



Informatica Power Center 9.0.1

Building Financial Data Mode - Lab#3

Hands-on Guide on Designing Expressions

Description:

BISP is committed to provide BEST learning material to the beginners and advance learners. In the same series, we have prepared a complete end-to-end Hands-on Guide for building financial data model in Informatica. The document focuses on how the real world requirement should be interpreted. The mapping document template with very simplified steps and screen shots makes the complete learning so easy. The document focuses on designing expressions. [Join our professional training program and learn from experts.](#)

History:

Version	Description Change	Author	Publish Date
0.1	Initial Draft	Upendra Upadhyay	10th Jul 2011
01.	Review#1	Amit Sharma	12th July 2011

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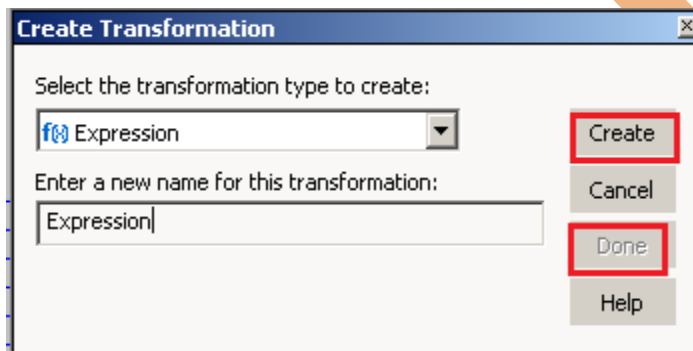
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Introduction

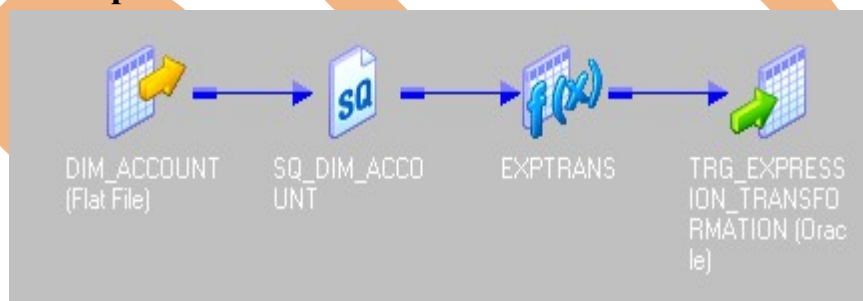
Expression Transformation in Informatica.

Expression transformation is a connected, passive transformation used to calculate values on a single row. Examples of calculations are concatenating the first and last name, adjusting the employee salaries, converting strings to date etc. Expression transformation can also be used to test conditional statements before passing the data to other transformations.

Expression Transformation.



