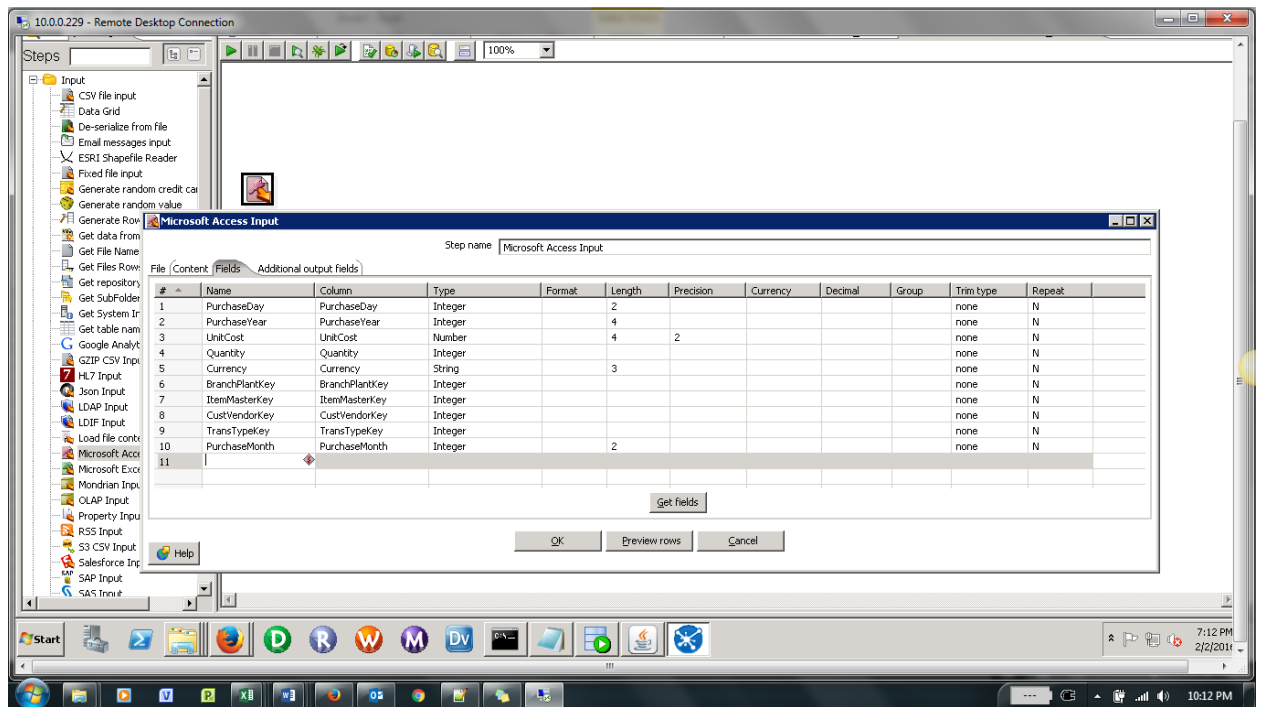
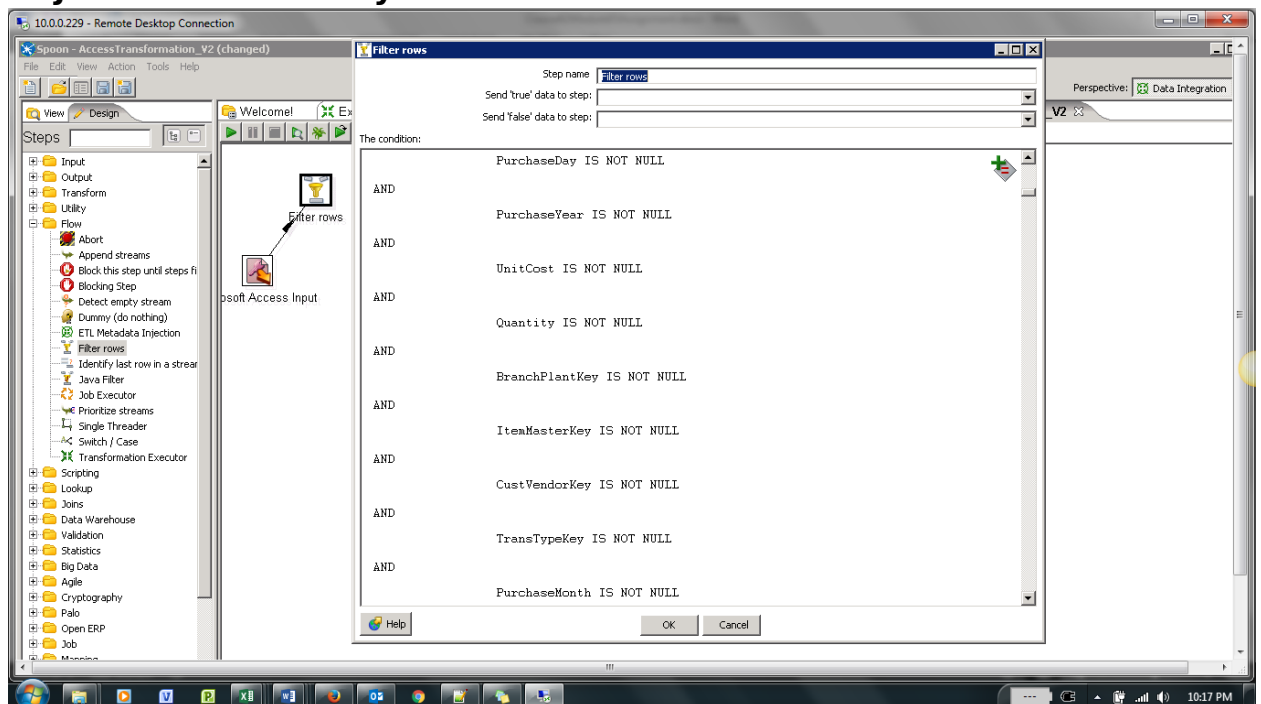


