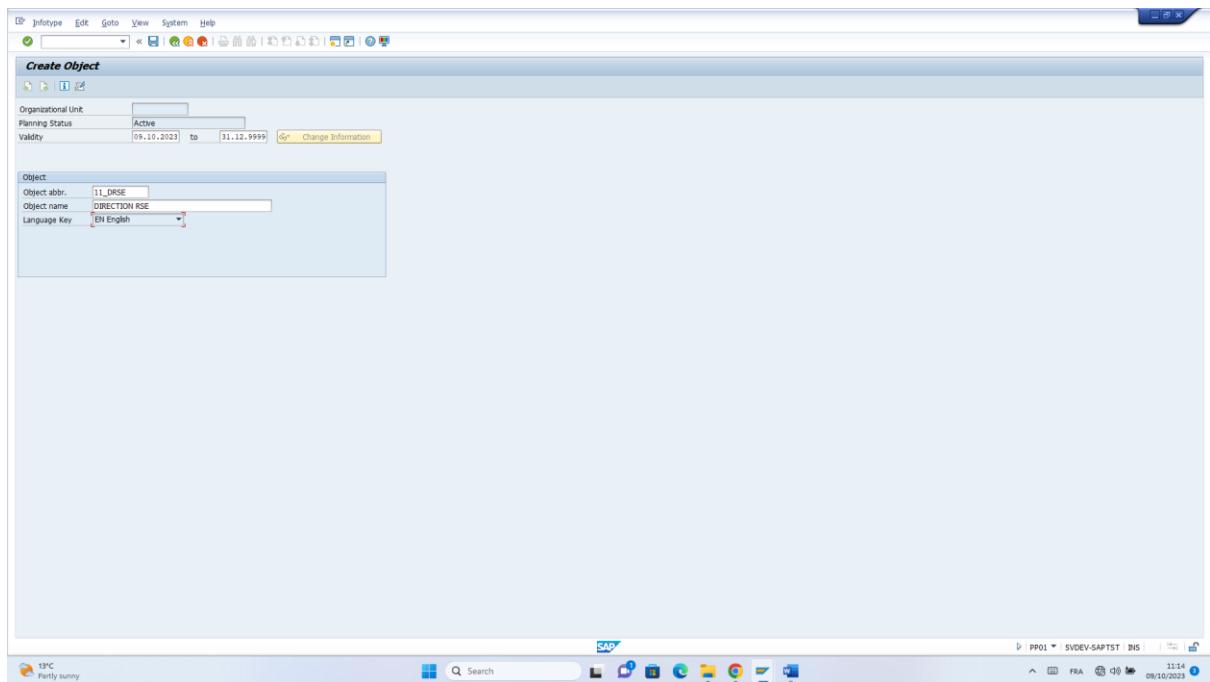
Object



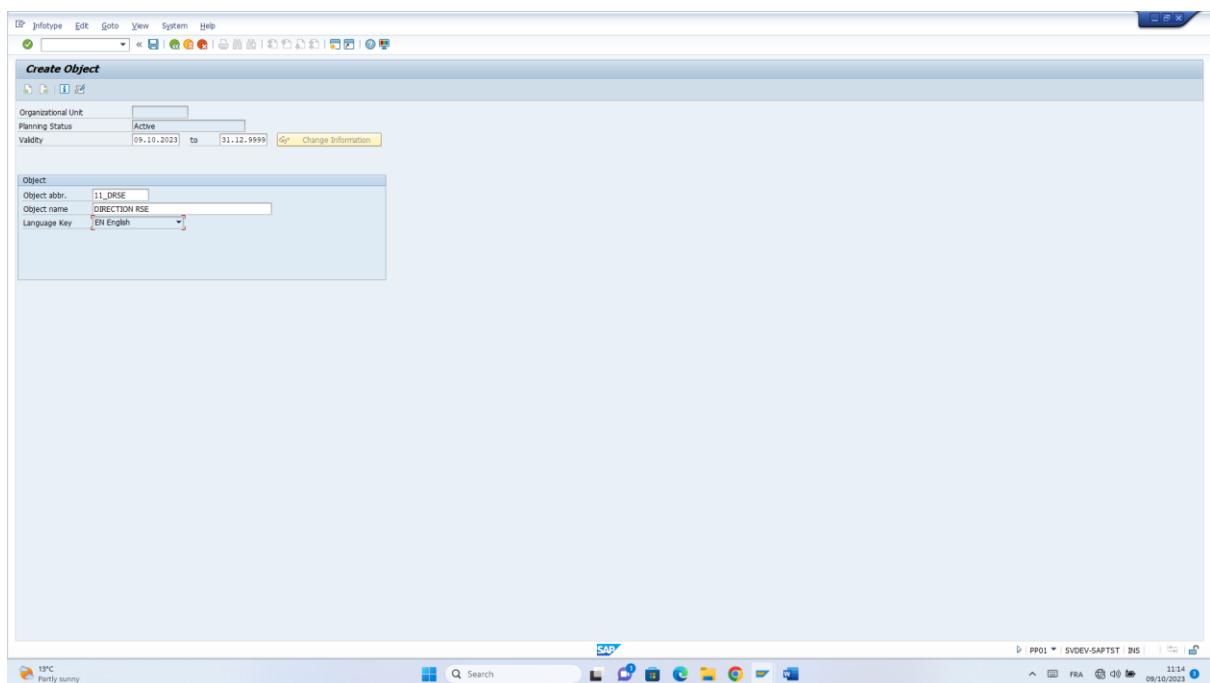
Create



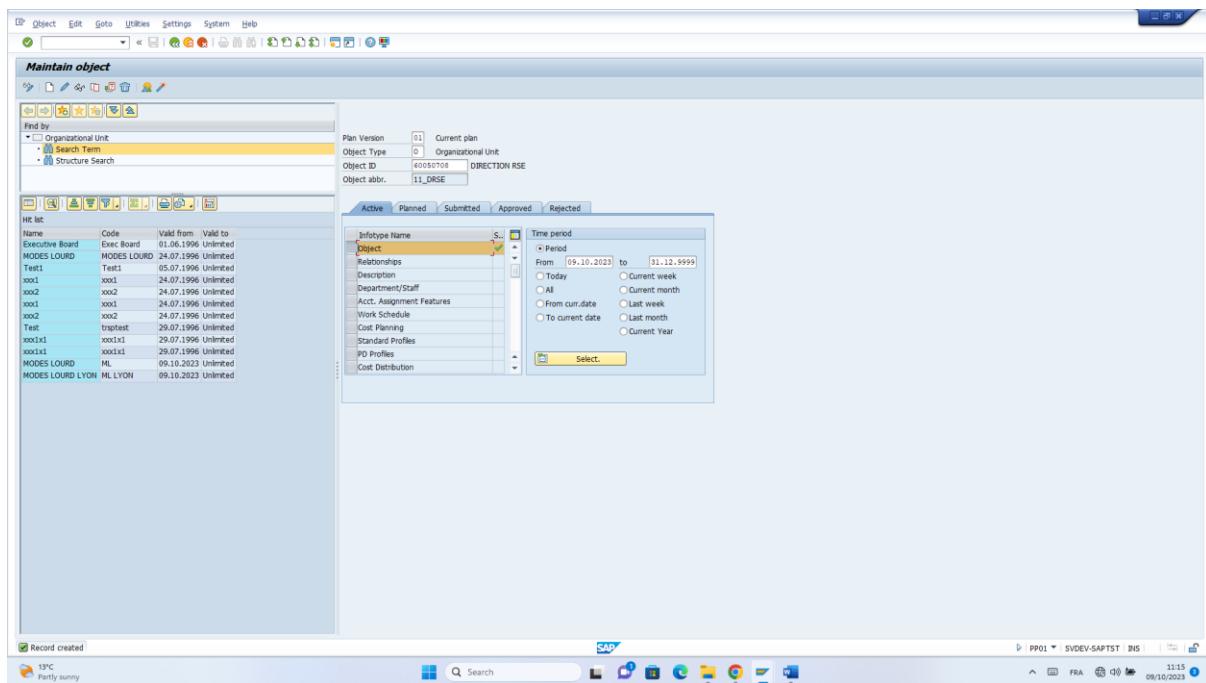
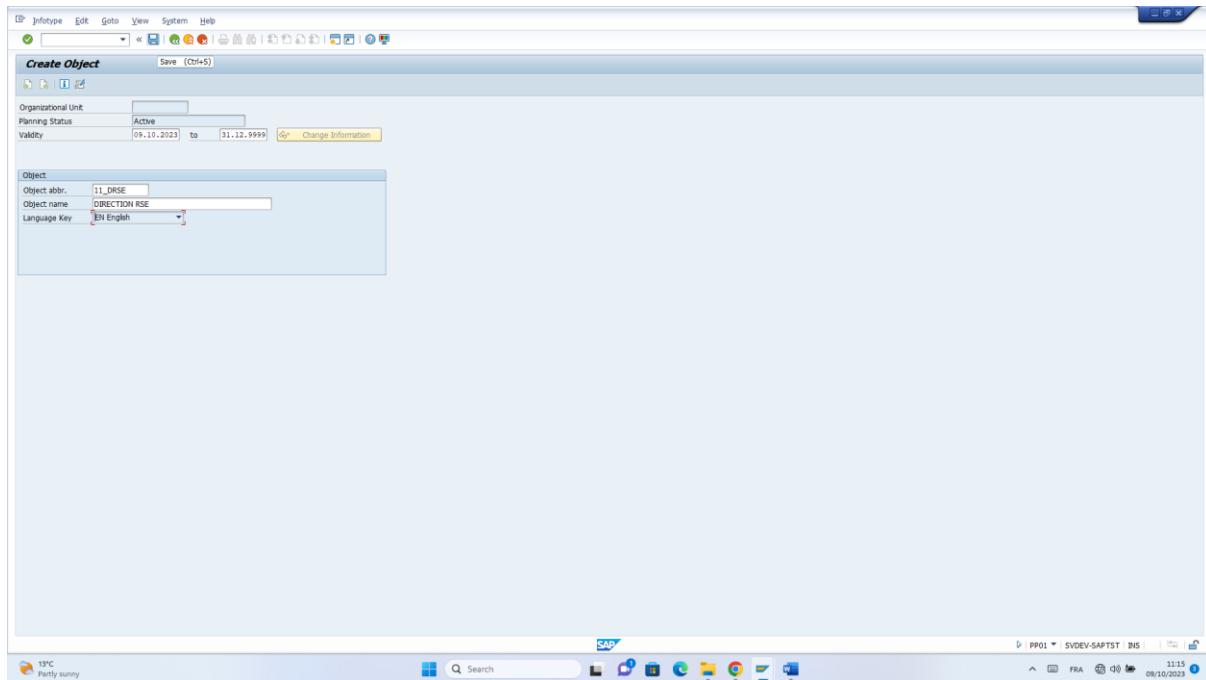
Enter an abbreviation and name for the organizational unit.



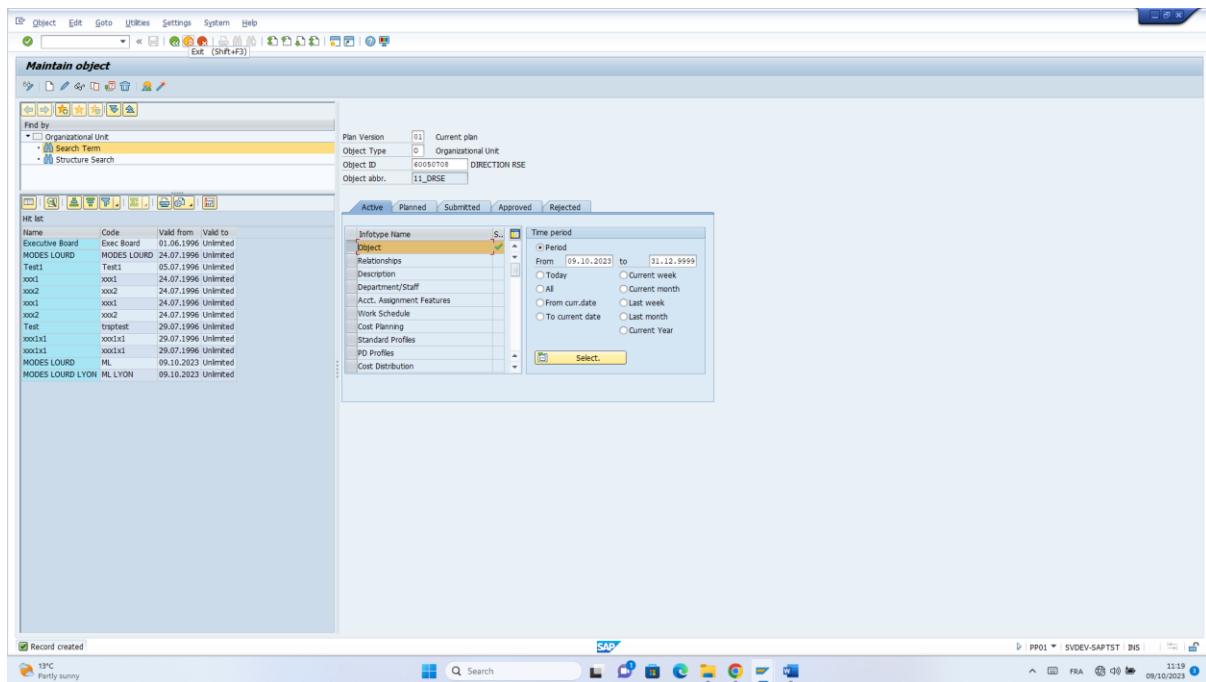
Specify a validity period for the organizational unit.



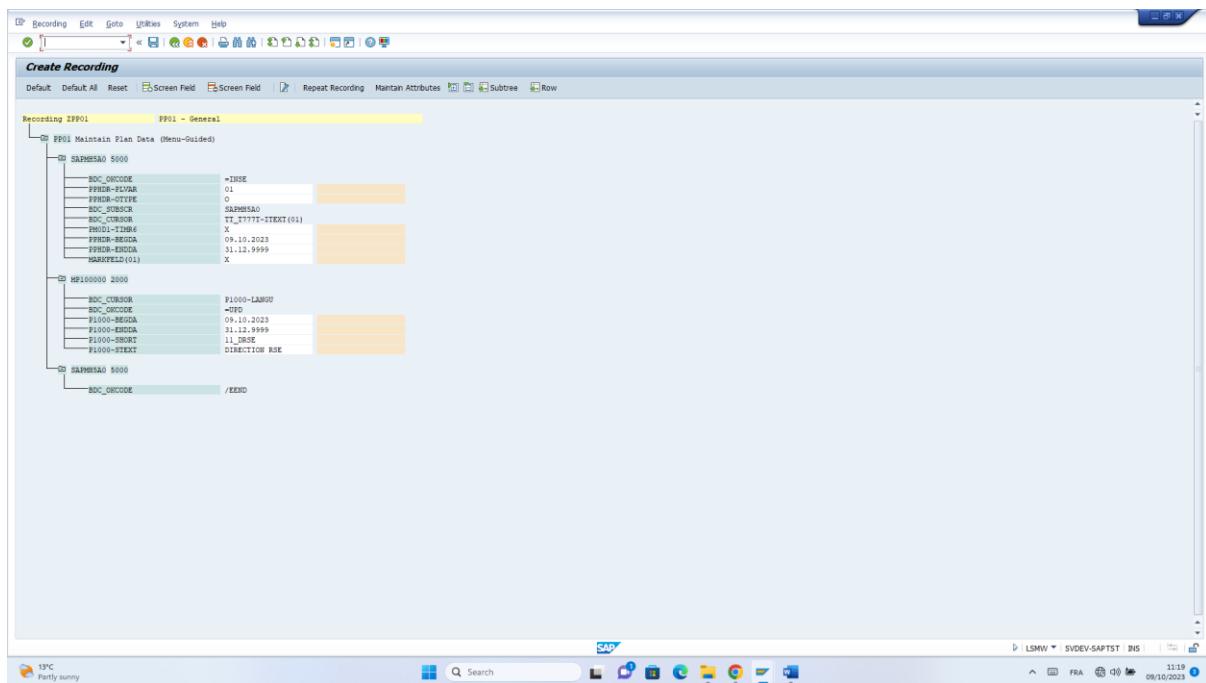
Save the Entry .



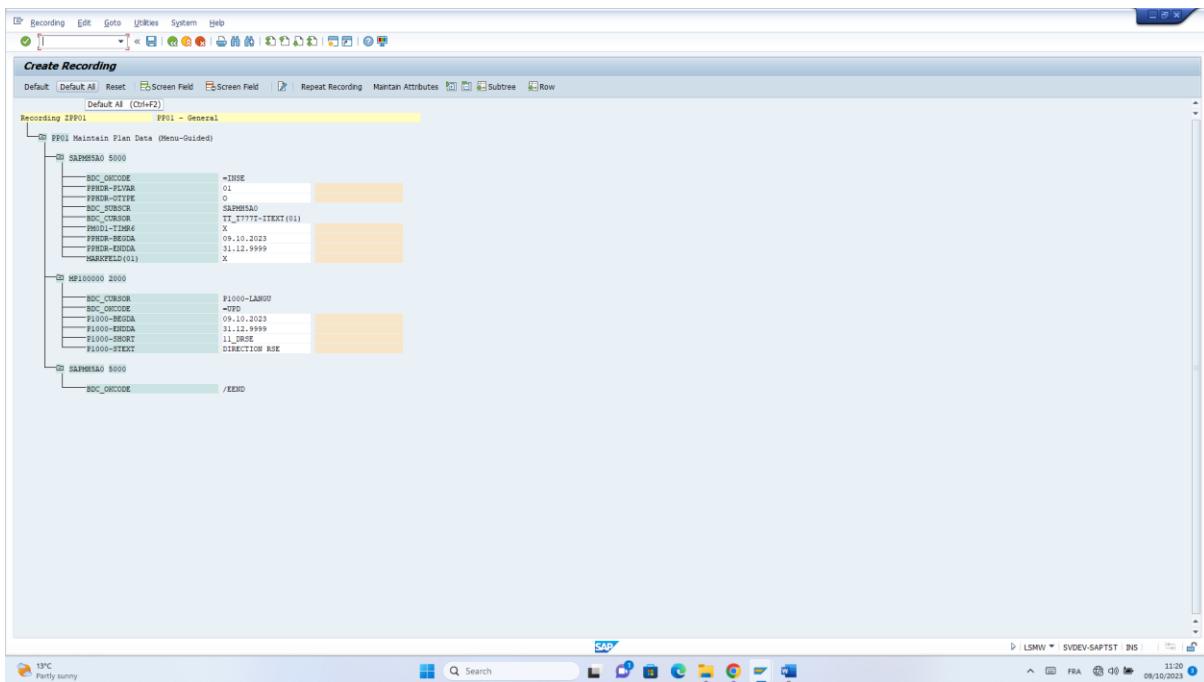
Exit



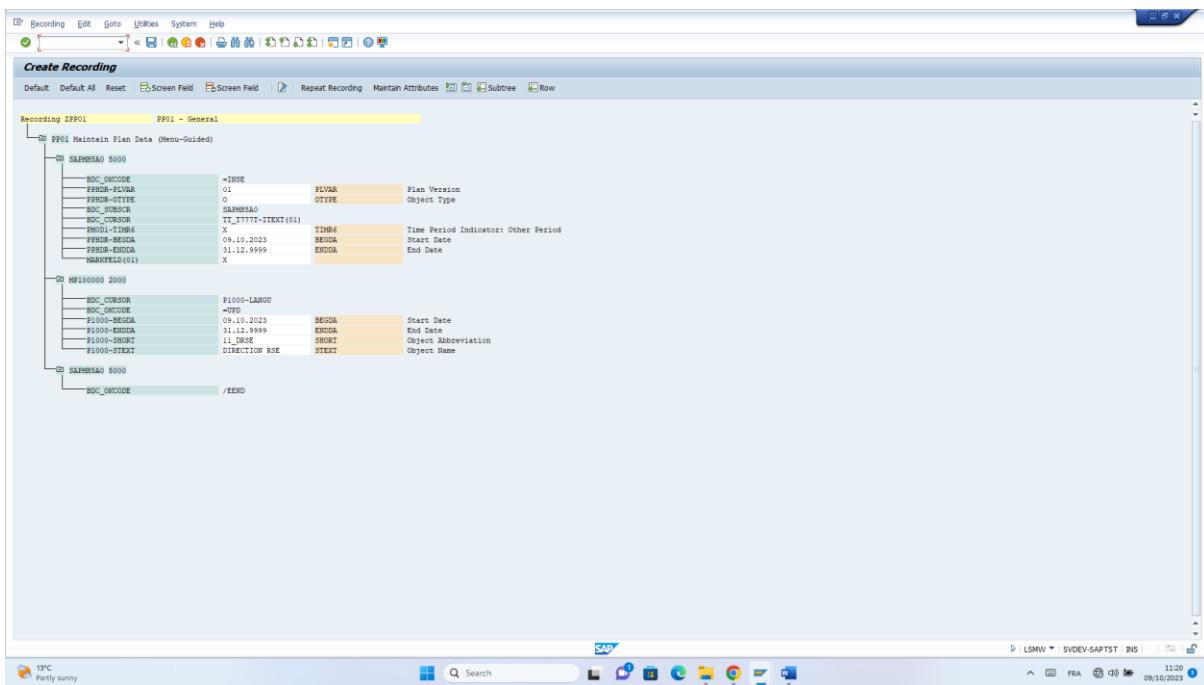
The following screen will appear.



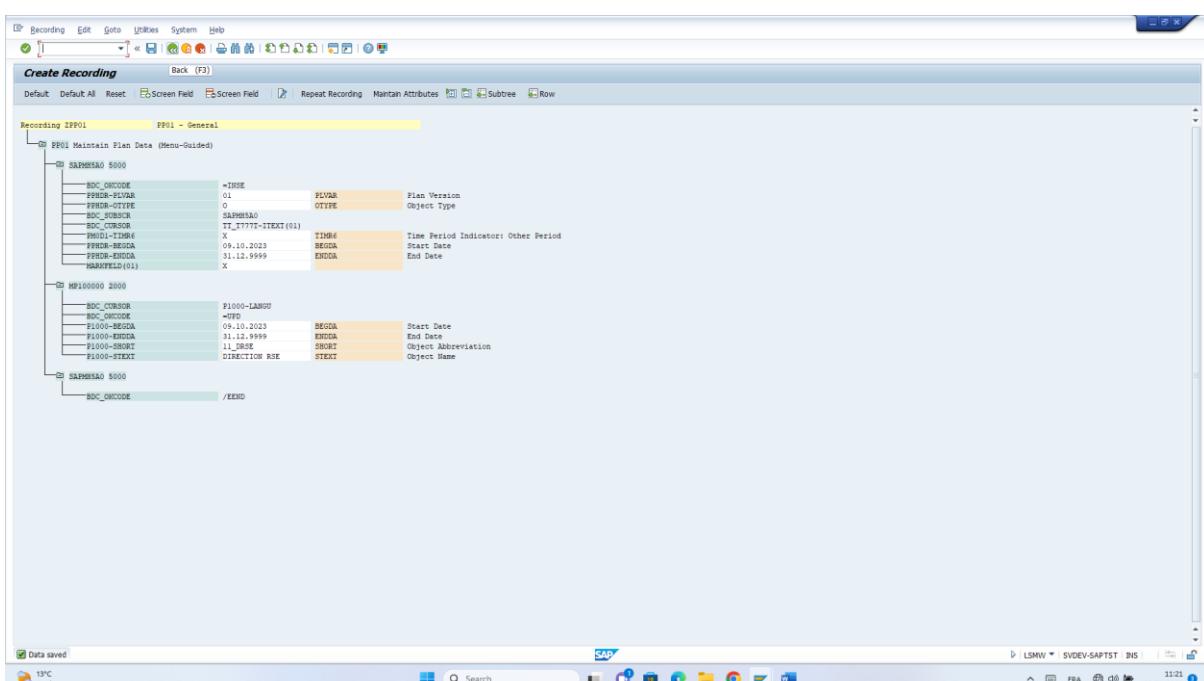
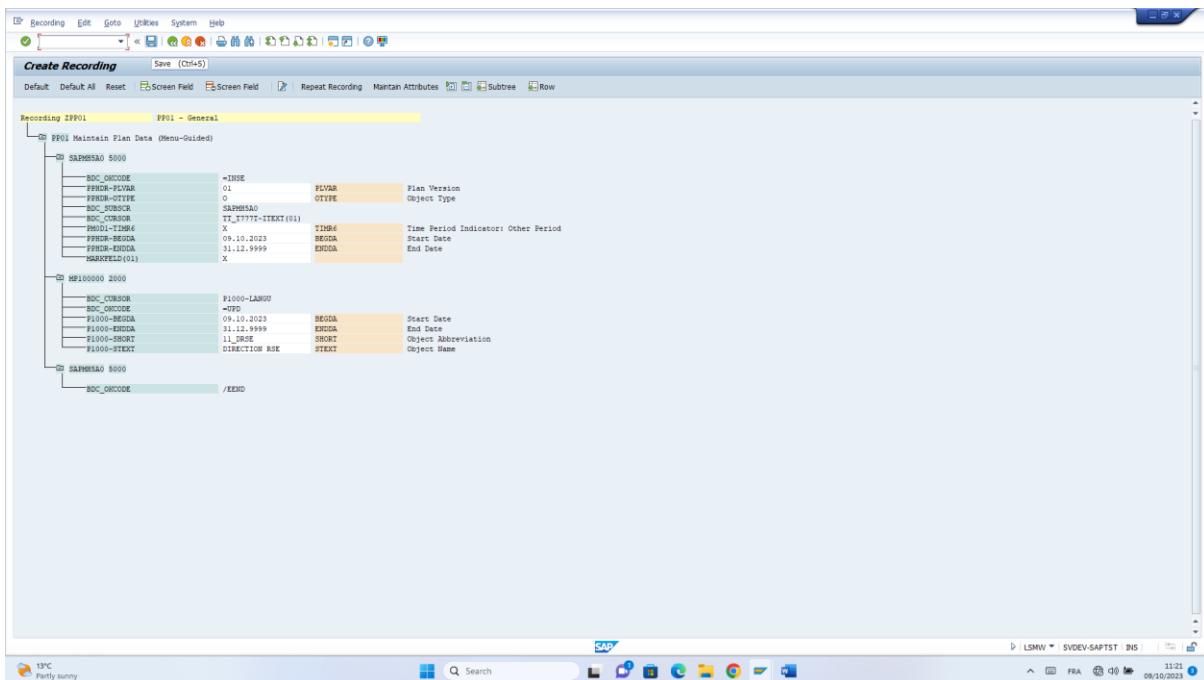
Now, click on Default All



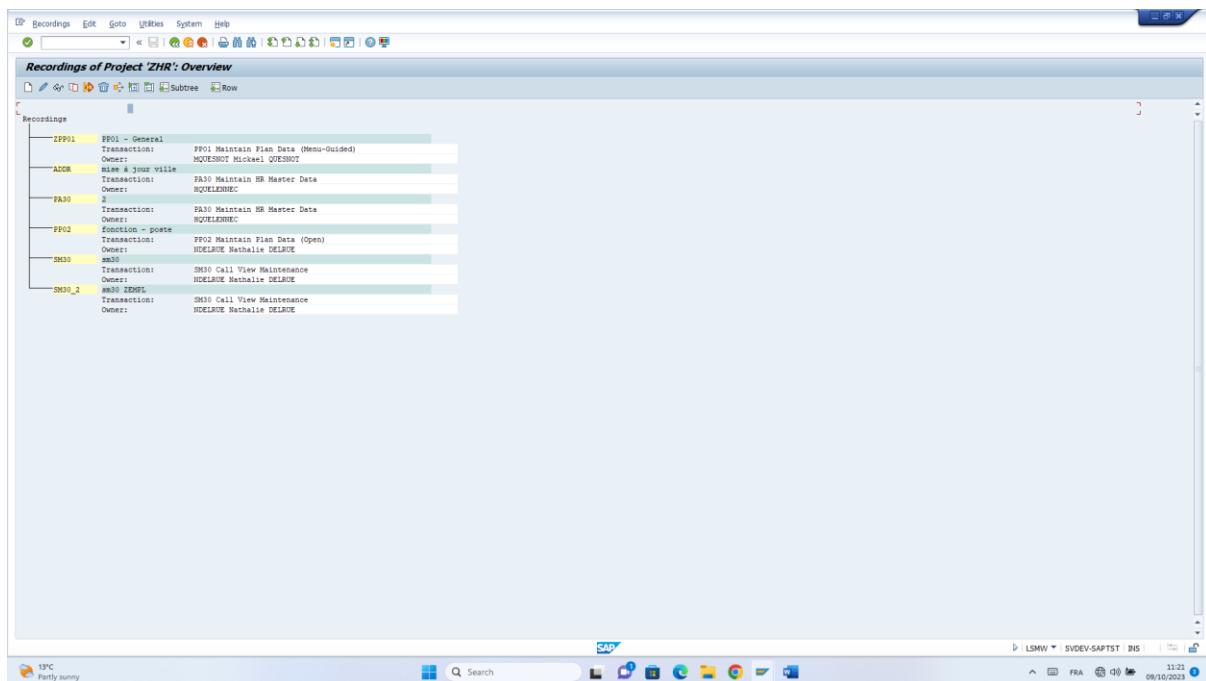
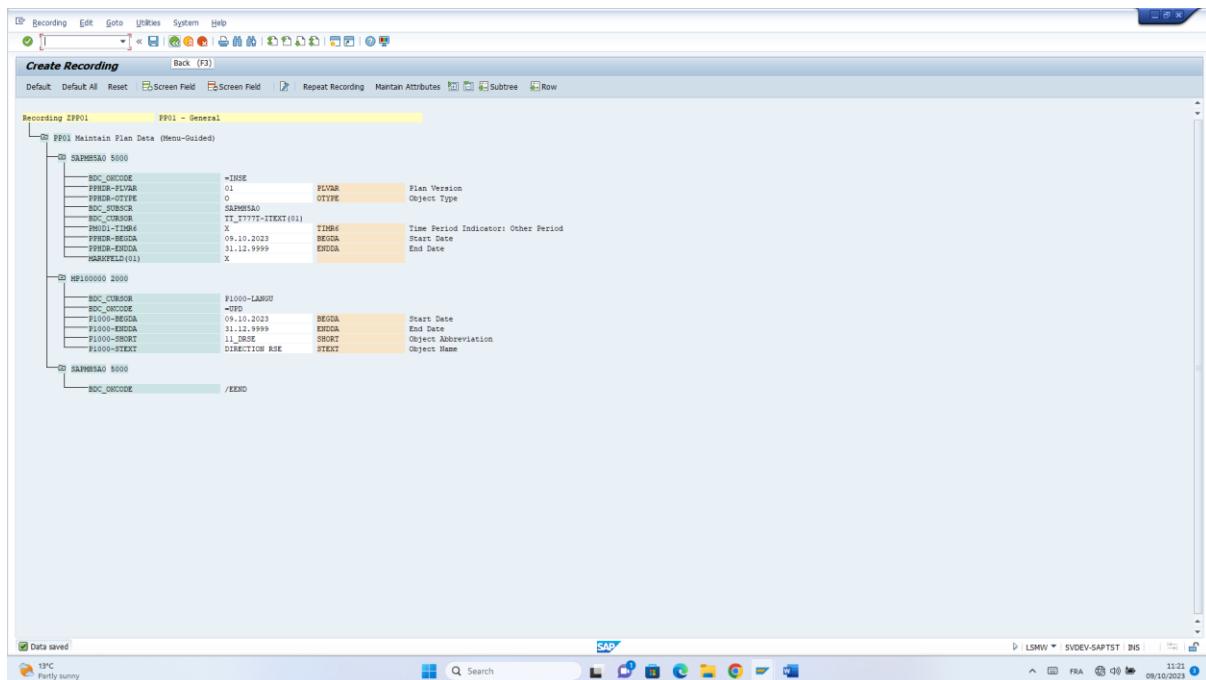
We are clicking 'Default all' button, so that all the fields which we touched during recording are included



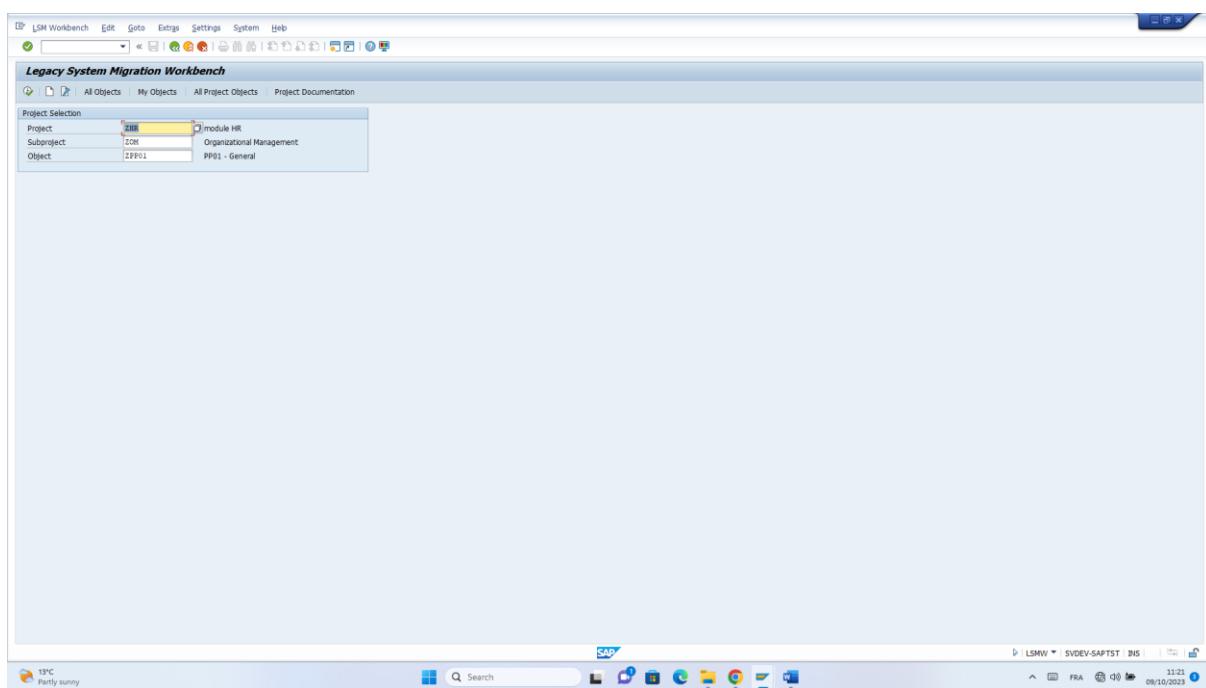
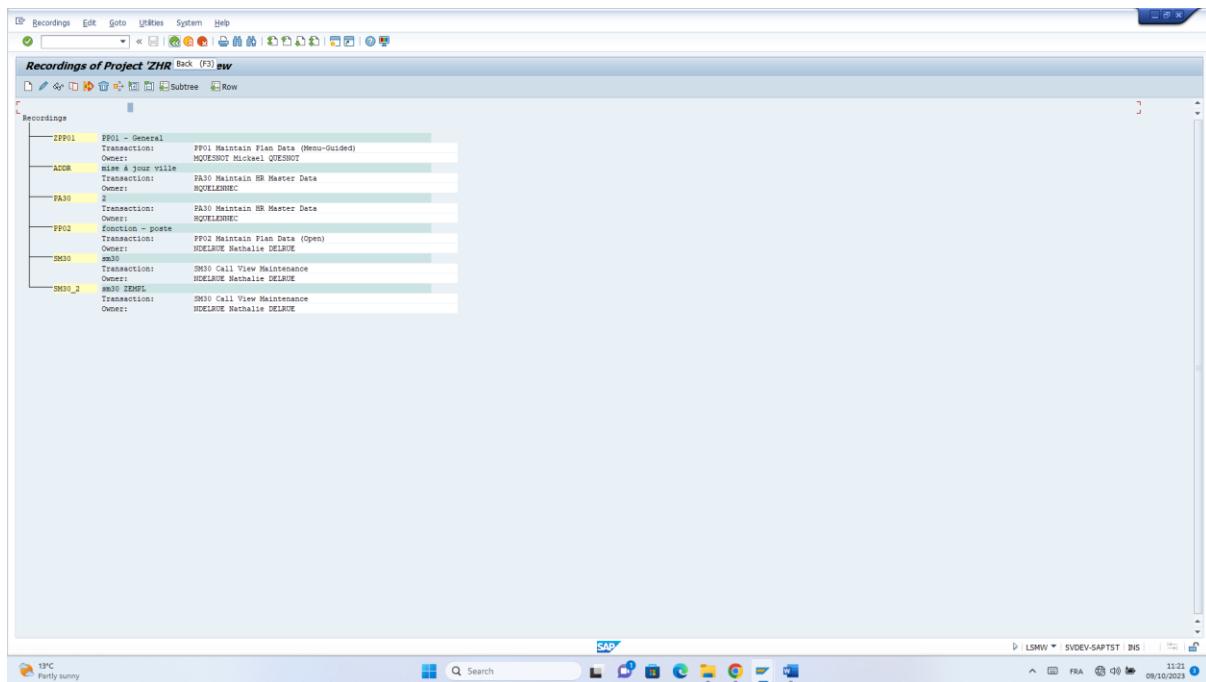
and save