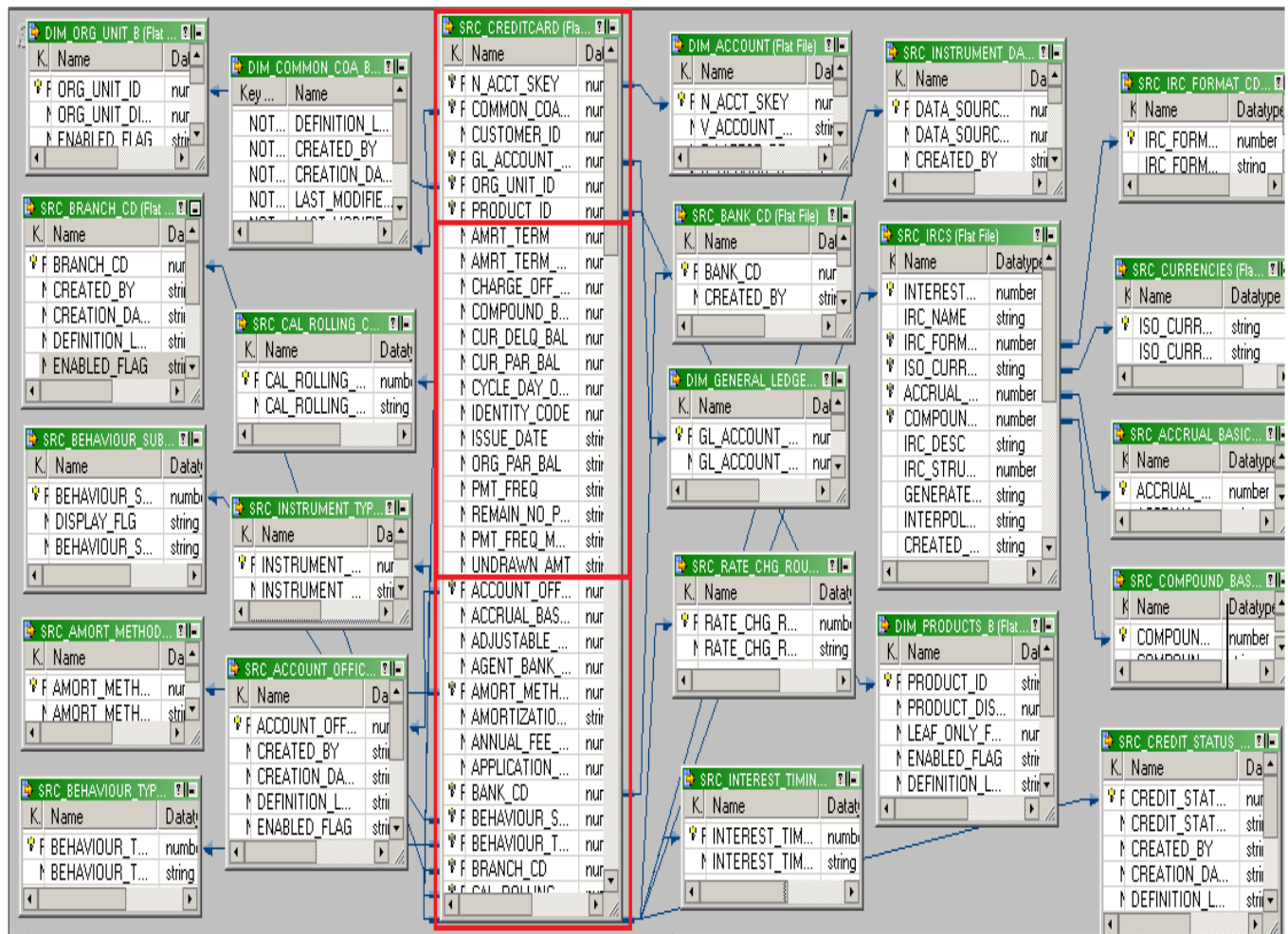
Process of Expression Transformation.



Expression.

Definition Name	Expression Transformation					
Source Name	SRC_CREDITCARD					
Target Name	TRG_CREDITCARD					
Source Details			Target Details			
Entity Name	Field/Expression Name	Data Type	Is Null	SQL Expression	Destination Entity Name	Destination Field Name
EXPRESSION	AMRT_TERM	Number	Y	N_ORIG_TERM	TRG_CREDITCARD	AMRT_TERM
EXPRESSION	AMRT_TERM_MULT	Varchar2(20)	Y	N_OVER_LIMIT_BAL	TRG_CREDITCARD	AMRT_TERM_MULT
EXPRESSION	CHARGE_OFF_BAL	Number	Y	N_EOP_BAL+N_HIGH_BAL+N_OVER_LIMIT_BAL	TRG_CREDITCARD	CHARGE_OFF_BAL
EXPRESSION	COMPOUND_BASIS_CD	Number	Y	DECODE(TRUE, (COMPOUND_BASIS_CD1=1), 1, 2)	TRG_CREDITCARD	COMPOUND_BASIS_CD
EXPRESSION	CUR_DELO_BAL	Number	Y	CUR_DELO_BAL	TRG_CREDITCARD	CUR_DELO_BAL
EXPRESSION	CUR_PAR_BAL	Number	Y	N_EOP_BAL	TRG_CREDITCARD	CUR_PAR_BAL
EXPRESSION	CYCLE_DAY_OF_MONTH	Number	Y	TO_DECIMAL(to_char(SRC_CREDITCARD.FIC_MIS_DATE,'DD'))	TRG_CREDITCARD	CYCLE_DAY_OF_MONTH
EXPRESSION	IDENTITY_CODE	Number	N	TO_CHAR(SRC_CREDITCARD.FIC_MIS_DATE,'YYYYMMDD')	TRG_CREDITCARD	IDENTITY_CODE
EXPRESSION	ISSUE_DATE	DATE	Y	SYSTIMESTAMP()	TRG_CREDITCARD	ISSUE_DATE
EXPRESSION	ORG_PAR_BAL	Number	Y	N_ACCT_TOT_BT_AMT	TRG_CREDITCARD	ORG_PAR_BAL
EXPRESSION	PMT_FREQ	Number	Y	DECODE(TRUE, (PMT_FREQ1=1), 1, 0)	TRG_CREDITCARD	PMT_FREQ
EXPRESSION	REMAIN_NO_PMTS_C	Number	Y	TO_DECIMAL(1)	TRG_CREDITCARD	REMAIN_NO_PMTS_C
EXPRESSION	PMT_FREQ_MULT	Varchar2(20)	Y	IIF(PMT_FREQ_MULT1='Y', True, False)	TRG_CREDITCARD	PMT_FREQ_MULT
EXPRESSION	UNDRAWN_AMT	Number	Y	(SRC_CREDITCARD.N_CURRENT_CREDIT_LIMIT - SRC_CREDITCARD.N_DRAWN_AMT)	TRG_CREDITCARD	UNDRAWN_AMT