## ACCESS INPUT PROCESSING:

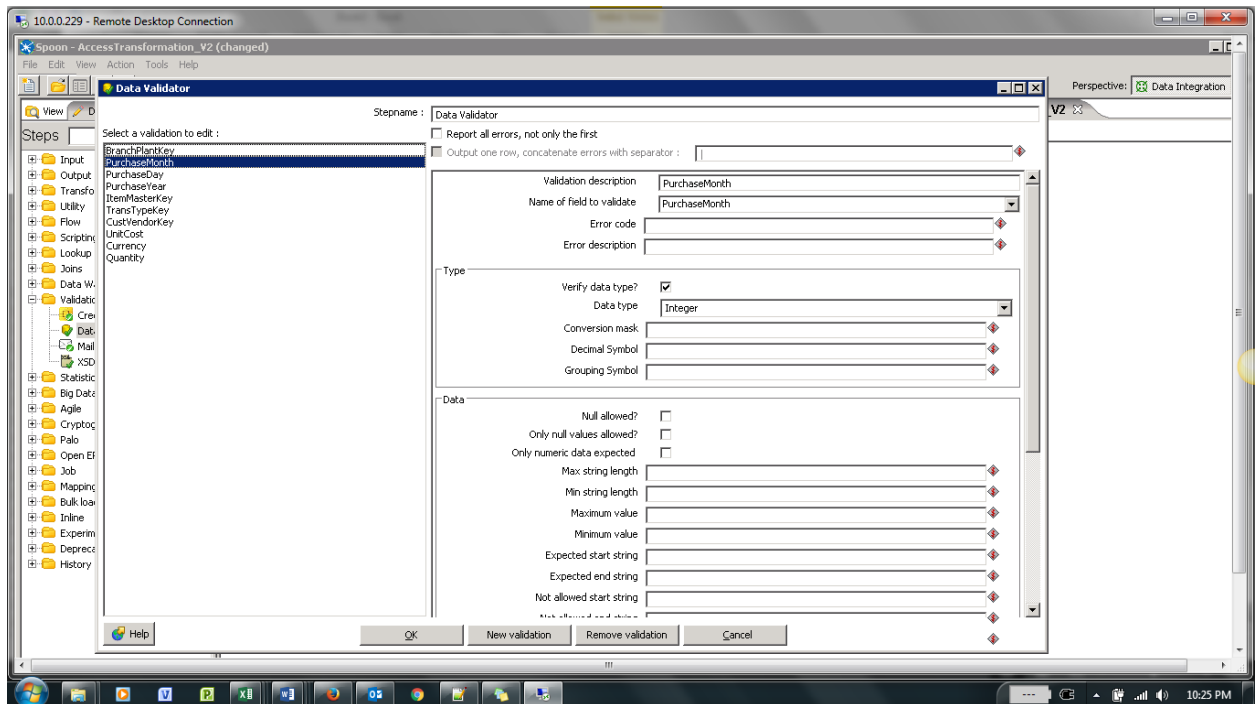
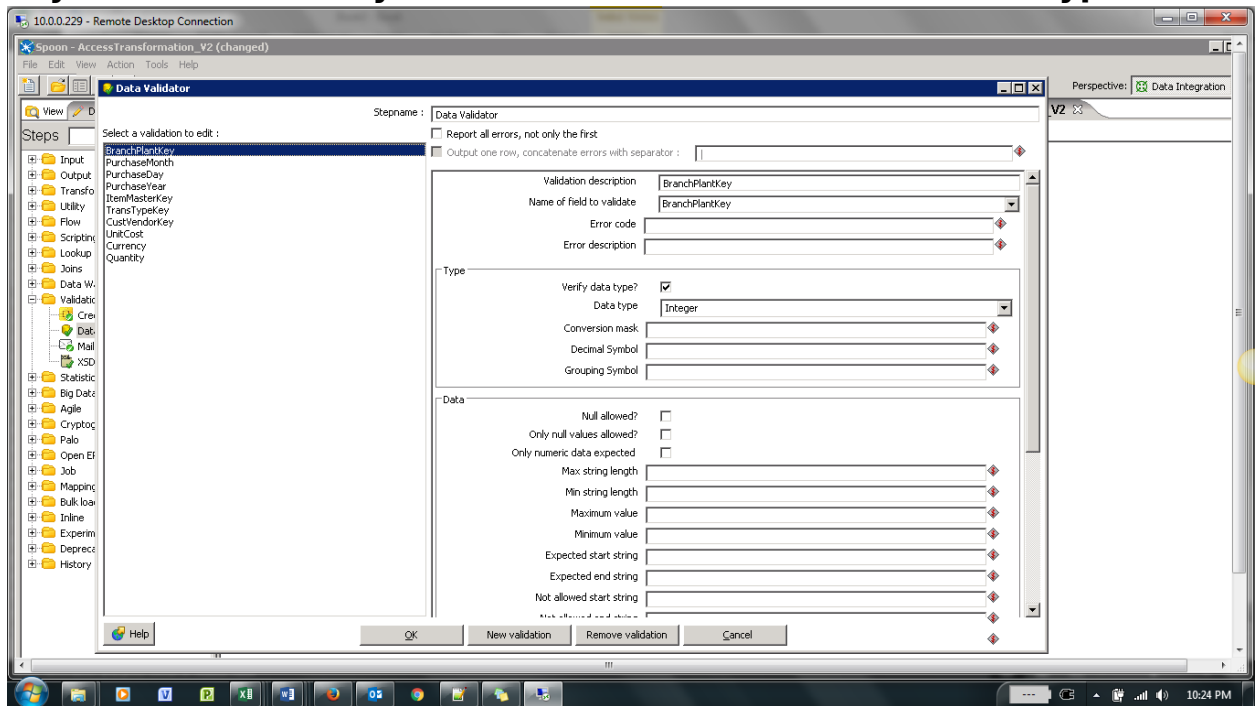
### 1. Microsoft ACCESS Input:

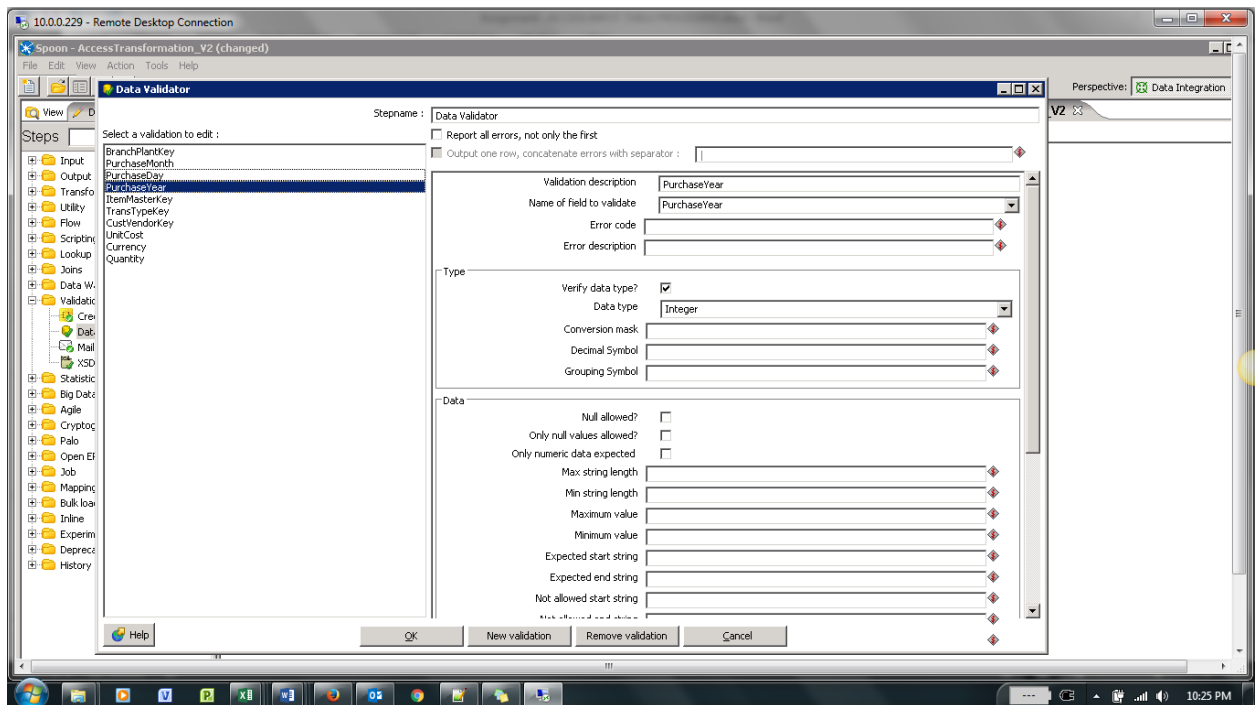
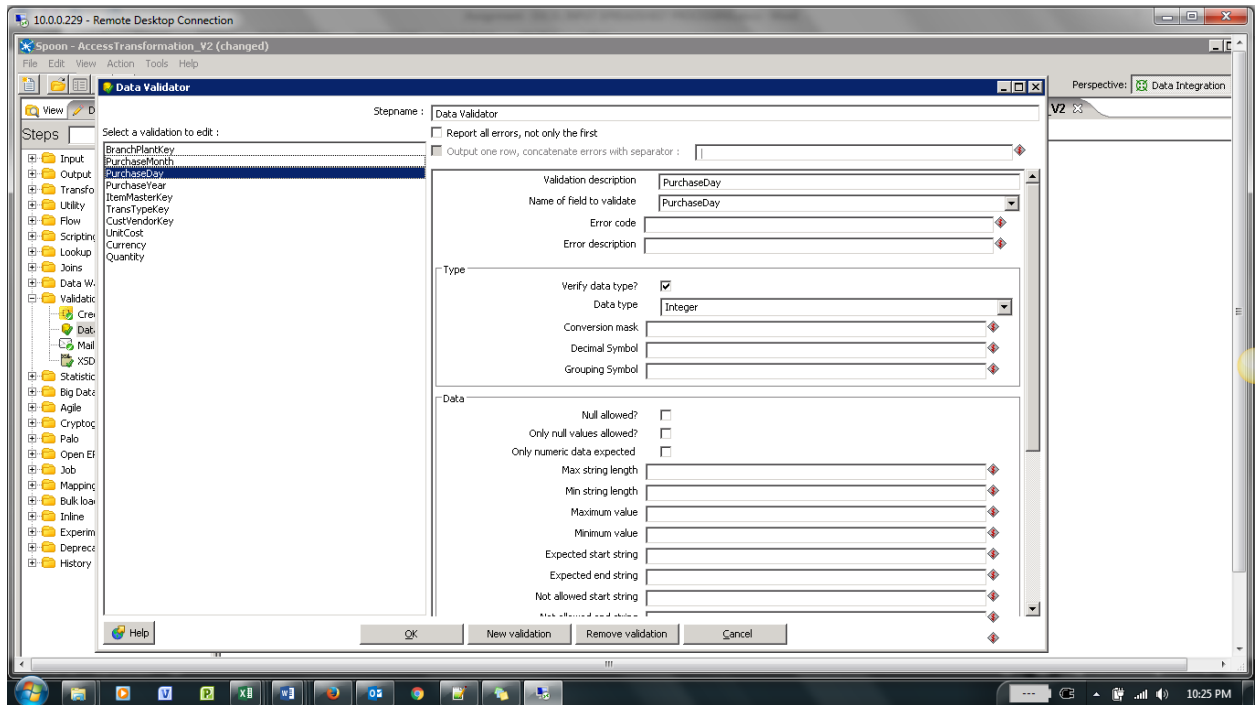