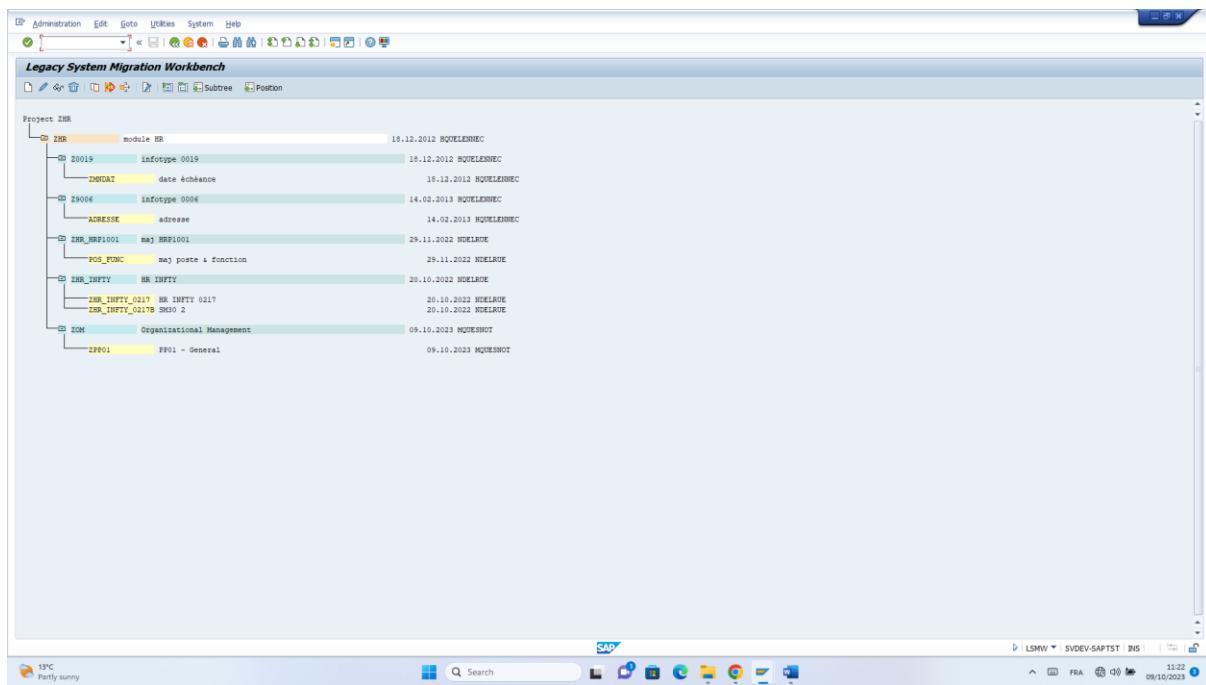
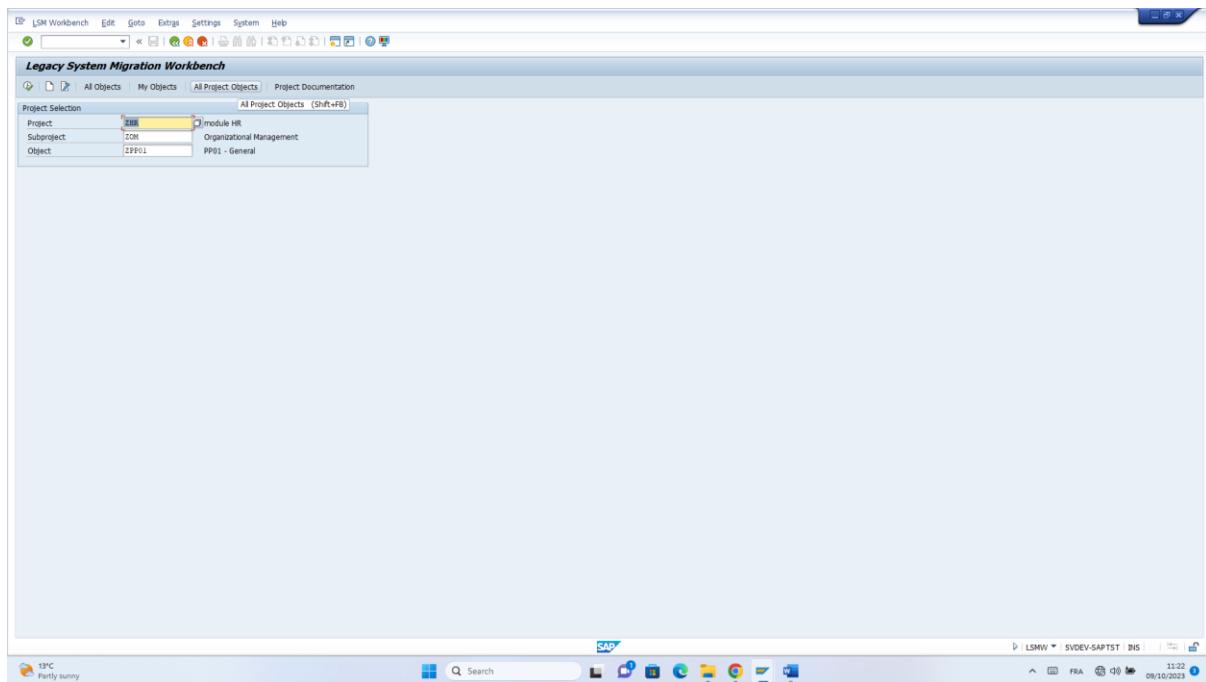
and press back

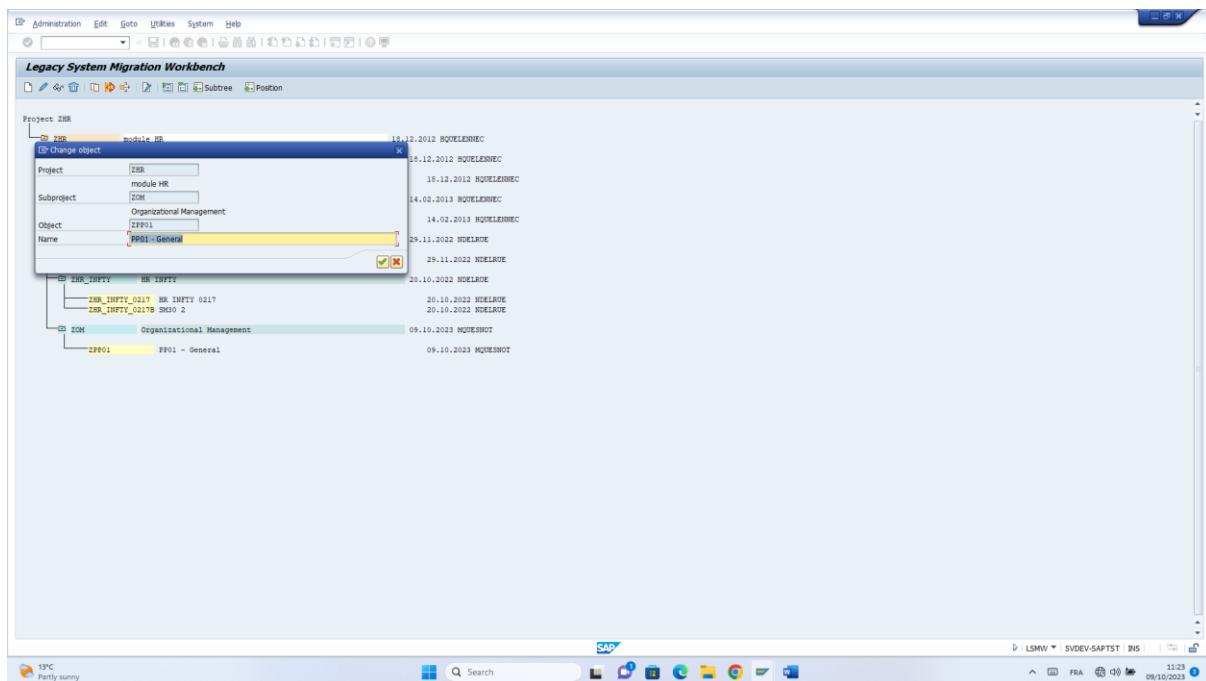
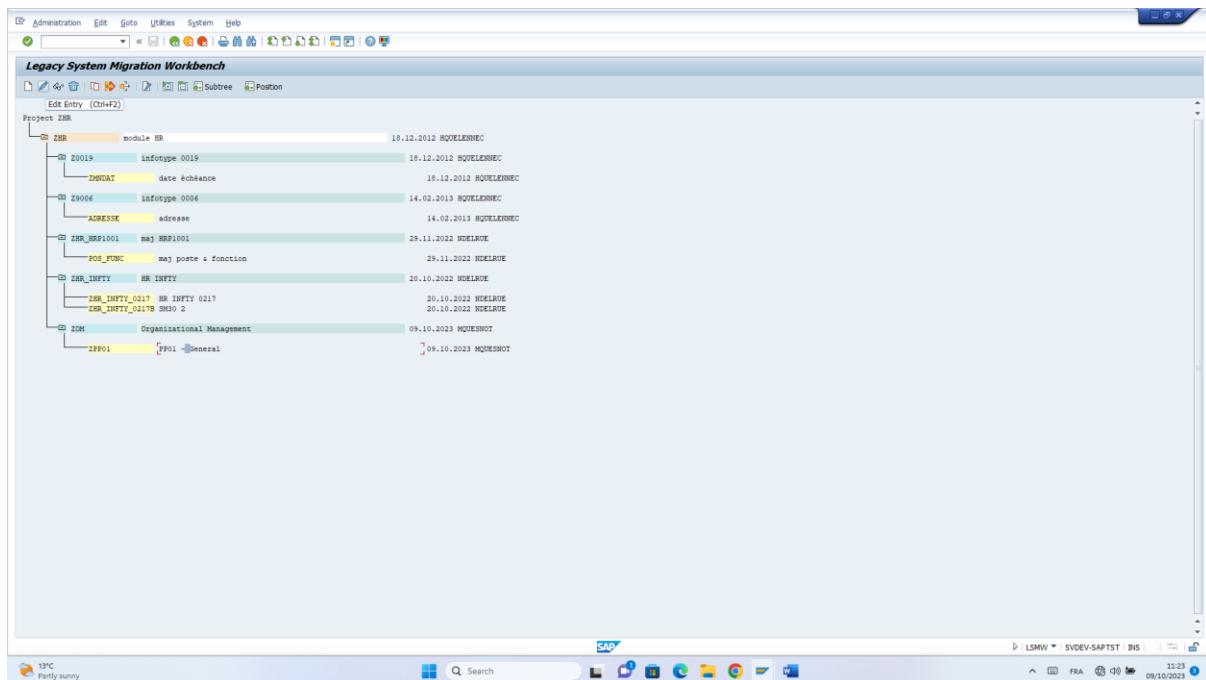


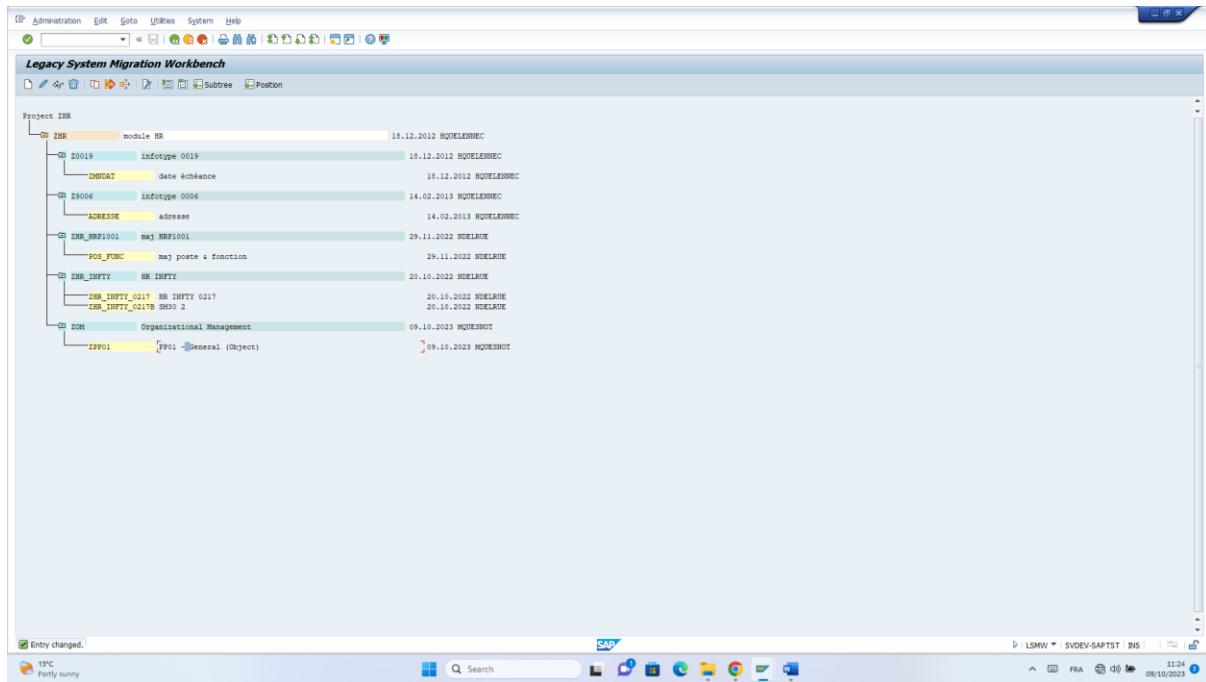
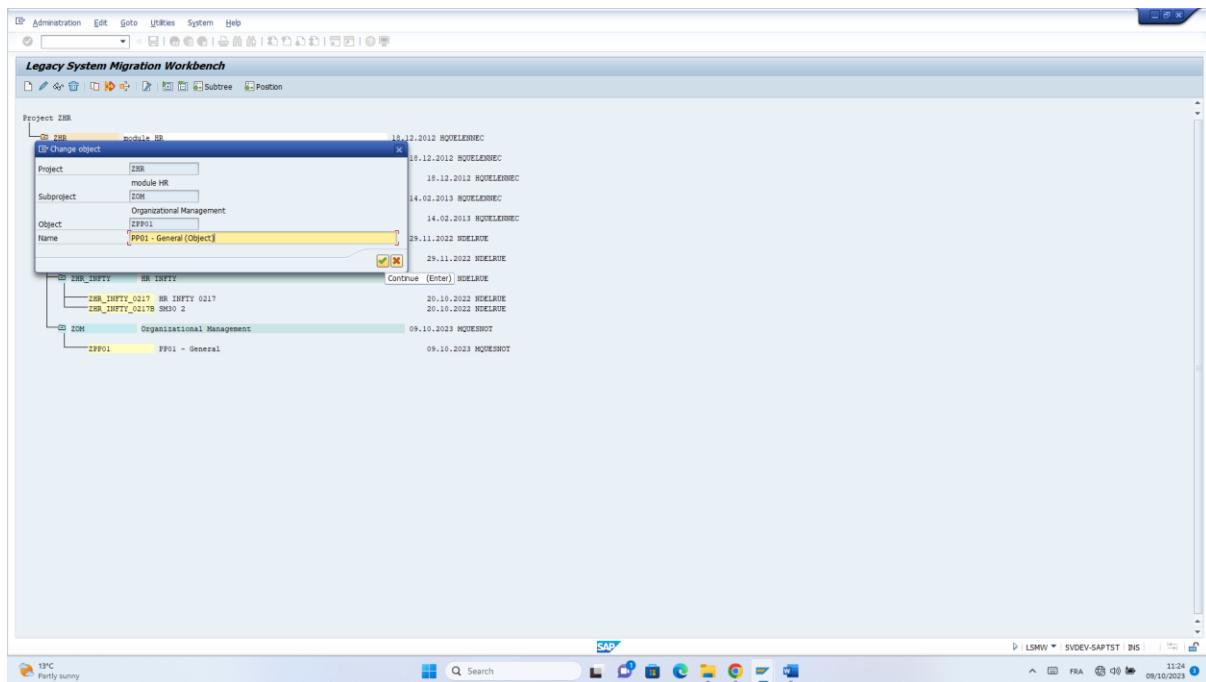
back to main Screen.

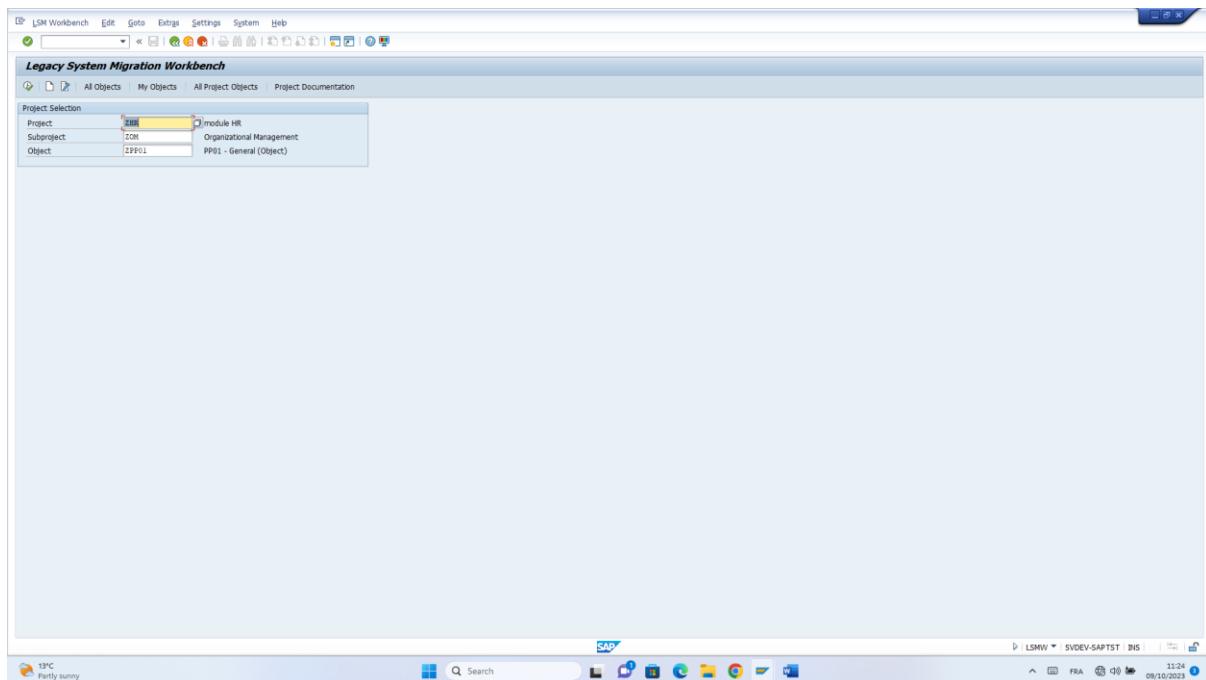


Processing basic steps in LSMW:



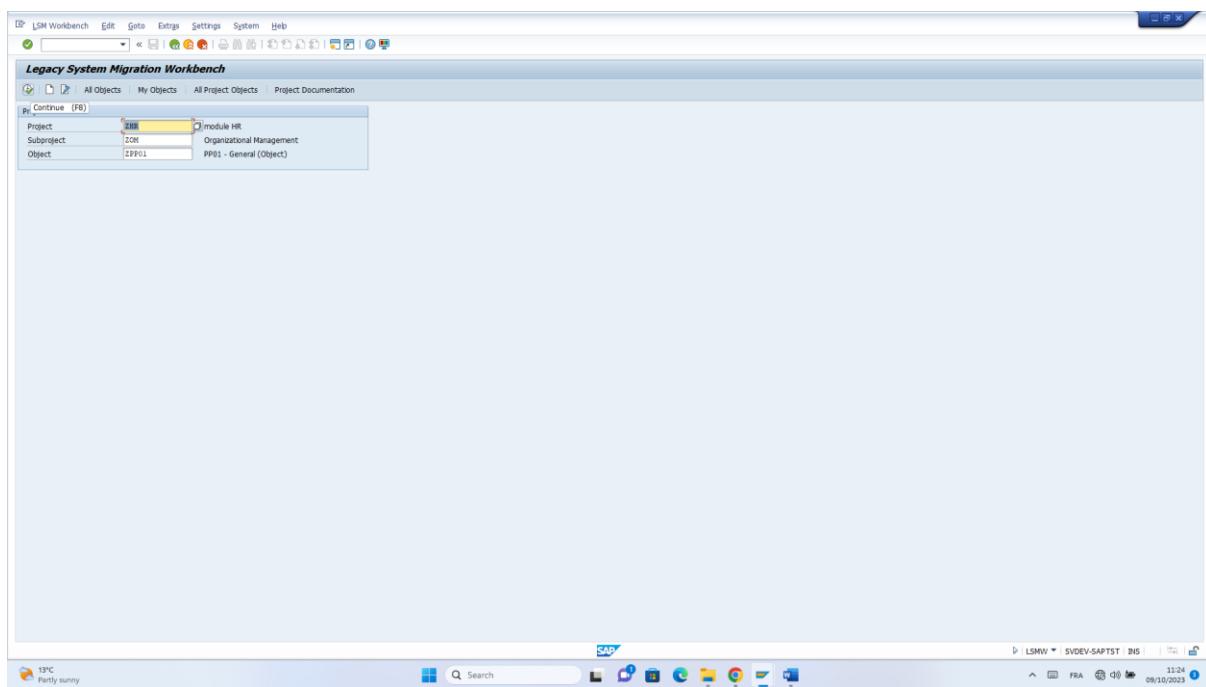






LSMW need to be configured 14 basic steps. Below you will find detailed step-by step procedure.

Click On execute



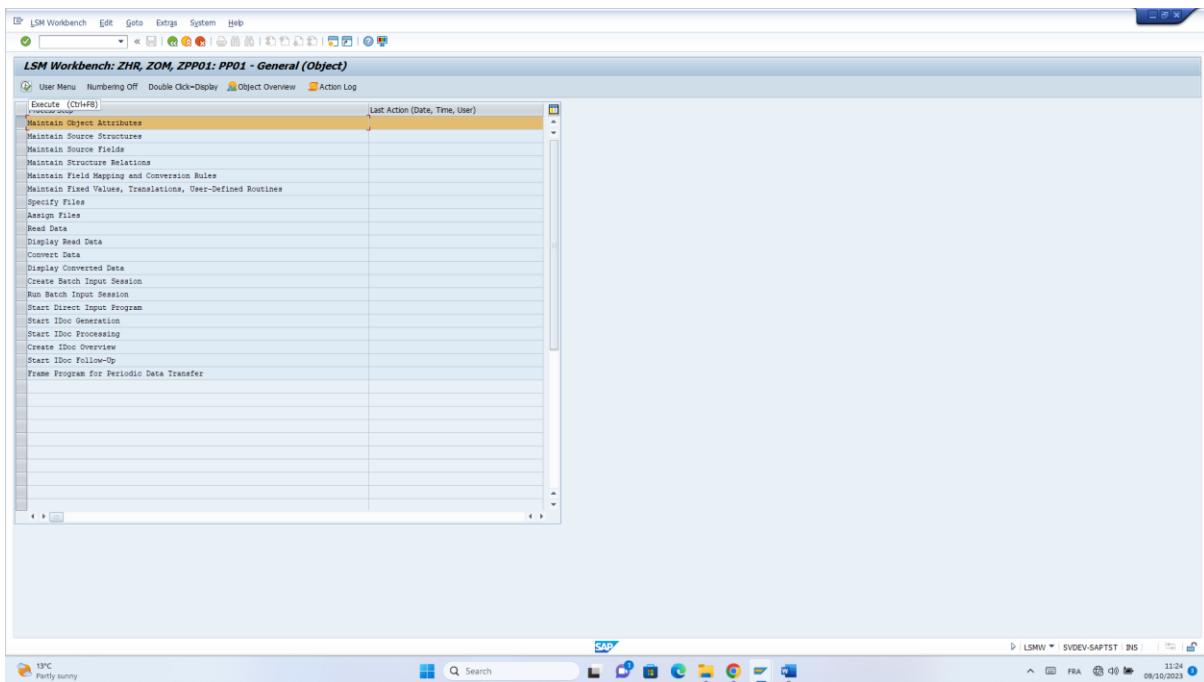
Step 1: Maintain Object Attributes

Select this radio button and click on execute

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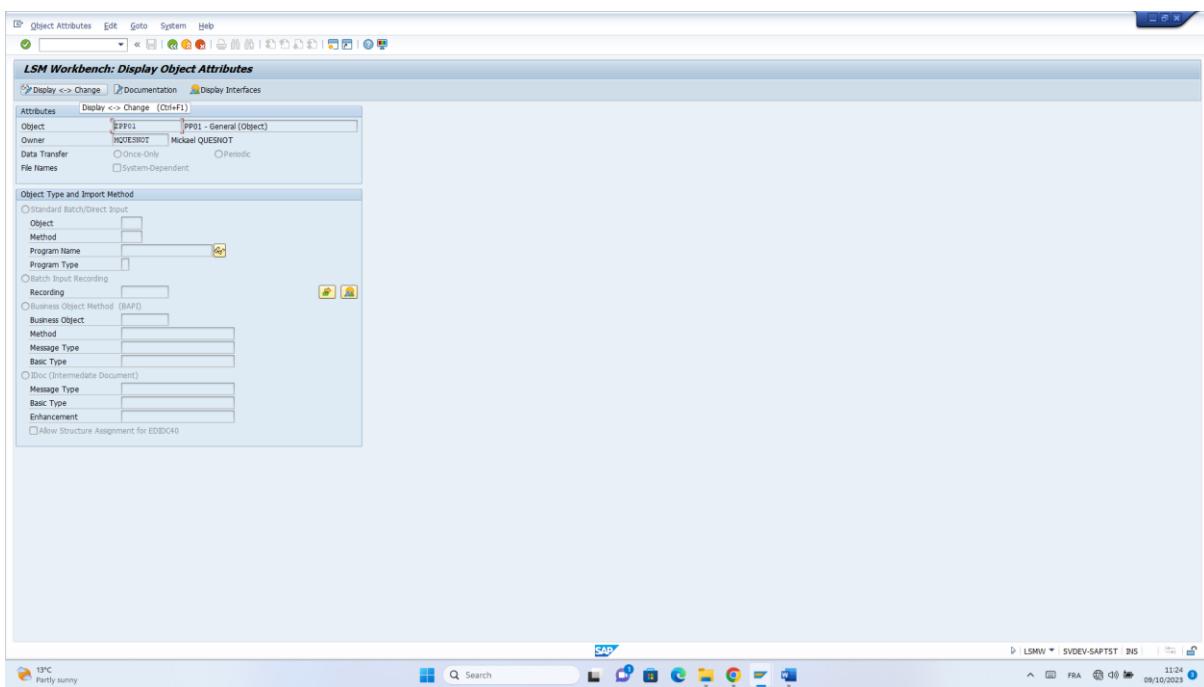
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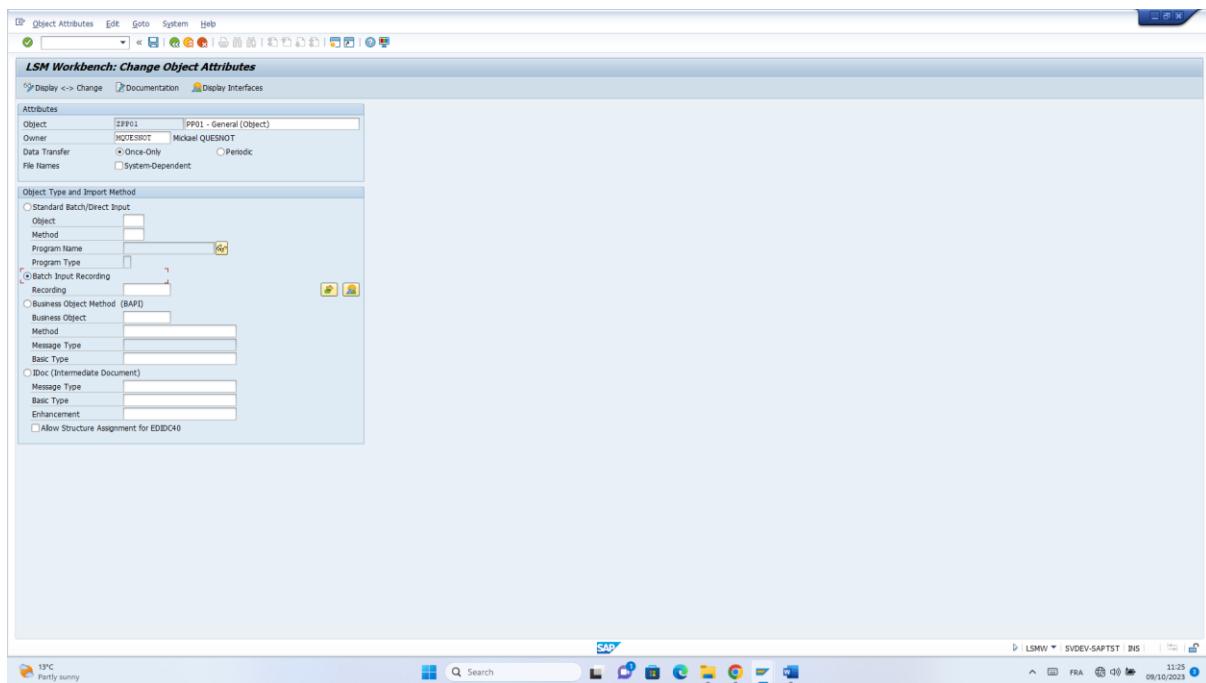
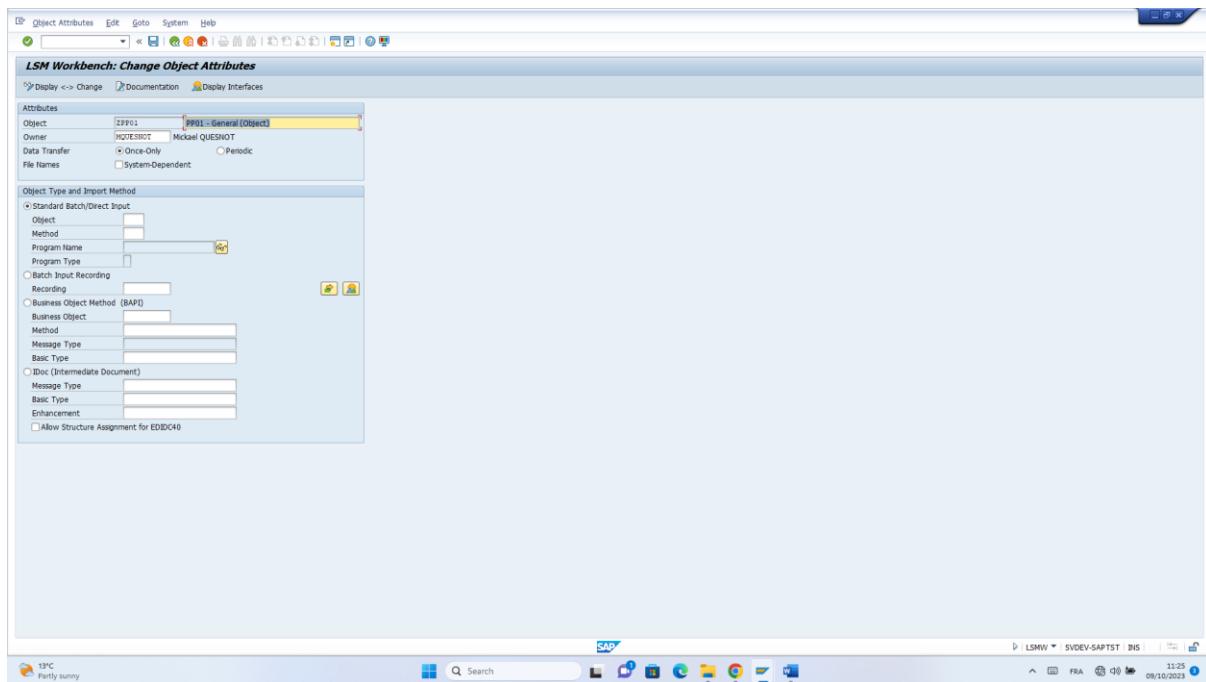
<https://www.linkedin.com/in/mickaelquesnot/>

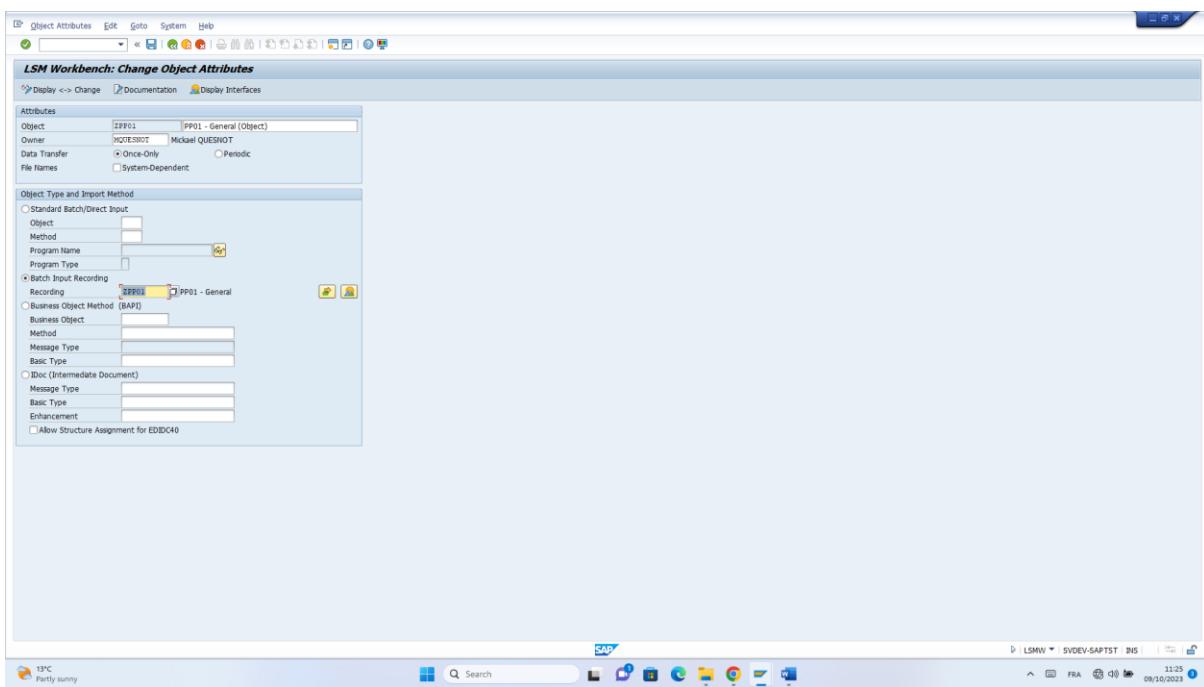
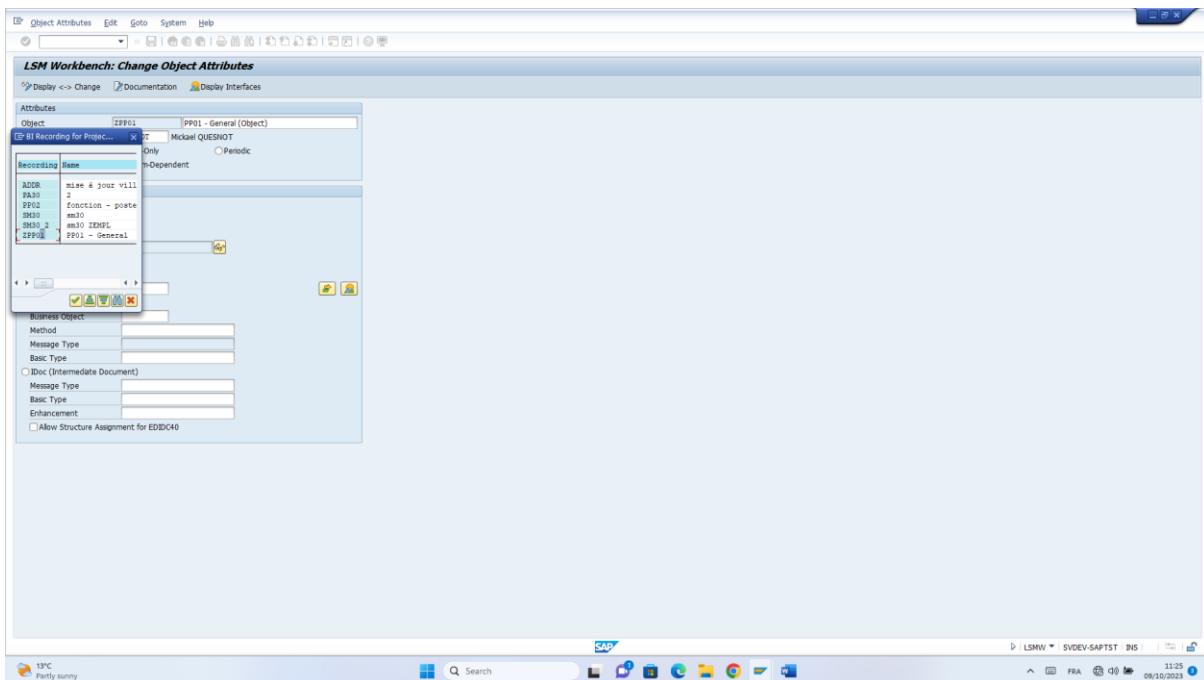


Now, click on Display/ Change icon Here, we are telling system that what kind recording should take into consideration while performing upload.