Source Table(Model).



Target Table.

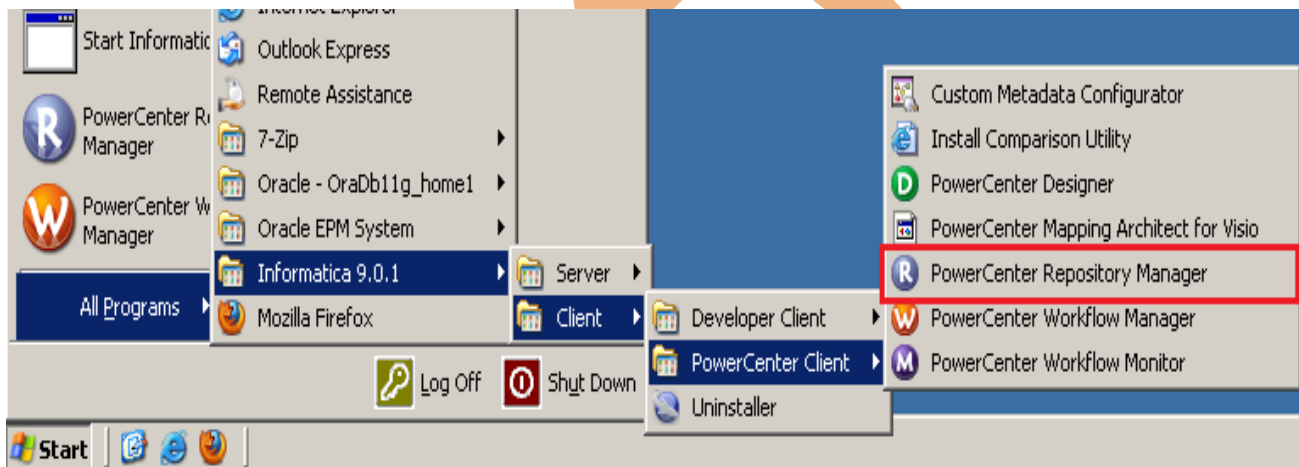
Target Designer

K.	Name	Datatype	L...
	N_ACCT_SKEY	number(p,s)	14
	COMMON_COA...	number(p,s)	14
	CUSTOMER_ID	number(p,s)	14
	GL_ACCOUNT_...	number(p,s)	14
	ORG_UNIT_ID	number(p,s)	14
	PRODUCT_ID	number(p,s)	14
	AMRT_TERM	number(p,s)	14
	AMRT_TERM_...	varchar2	20
	CHARGE_OFF_...	number(p,s)	14
	COMPOUND_B...	number(p,s)	14
	CUR_DELQ_BAL	number(p,s)	14
	CUR_PAR_BAL	number(p,s)	14
	CYCLE_DAY_O...	number(p,s)	14
	IDENTITY_CODE	number(p,s)	14
	ISSUE_DATE	date	19
	ORG_PAR_BAL	number(p,s)	14
	PMT_FREQ	number(p,s)	14
	REMAIN_NO_P...	number(p,s)	14
	PMT_FREQ_M...	varchar2	20
	UNDR&w/N ΔMT	number(p,s)	14
	ACCOUNT_OFF...	number(p,s)	14
	ACCRUAL BAS...	number(p,s)	14