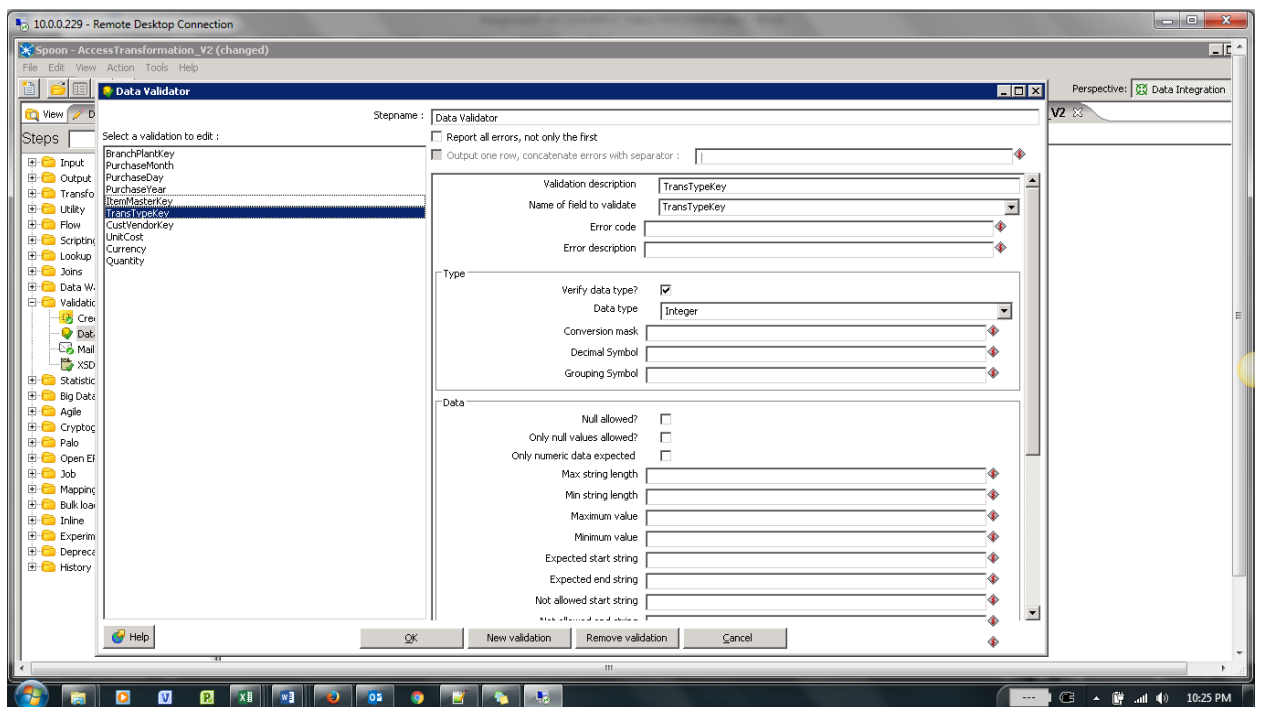
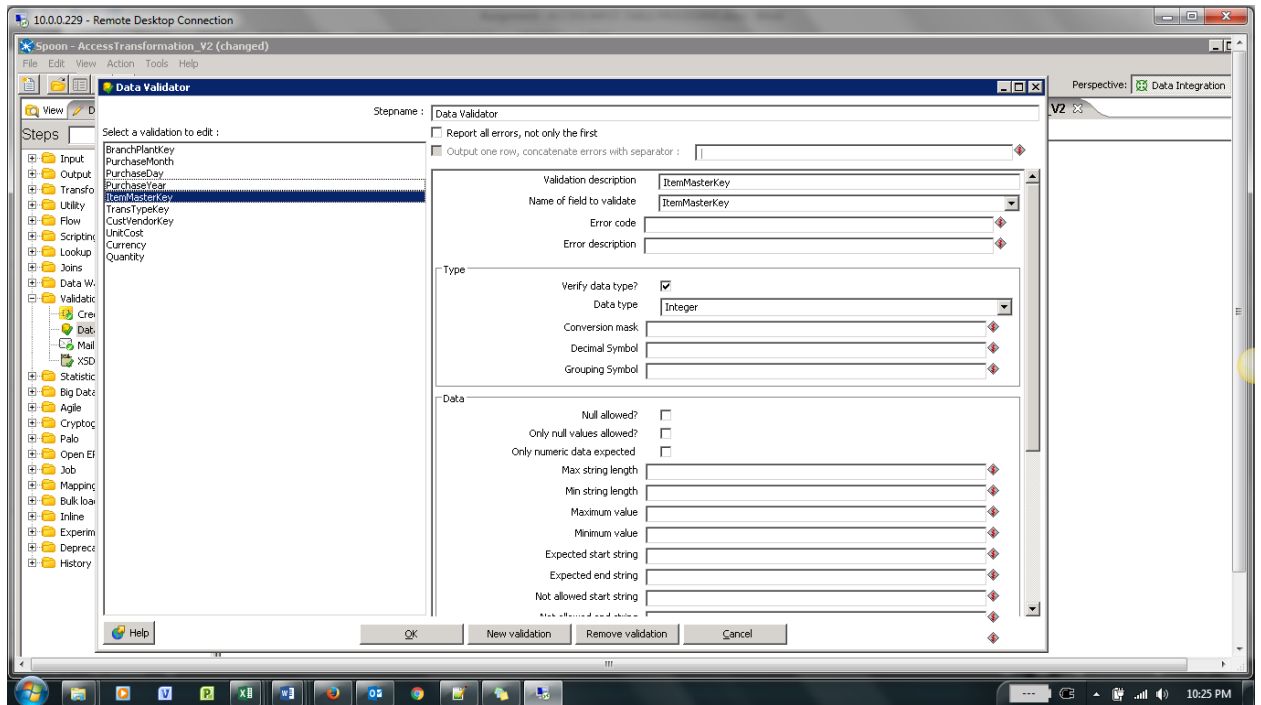
### 2. Reject a record if any field is null