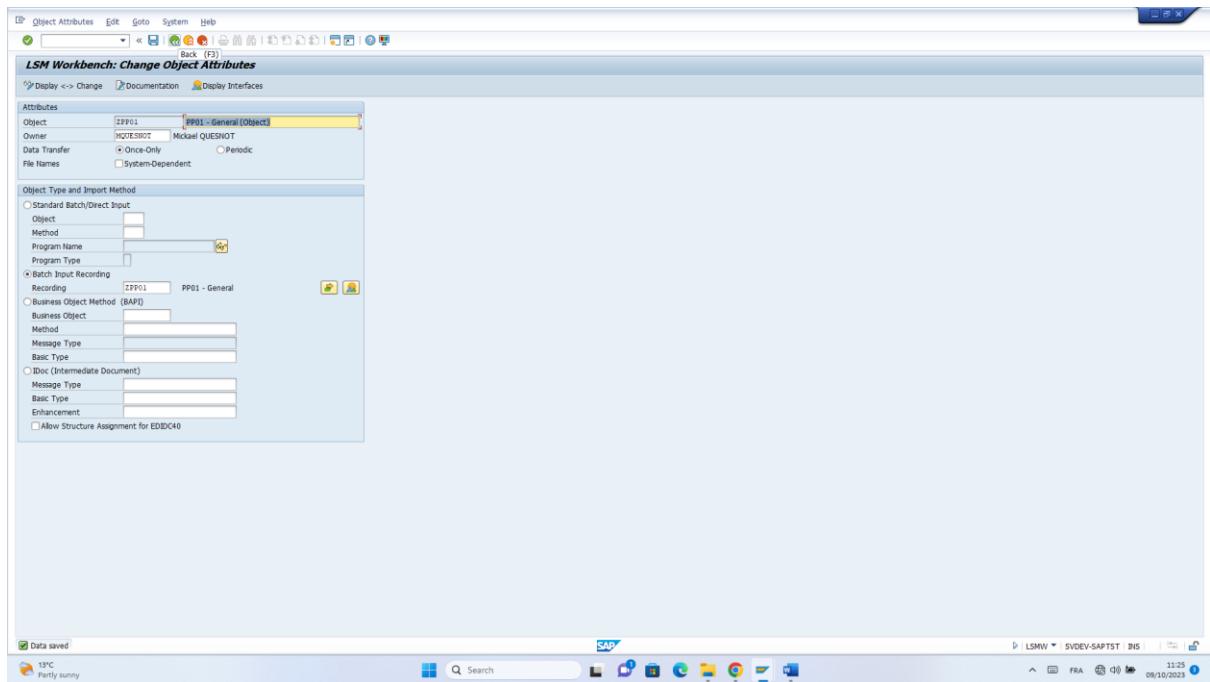
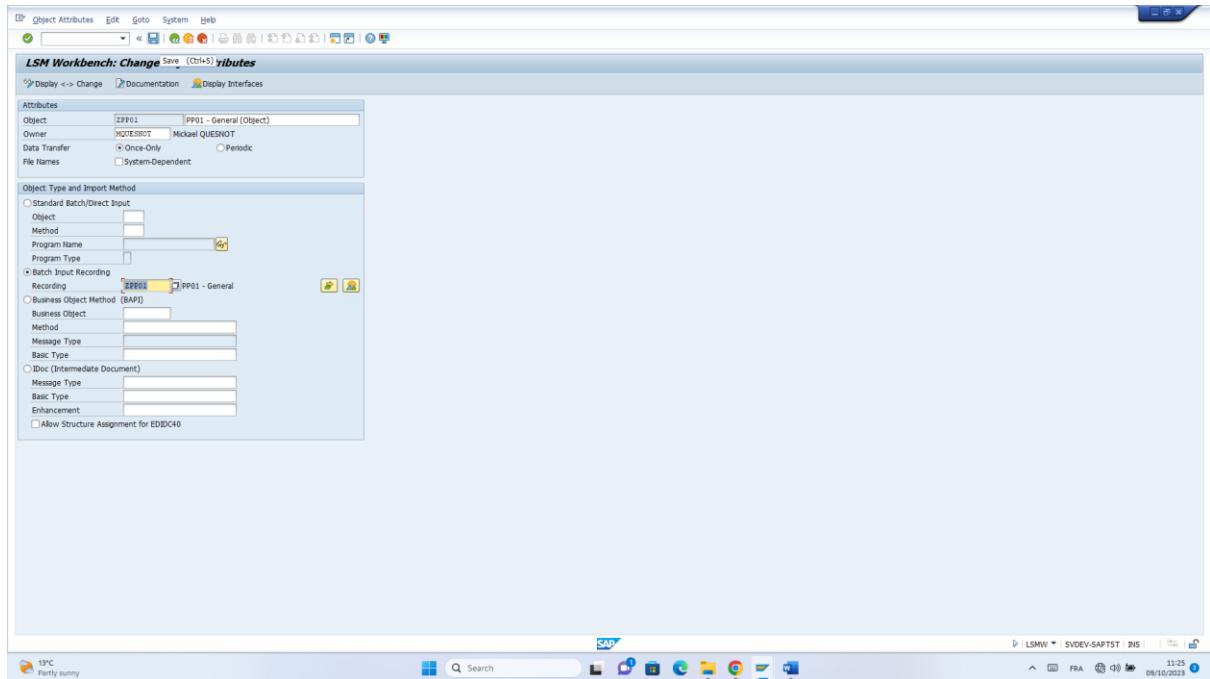
Select 'Batch Input Recording' and give name as shown below (Recording Name)

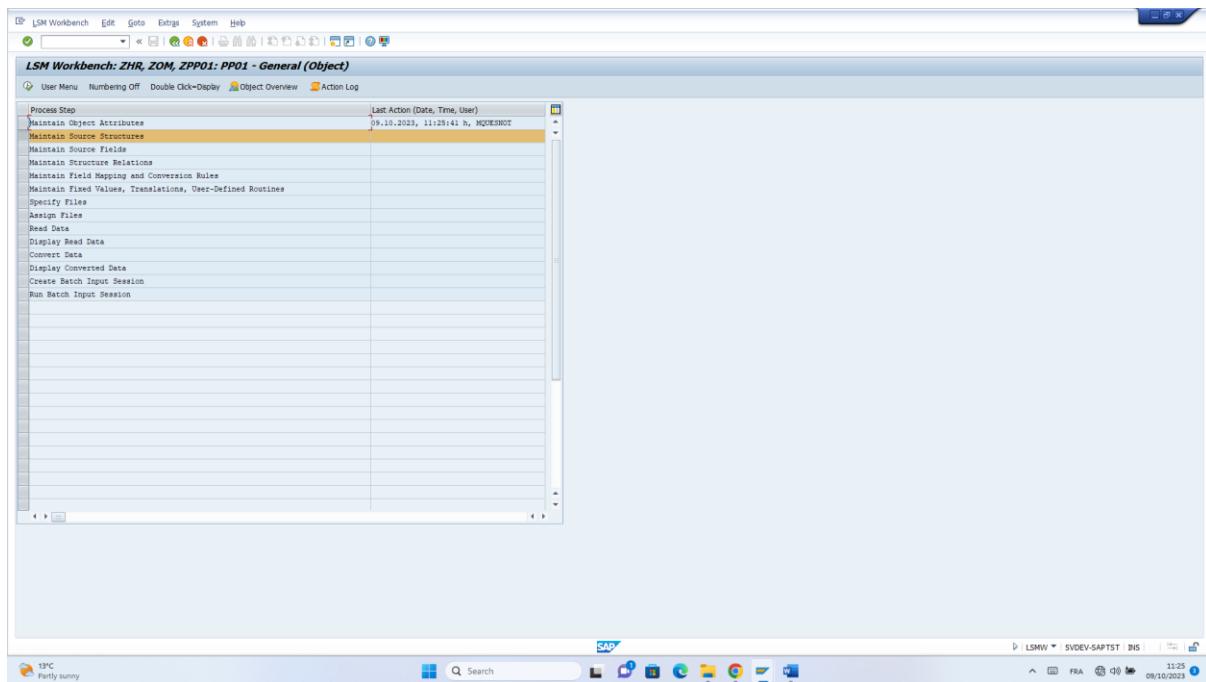






Save and Back.

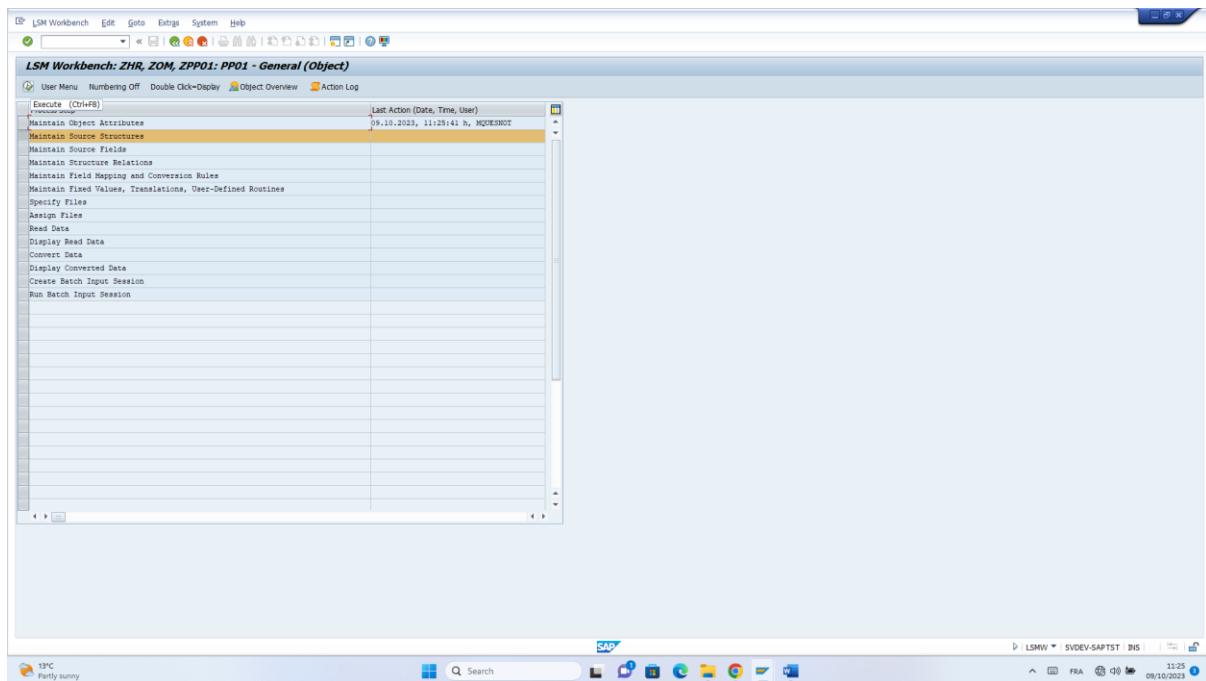




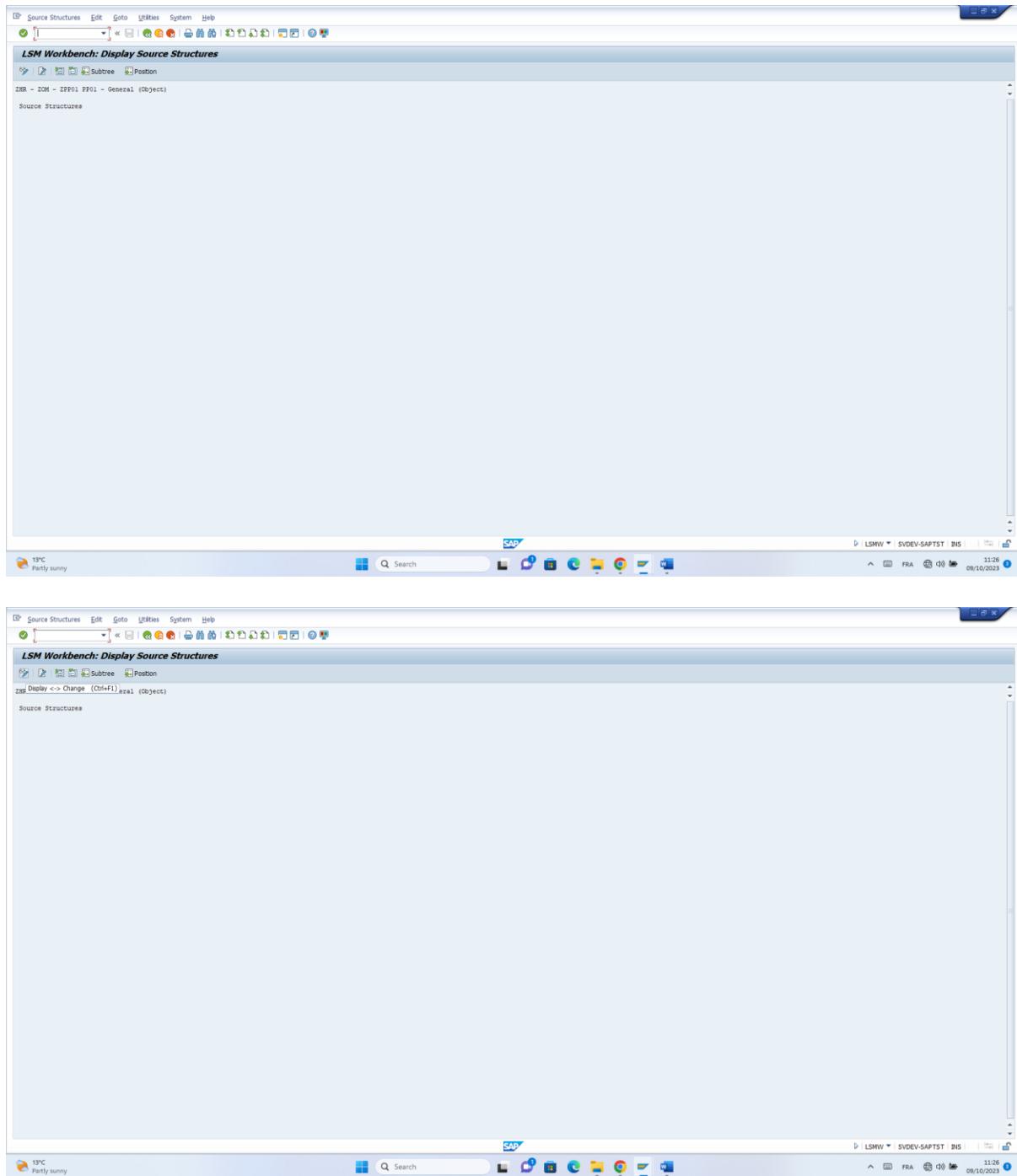
Step 2: Maintain Source Structures

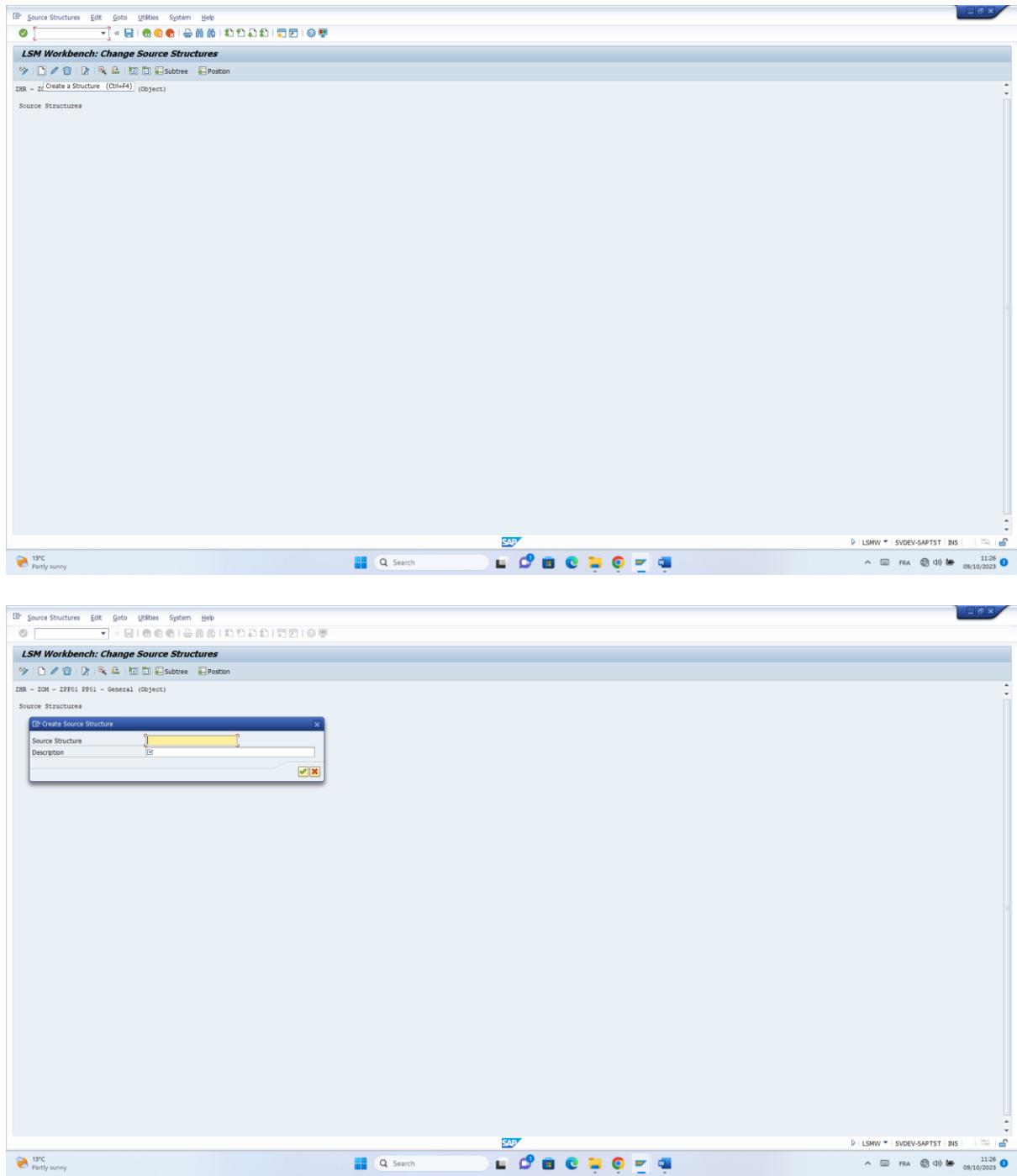
Source structures are helpful in building hierarchical relationships. While uploading the data system always checks highest level structure first before going for subordinate structure.

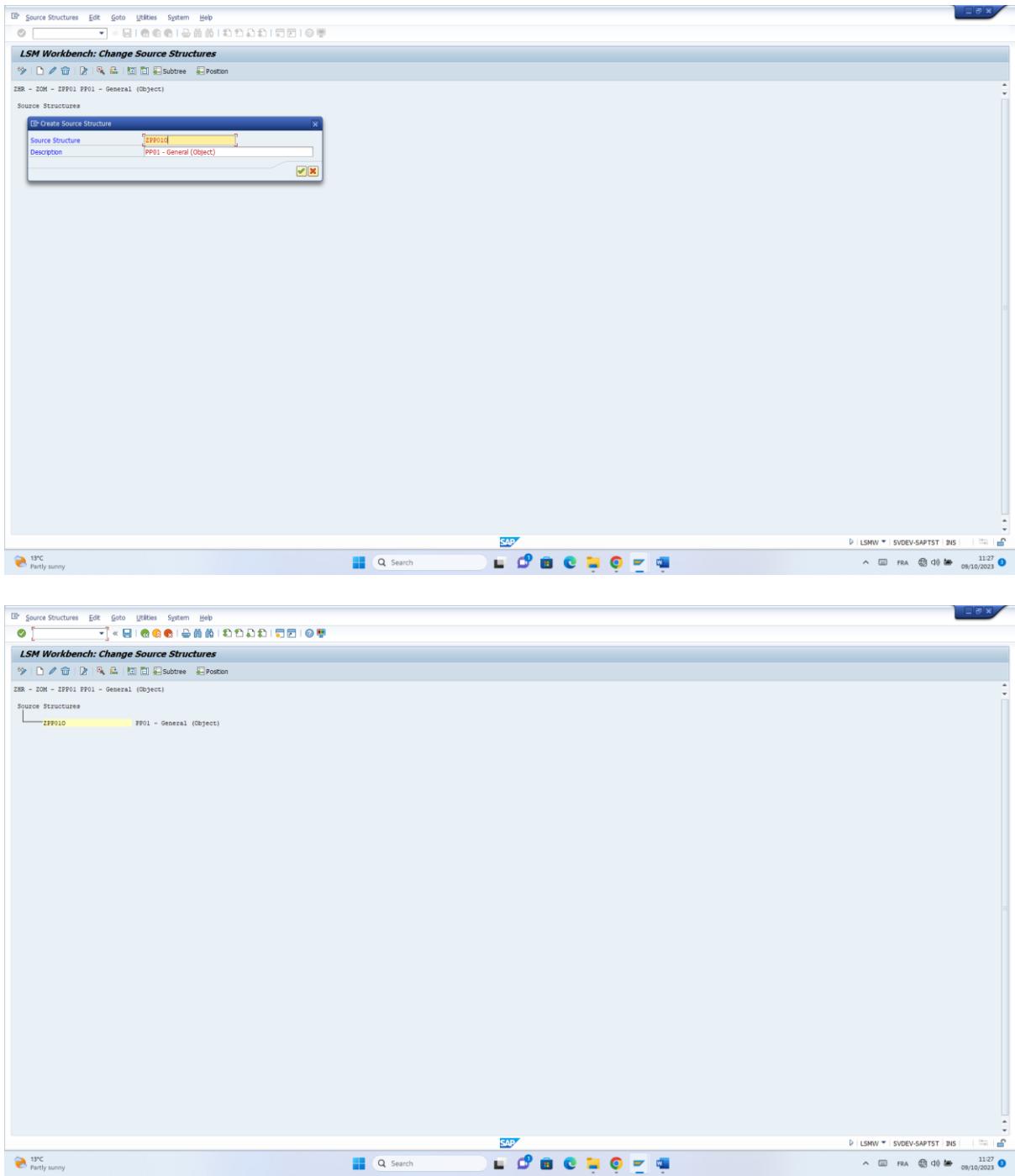
Select source structure and create



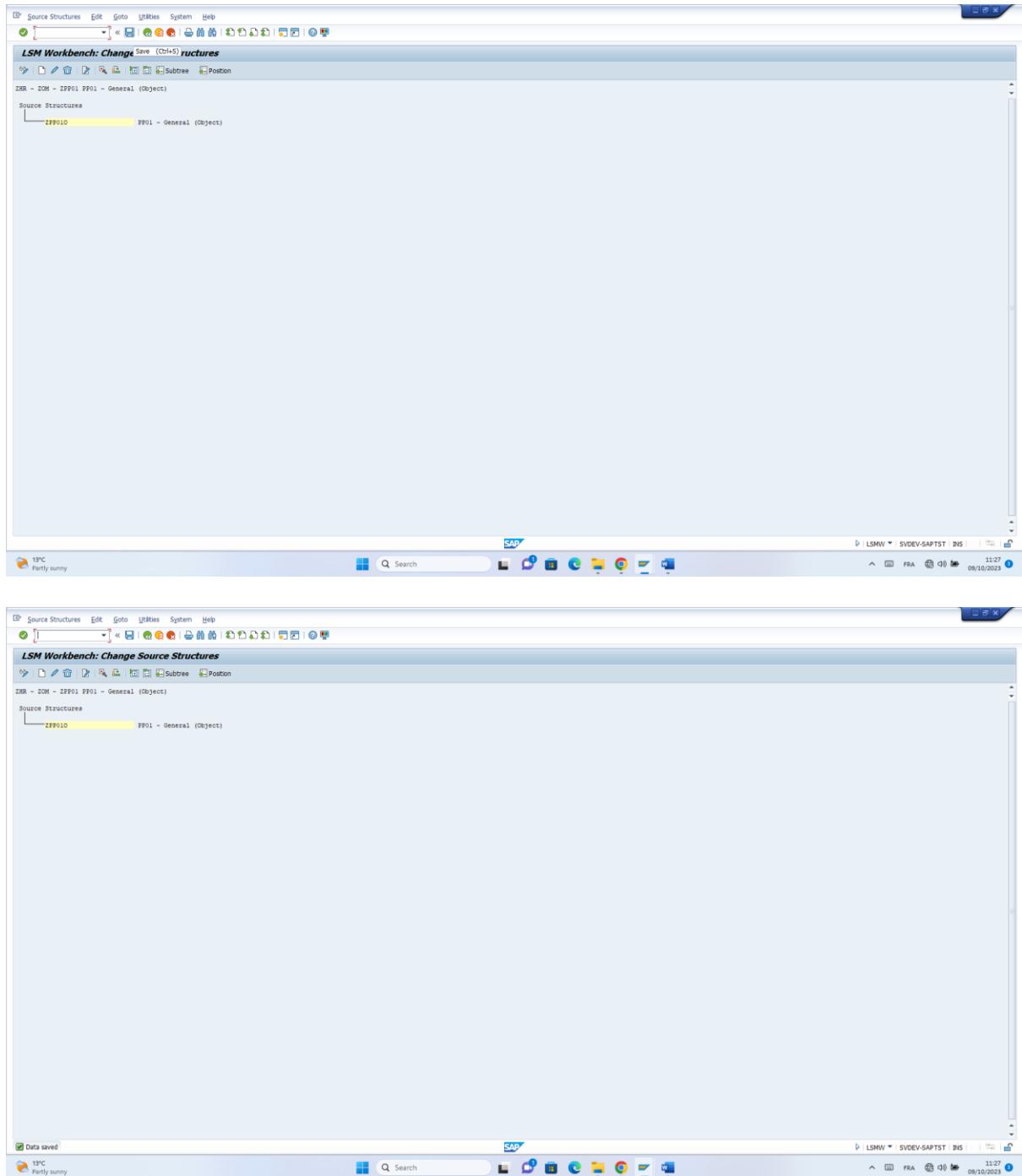
First click on Change button and then click on create button.

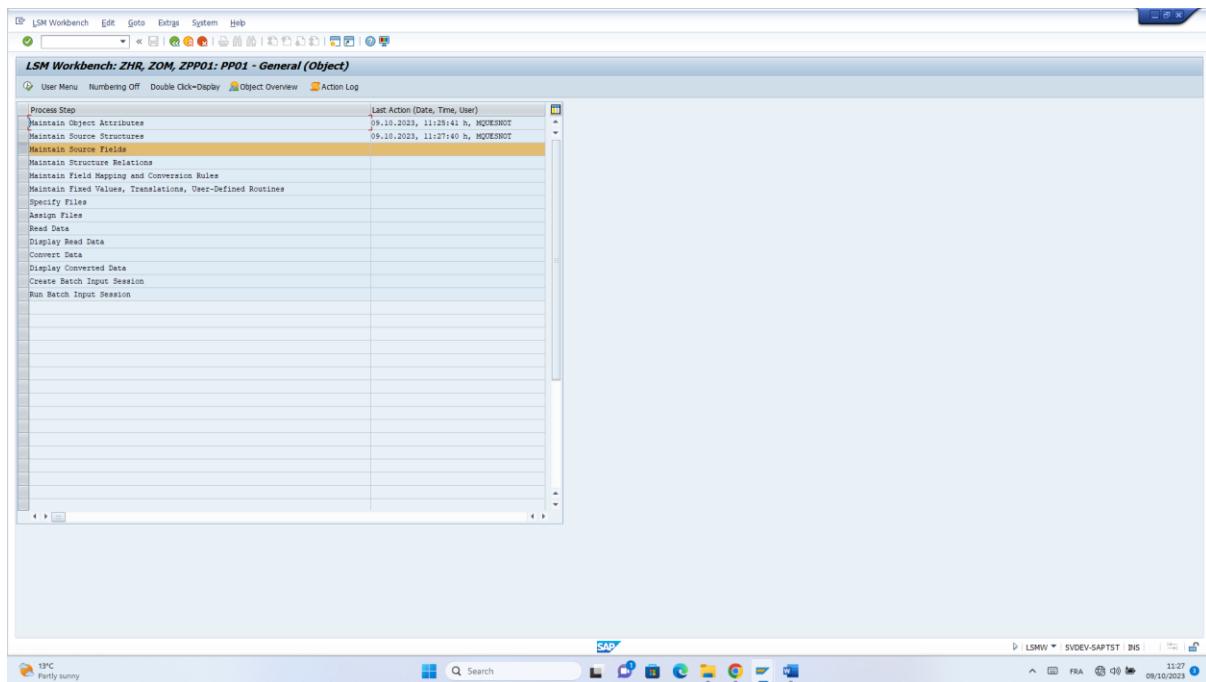






Save and Back.

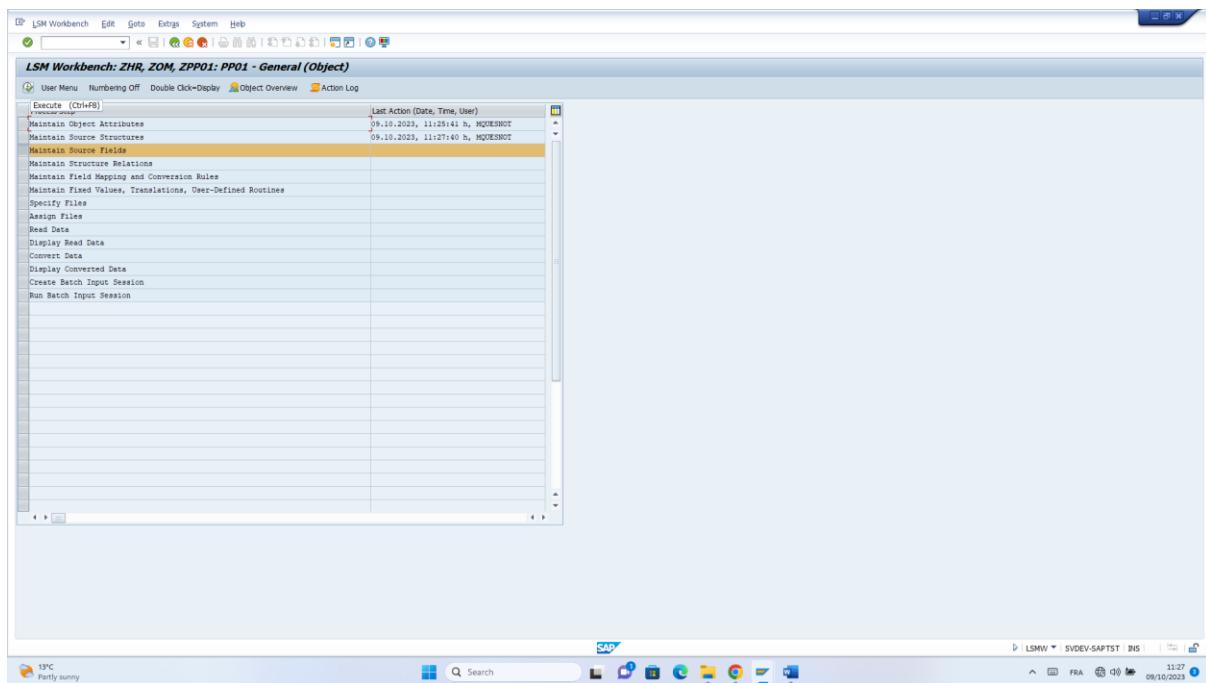


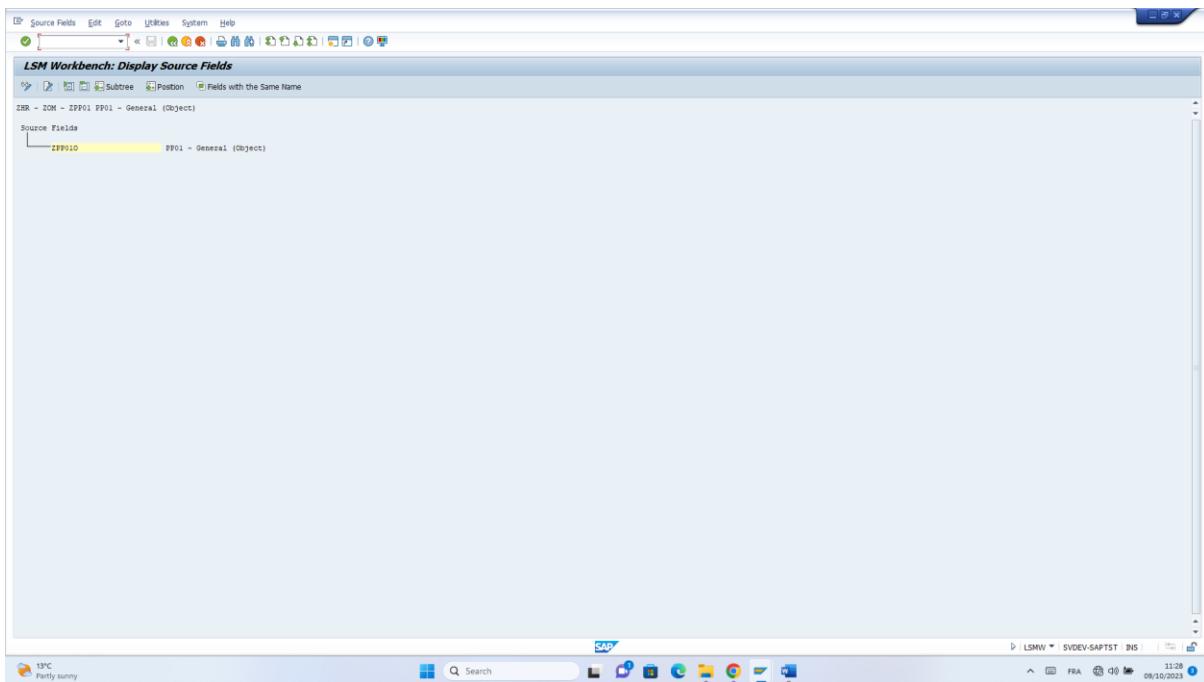


Step 3: Maintain Source Fields

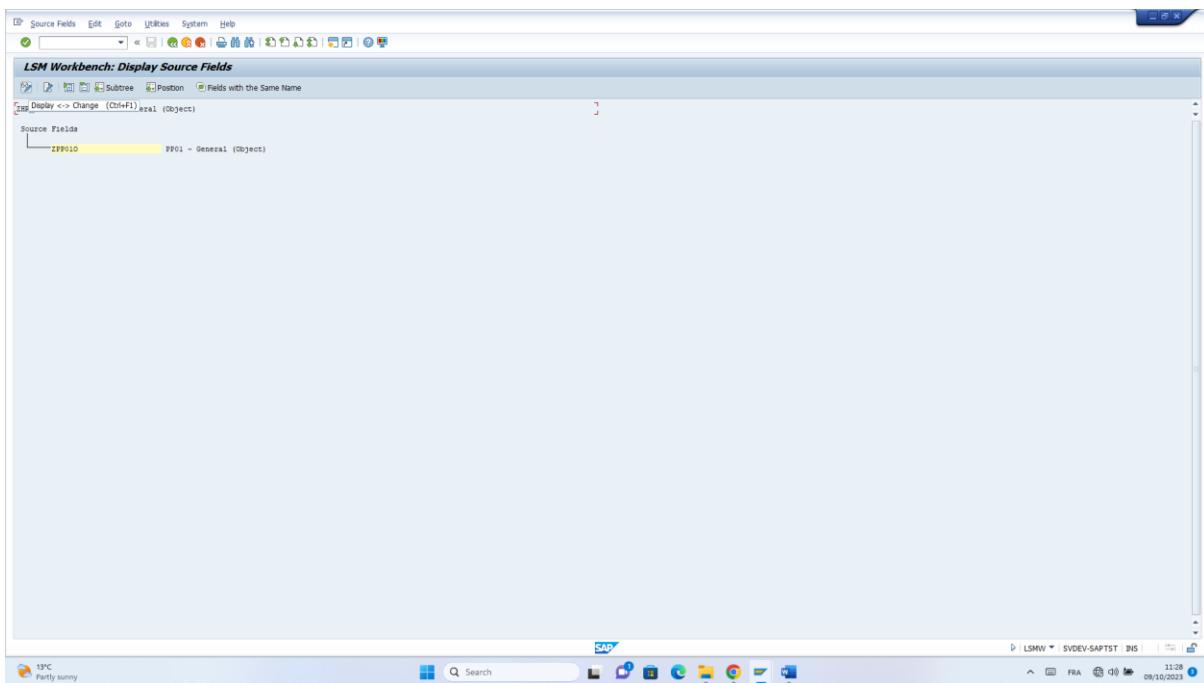
Here we assign all the fields which need to upload to source structure.

Click on Object Overview—>select table

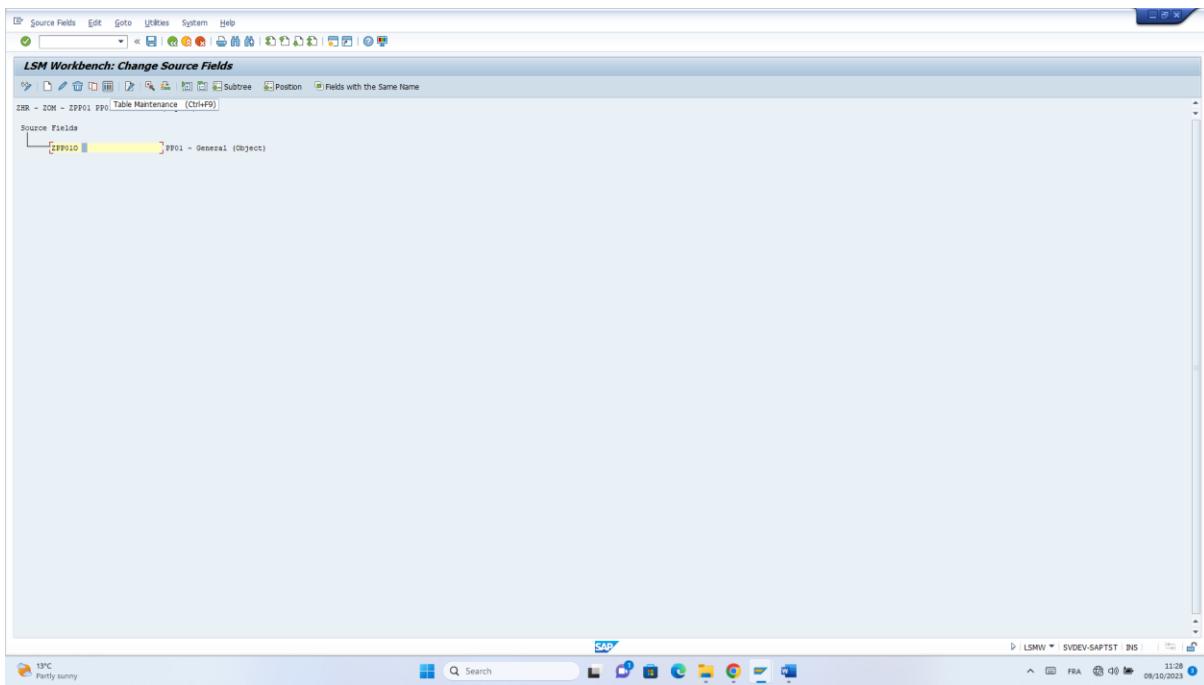




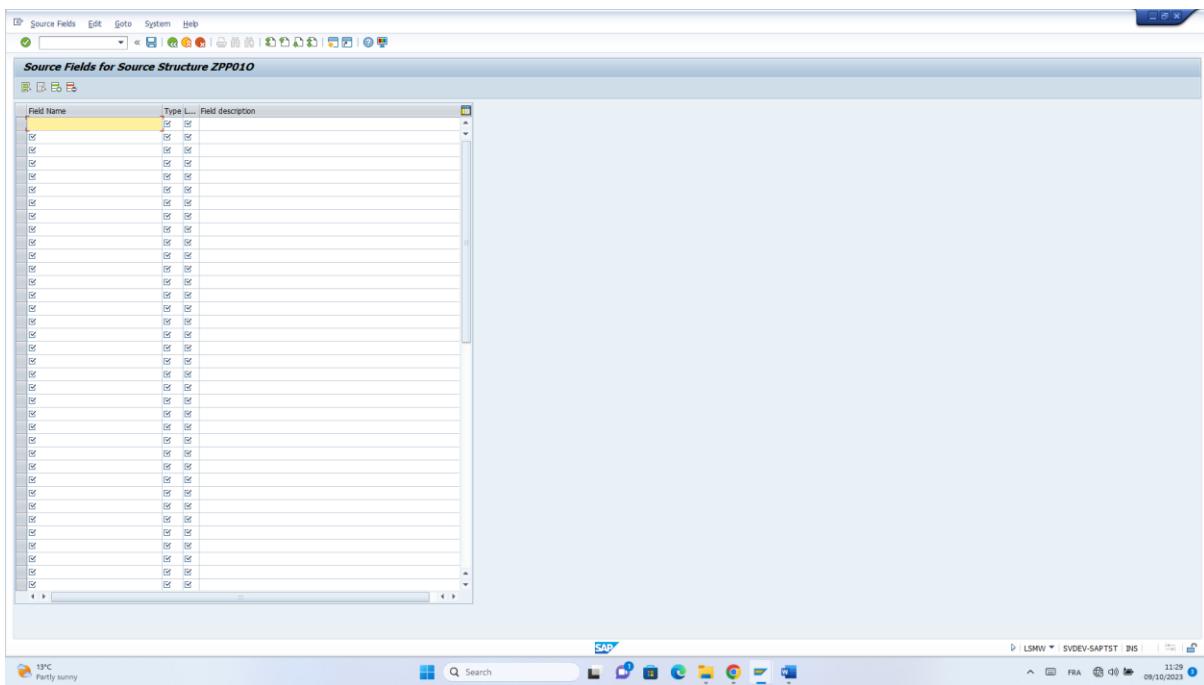
Click on change



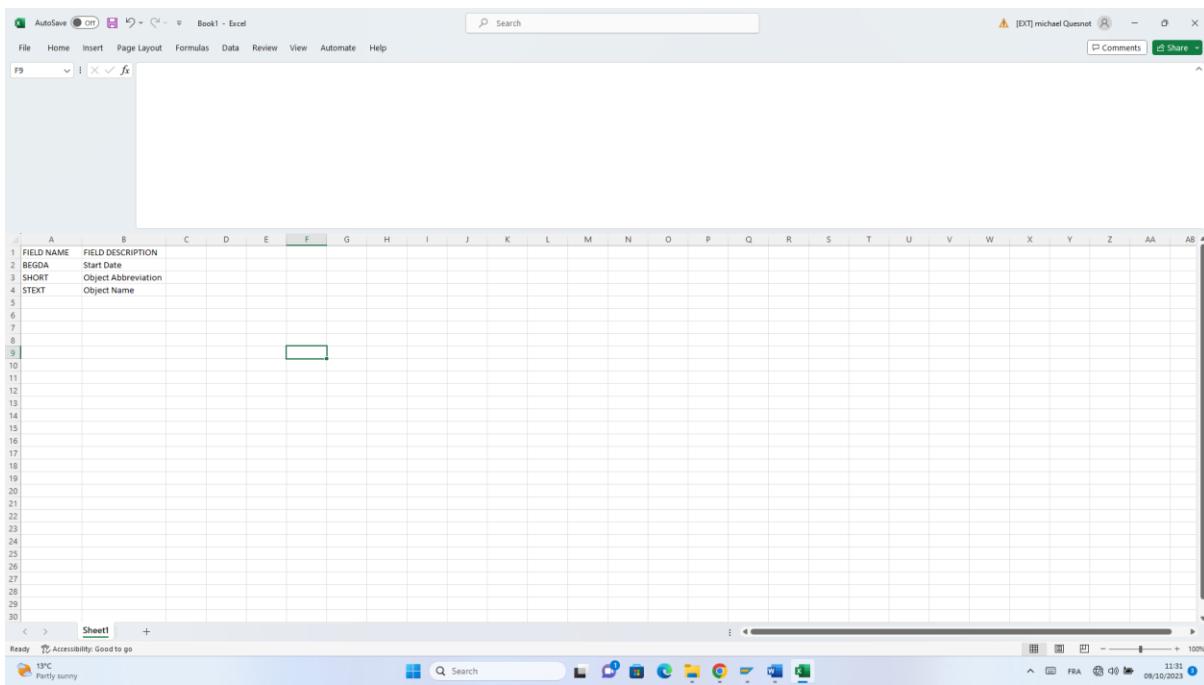
Click on Object Overview—>select table



Click on change and then select the source field and then Table.