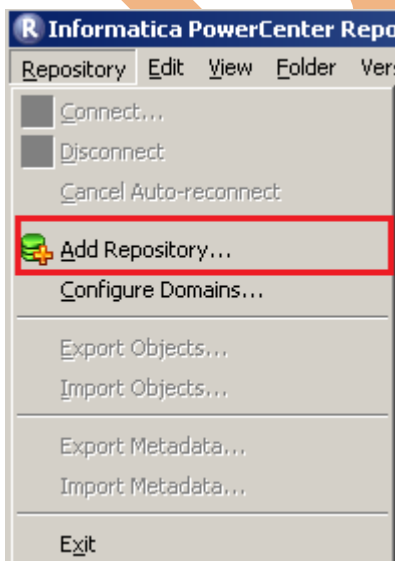
Creating Repository and Folder

Creating Repository & Connecting it.

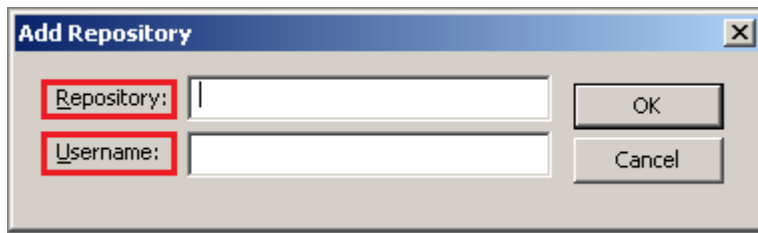
Step-1 First create repository, Click on Start -> All Programs -> Informatica 9.0.1 -> Client -> Power Center Client -> Power Center Repository Manager.



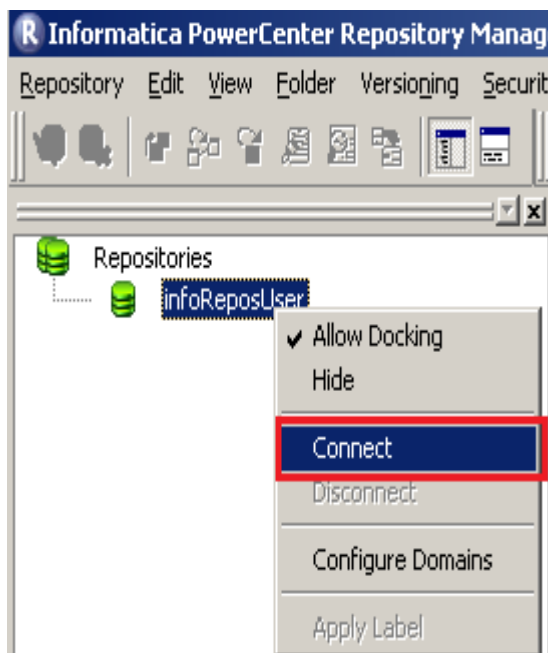
Step-2 Then click on Repository Menu and click on Add Repository.