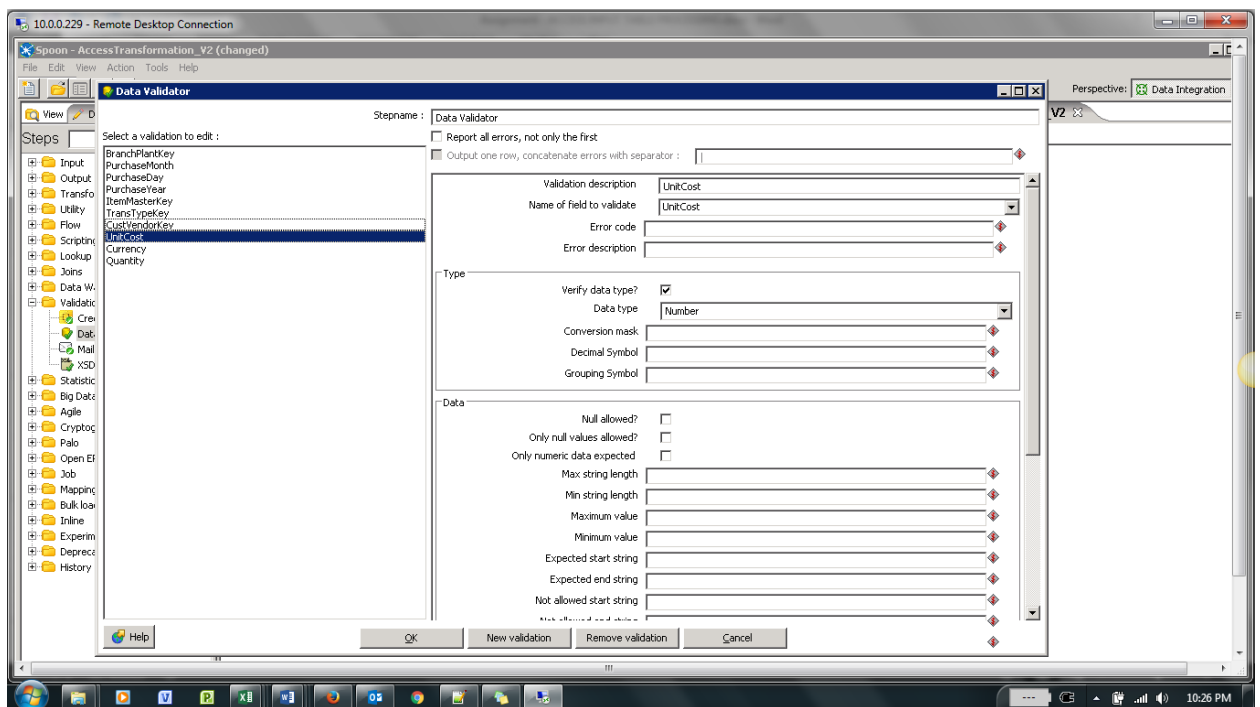
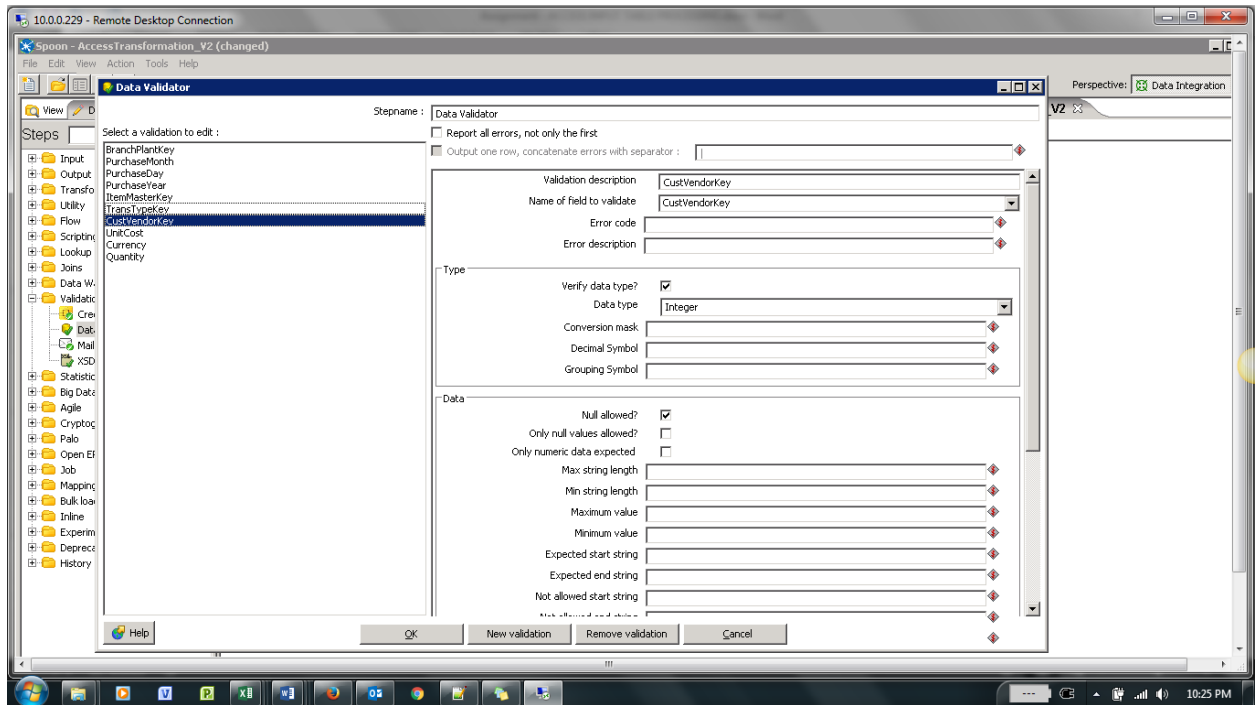