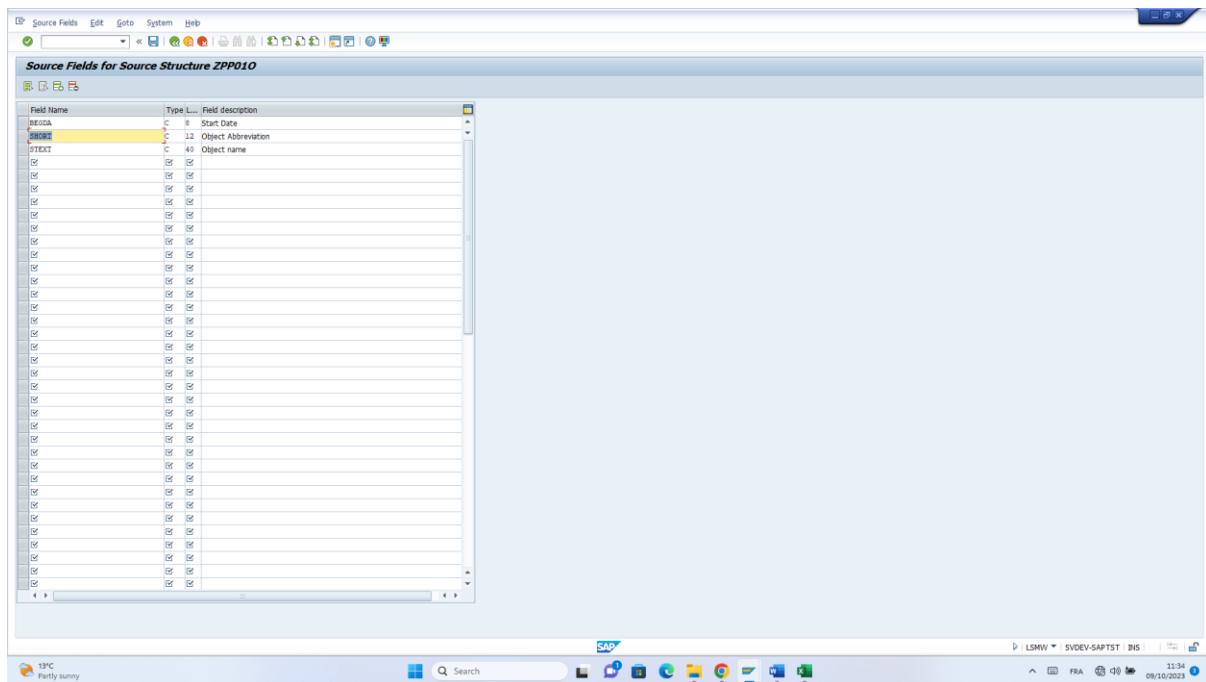


Copy the fields and length in excel sheet (for temporary)

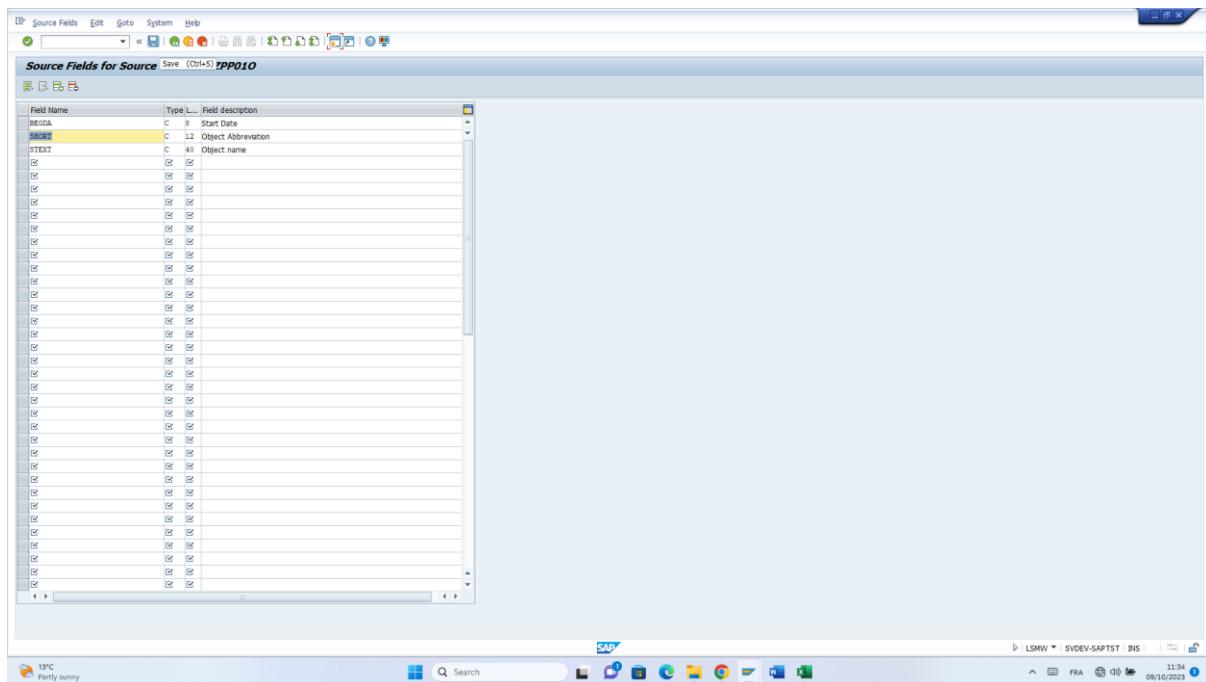


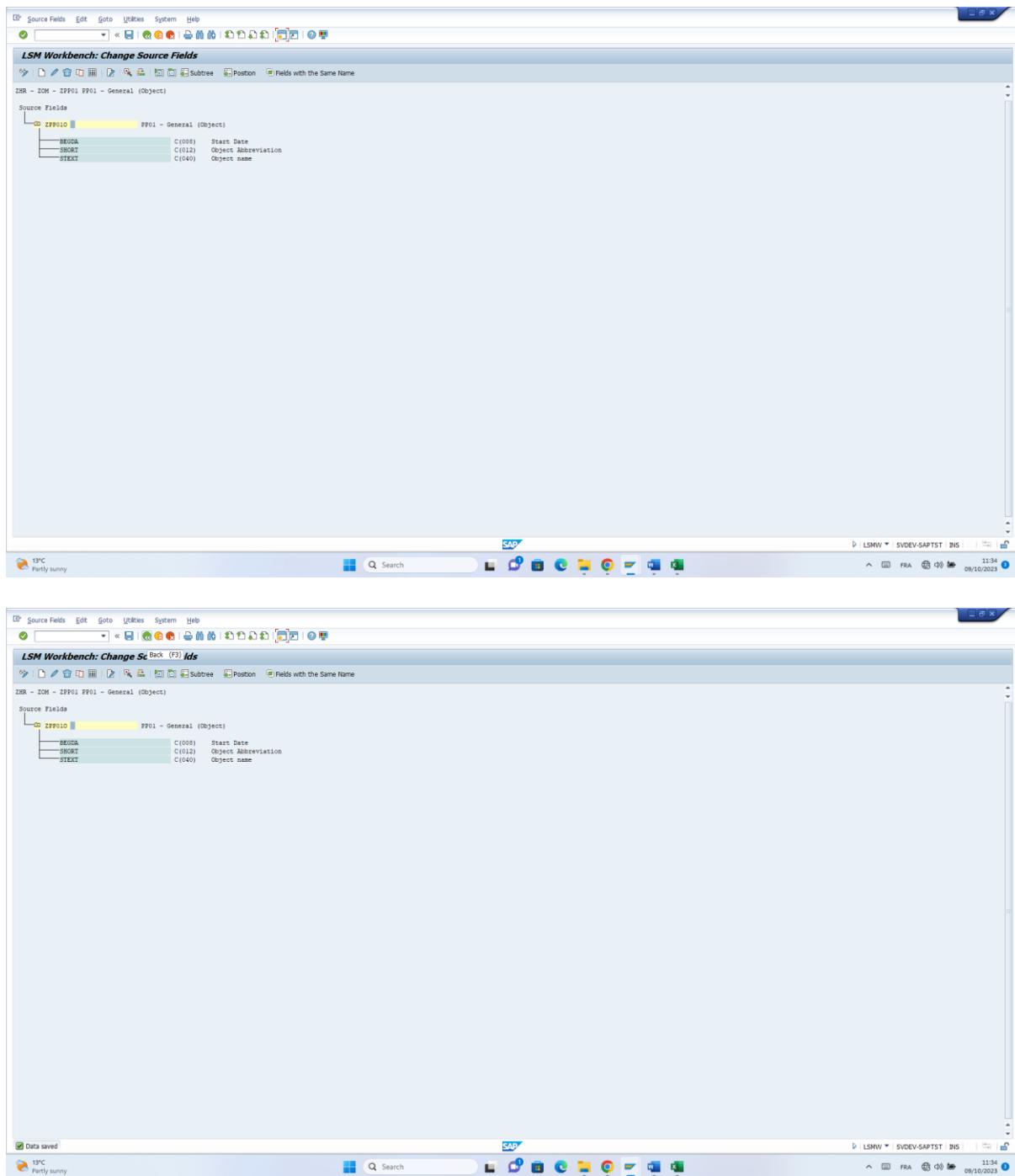
Note: exclude TABNAME and TCODE which are not required to maintain separately, system will take these from recording we made.

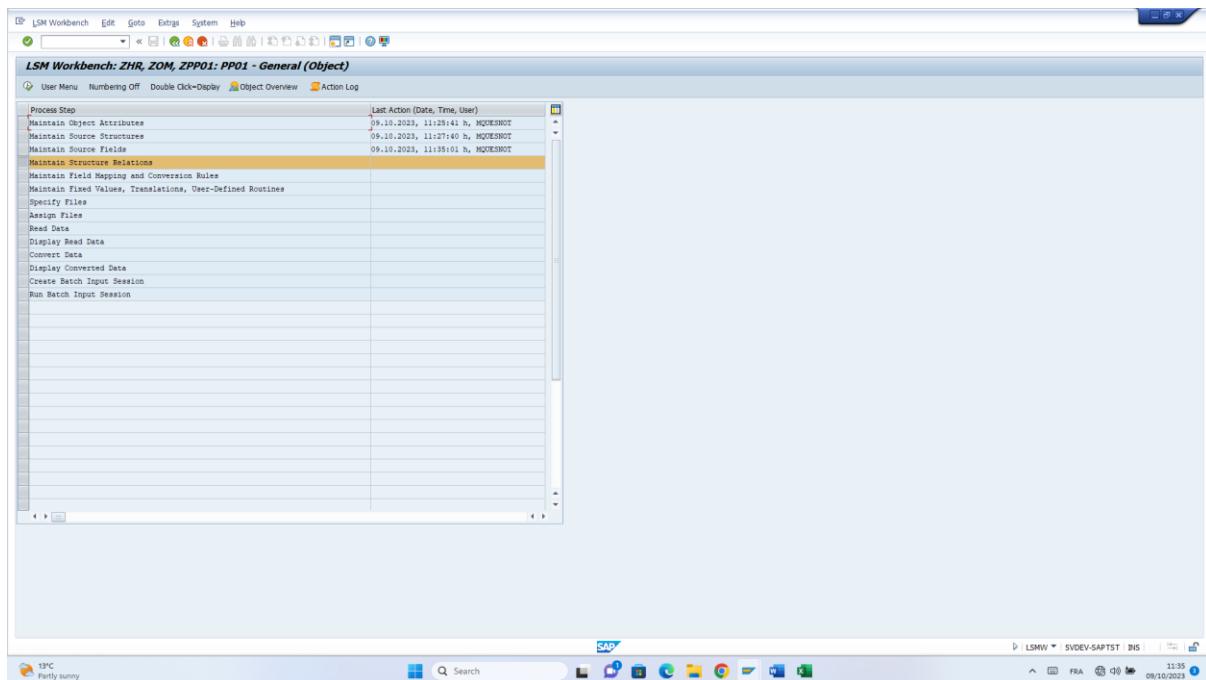
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CL01V	1	Types	CL01V	CHAR	2	0	Plan Version	
CL01E	1	Types	CL01E	CHAR	2	0	Object Type	
CL01D	1	Types	CL01D	CHAR	8	0	Object ID	
INF0TY	1	Types	INF0TY	CHAR	4	0	Infotype	
SB0TY	1	Types	SB0TY	CHAR	4	0	Subtype	
ISTAT	1	Types	ISTAT_D	CHAR	1	0	Planning Status	
PRI0X	1	Types	PRI0X	CHAR	2	0	Priority	
REGEDA	1	Types	REGEDA	DATS	8	0	Start Date	
ENDDA	1	Types	ENDDA	DATS	8	0	End Date	
LANGU	1	Types	LANGU	LANG	1	0	Language Key	
DUMMY	1	Types	DUMMY_5	CHAR	9	0	Dummy Function With Length 9	
REQRN	1	Types	REQRN	DATS	3	0	Number of Infotype Record with Same Key	
REQRD	1	Types	REQRD	DATS	8	0	Order ID on	
REQRM	1	Types	REQRM	CHAR	12	0	User Name	
REASR	1	Types	REASR	CHAR	2	0	Reason	
RESTD	1	Types	RESTD	CHAR	1	0	Historical Record Flag	
IT00B	1	Types	IT00B	CHAR	8	0	Text Module for Infotype	
SHORT	1	Types	SHORT_D	CHAR	12	0	Object Abbreviation	
STEXT	1	Types	STEXT	CHAR	40	0	Object Name	
SDATE	1	Types	SDATE	DATS	8	0	Delimited date	



Save and back.



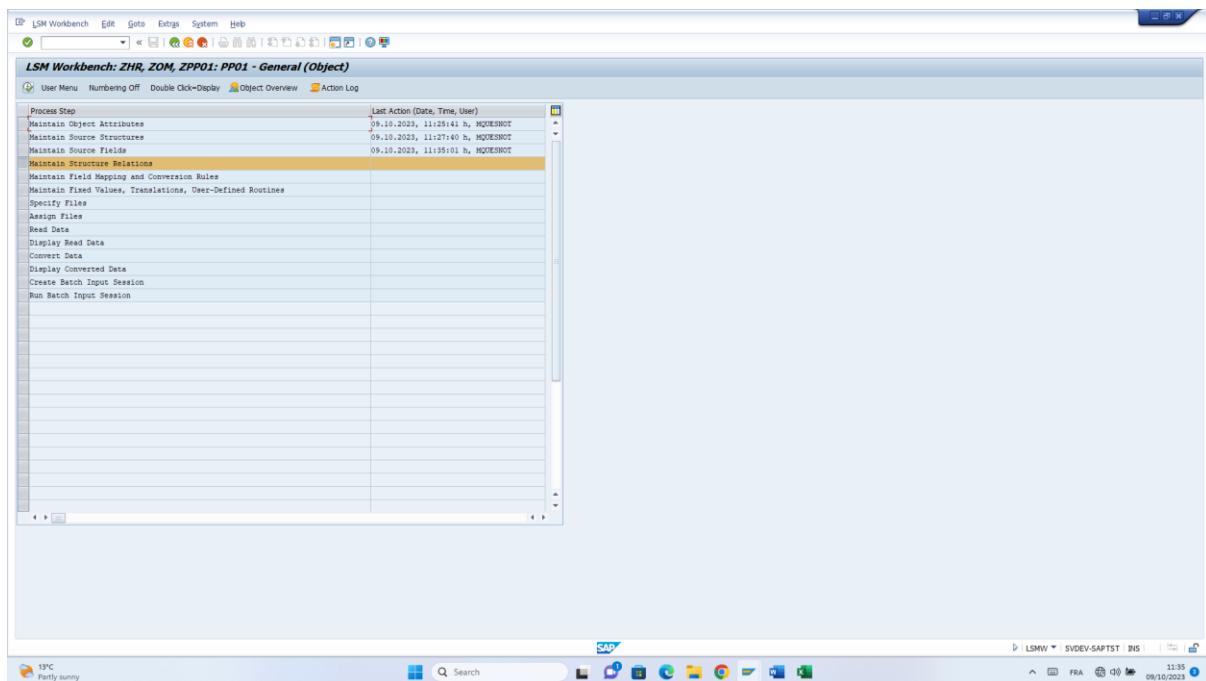


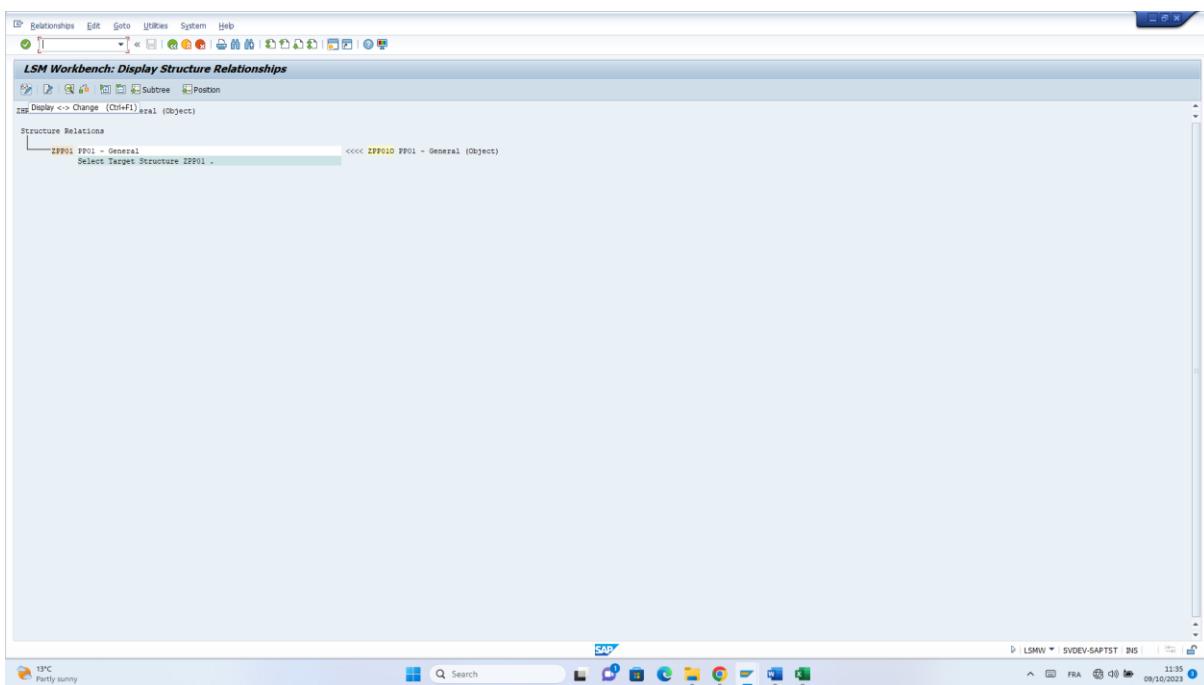
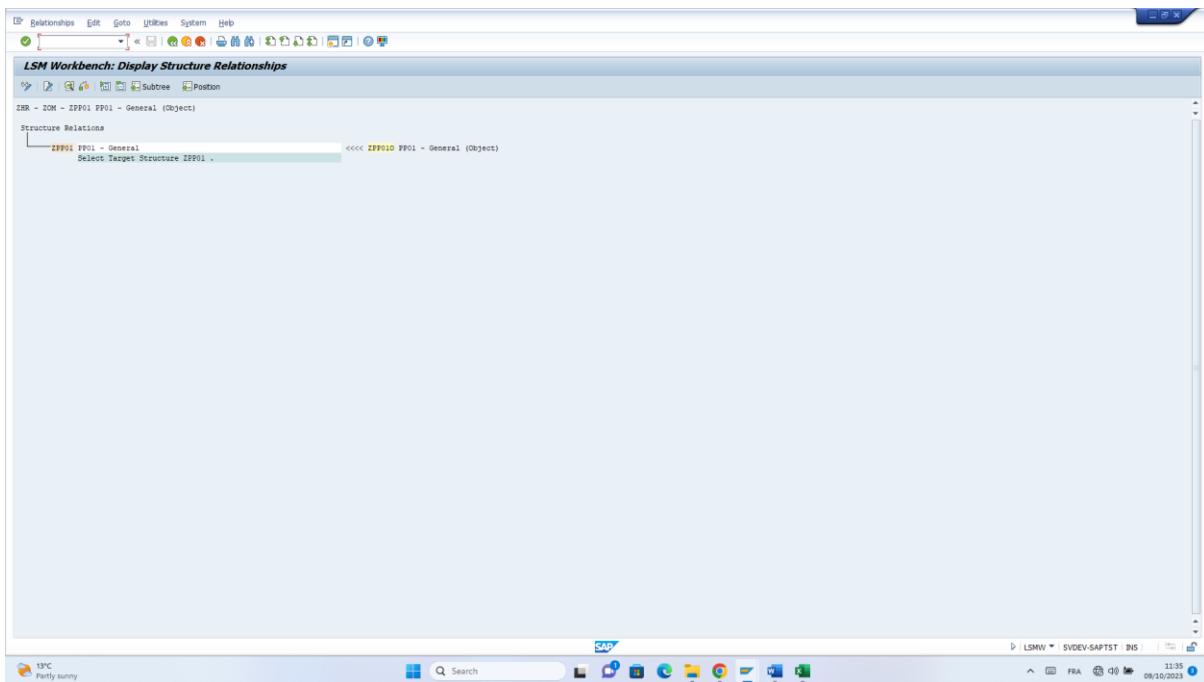


Step 4: Maintain Structure Relations

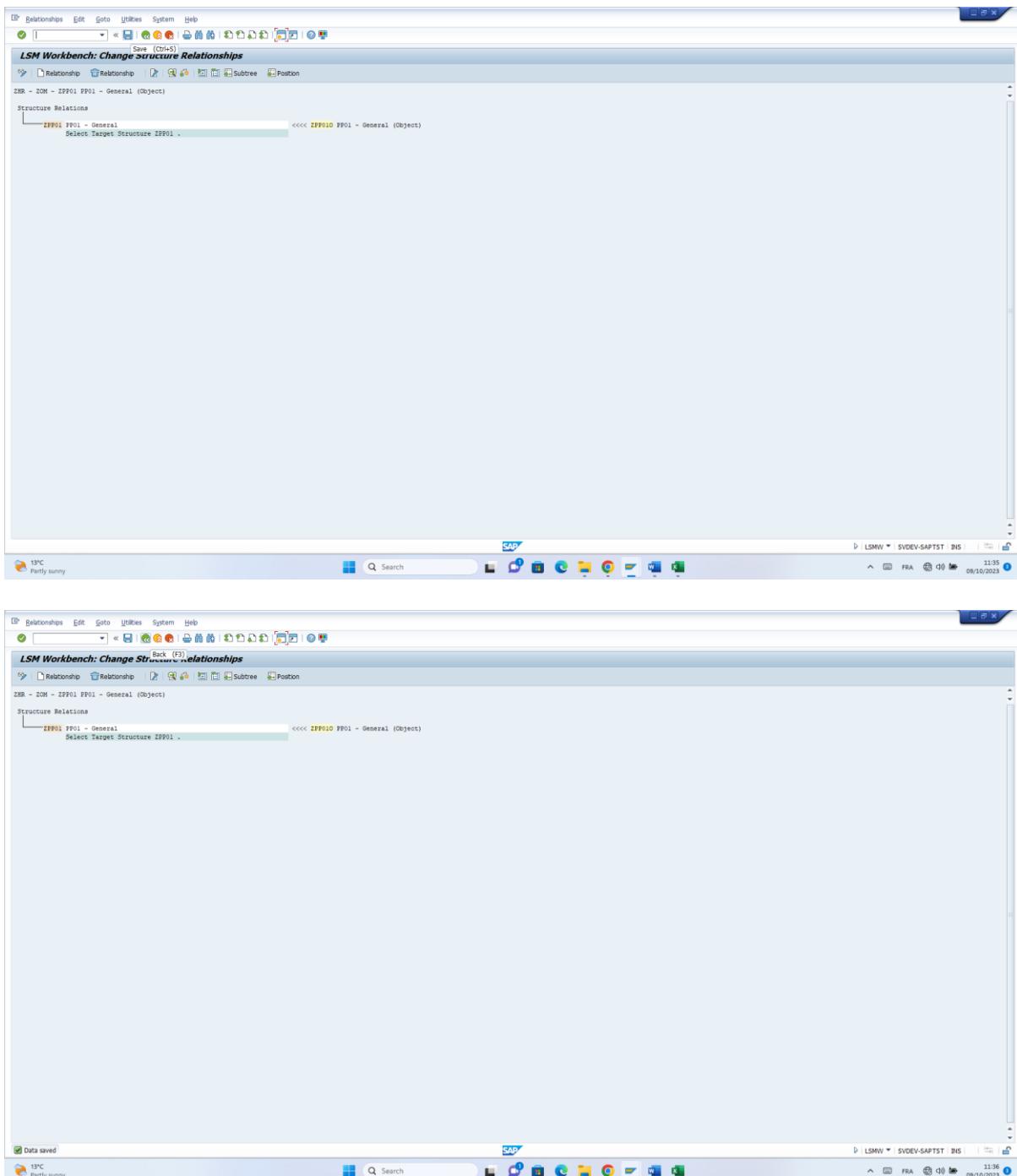
Here we check whether structure relations between legacy and SAP established or not.

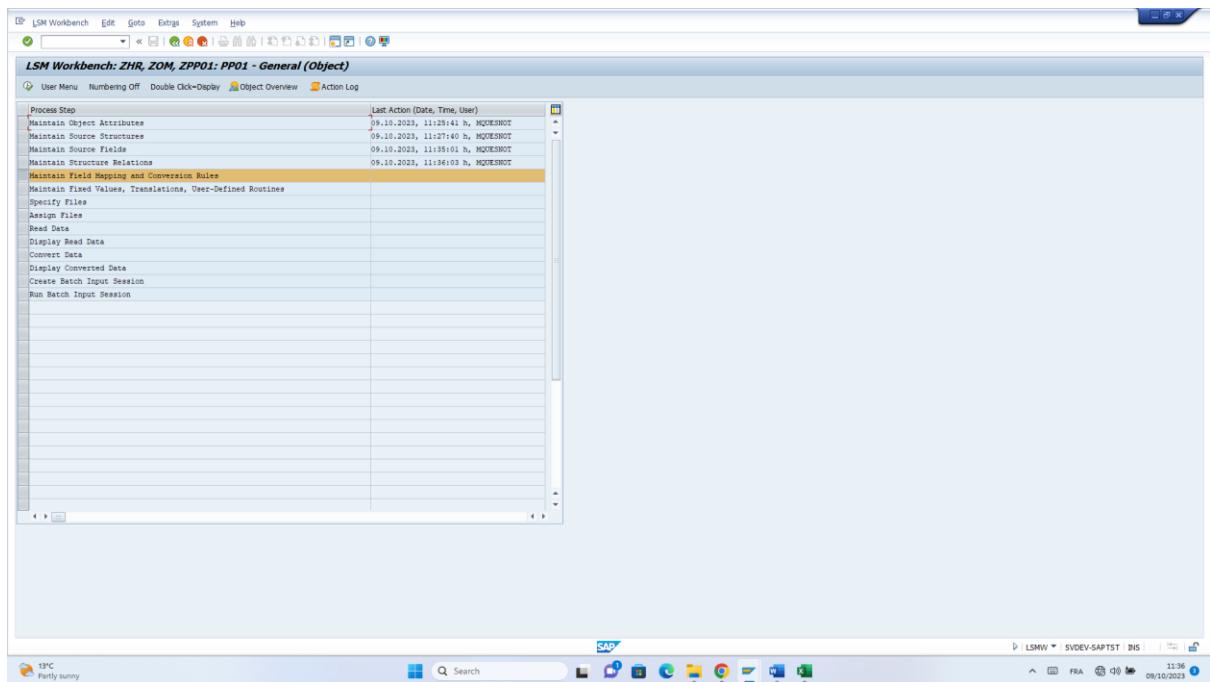
In this step there is no need to change, just save and come back.





Save and Back.

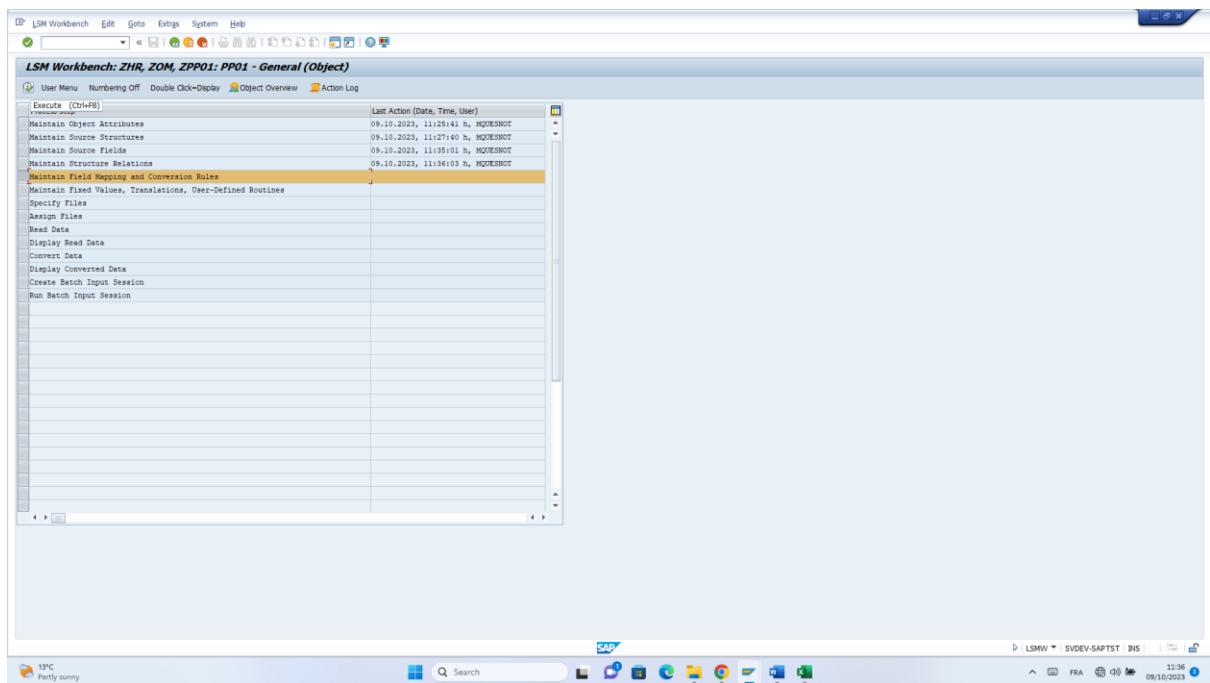




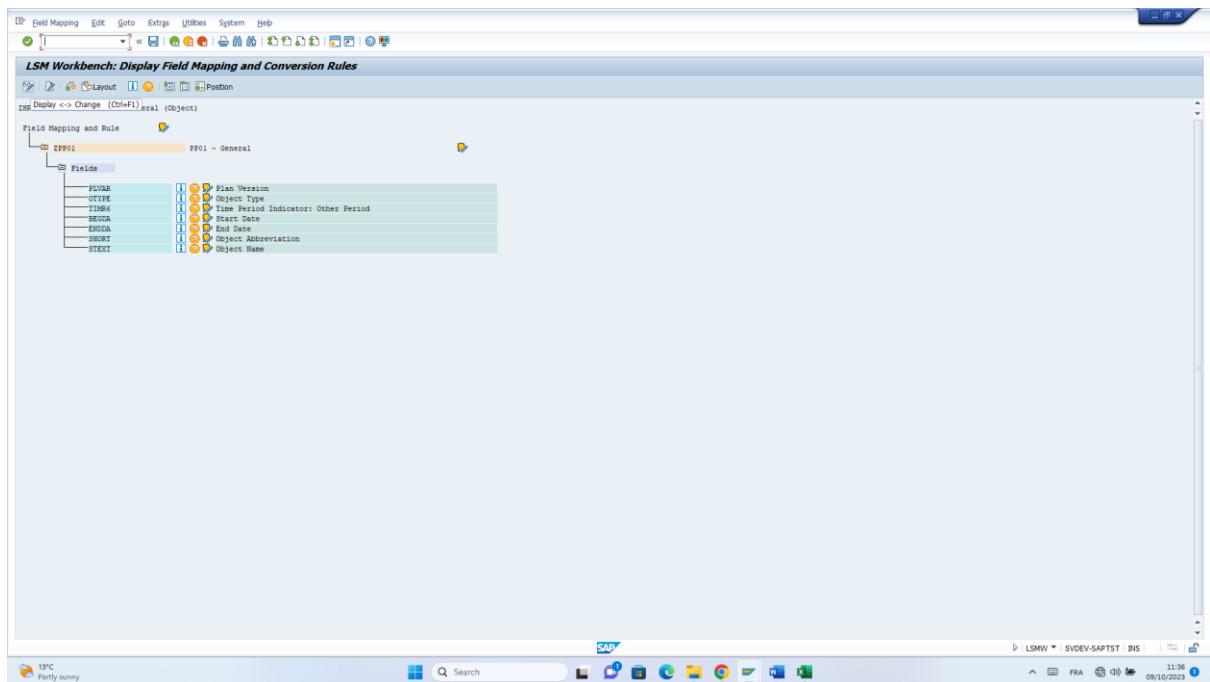
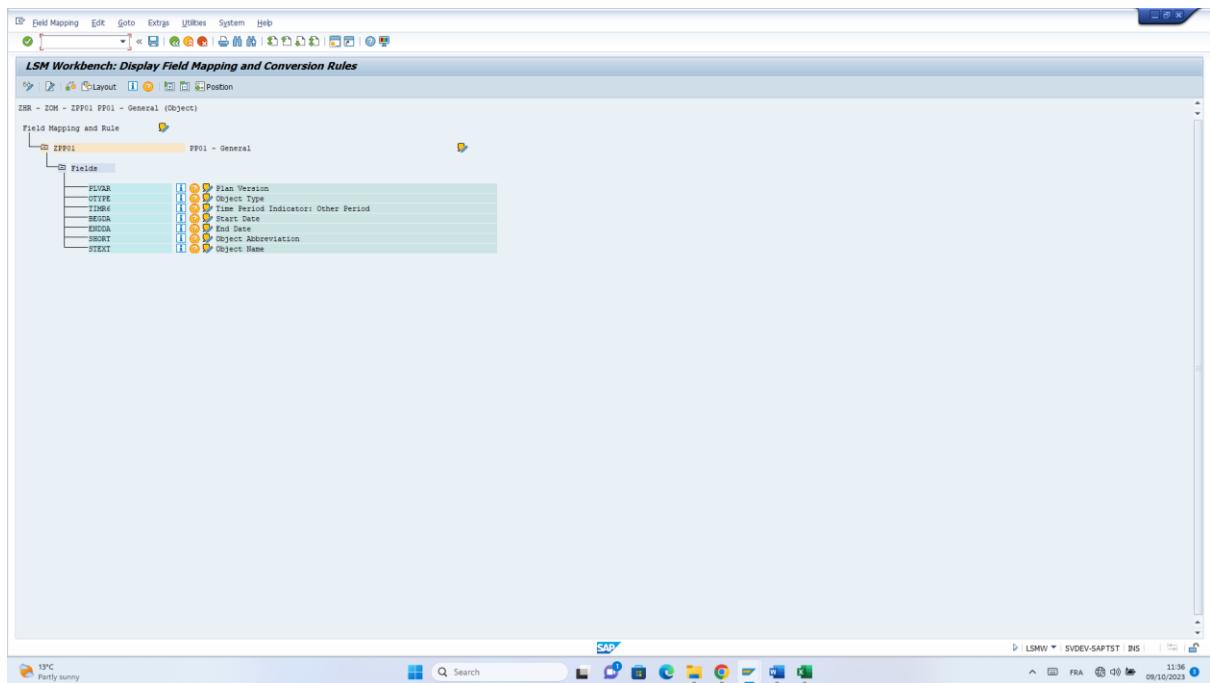
Step 5: Display Field Mapping and Conversion

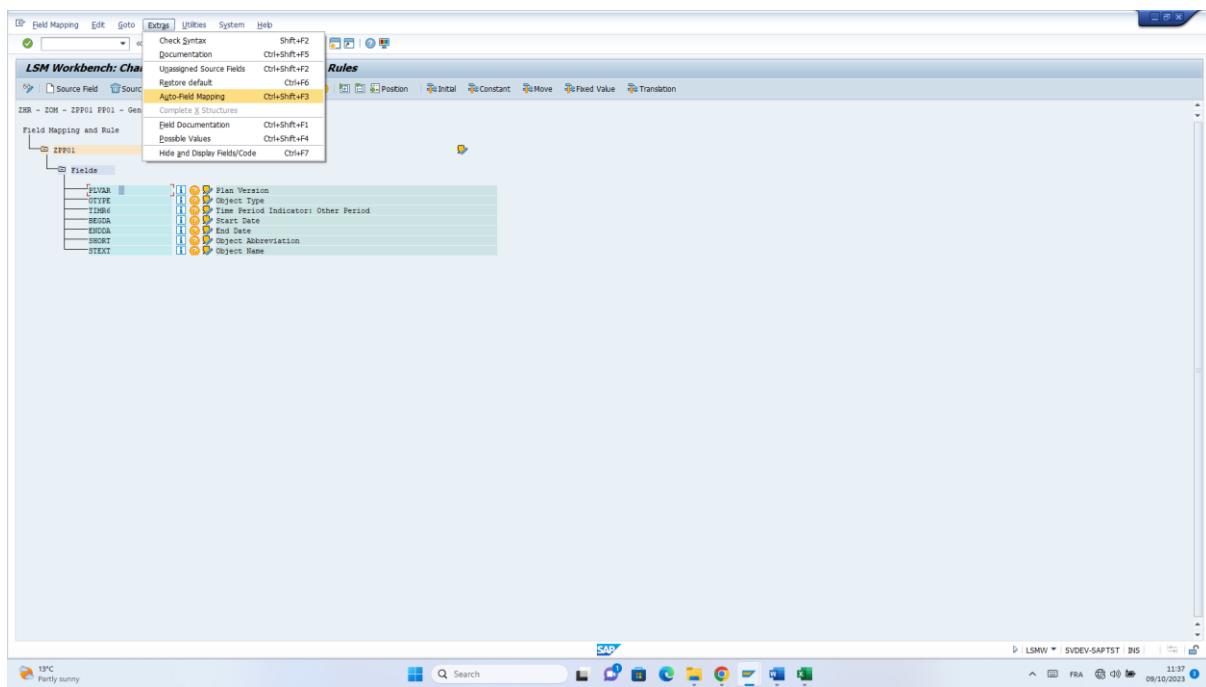
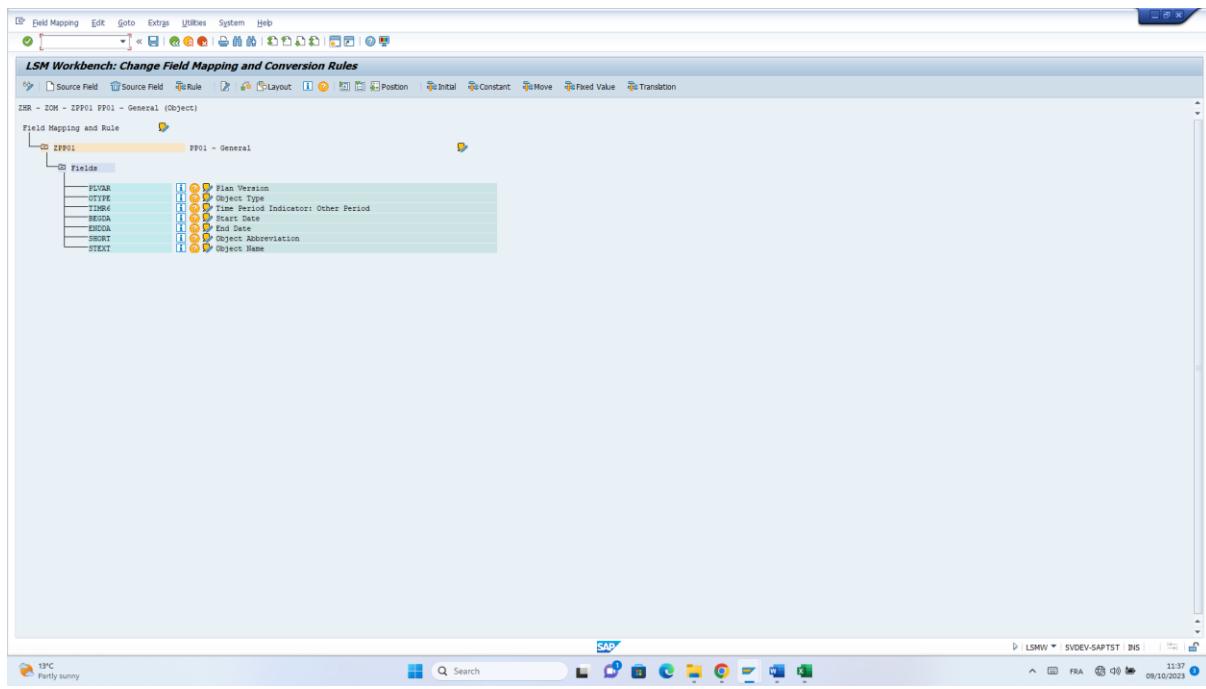
Here we establish the relationship between legacy and SAP based on object fields.