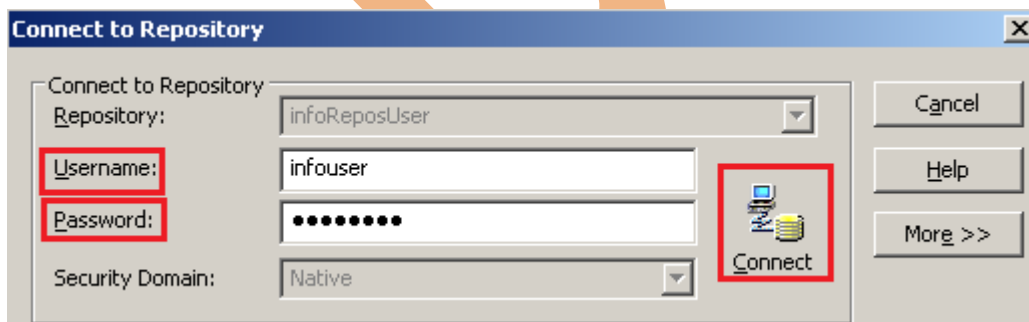
Step-3 Give information like Repository Name and Username. Then click on ok button and repository created successfully.



Step-4 Now connect repository. Right click on newly created repository and click on connect.

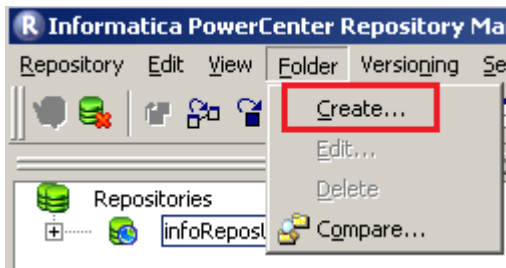


Step-5 Give Username & password and click on Connect.

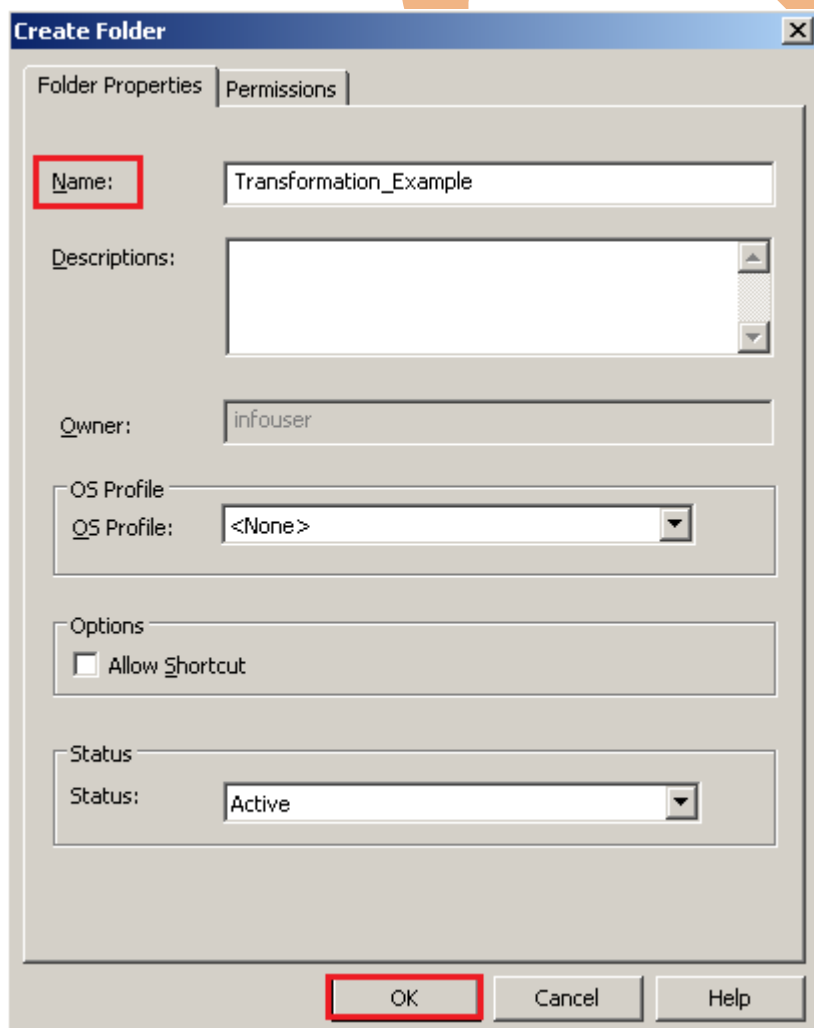


Creating Folder.