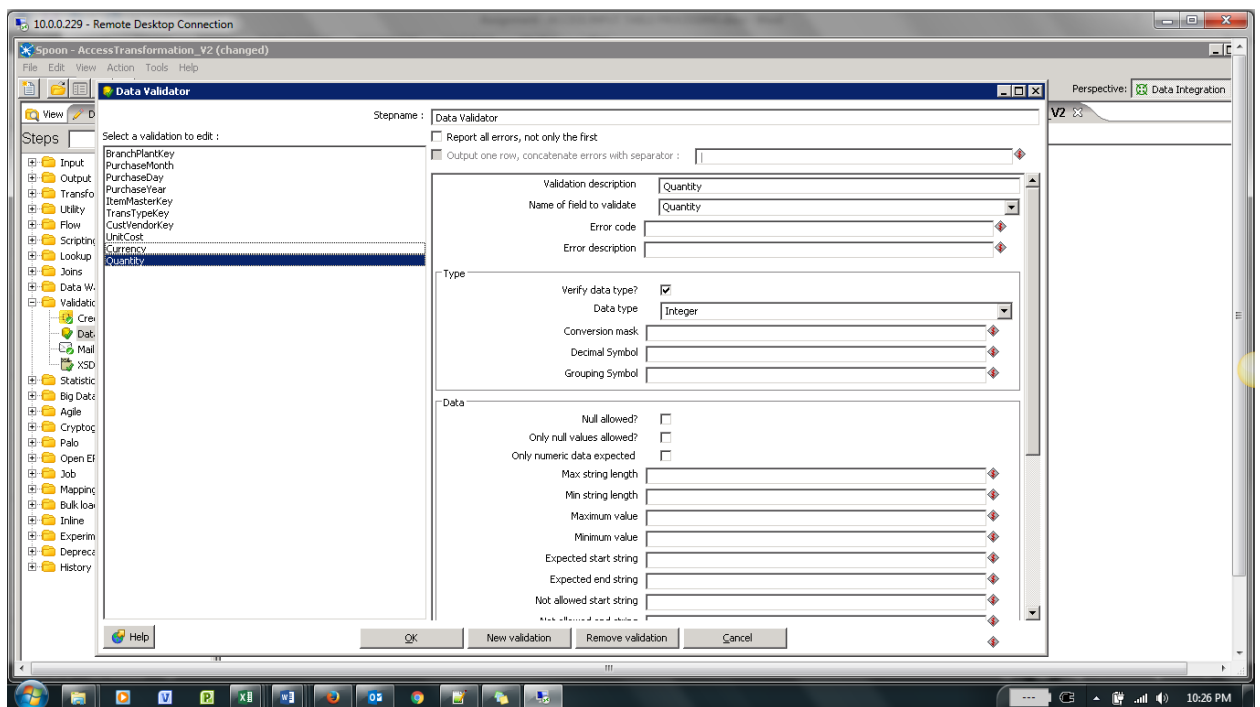
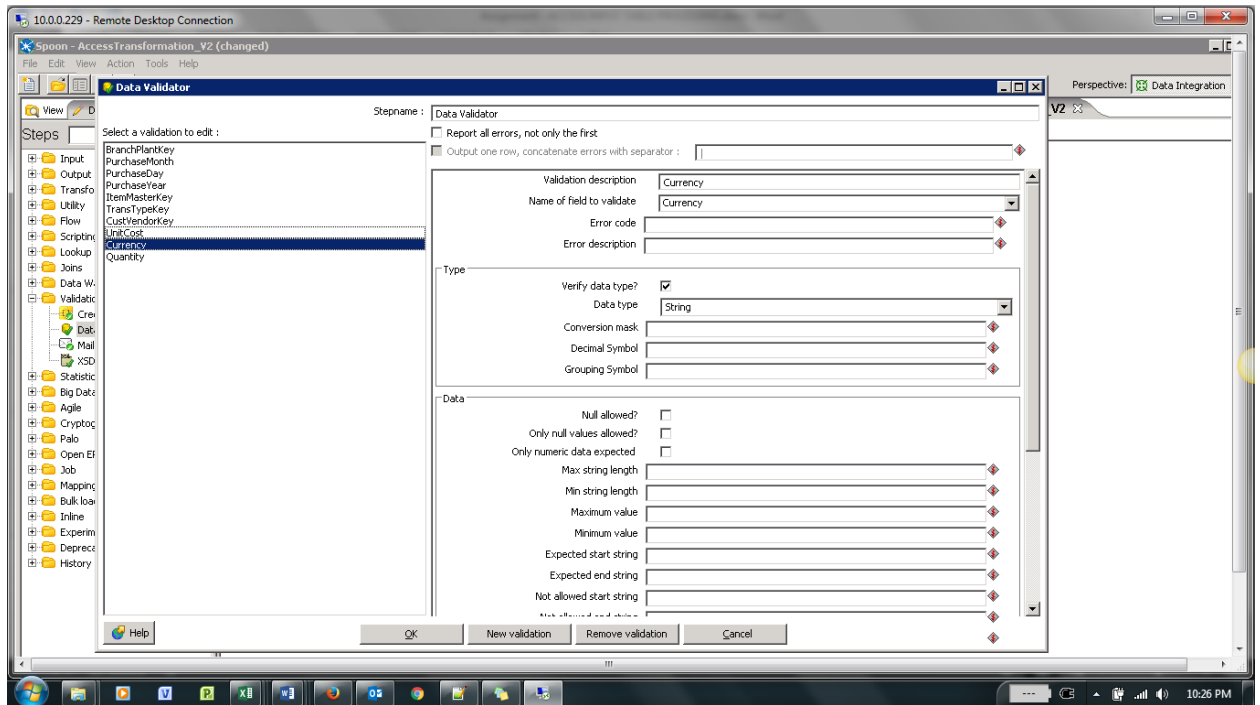
### 3. Reject a record if any field value does not match its data type











#### 4. Reject invalid foreign key references : Join Date\_Dim

The screenshot shows the SAP Data Integration Studio interface. The main workspace displays a data flow diagram with the following steps: Microsoft Access Input, Filter rows, Data Validator, Sort rows, Date\_Dim, and Sort rows 2. A 'Merge Join' dialog box is open, showing the configuration for the join operation.

**Merge Join Configuration:**

- Step name: Merge Join
- First Step: Sort rows
- Second Step: Sort rows 2
- Join Type: INNER

**Keys for 1st step:**

#	Key field
1	PurchaseDay
2	PurchaseMonth
3	PurchaseYear
4	

**Keys for 2nd step:**

#	Key field
1	CALDAY
2	CALMONTH
3	CALYEAR
4	

#### 5. Reject invalid foreign key references : Join Trans\_Type\_Dim

The screenshot shows the SAP Data Integration Studio interface. The main workspace displays a data flow diagram with the following steps: Microsoft Access Input, Filter rows, Data Validator, Sort rows, Merge Join, Sort rows 2, Date\_Dim, Sort rows 3, Sort rows 4, MergeJoin 2, and Trans\_Type\_Dim. A 'Merge Join' dialog box is open, showing the configuration for the join operation.

**Merge Join Configuration:**

- Step name: MergeJoin 2
- First Step: Sort rows 3
- Second Step: Sort rows 4
- Join Type: INNER

**Keys for 1st step:**

#	Key field
1	TransTypekey

**Keys for 2nd step:**

#	Key field
1	TRANSTYPEKEY

**Execution Results:**

#	Stepname	Copied	Read	Written	Int.	Out.	Input/output	Speed (r/s)
1	Microsoft Access Input	0	0	16	0	0	432	-
2	Filter rows	0	16	14	0	0	326	-
3	Data Validator	0	14	14	0	0	264	-
4	Sort rows	0	14	14	0	0	233	-
5	Merge Join	0	118	12	0	0	162	-
6	Date_Dim	0	0	104	104	0	1,238	-
7	Sort rows 2	0	104	104	0	0	1,182	-

## 6. Reject invalid foreign key references : Join Cust\_Vendor\_Dim

The screenshot shows the SAP Data Integration Studio interface. The main workspace displays a data flow diagram with steps: Microsoft Access Input, Data Validator, Merge Join, Sort rows 2, Sort rows 3, Sort rows 4, Sort rows 5, Sort rows 6, and Item Master Dim. A 'Merge Join' configuration window is open, showing the following details:

- Step name: Merge Join 3
- First Step: Sort rows 5
- Second Step: Sort rows 6
- Join Type: INNER

The 'Keys for 1st step' table is as follows:

#	Key field
1	CustVendorKey

The 'Keys for 2nd step' table is as follows:

#	Key field
1	CUSTVENDORKEY

The 'Execution Results' table at the bottom shows the following data:

#	Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)	input/output
1	Microsoft Access Input	0	0	16	16	0	0	0	0	0	0.0s	432	-
2	Filter rows	0	16	14	0	0	0	0	0	0	0.0s	326	-
3	Data Validator	0	14	14	0	0	0	0	0	0	0.1s	264	-
4	Sort rows	0	14	14	0	0	0	0	0	0	0.1s	233	-
5	Merge Join	0	118	12	0	0	0	0	0	0	0.7s	162	-
6	Date_Dim	0	0	104	104	0	0	0	0	0	0.1s	1,238	-
7	Sort rows 2	0	104	104	0	0	0	0	0	0	0.1s	1,182	-

## 7. Reject invalid foreign key references : Join Item\_Master\_Dim

The screenshot shows the SAP Data Integration Studio interface. The main workspace displays a data flow diagram with steps: Microsoft Access Input, Data Validator, Merge Join, Sort rows 2, Sort rows 3, Sort rows 4, Sort rows 5, Sort rows 6, Sort rows 7, Sort rows 8, and Item Master Dim. A 'Merge Join' configuration window is open, showing the following details:

- Step name: Merge Join 4
- First Step: Sort rows 7
- Second Step: Sort rows 8
- Join Type: INNER

The 'Keys for 1st step' table is as follows:

#	Key field
1	ItemMasterKey

The 'Keys for 2nd step' table is as follows:

#	Key field
1	ITEMMASTERKEY

The 'Execution Results' table at the bottom shows the following data:

#	Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)	input/output
1	Microsoft Access Input	0	0	16	16	0	0	0	0	0	0.0s	432	-
2	Filter rows	0	16	14	0	0	0	0	0	0	0.0s	326	-
3	Data Validator	0	14	14	0	0	0	0	0	0	0.1s	264	-
4	Sort rows	0	14	14	0	0	0	0	0	0	0.1s	233	-
5	Merge Join	0	118	12	0	0	0	0	0	0	0.7s	162	-
6	Date_Dim	0	0	104	104	0	0	0	0	0	0.1s	1,238	-
7	Sort rows 2	0	104	104	0	0	0	0	0	0	0.1s	1,182	-



## 8. Reject invalid foreign key references : Join Branch\_Plant\_Dim

The screenshot shows the SAP Data Integration Studio interface. The central pane displays the configuration for a 'Merge Join' step (Step name: Merge Join 5). The 'First Step' is 'Sort rows 9' and the 'Second Step' is 'Sort rows 10'. The 'Join Type' is set to 'INNER'. The 'Keys for 1st step' table shows a key field 'BranchPlantKey' with a value of 1. The 'Keys for 2nd step' table shows a key field 'BRANCHPLANTKEY' with a value of 1. The 'Execution Results' table at the bottom shows the following data:

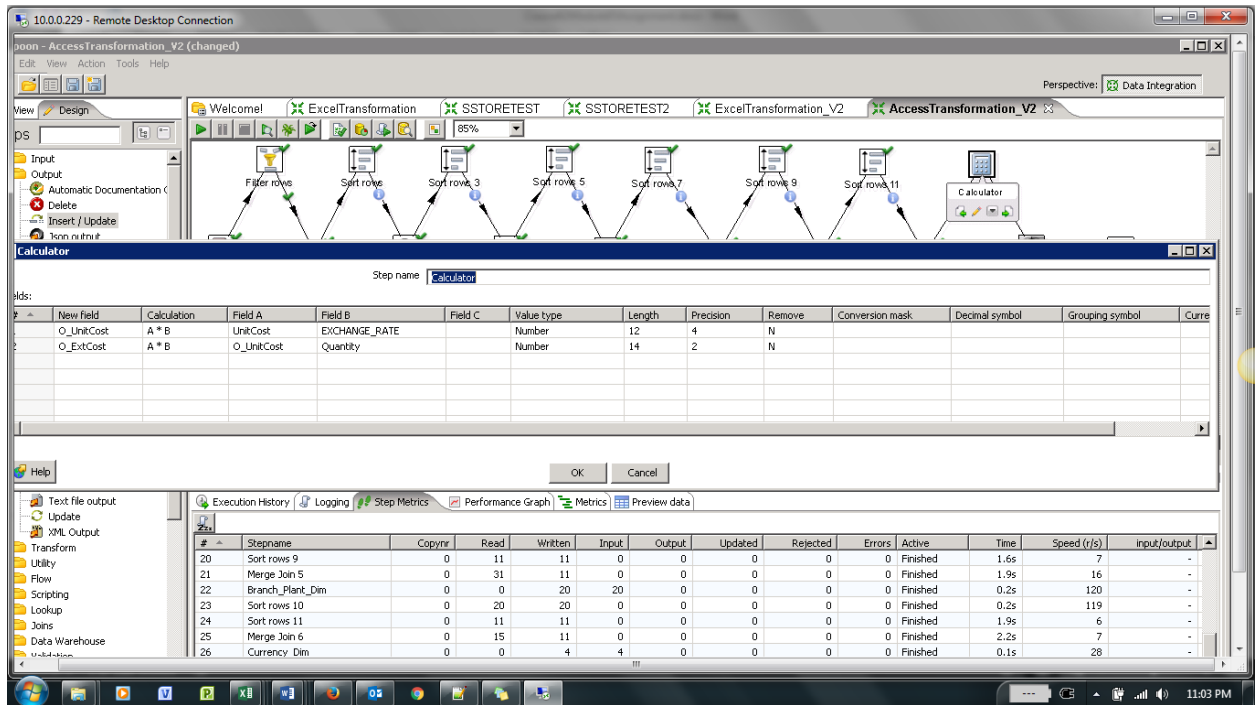
#	Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)	input/output
1	Microsoft Access Input	0	0	16	16	0	0	0	0	0	0.0s	432	-
2	Filter rows	0	16	14	0	0	0	0	0	0	0.0s	326	-
3	Data Validator	0	14	14	0	0	0	0	0	0	0.1s	264	-
4	Sort rows	0	14	14	0	0	0	0	0	0	0.1s	233	-
5	Merge Join	0	118	12	0	0	0	0	0	0	0.7s	162	-
6	Date_Dim	0	0	104	104	0	0	0	0	0	0.1s	1,238	-
7	Sort rows 2	0	104	104	0	0	0	0	0	0	0.1s	1,182	-