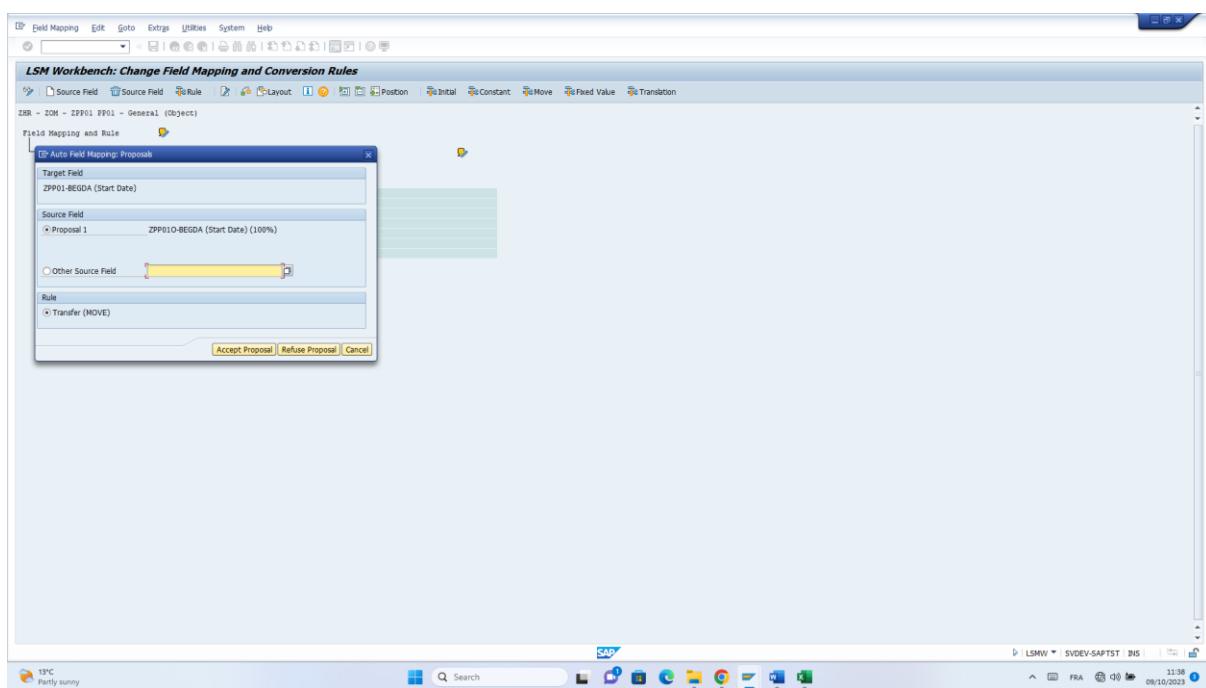
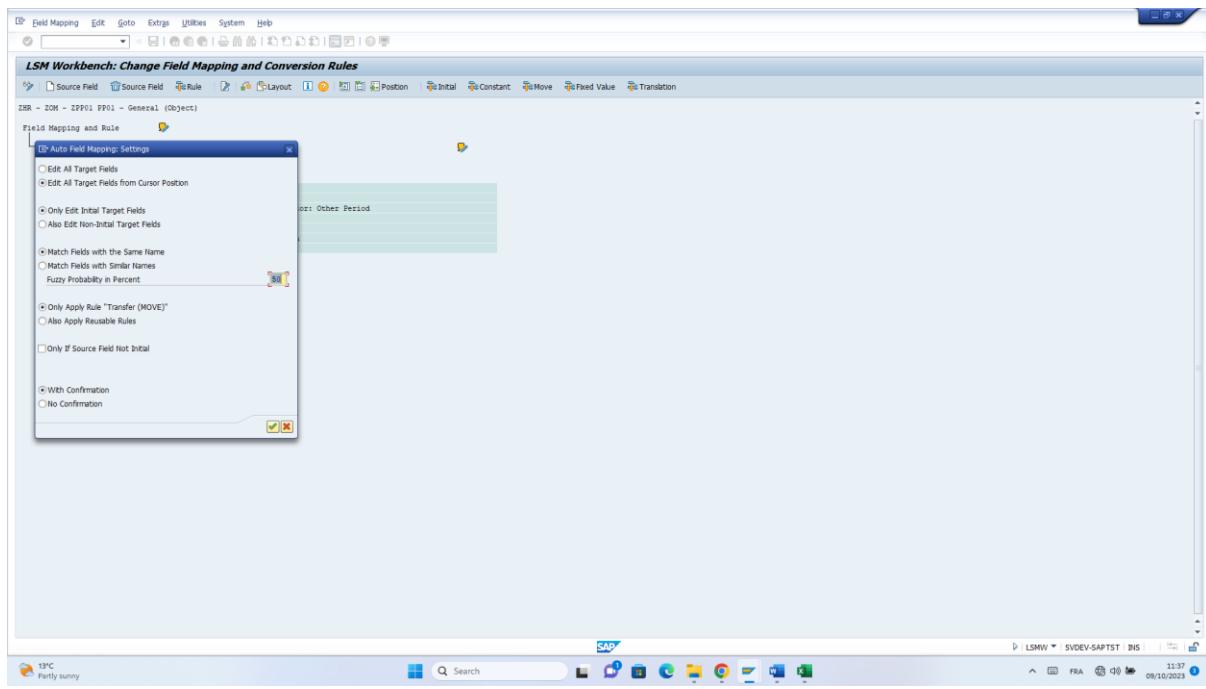
In menu bar, go to Maintain Field Mapping and Conversion Rules

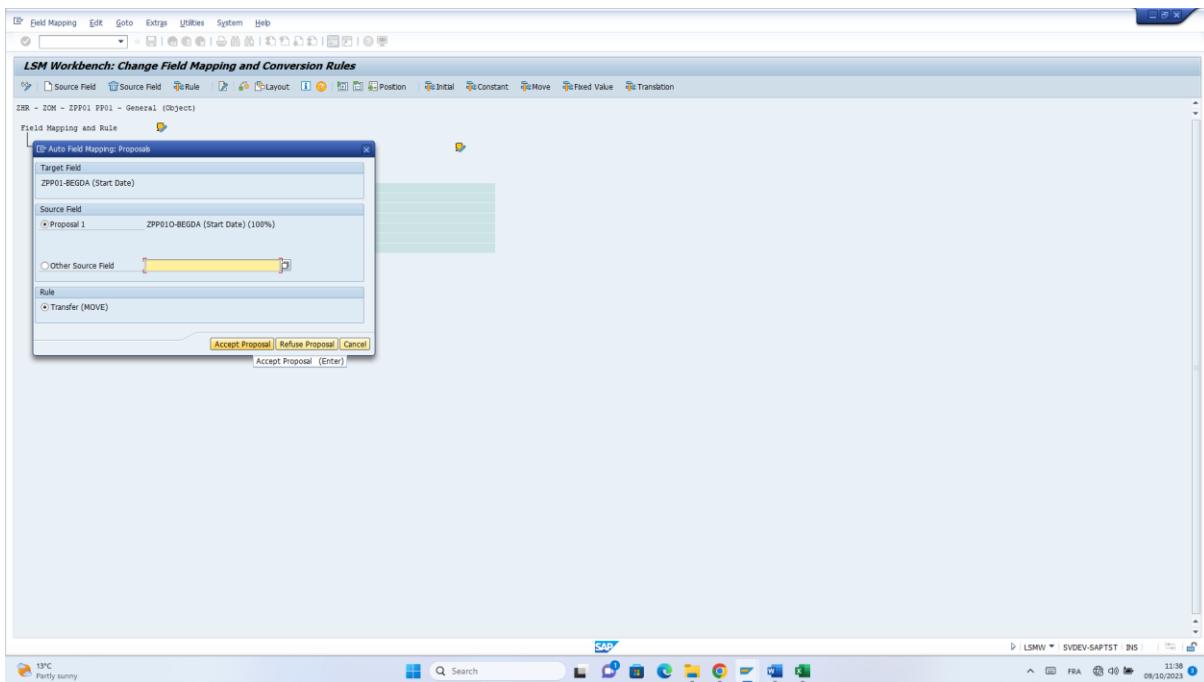


After Execute go to Extra and then Auto Field Mapping.

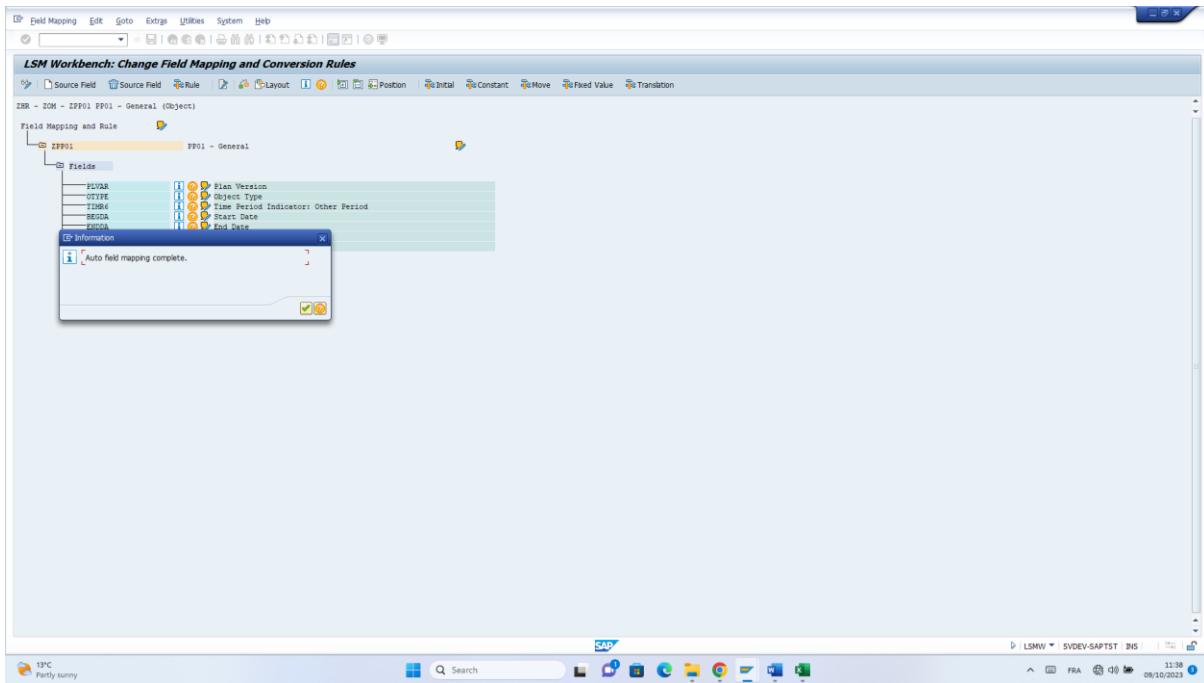


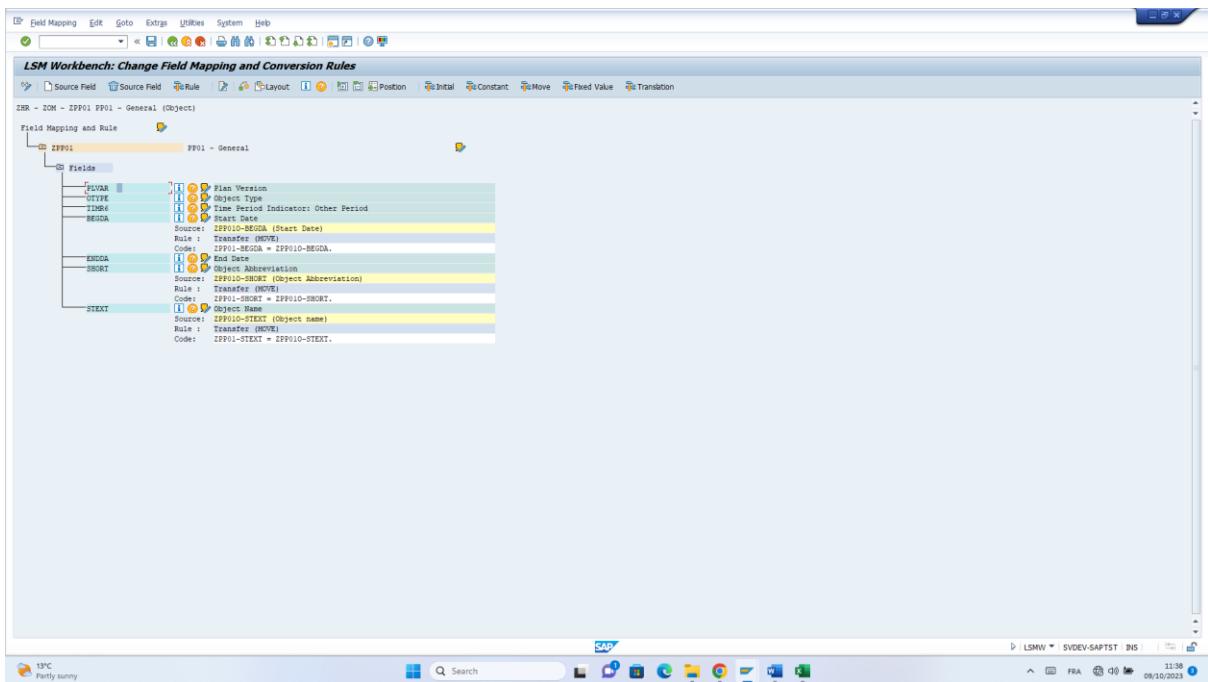




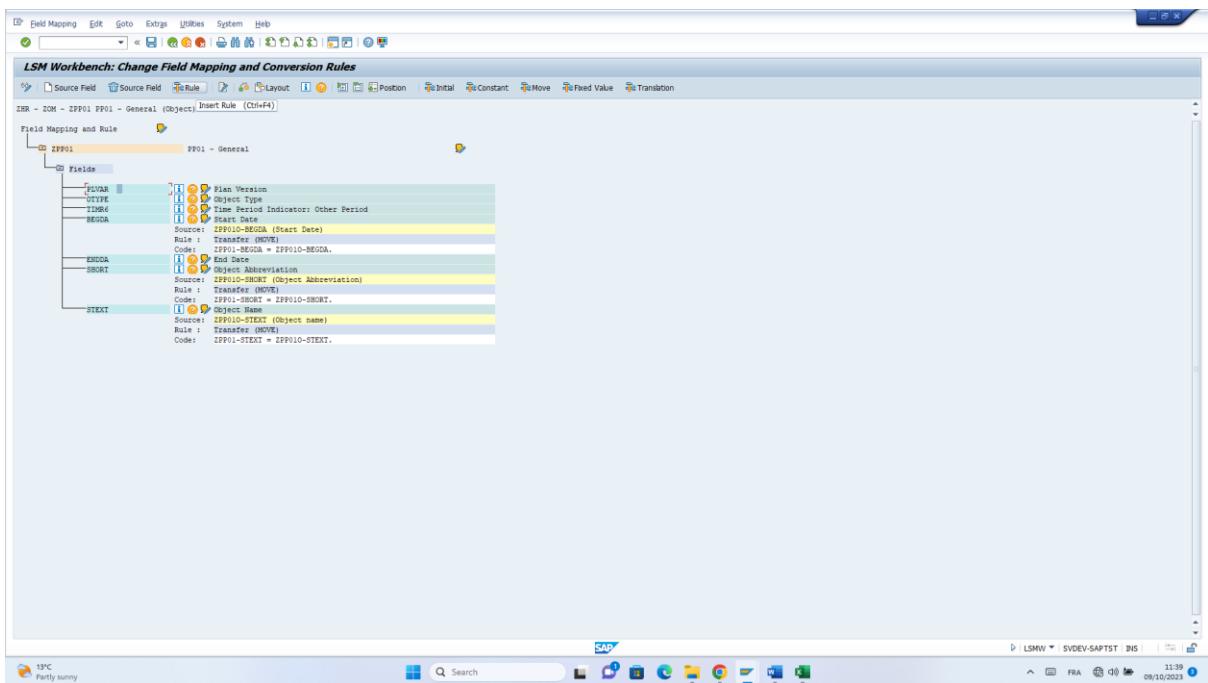


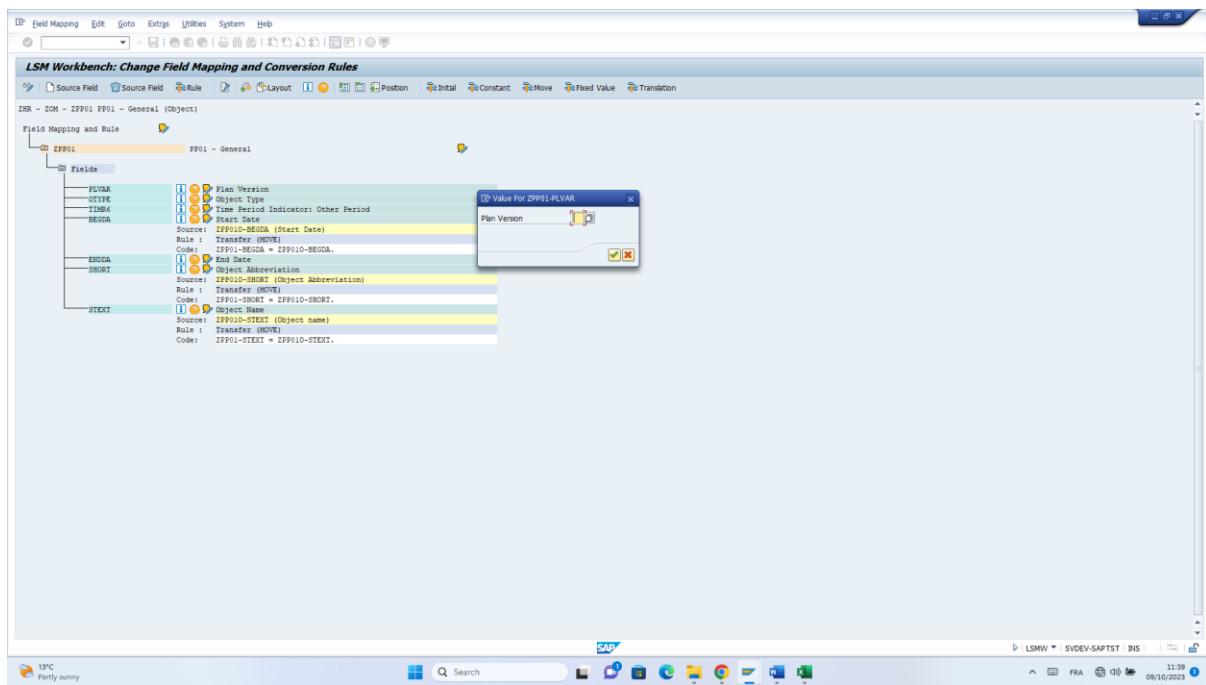
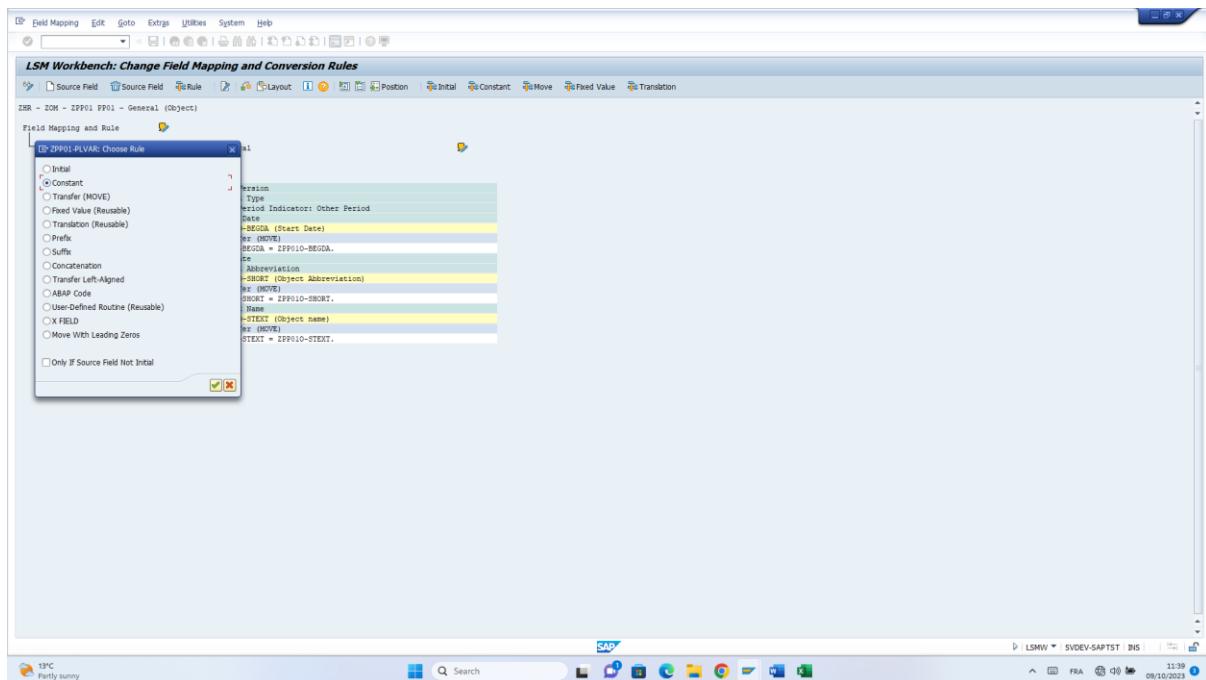
Now accept proposal for all the fields which need to upload

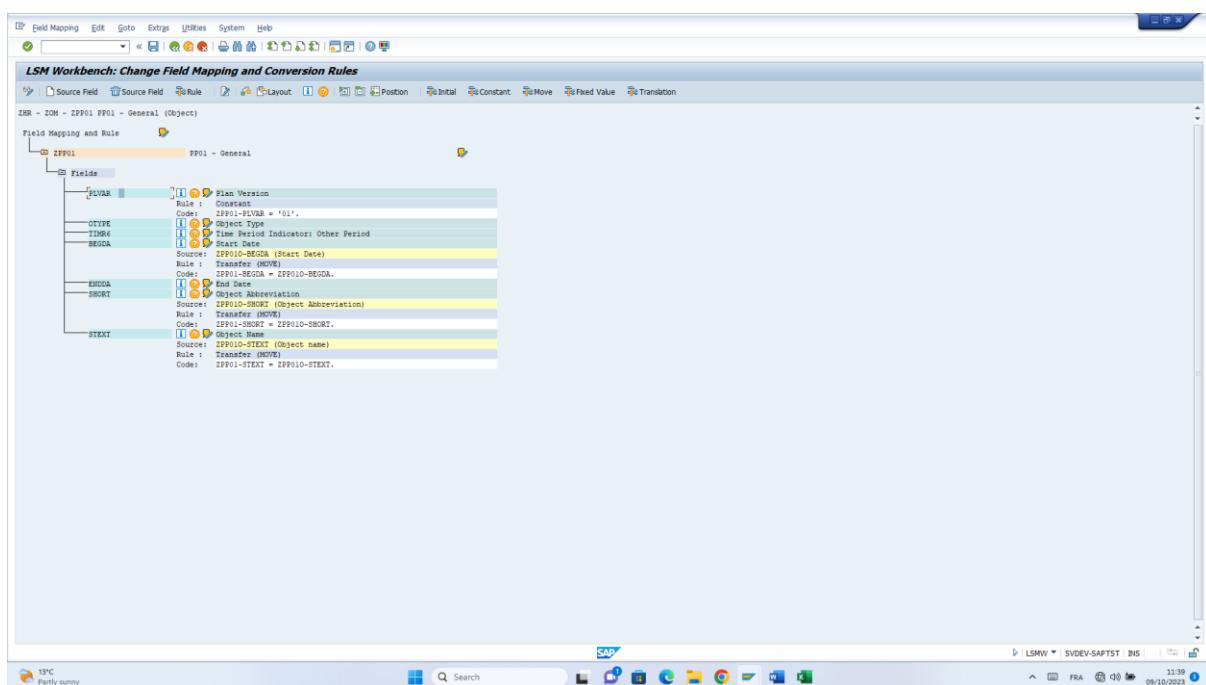
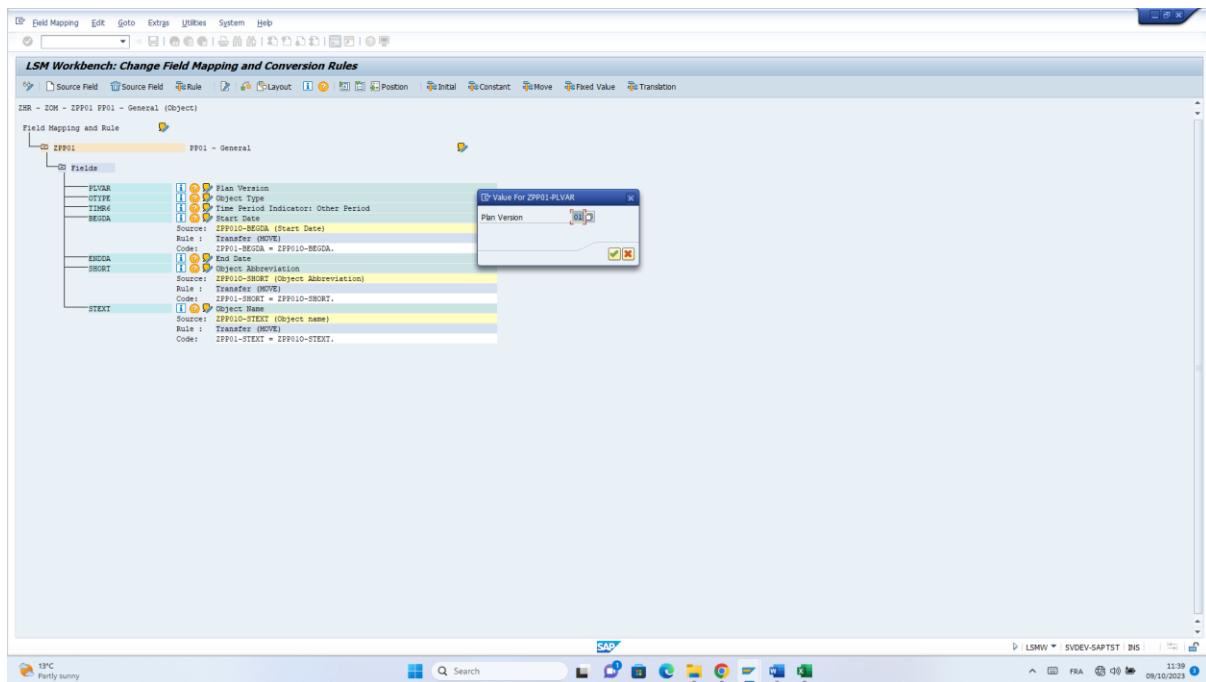


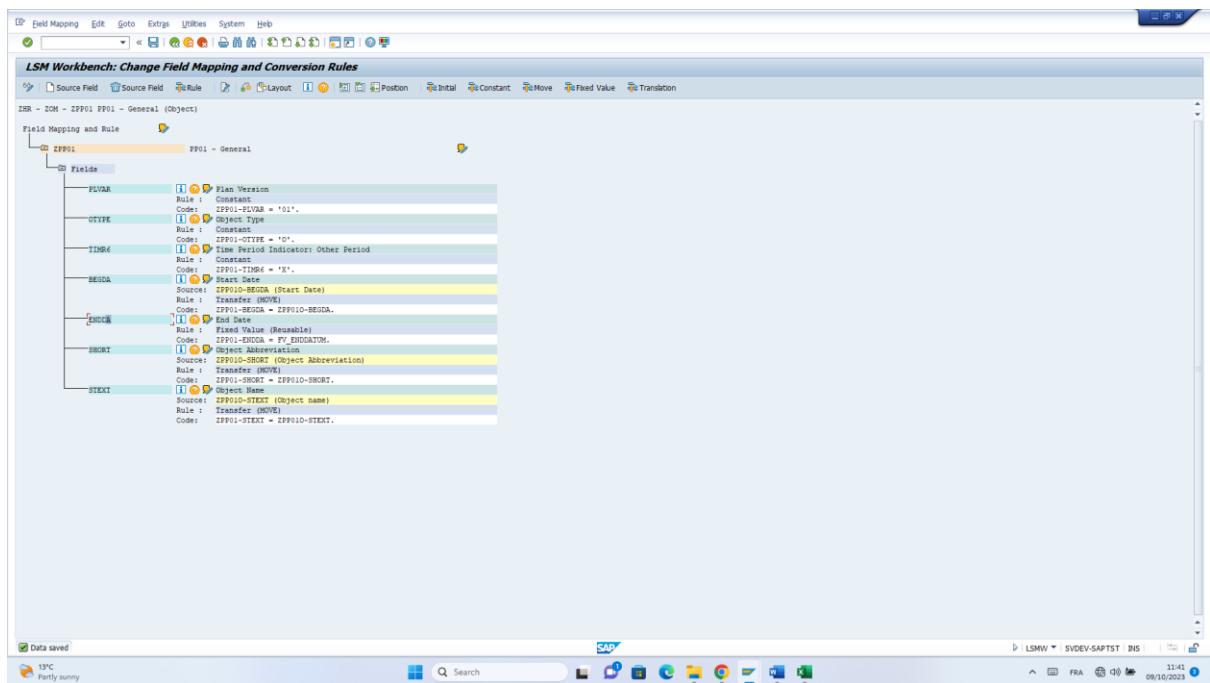
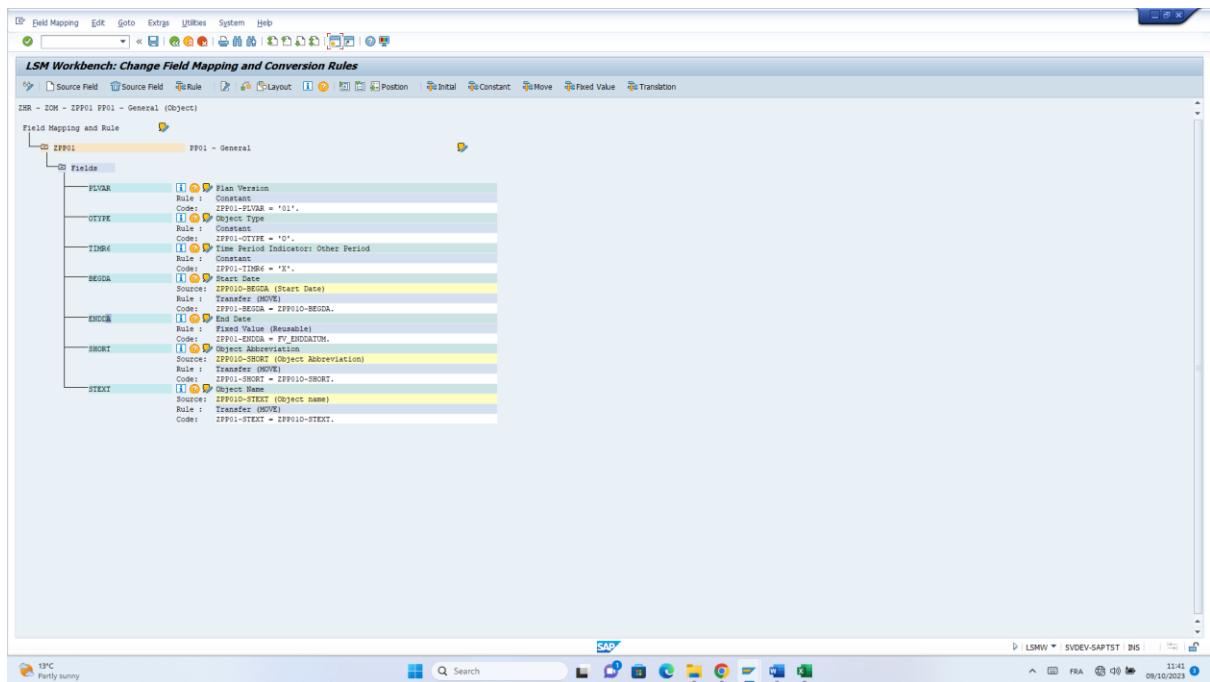


RULE









Step 6: Maintain Fixed Values, Translations, User-Defined Routines

No need to maintain this step, unless and until if there exist any user defined routines, which helpful for reusable.