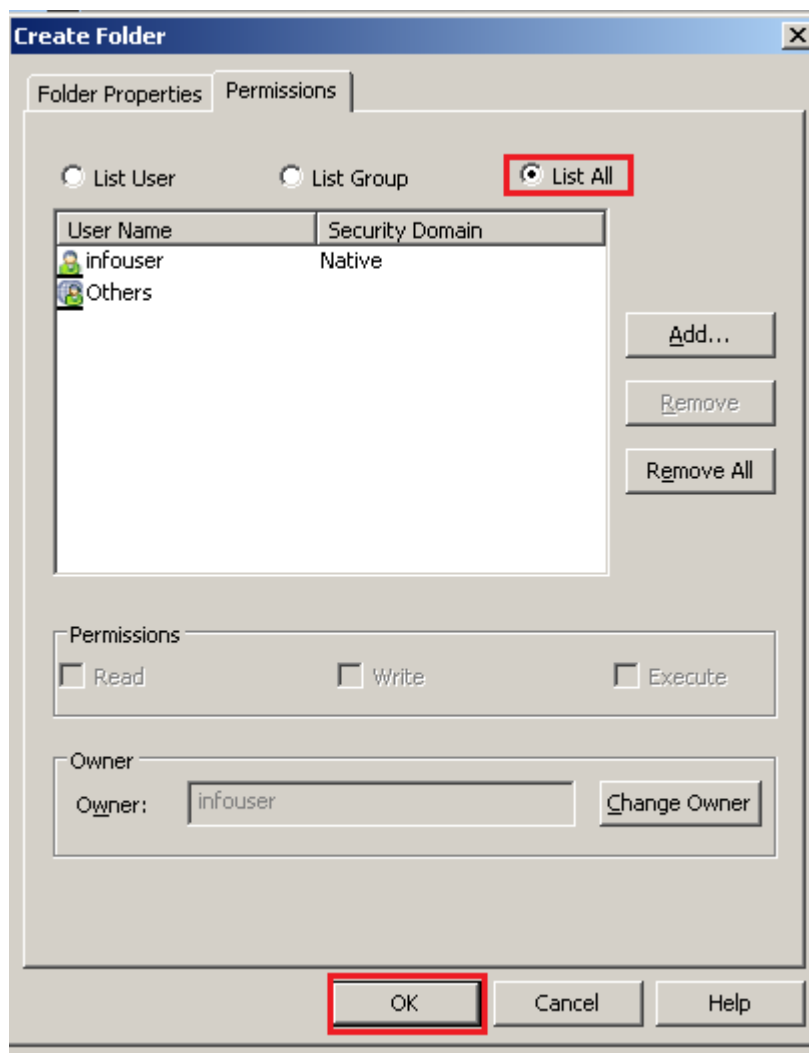
Step-1 Go to Informatica Power Center Repository Manager and click on Folder Menu and click on Create.



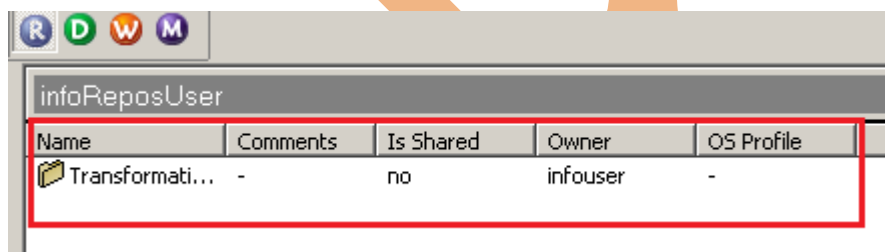
Step-2 Specify Name of Folder, Description, Owner, OS Profile, Options, Status and got to permissions tab.



Step-3 This is permission tab to give permission for this folder.