## 9. Reject invalid foreign key references : Join Currency\_Dim

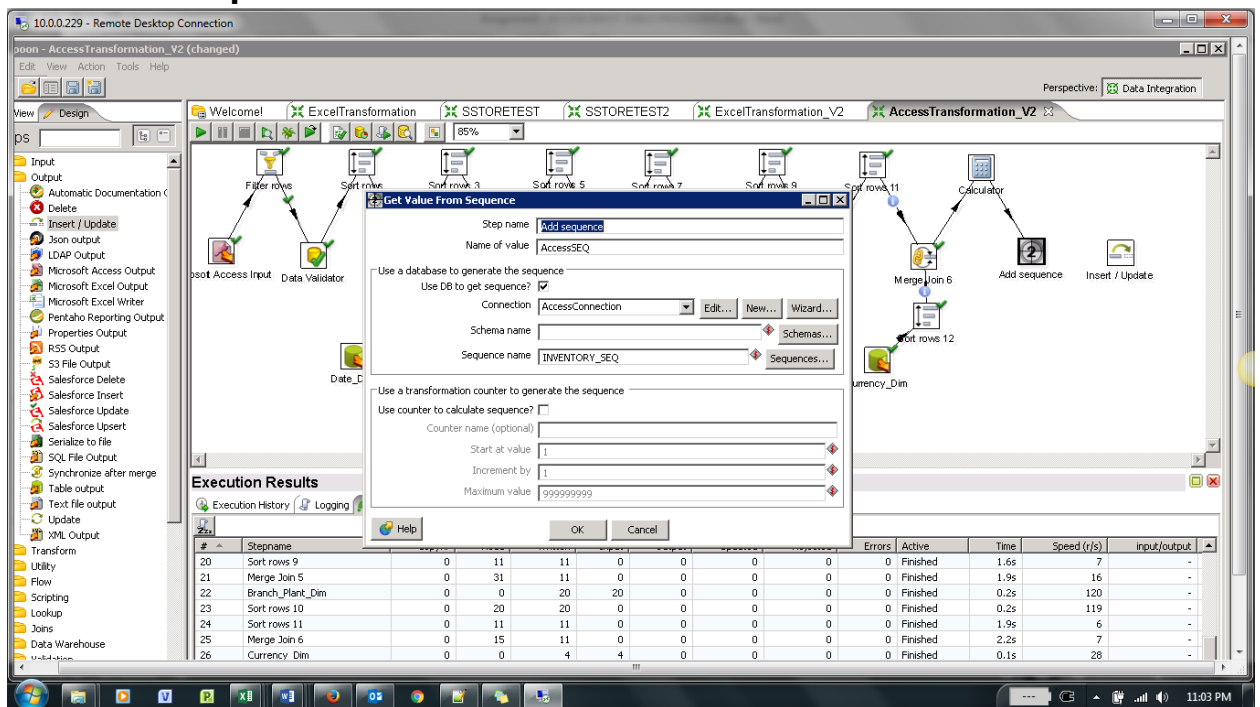
The screenshot shows the SAP Data Integration Studio interface. The central pane displays the configuration for a 'Merge Join' step (Step name: Merge Join 6). The 'First Step' is 'Sort rows 11' and the 'Second Step' is 'Sort rows 12'. The 'Join Type' is set to 'INNER'. The 'Keys for 1st step' table shows a key field 'Currency' with a value of 1. The 'Keys for 2nd step' table shows a key field 'CURRENCY\_ID' with a value of 1. The 'Execution Results' table at the bottom shows the following data:

#	Stepname	Copynr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)	input/output
1	Microsoft Access Input	0	0	16	16	0	0	0	0	0	0.0s	432	-
2	Filter rows	0	16	14	0	0	0	0	0	0	0.0s	326	-
3	Data Validator	0	14	14	0	0	0	0	0	0	0.1s	264	-
4	Sort rows	0	14	14	0	0	0	0	0	0	0.1s	233	-
5	Merge Join	0	118	12	0	0	0	0	0	0	0.7s	162	-
6	Date_Dim	0	0	104	104	0	0	0	0	0	0.1s	1,238	-
7	Sort rows 2	0	104	104	0	0	0	0	0	0	0.1s	1,182	-

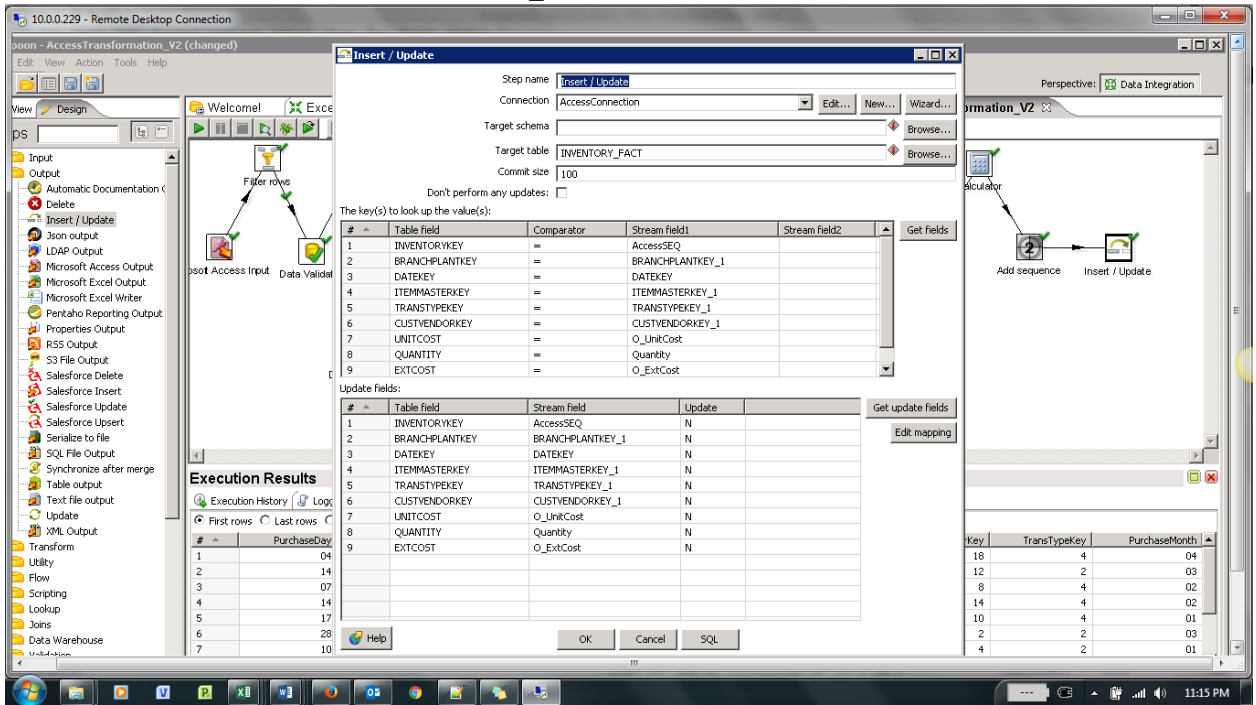
## 10. Calculator Transformation for Unit Cost and ExtCost:



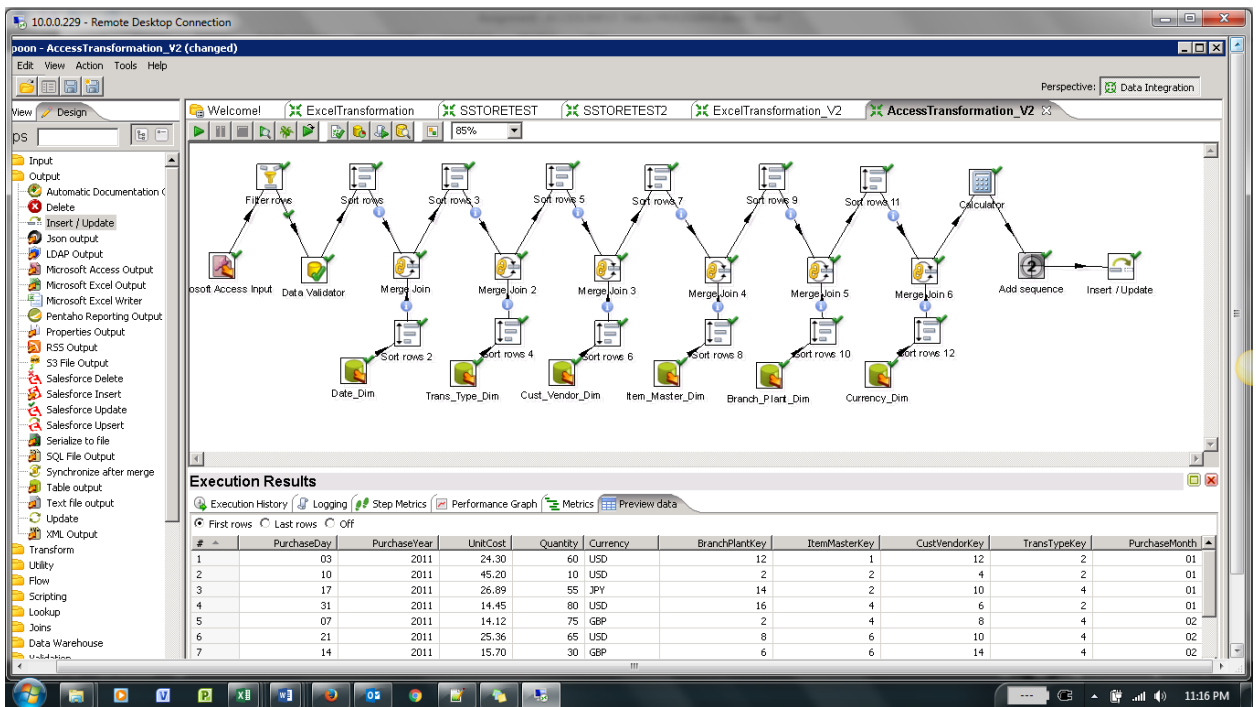
## 11. Add Sequence



## 12. Insert/Update INVENTORY\_FACT table:



### Complete Transformation:



## Execution: Step Output Stats:

The image displays two screenshots of the SSIS Execution Results window, showing the 'Step Metrics' tab. The window is titled '10.0.0.229 - Remote Desktop Connection' and shows a list of steps with their respective metrics.

**Execution Results - Step 1 to 28**

#	Stepname	Copyrtr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)	Input/output
1	Microsoft Access Input	0	0	16	16	0	0	0	0	Finished	0.3s	63	-
2	Filter rows	0	16	14	0	0	0	0	0	Finished	0.3s	56	-
3	Data Validator	0	14	14	0	0	0	0	0	Finished	0.3s	48	-
4	Sort rows	0	14	14	0	0	0	0	0	Finished	0.3s	47	-
5	Merge Join	0	118	12	0	0	0	0	0	Finished	0.7s	178	-
6	Date_Dim	0	0	104	104	0	0	0	0	Finished	0.4s	295	-
7	Sort rows 2	0	104	104	0	0	0	0	0	Finished	0.4s	292	-
8	Sort rows 3	0	12	12	0	0	0	0	0	Finished	0.7s	18	-
9	Merge Join 2	0	17	12	0	0	0	0	0	Finished	1.0s	16	-
10	Trans_Type_Dim	0	0	5	5	0	0	0	0	Finished	0.3s	17	-
11	Sort rows 4	0	5	5	0	0	0	0	0	Finished	0.3s	17	-
12	Sort rows 5	0	12	12	0	0	0	0	0	Finished	1.0s	11	-
13	Merge Join 3	0	32	11	0	0	0	0	0	Finished	1.4s	23	-
14	Cust_Vendor_Dim	0	0	20	20	0	0	0	0	Finished	0.7s	28	-
15	Sort rows 6	0	20	20	0	0	0	0	0	Finished	0.7s	28	-
16	Sort rows 7	0	11	11	0	0	0	0	0	Finished	1.4s	8	-
17	Merge Join 4	0	31	11	0	0	0	0	0	Finished	1.7s	18	-
18	Item_Master_Dim	0	0	20	20	0	0	0	0	Finished	0.7s	29	-
19	Sort rows 8	0	20	20	0	0	0	0	0	Finished	0.7s	29	-
20	Sort rows 9	0	11	11	0	0	0	0	0	Finished	1.7s	6	-
21	Merge Join 5	0	31	11	0	0	0	0	0	Finished	2.0s	15	-
22	Branch_Plant_Dim	0	0	20	20	0	0	0	0	Finished	0.7s	30	-
23	Sort rows 10	0	20	20	0	0	0	0	0	Finished	0.7s	30	-
24	Sort rows 11	0	11	11	0	0	0	0	0	Finished	2.0s	5	-
25	Merge Join 6	0	15	11	0	0	0	0	0	Finished	2.4s	6	-
26	Currency_Dim	0	0	4	4	0	0	0	0	Finished	0.6s	6	-
27	Sort rows 12	0	4	4	0	0	0	0	0	Finished	0.6s	6	-
28	Calculator	0	11	11	0	0	0	0	0	Finished	2.4s	4	-

**Execution Results - Step 4 to 30**

#	Stepname	Copyrtr	Read	Written	Input	Output	Updated	Rejected	Errors	Active	Time	Speed (r/s)	Input/output
4	Sort rows	0	14	14	0	0	0	0	0	Finished	0.3s	47	-
5	Merge Join	0	118	12	0	0	0	0	0	Finished	0.7s	178	-
6	Date_Dim	0	0	104	104	0	0	0	0	Finished	0.4s	295	-
7	Sort rows 2	0	104	104	0	0	0	0	0	Finished	0.4s	292	-
8	Sort rows 3	0	12	12	0	0	0	0	0	Finished	0.7s	18	-
9	Merge Join 2	0	17	12	0	0	0	0	0	Finished	1.0s	16	-
10	Trans_Type_Dim	0	0	5	5	0	0	0	0	Finished	0.3s	17	-
11	Sort rows 4	0	5	5	0	0	0	0	0	Finished	0.3s	17	-
12	Sort rows 5	0	12	12	0	0	0	0	0	Finished	1.0s	11	-
13	Merge Join 3	0	32	11	0	0	0	0	0	Finished	1.4s	23	-
14	Cust_Vendor_Dim	0	0	20	20	0	0	0	0	Finished	0.7s	28	-
15	Sort rows 6	0	20	20	0	0	0	0	0	Finished	0.7s	28	-
16	Sort rows 7	0	11	11	0	0	0	0	0	Finished	1.4s	8	-
17	Merge Join 4	0	31	11	0	0	0	0	0	Finished	1.7s	18	-
18	Item_Master_Dim	0	0	20	20	0	0	0	0	Finished	0.7s	29	-
19	Sort rows 8	0	20	20	0	0	0	0	0	Finished	0.7s	29	-
20	Sort rows 9	0	11	11	0	0	0	0	0	Finished	1.7s	6	-
21	Merge Join 5	0	31	11	0	0	0	0	0	Finished	2.0s	15	-
22	Branch_Plant_Dim	0	0	20	20	0	0	0	0	Finished	0.7s	30	-
23	Sort rows 10	0	20	20	0	0	0	0	0	Finished	0.7s	30	-
24	Sort rows 11	0	11	11	0	0	0	0	0	Finished	2.0s	5	-
25	Merge Join 6	0	15	11	0	0	0	0	0	Finished	2.4s	6	-
26	Currency_Dim	0	0	4	4	0	0	0	0	Finished	0.6s	6	-
27	Sort rows 12	0	4	4	0	0	0	0	0	Finished	0.6s	6	-
28	Calculator	0	11	11	0	0	0	0	0	Finished	2.4s	4	-
29	Add sequence	0	11	11	0	0	0	0	0	Finished	2.4s	4	-
30	Insert / Update	0	11	11	11	11	0	0	0	Finished	2.5s	4	-