LSM Workbench: ZHR, ZOM, ZPP01: PP01 - General (Object)

User Menu Numbering Off Double Click-Display Object Overview Action Log

Process Step Last Action (Date, Time, User)

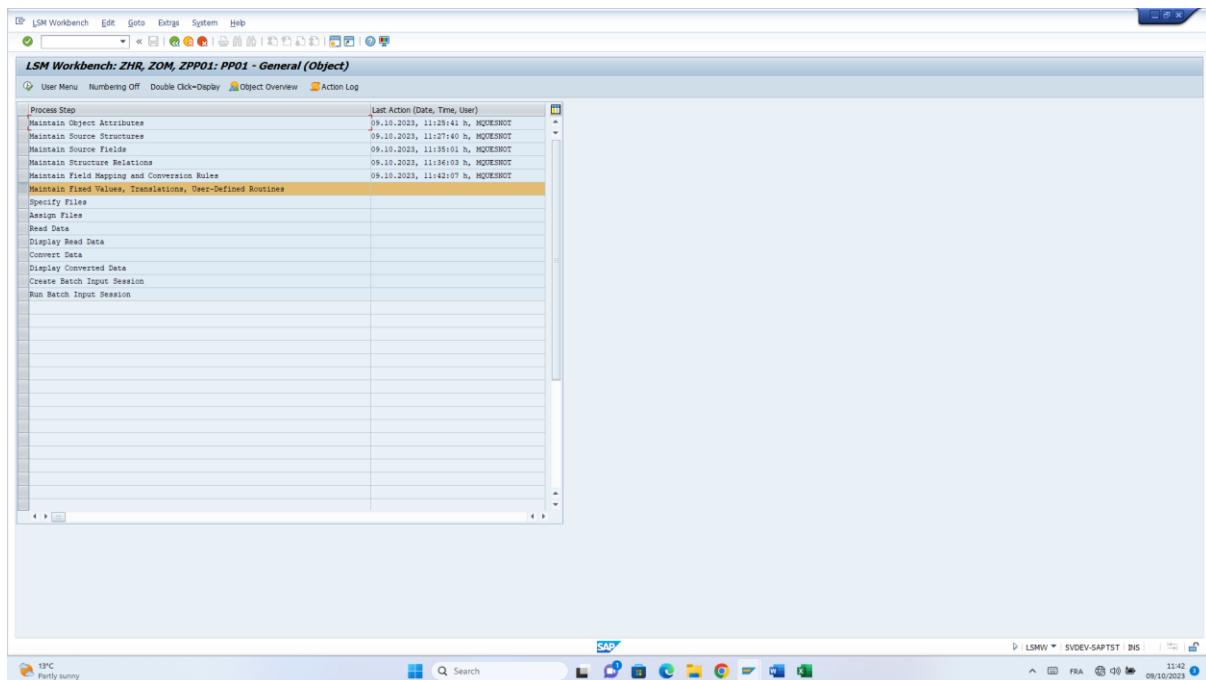
- Maintain Object Attributes 09.10.2023, 11:25:41 h, MQUESNOT
- Maintain Source Structures 09.10.2023, 11:27:40 h, MQUESNOT
- Maintain Source Fields 09.10.2023, 11:35:01 h, MQUESNOT
- Maintain Structure Relations 09.10.2023, 11:36:03 h, MQUESNOT
- Maintain Field Mapping and Conversion Rules 09.10.2023, 11:42:07 h, MQUESNOT
- Maintain Fixed Values, Translations, User-Defined Routines
- Specify Files
- Assign Files
- Read Data
- Display Read Data
- Convert Data
- Display Converted Data
- Create Batch Input Session
- Run Batch Input Session

LSM Workbench:Fixed Values,Translations,UserDefined Routines

Administration Edit Goto Utilities System Help

Reusable Rules

- ZHR module HR 18.12.2012 MQUELENNEC
 - Fixed Values
 - EDUCATION End Date 09.10.2023 MQUESNOT
 - Translations
 - User-Defined Routines

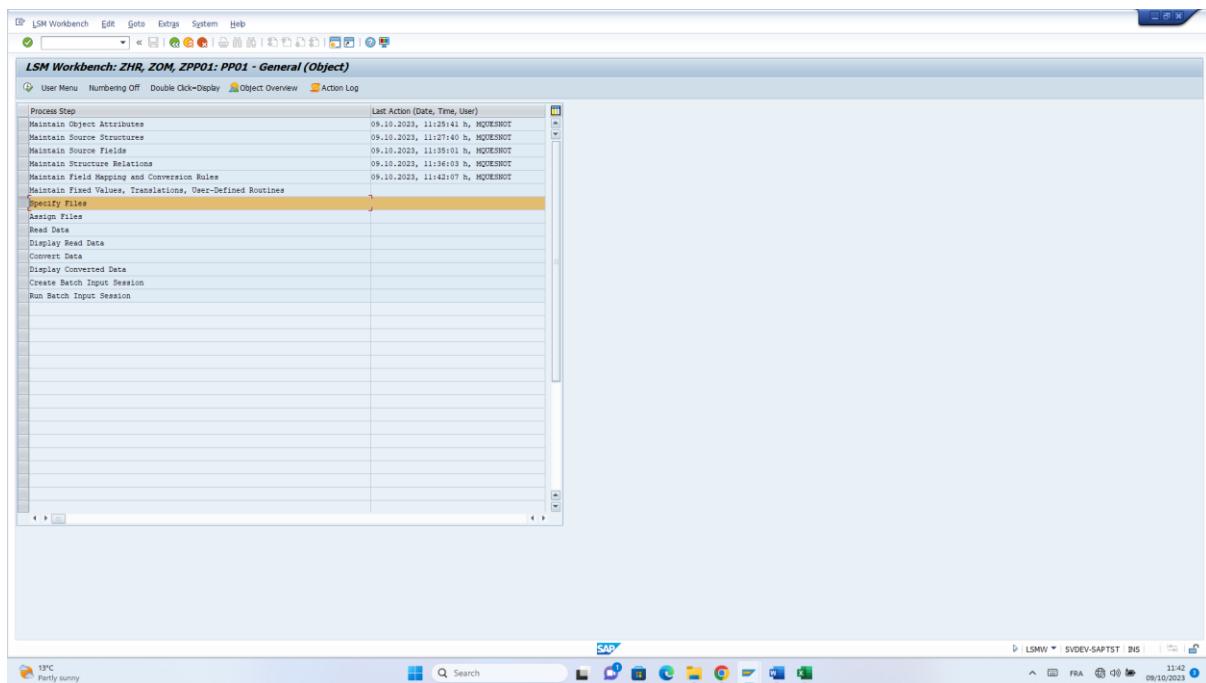


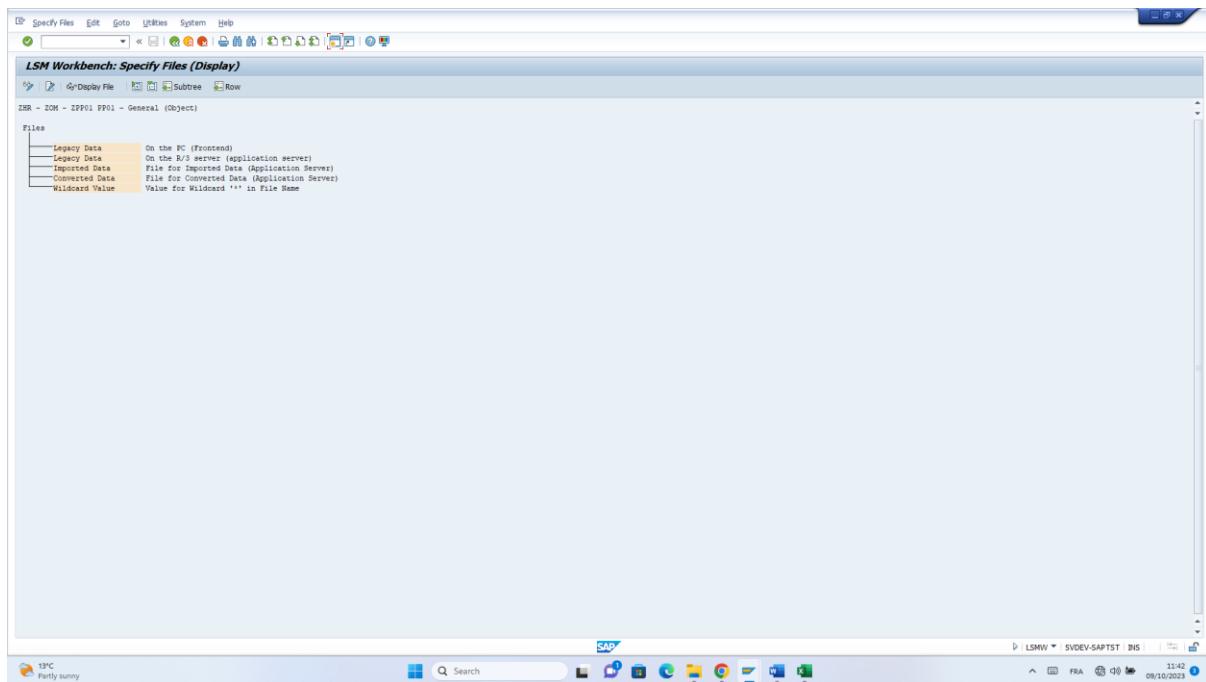
Step 7: Specify Files

In this step, you specify the location of the legacy file.

Note: Generally we receive legacy file in excel format, so save this file as Text

Now, double click on 'Legacy Data – On the PC (Front End)



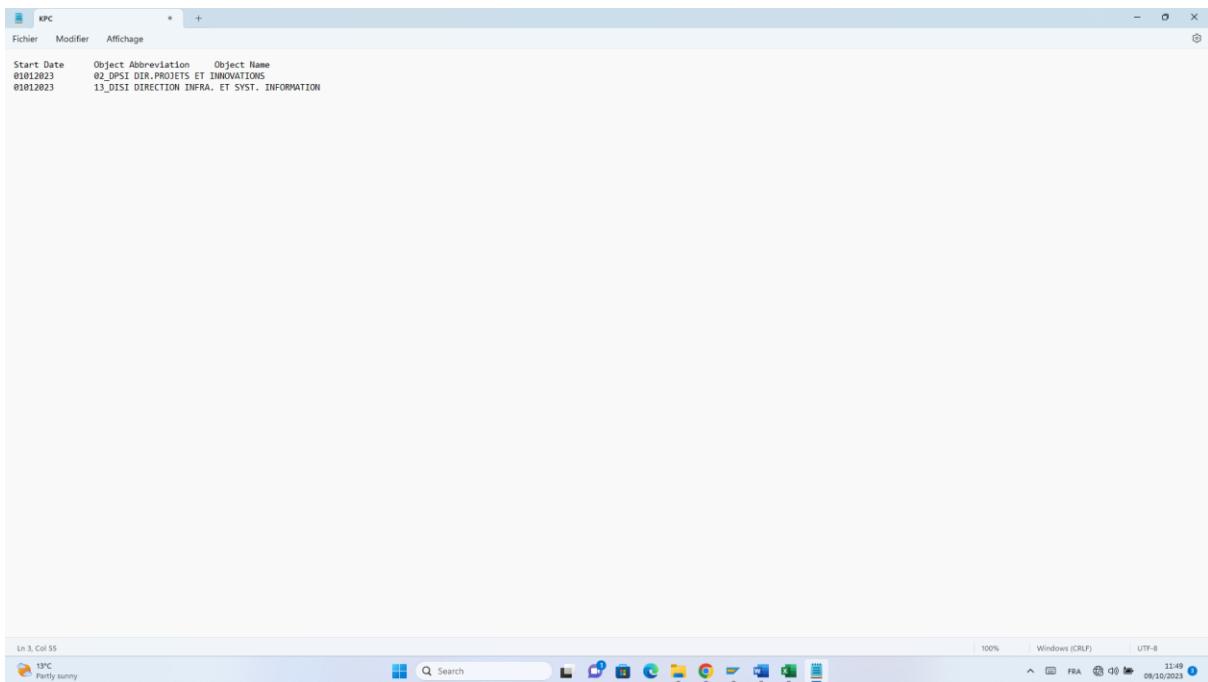


Convert the data on Notepad.

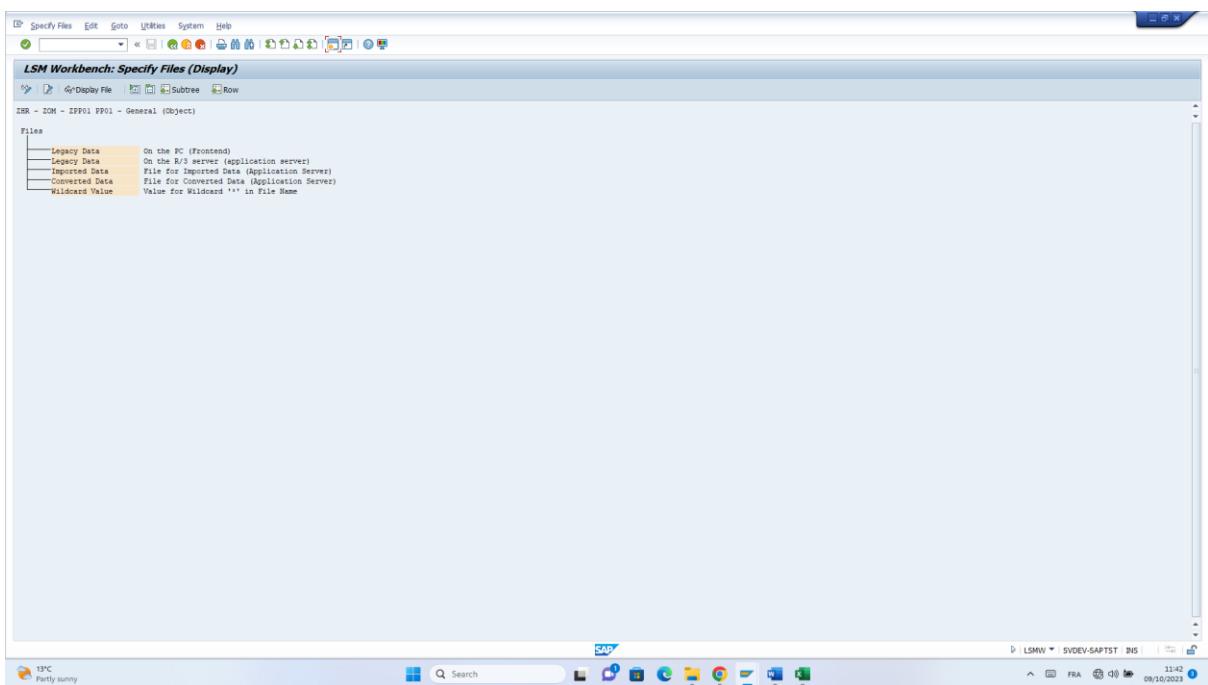
The screenshot shows a Microsoft Excel spreadsheet titled 'Book1 - Excel'. The data is as follows:

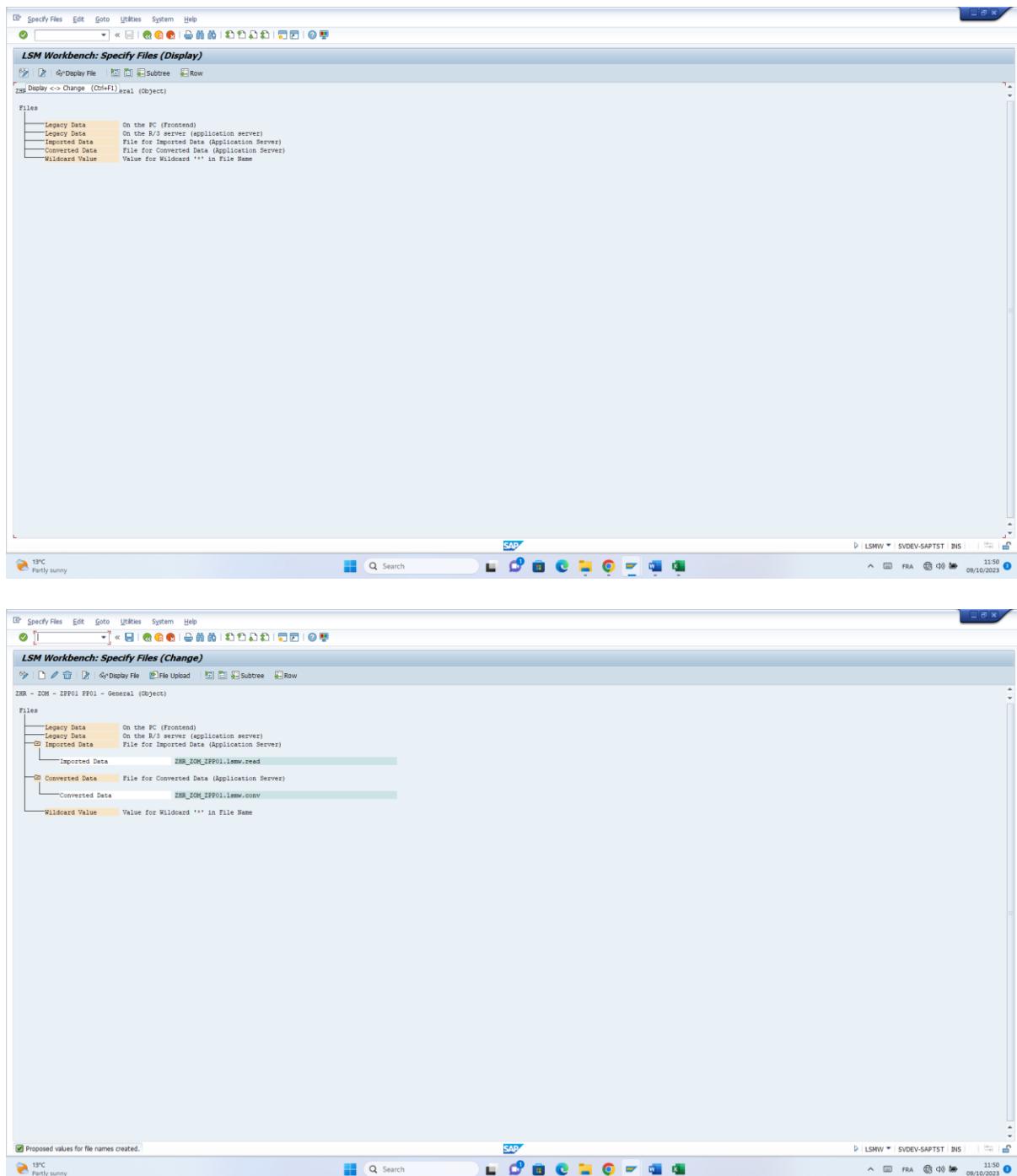
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1	Start Date	Object Abbreviation	Object Name																						
2	01/01/2023	02_DPSI	DIR.PROJETS ET INNOVATIONS																						
3	01/01/2023	13_DPSI	DIRECTION INFRA. ET SYST. INFORMATION																						
4																									
5																									
6																									
7																									
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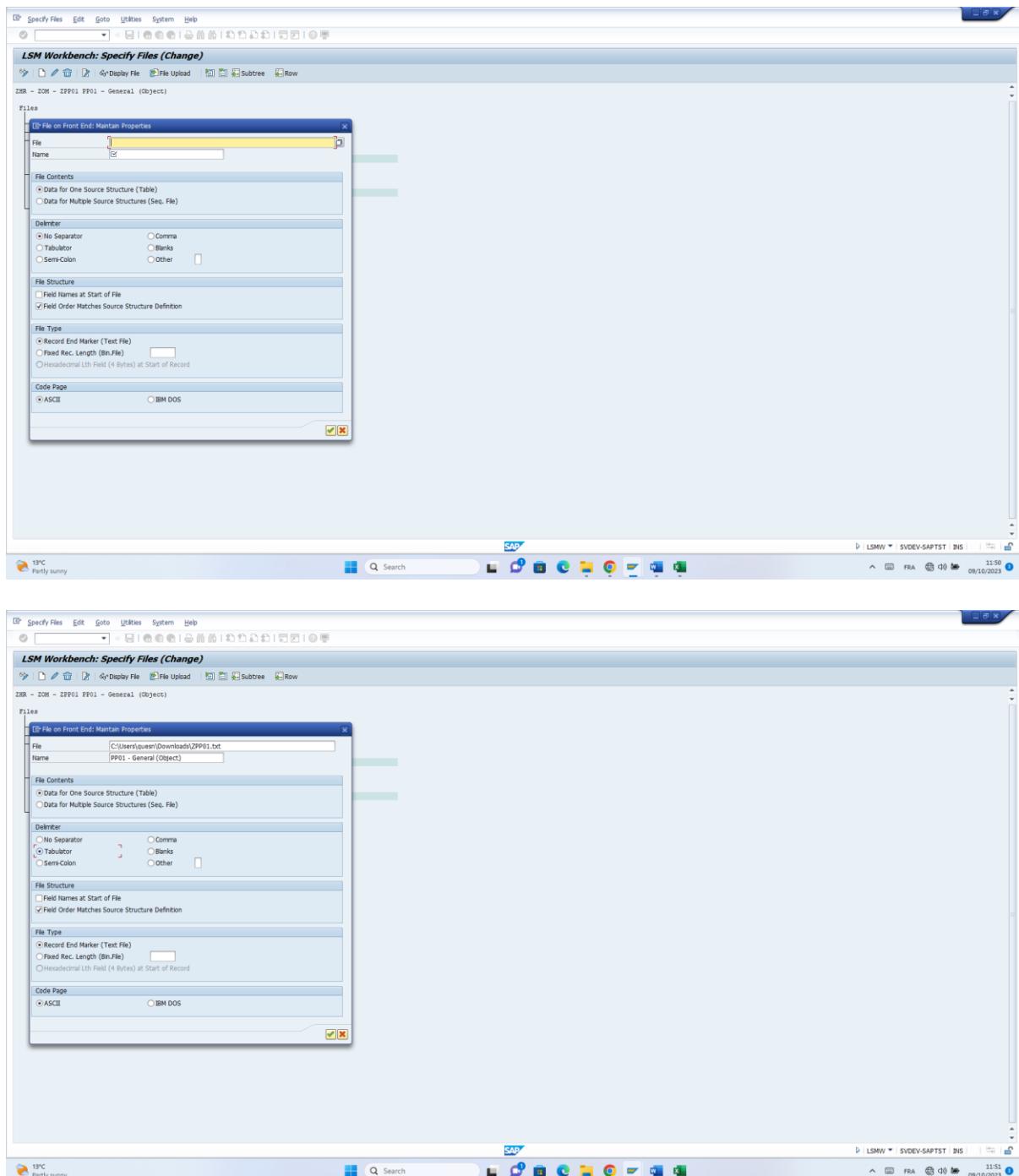
The status bar at the bottom shows 'Ready', '13°C Partly sunny', and system information like 'Sheet1 Sheet2 + 100%'.

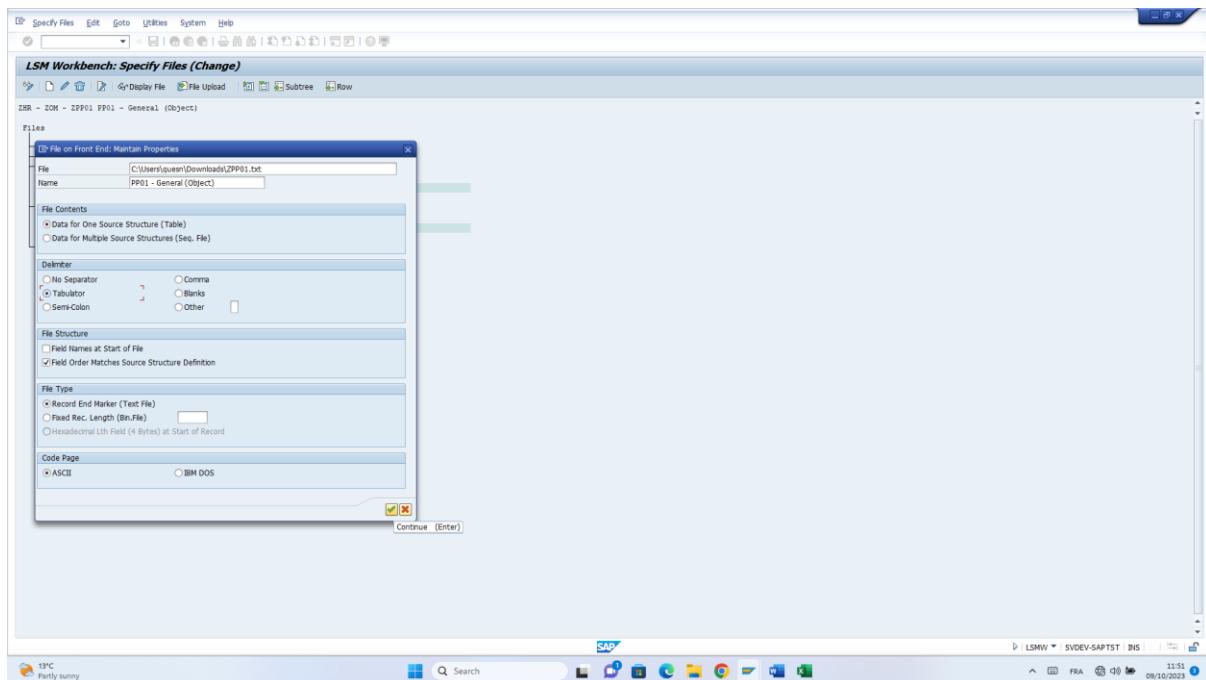


Here Double Click on Legacy Data and give the Path,

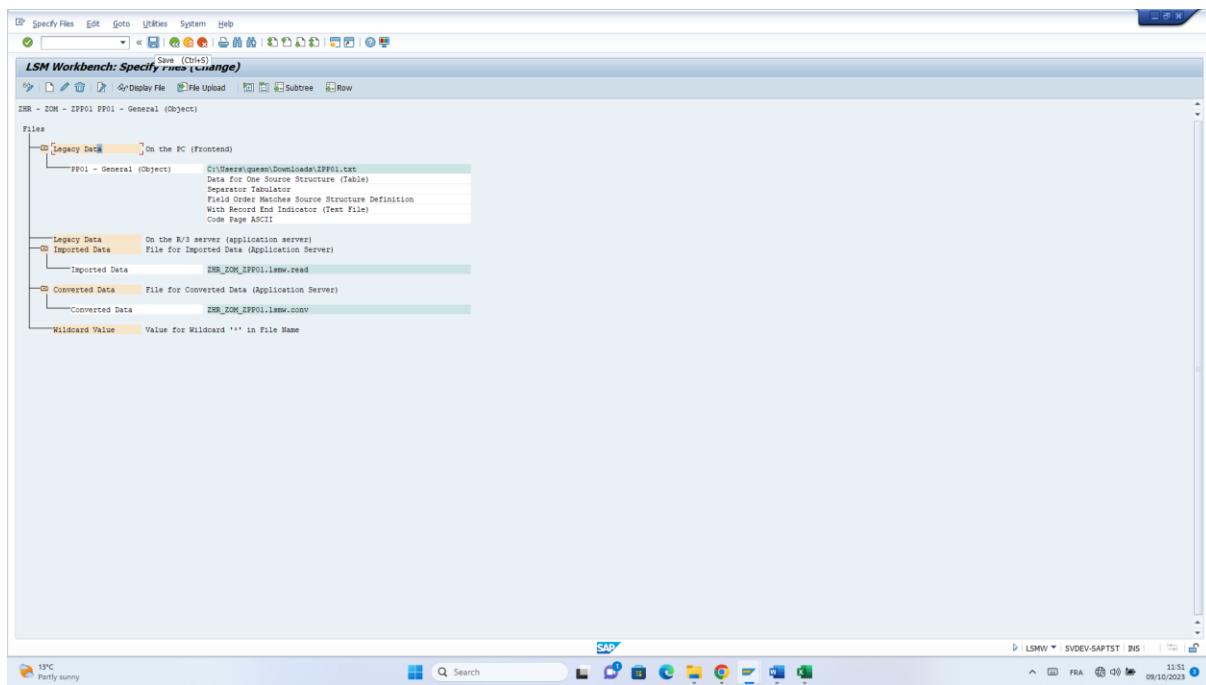








Save and Back



LSM Workbench: Specify Files (Change)

ZHR - ZOM - ZPP01_PP01 - General (Object)

Files

- Legacy Data On the PC (Frontend)
 - PP01 - General (Object) C:\Users\mquesnot\Downloads\ZPP01.txt
 - Data for One Source Structure (Table)
 - Separator Terminator
 - Field Order Matches Source Structure Definition
 - High Record Indicator (Text File)
 - Code Page ASCII
- Imported Data On the R/3 server (application server)
 - Imported Data ZHR_ZOM_ZPP01.lsmw.read
- Converted Data File for Converted Data (Application Server)
 - Converted Data ZHR_ZOM_ZPP01.lsmw.conv
- Wildcard Value Value for Wildcard '*' in File Name

Data saved

13°C Partly sunny

LSM Workbench Edit Goto Extras System Help

LSM Workbench: ZHR, ZOM, ZPP01: PP01 - General (Object)

User Menu Numbering Off Double Click-Display Object Overview Action Log

Process Step Last Action (Date,Time,User)

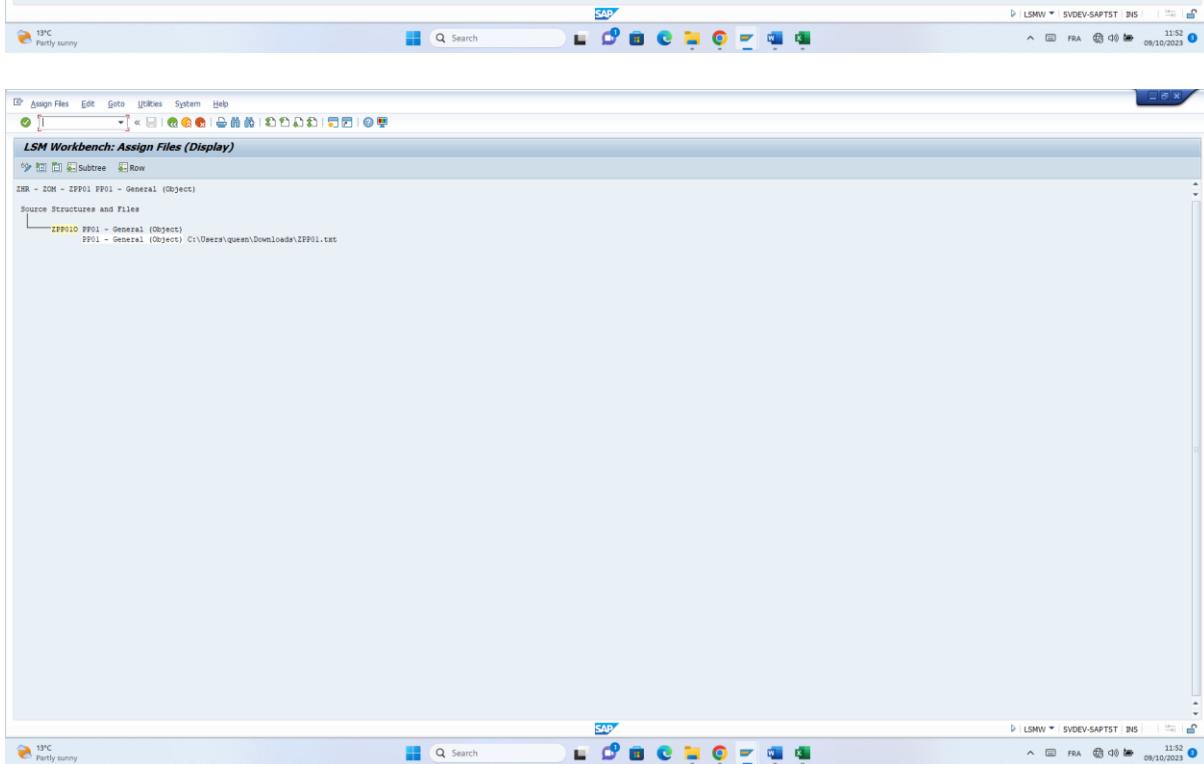
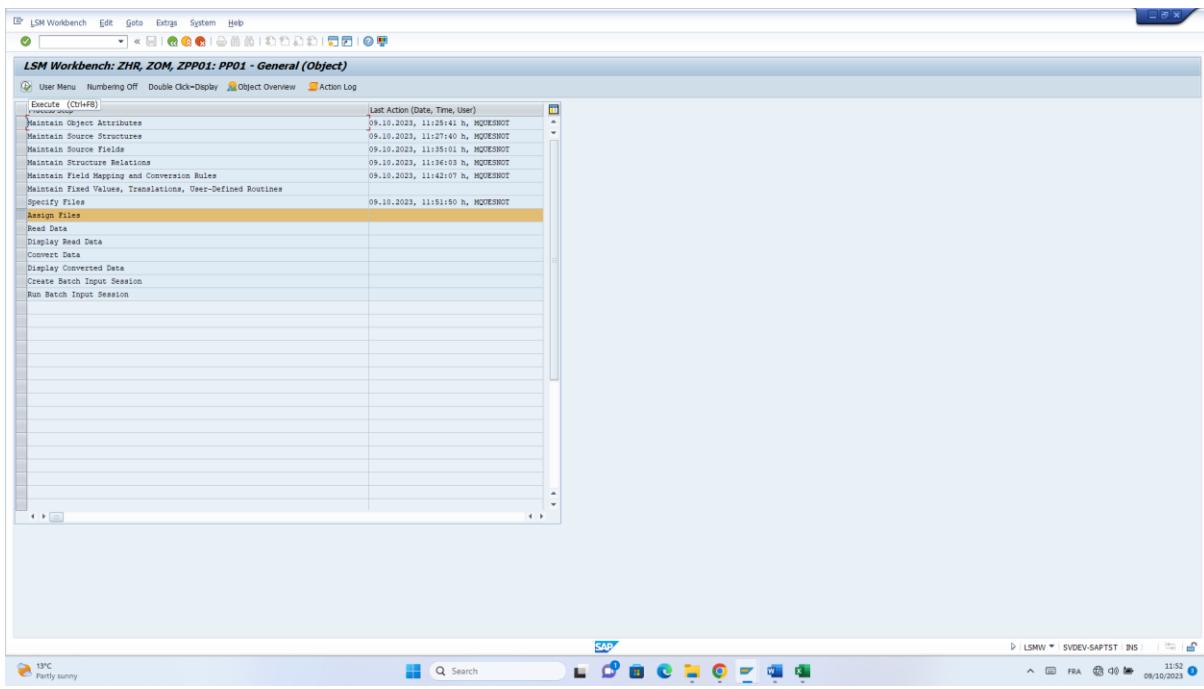
Maintain Object Attributes	09.10.2023, 11:25:41 h, MICKAEL
Maintain Source Structure	09.10.2023, 11:27:40 h, MICKAEL
Maintain Source Fields	09.10.2023, 11:35:01 h, MICKAEL
Maintain Structure Relations	09.10.2023, 11:36:03 h, MICKAEL
Maintain Field Mapping and Conversion Rules	09.10.2023, 11:43:07 h, MICKAEL
Maintain Fixed Values, Translations, User-Defined Routines	09.10.2023, 11:51:50 h, MICKAEL
Specify Files	09.10.2023, 11:51:50 h, MICKAEL
Assign Files	
Read Data	
Display Read Data	
Convert Data	
Display Converted Data	
Create Batch Input Session	
Run Batch Input Session	

13°C Partly sunny

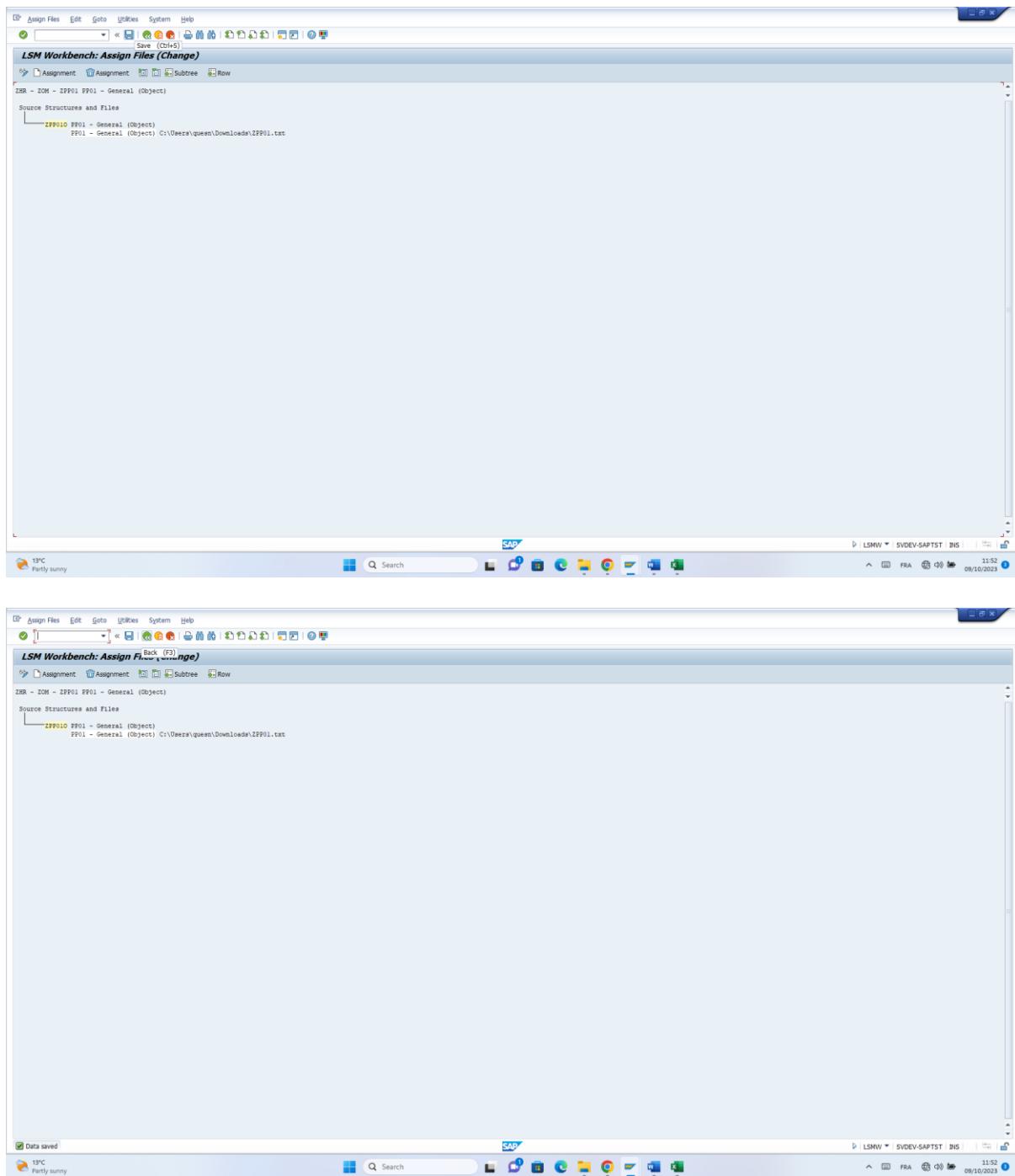
LSM Workbench Edit Goto Extras System Help

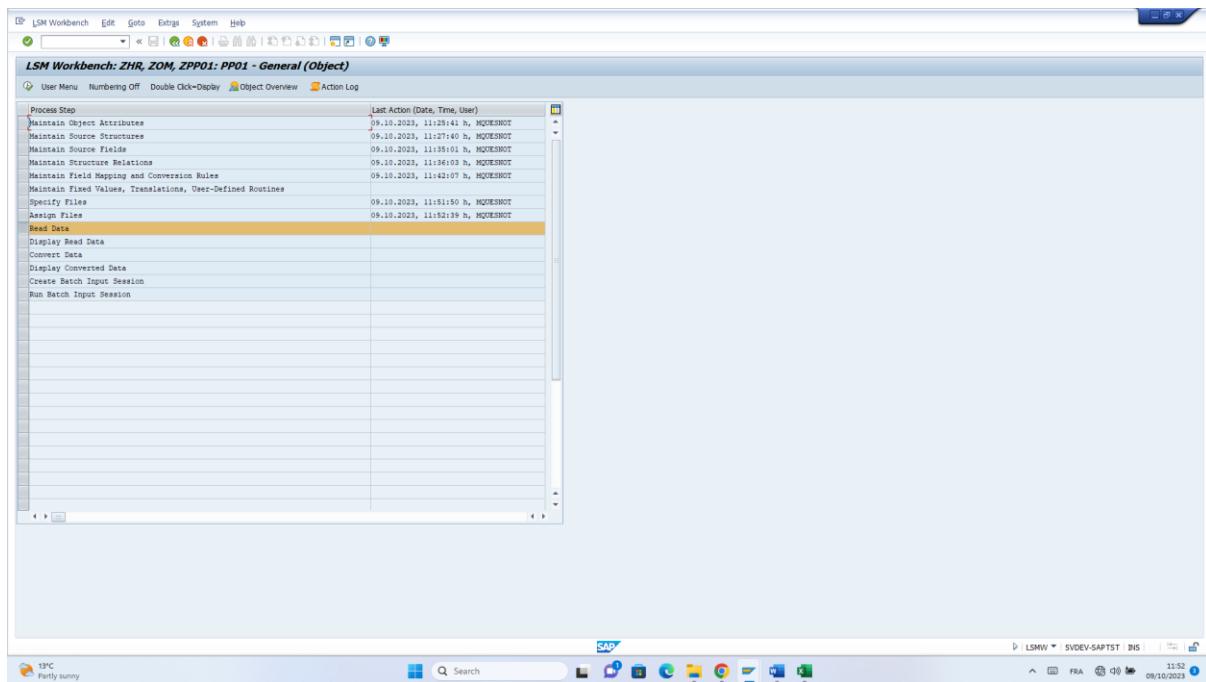
Step 8: Assign Files

Here, we just check whether file is assigned to source structure or not.



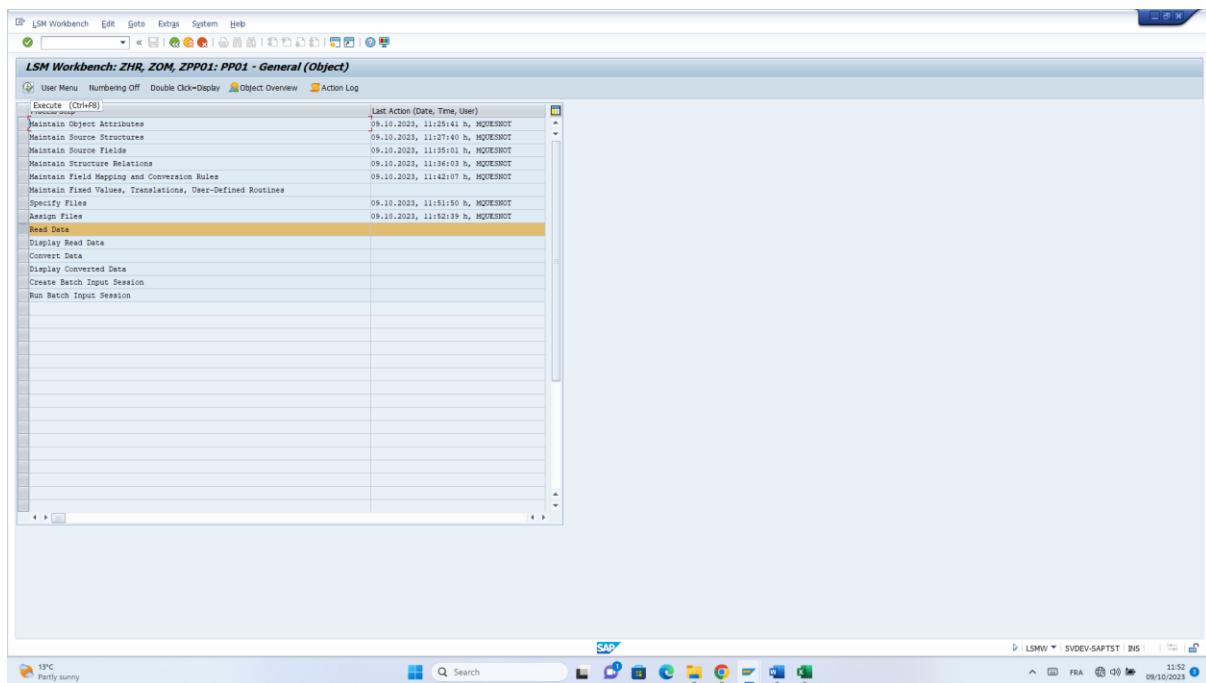
Save and Back

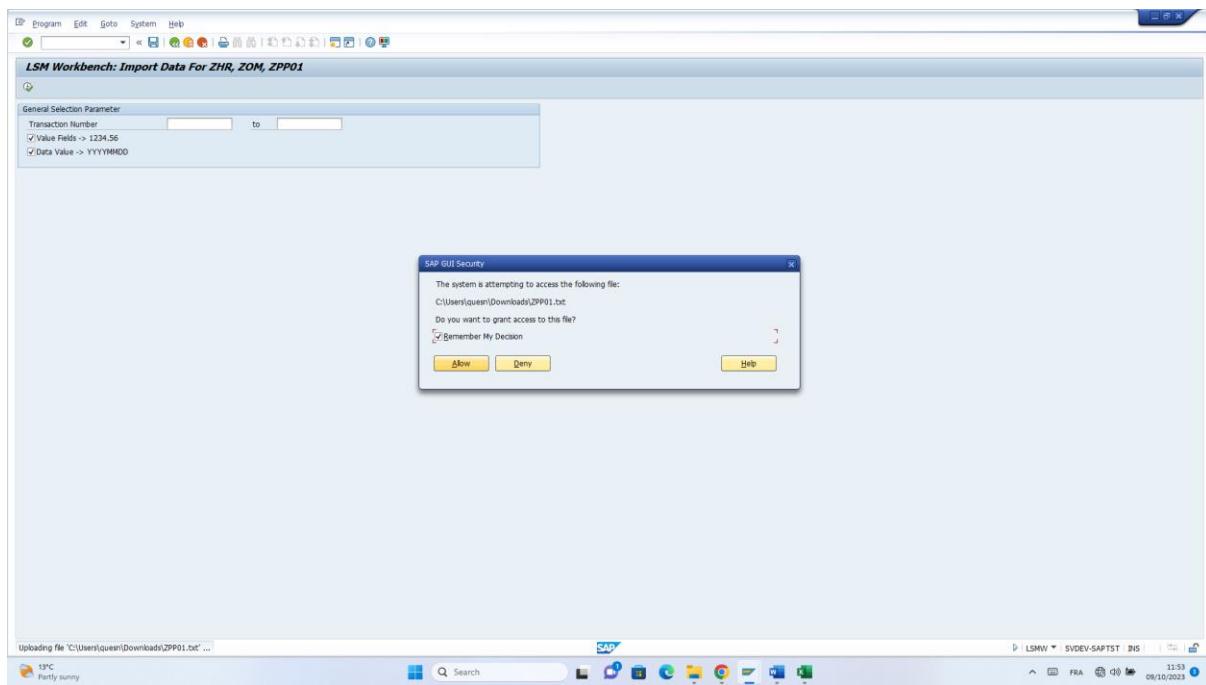
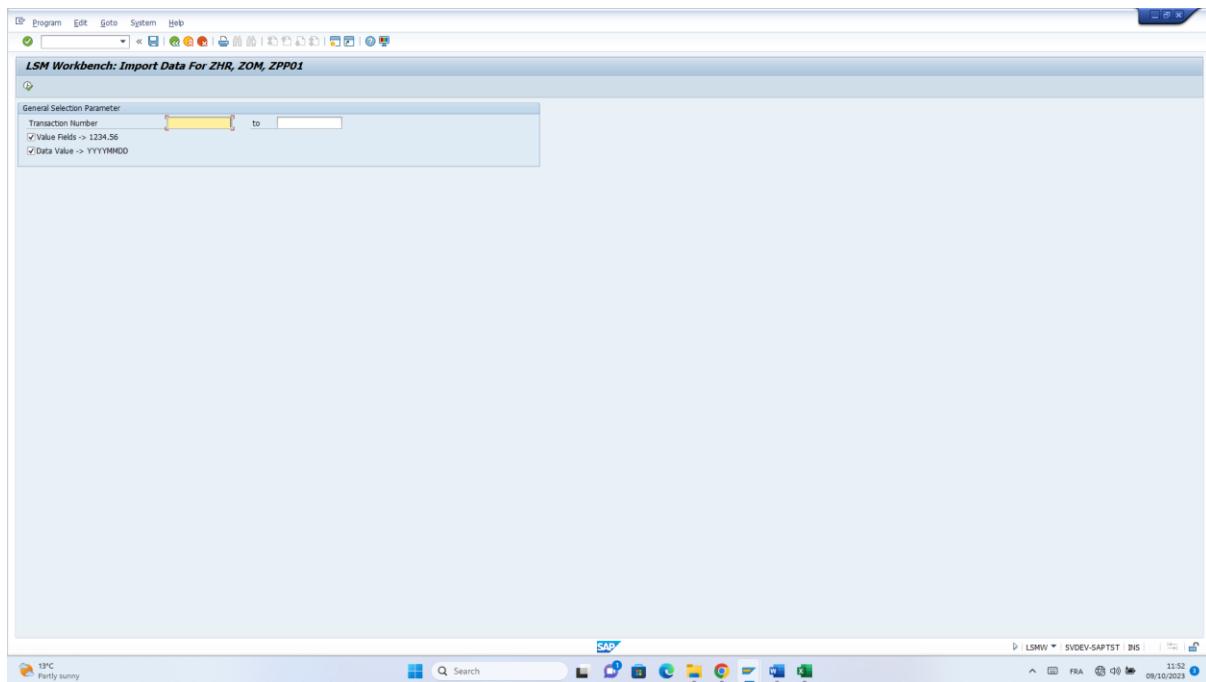


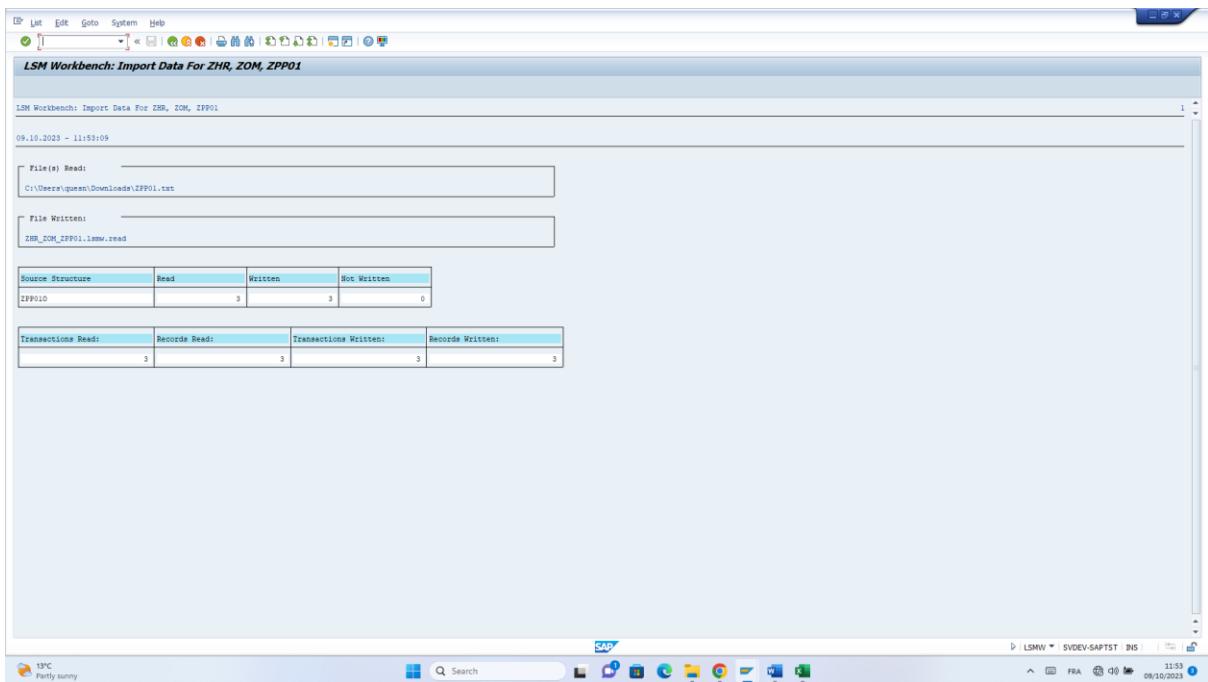


Step 9: Read Data

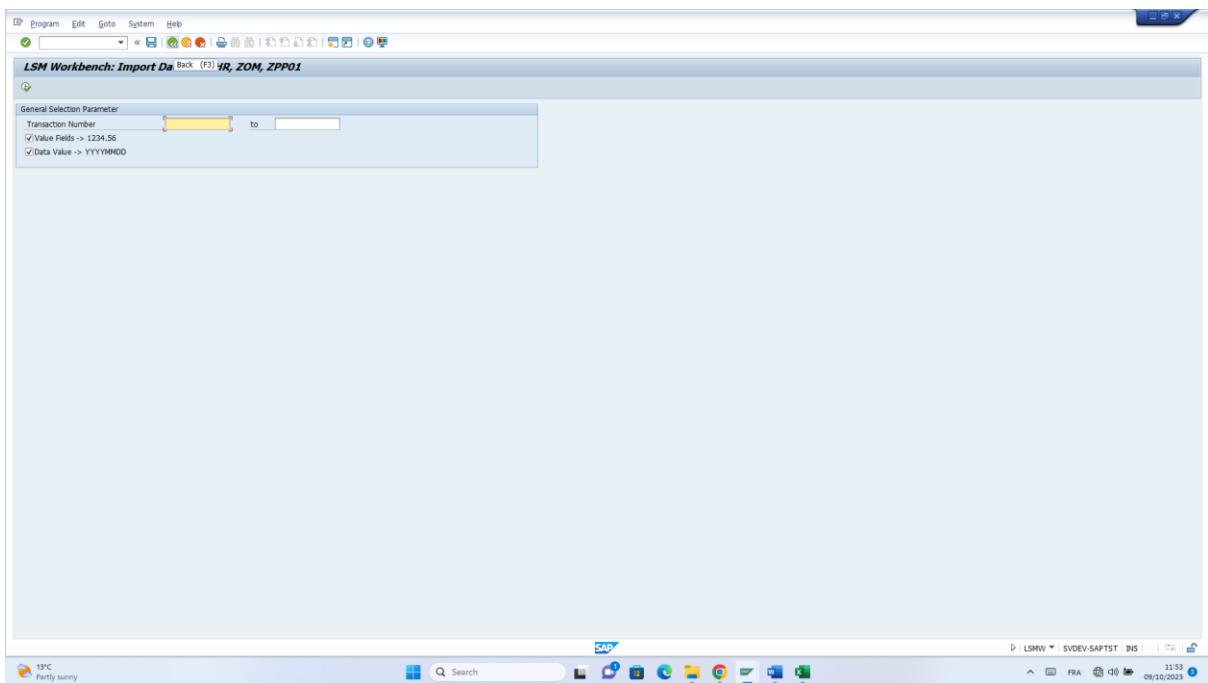
Here our legacy data is read

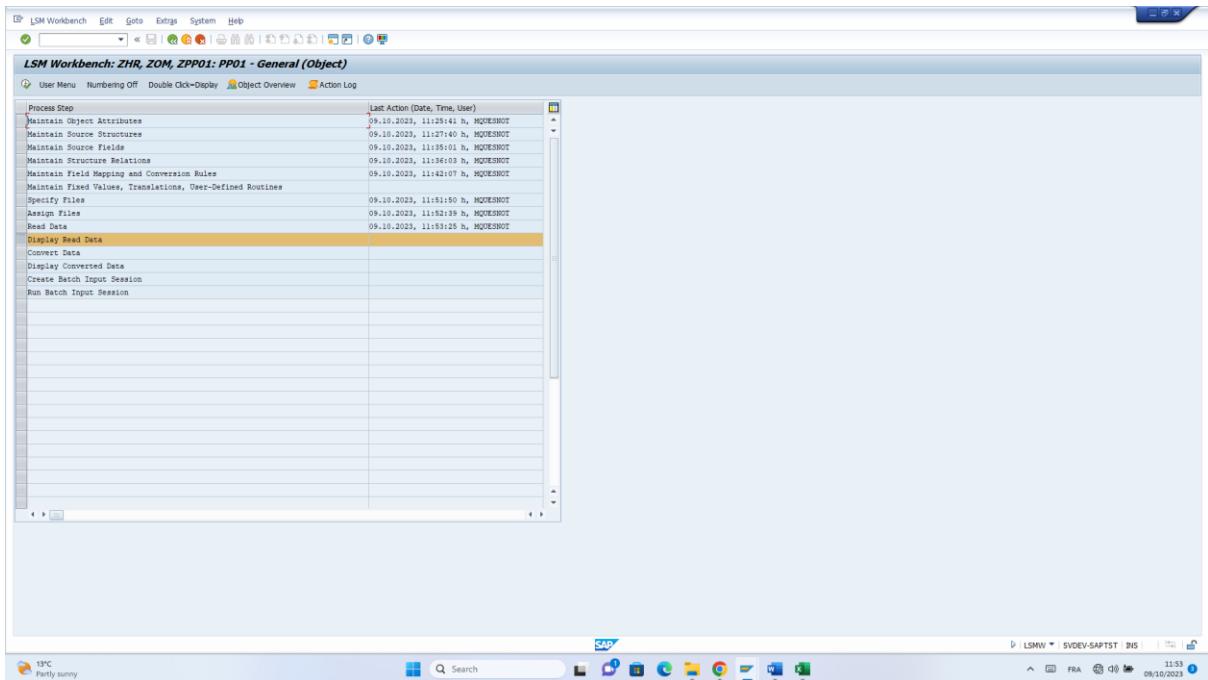






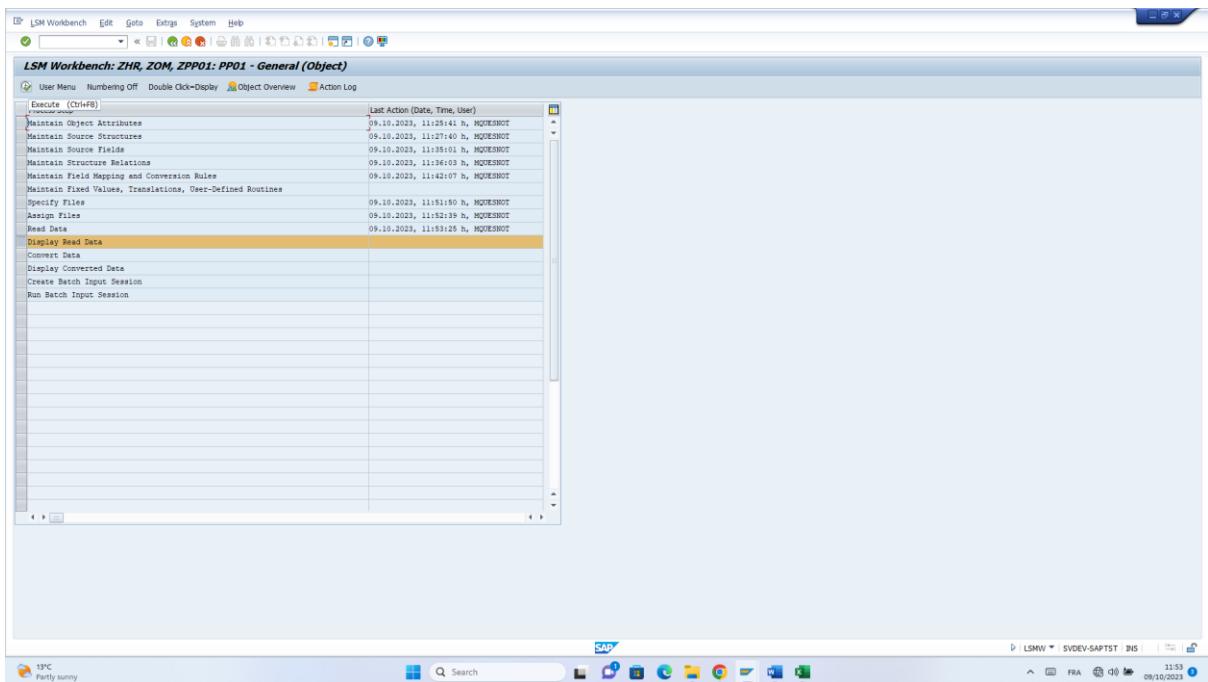
BACK

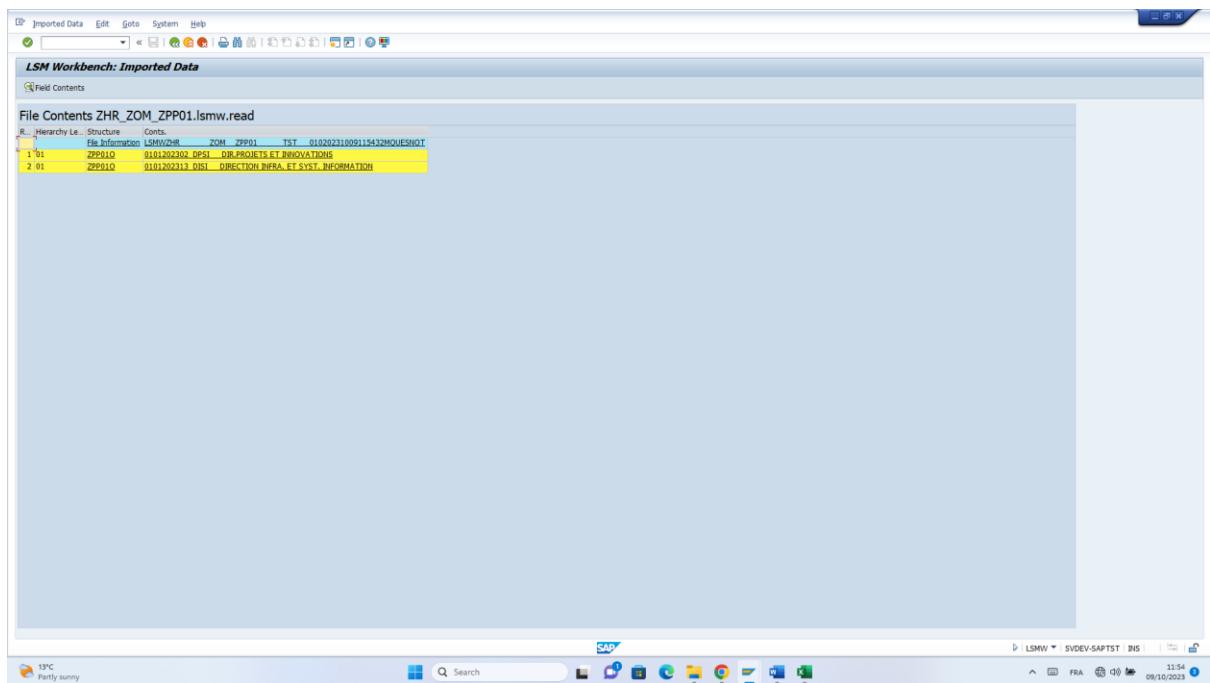
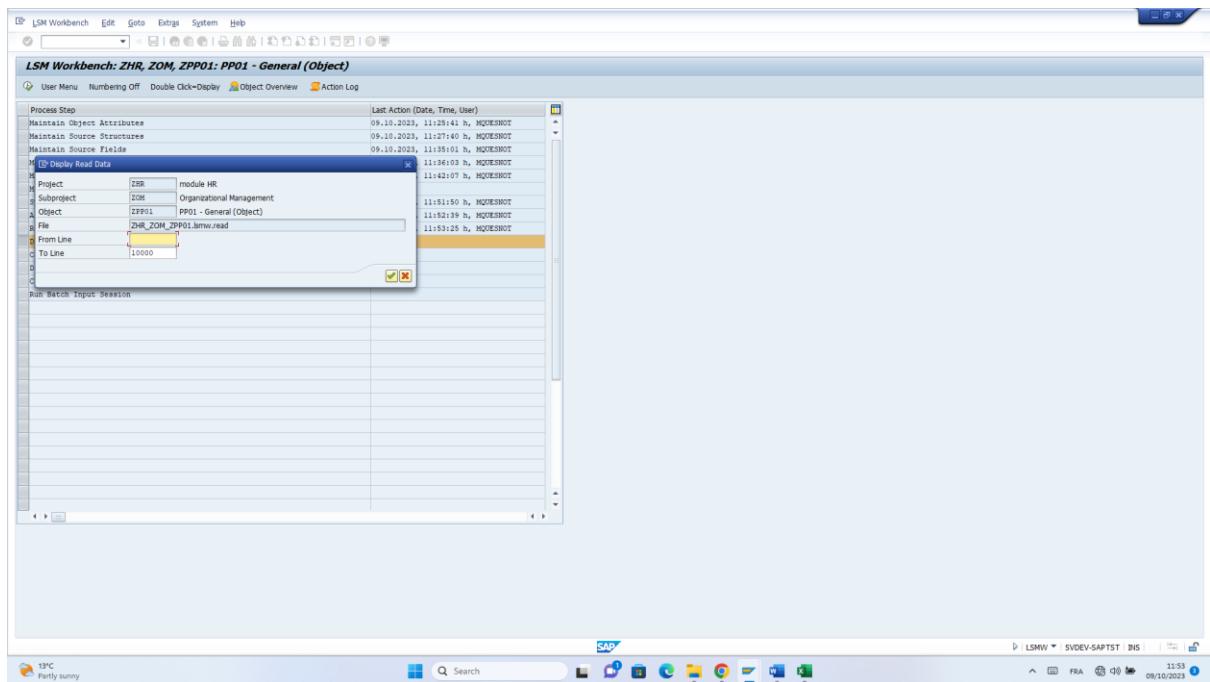




Step 10: Display Read Data

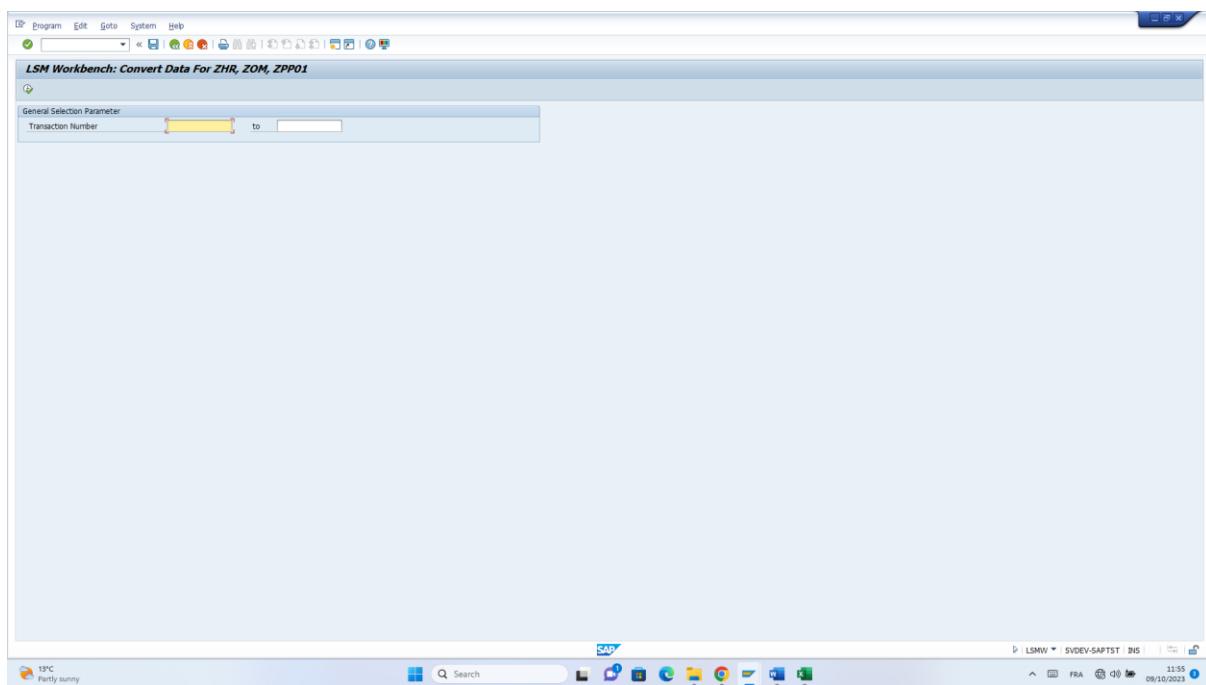
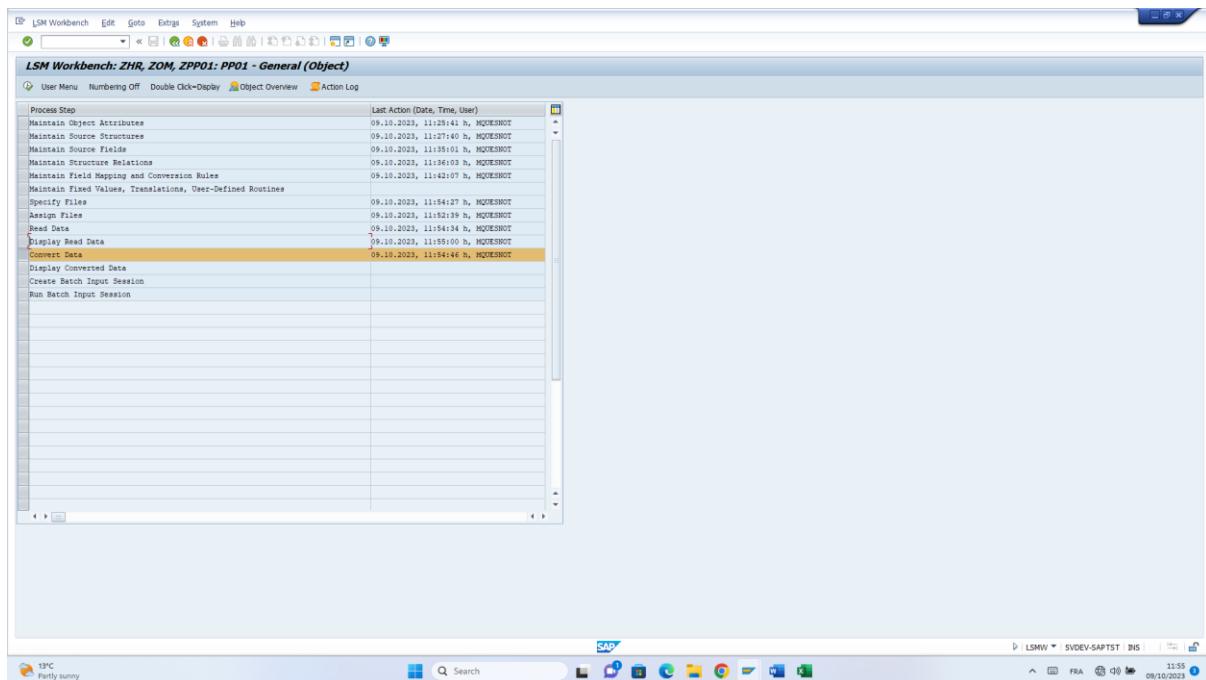
Here, we can display all for part of the data by giving line numbers

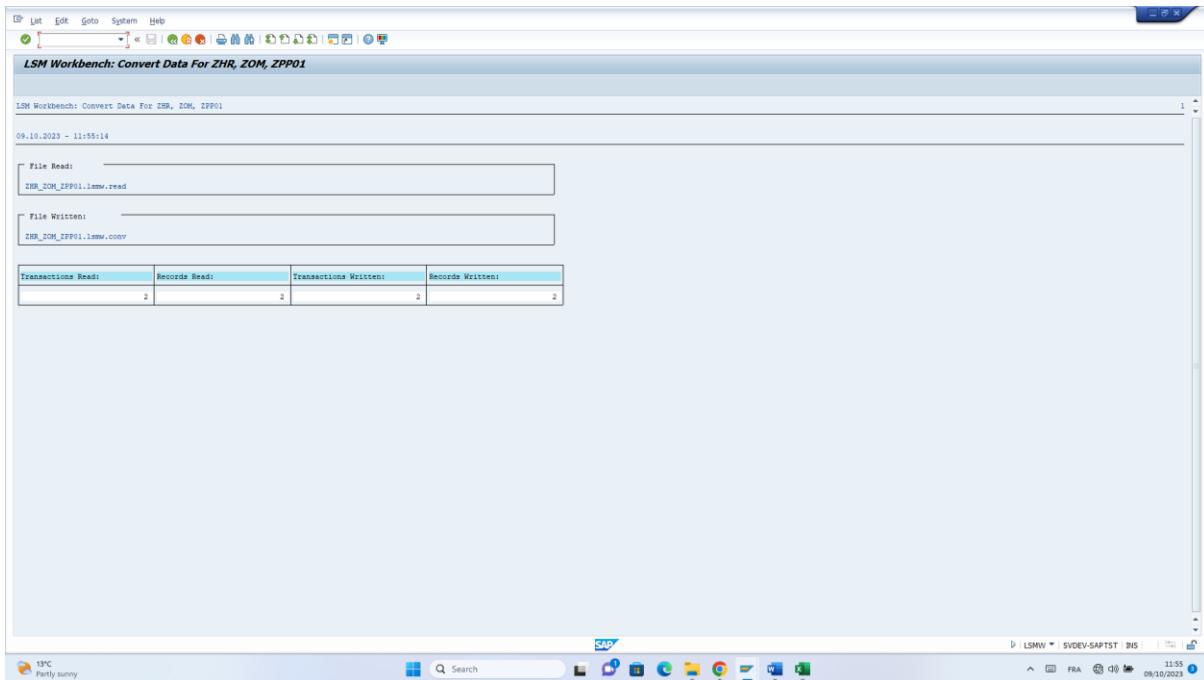




Step 11: Convert Data

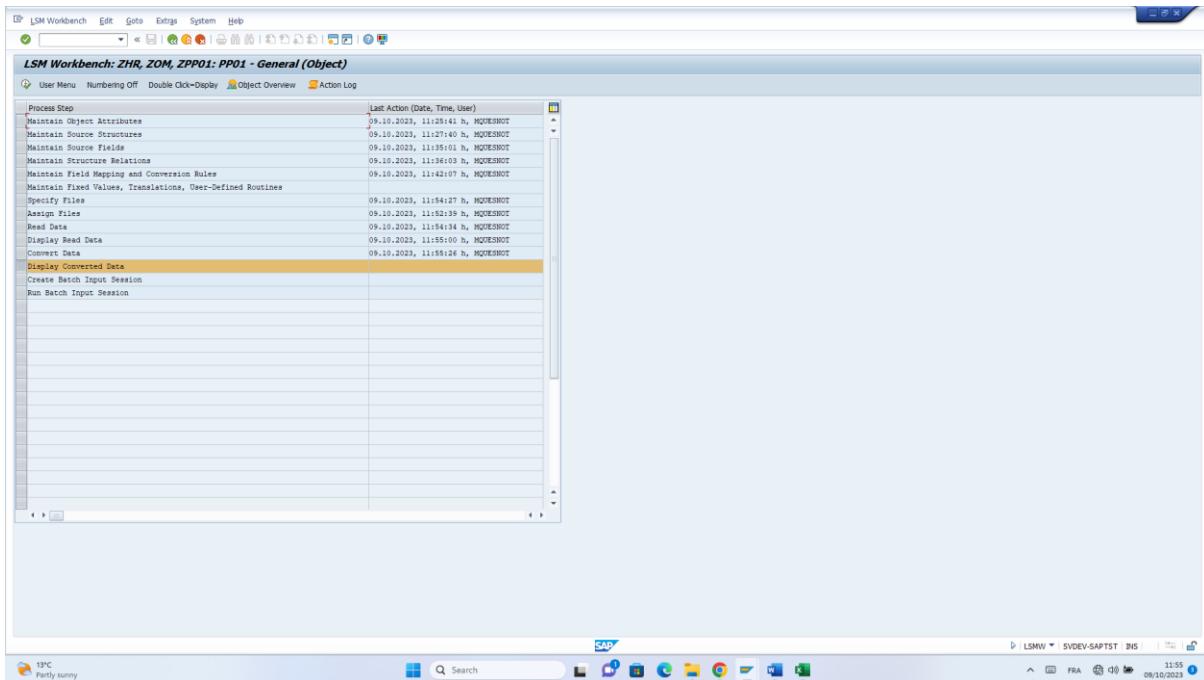
Here, whatever data has been read will convert to SAP standards

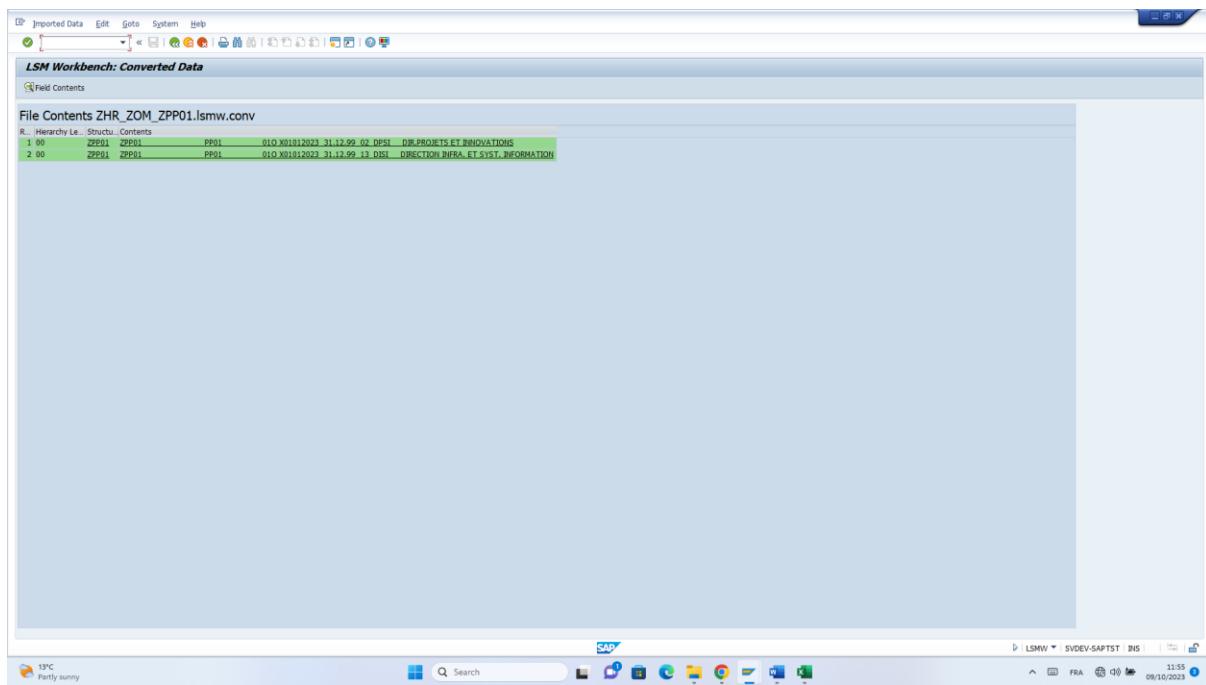
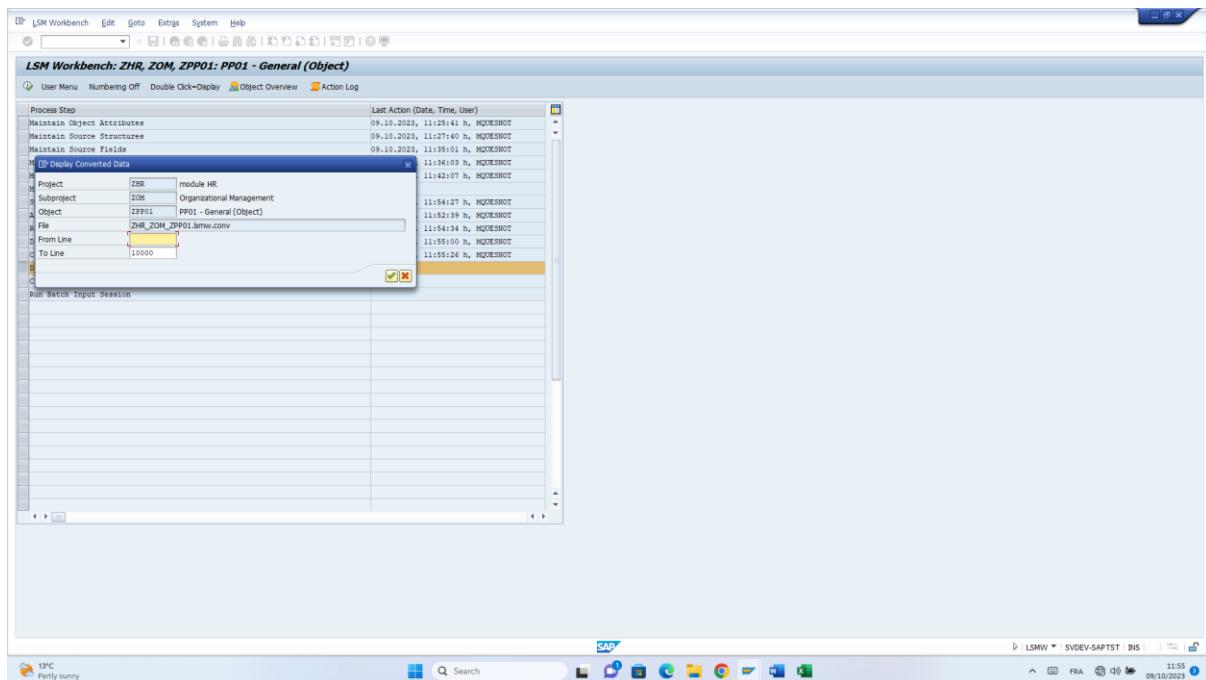


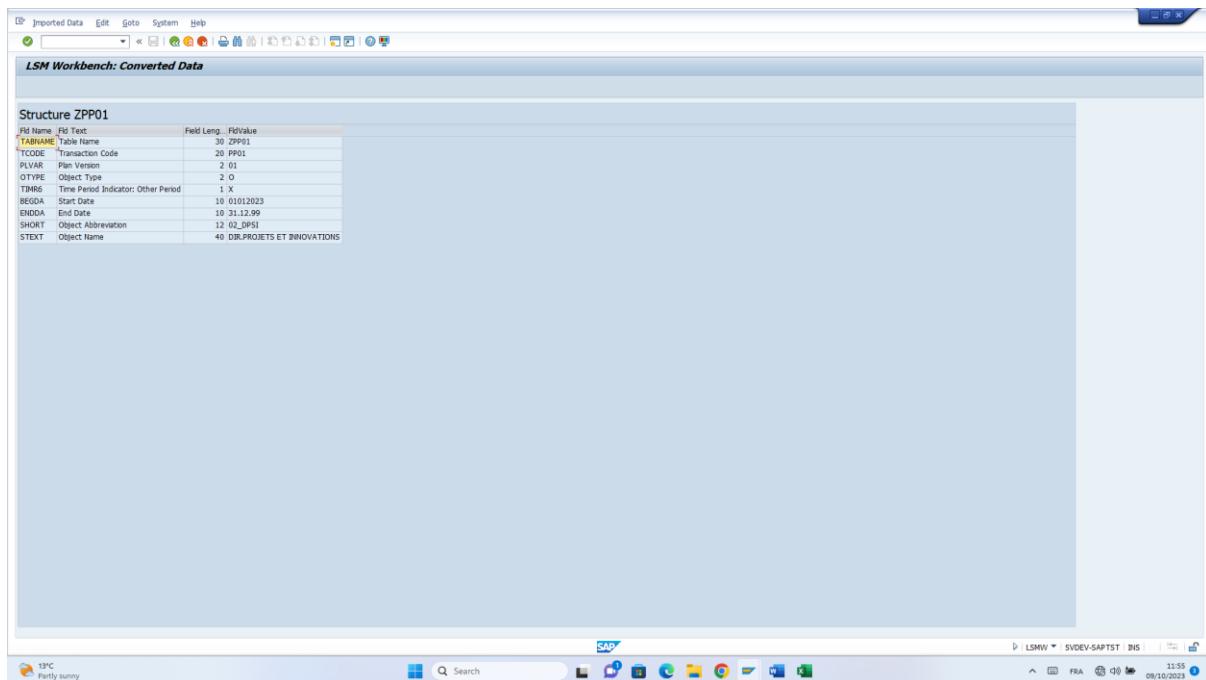


Step 12: Display Converted Data

Here, converted data can be viewed for cross check



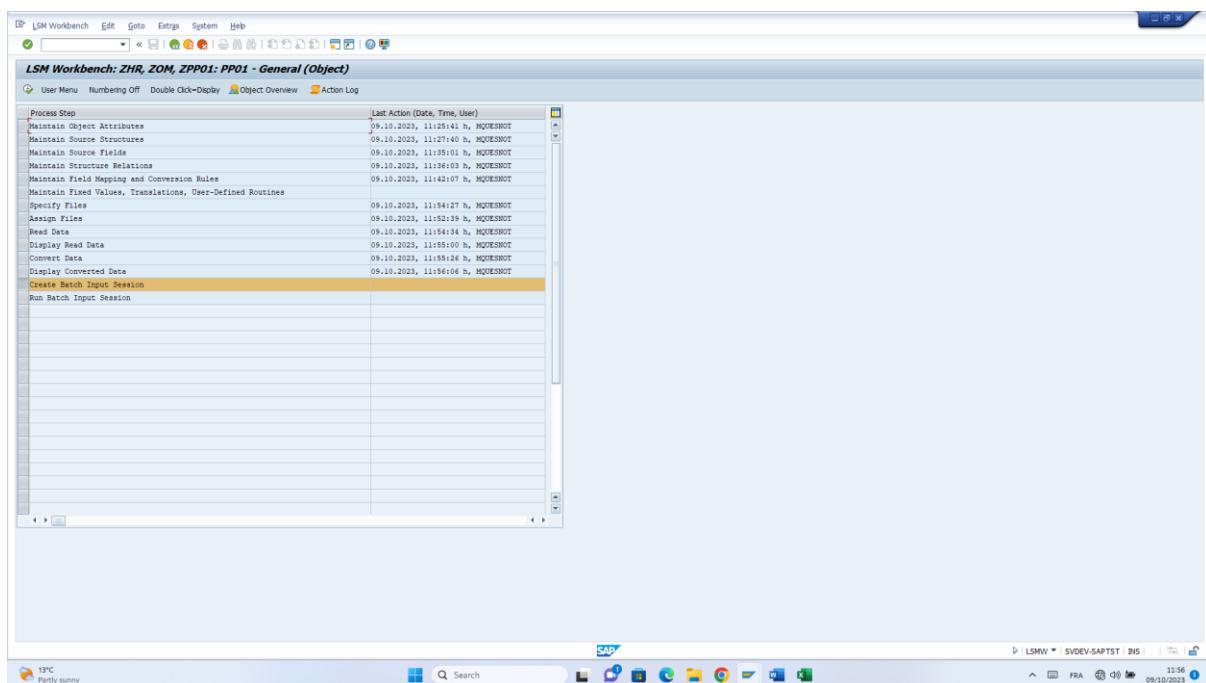


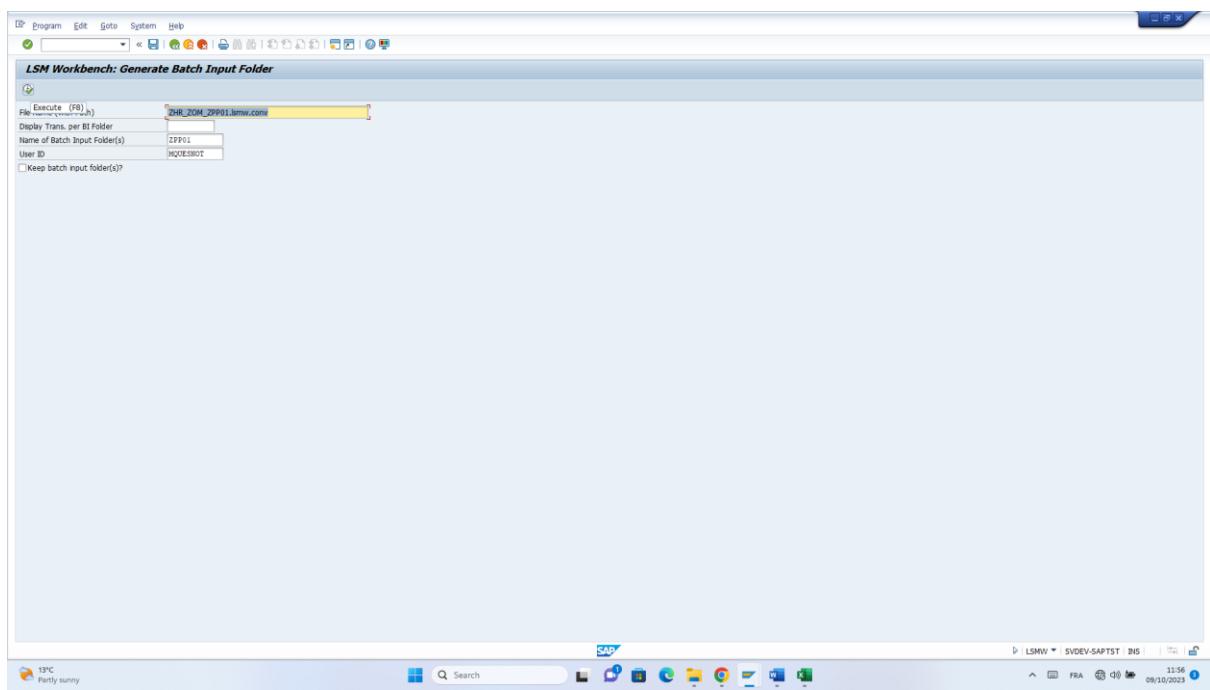
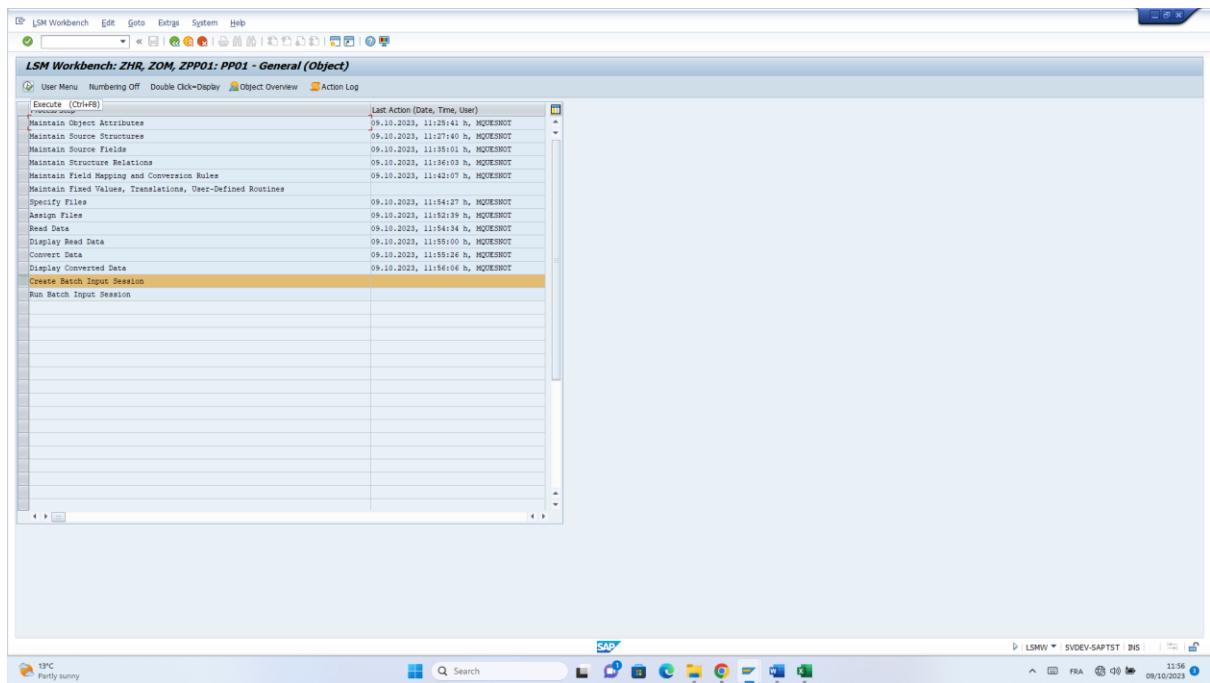


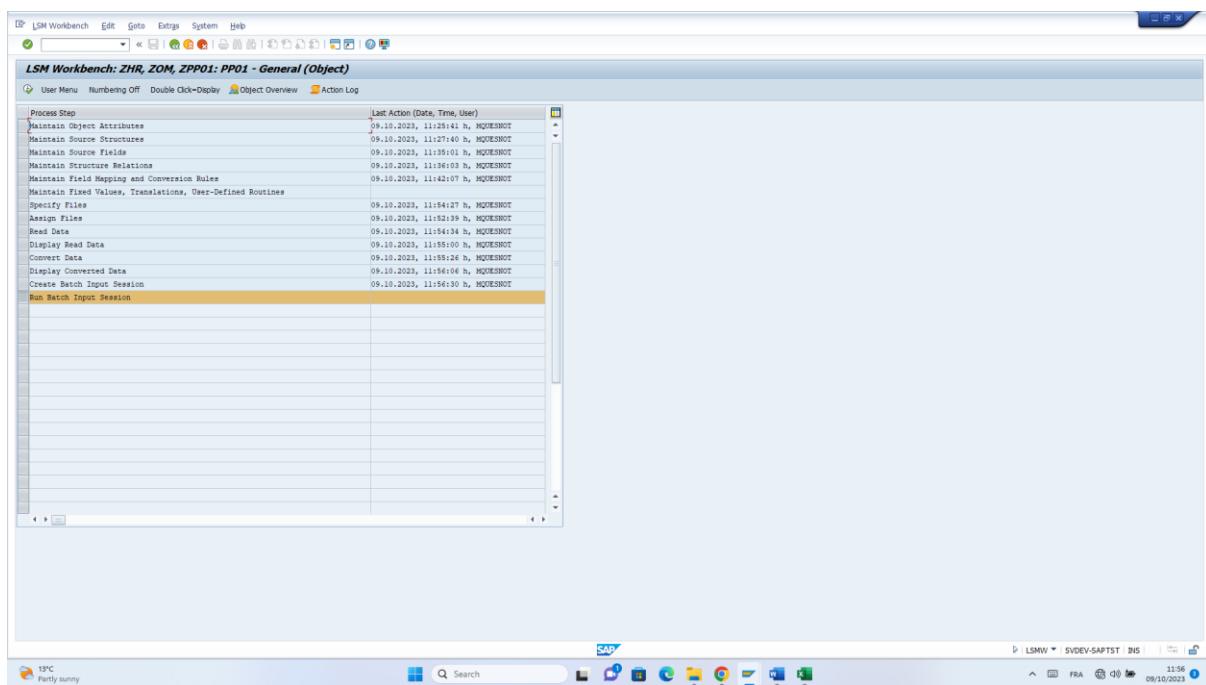
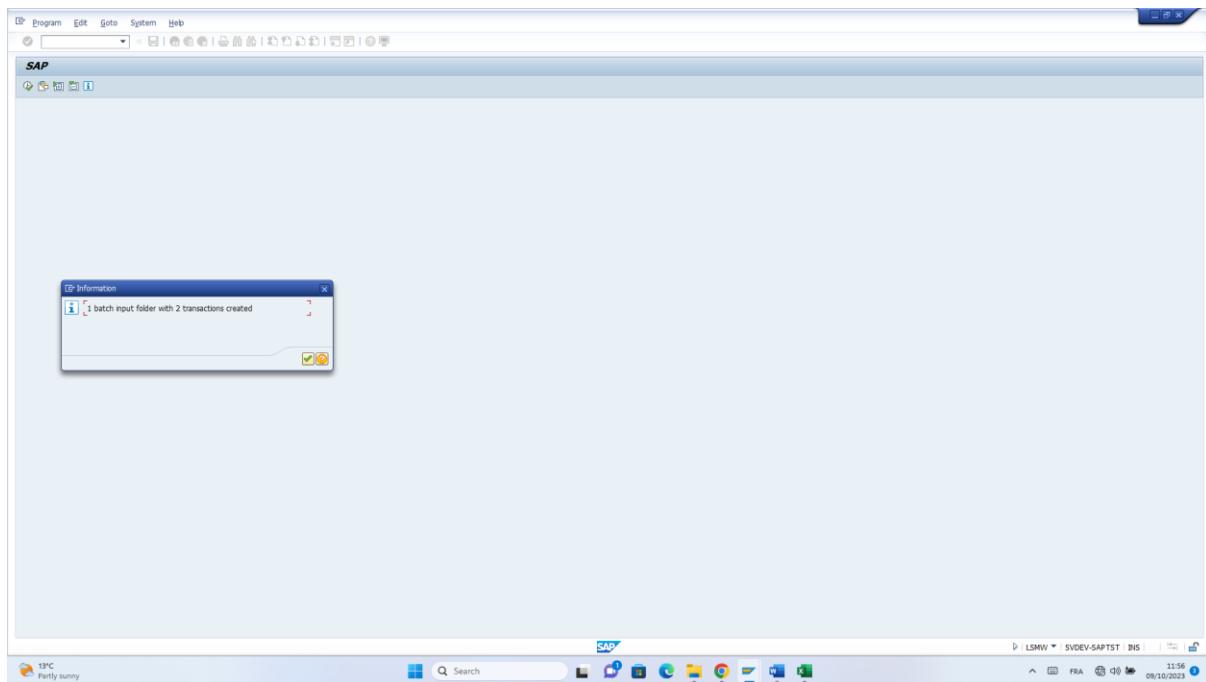
Step 13: Create Batch Input Session

In this step, we create session for batch input

Make sure you check box for 'Keep batch input folder' is active



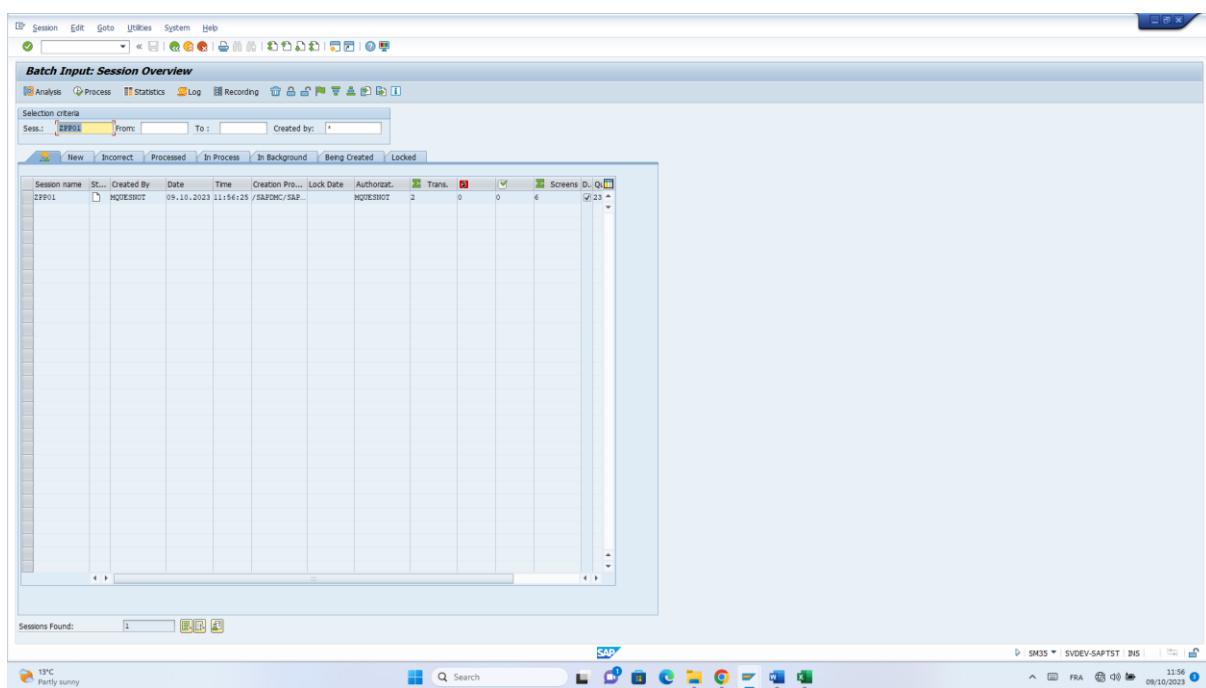
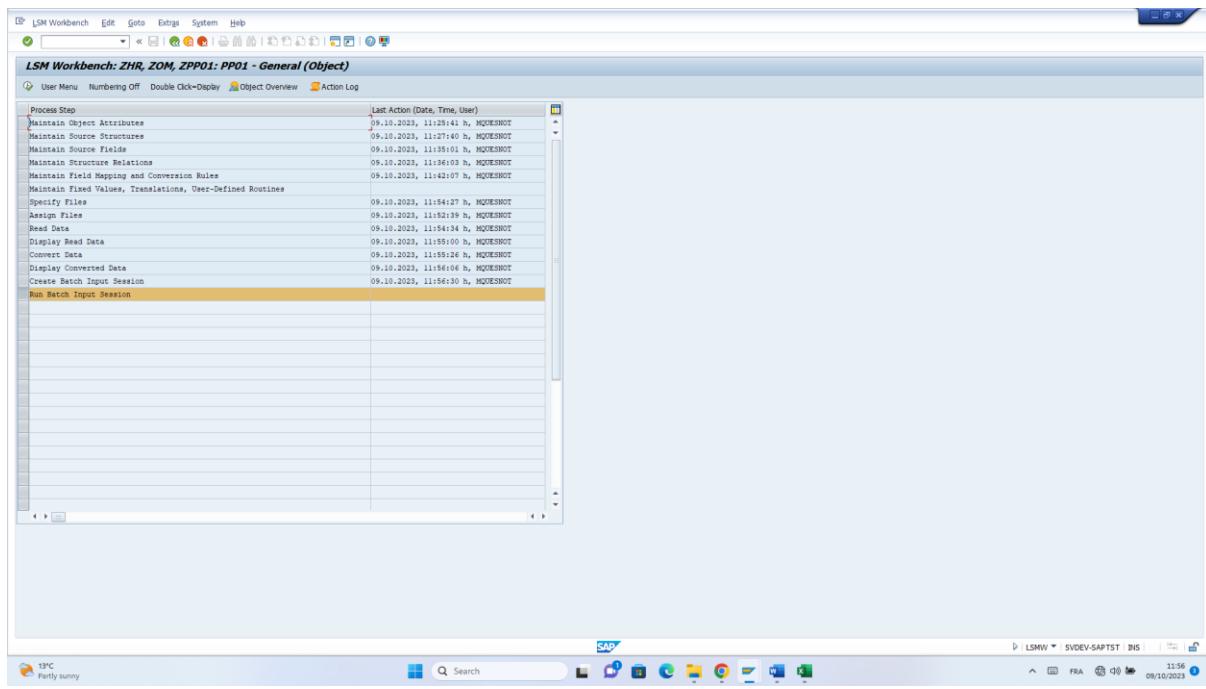


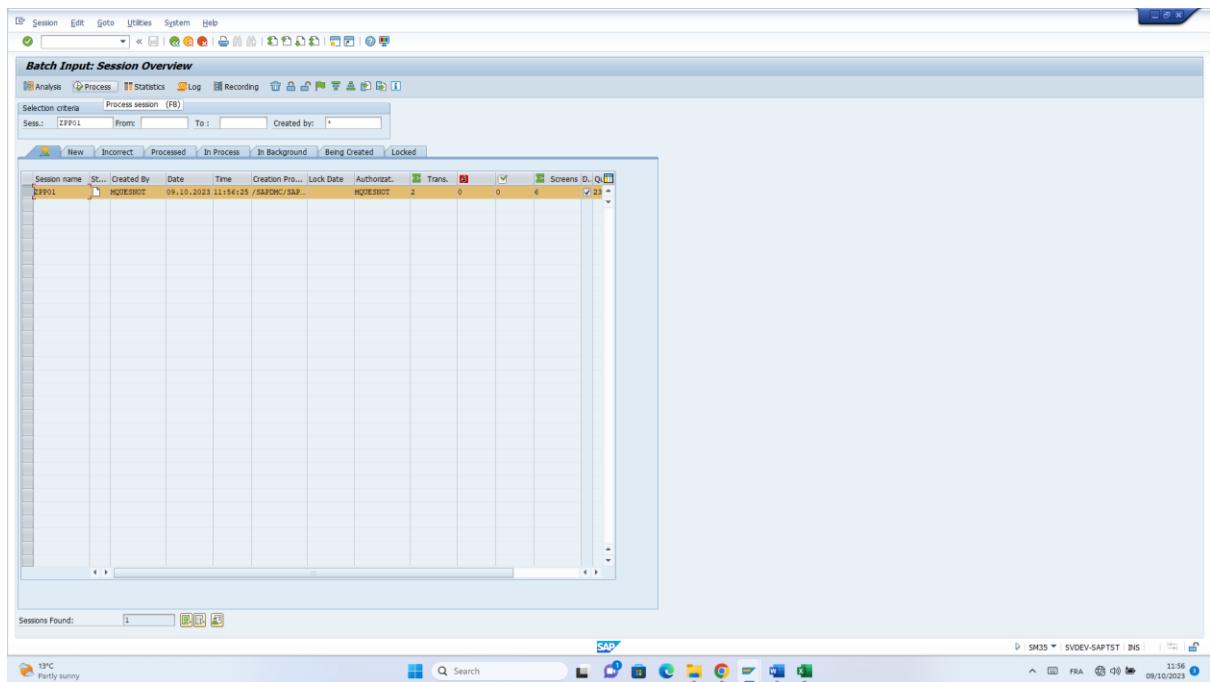


Step 14: Run Batch Input Session

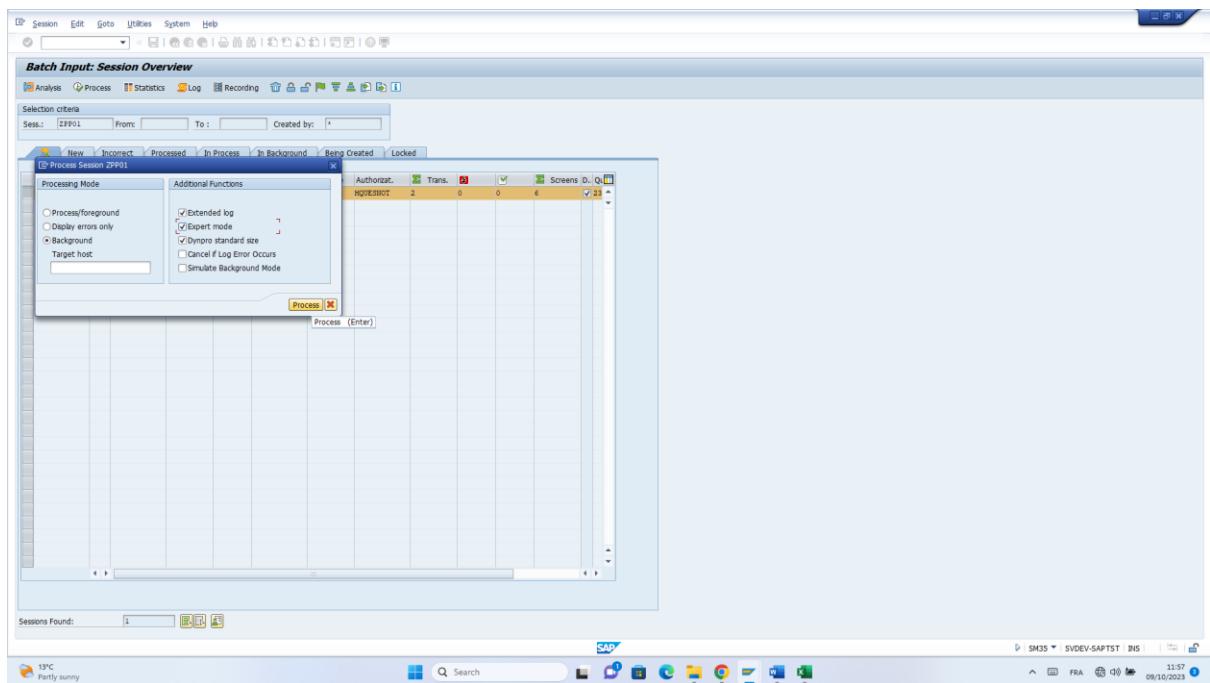
Here we run the batch input session which we created in step 13.

Select Session and execute process





BACKGROUND



Batch Input: Session Overview

Session name	St...	Created By	Date	Time	Creation Pro...	Lock Date	Authorizat...	Trans.	Screens	Q...
IPP01	3	HQUESNOT	09.10.2023	11:56:25	/SAPFMC/TAB		HQUESNOT	2	2	0

Sessions Found: 1

1 session(s) transferred to background processing

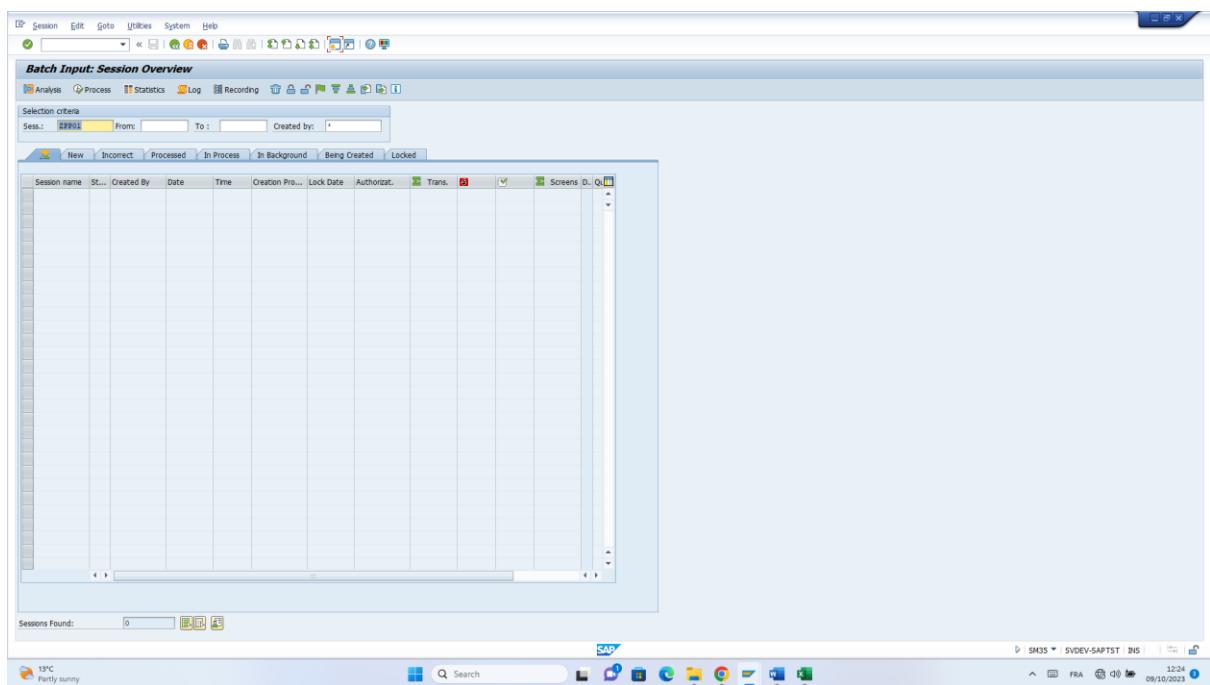
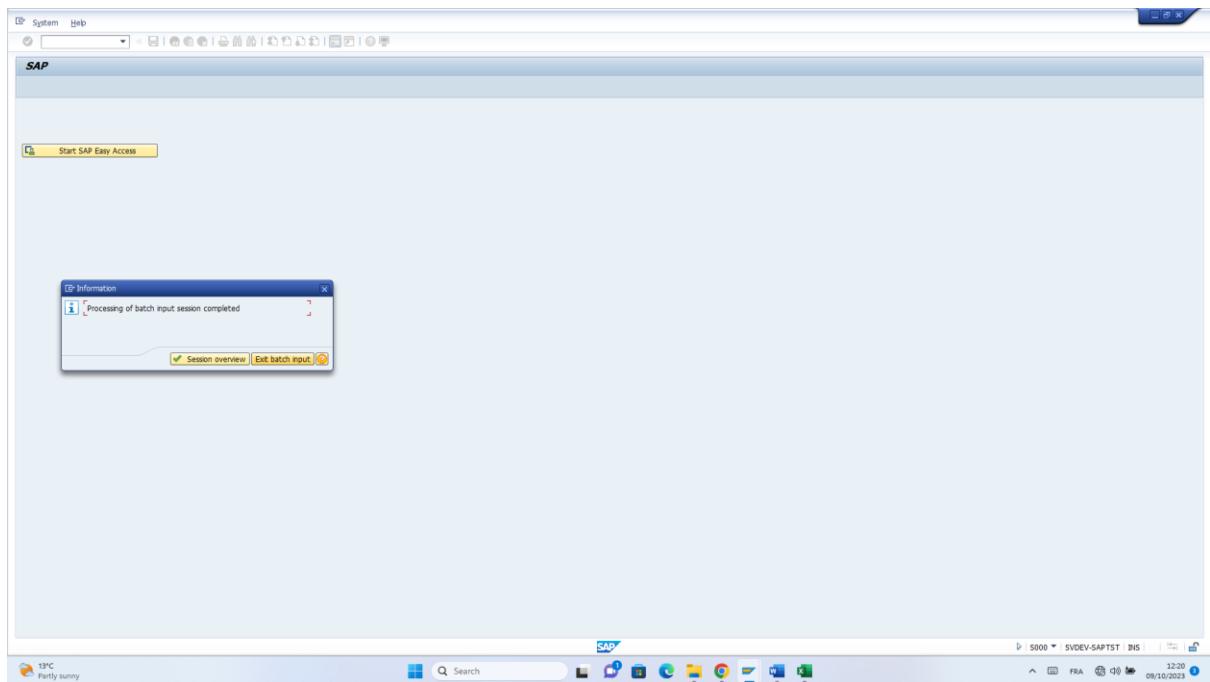
13°C Partly sunny

SMDS SVDEV-SAPTEST IN5 11:57 09/10/2023

The screenshot shows the SAP Analysis of Session interface for session ZPP01. The main window displays session information: Name (ZPP01), Created On (09.10.2023), Created At (11:54:25), Created By (MICKAEL), Authorization (MICKAEL), Locked Until (Never), and Queue ID (23100911542484440989). Below this is an Overview table showing transaction and screenshot counts across various states: New (0/0), Incorrect (2/6), To Process (2/6), Processed (0/0), Deleted (0/0), Current Content (2/6), Removed (0/0), and Created (2/6).

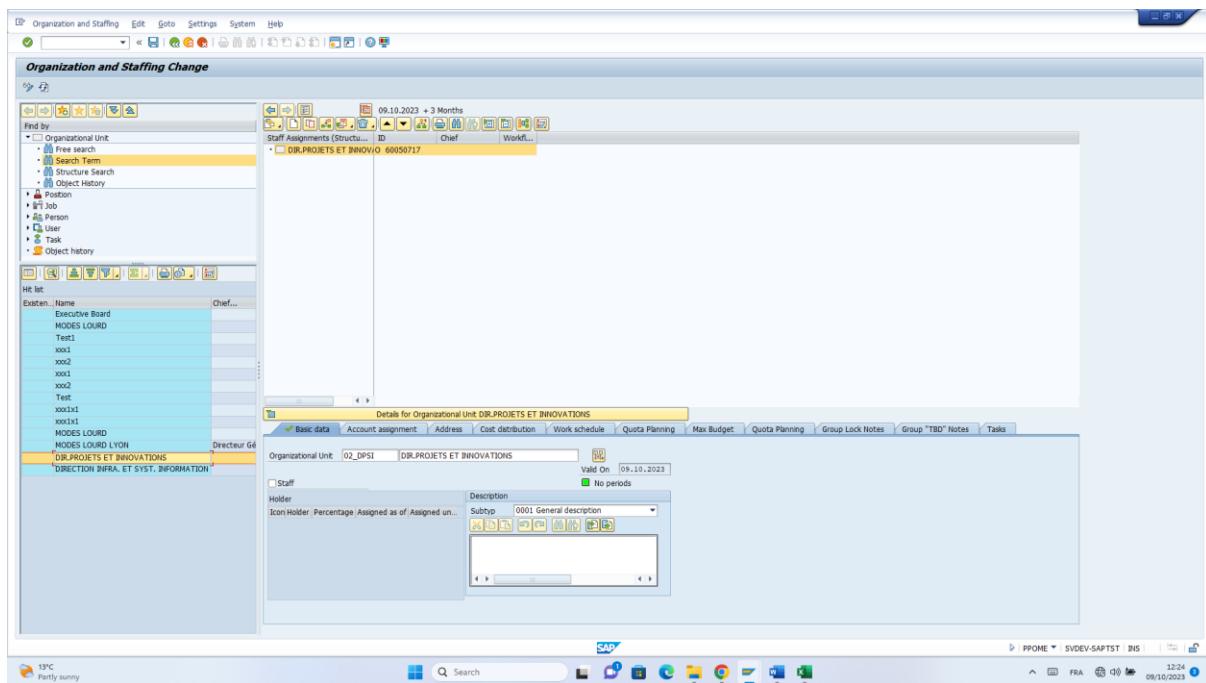
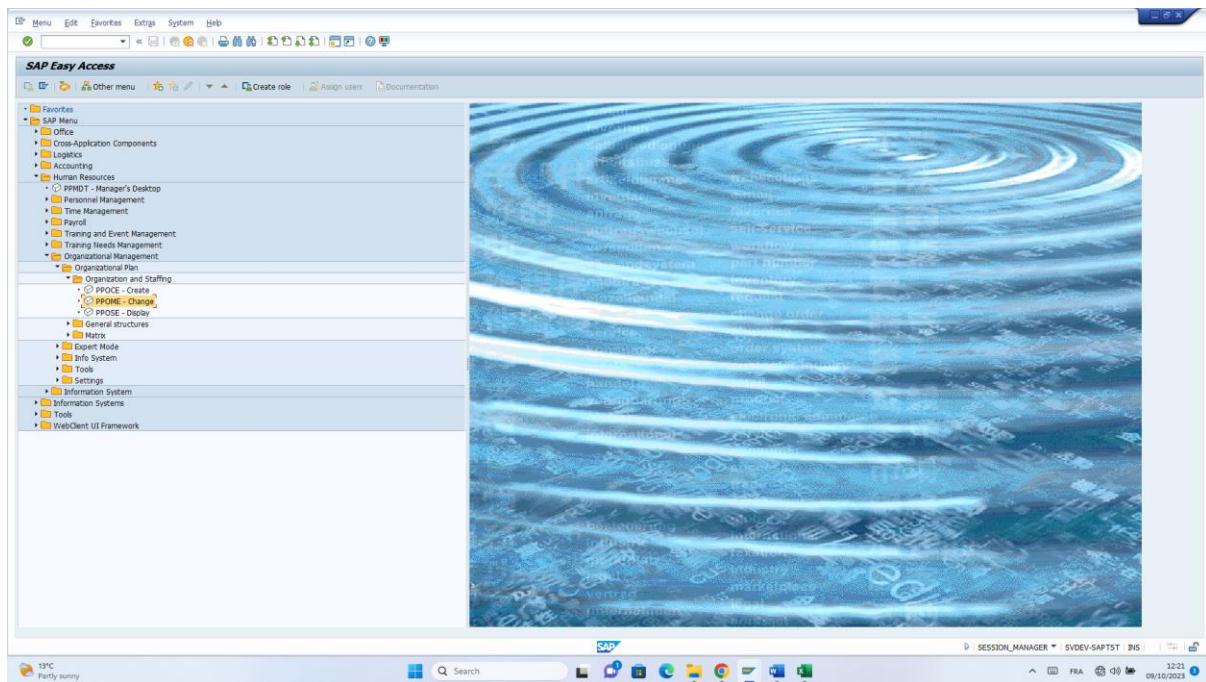
DISPLAY ERRORS ONLY

The screenshot shows the SAP Batch Input: Session Overview interface for session ZPP01. In the 'Processing Mode' section, the 'Display errors only' option is selected. In the 'Additional Functions' section, the 'Bypro standard size' checkbox is checked. The bottom part of the screen shows a grid of session details, with one row highlighted for session ZPP01.



Now legacy data will we upload to Master data in SAP system

To check Go to PPOME



Updated Successfully.

MICKAEL QUESNOT  EU

Directeur BU SAP SCM & CONCUR

<https://www.linkedin.com/in/mickaelquesnot/>