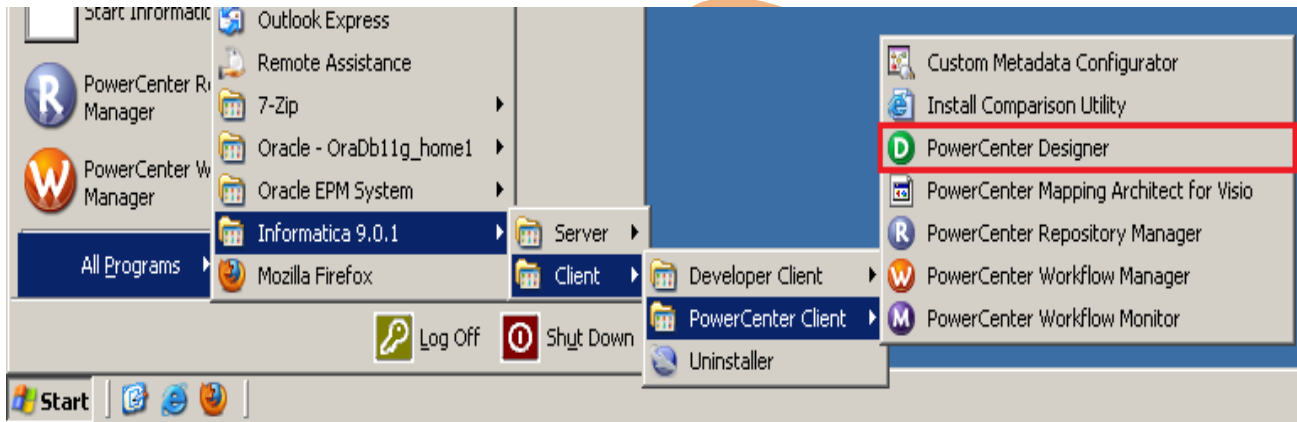


Step-4 This is newly created Folder

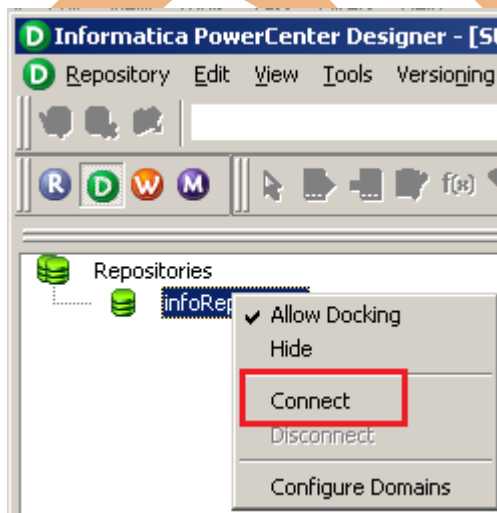


Importing Source and Target Table

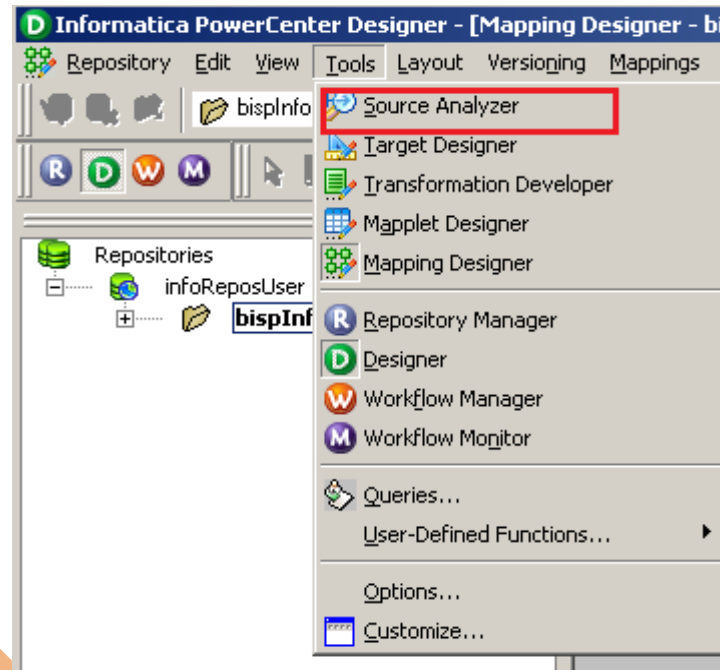
Step-1 Click on Start -> All Programs -> Informatica 9.0.1 -> Client -> Power Center Client -> Power Center Designer..



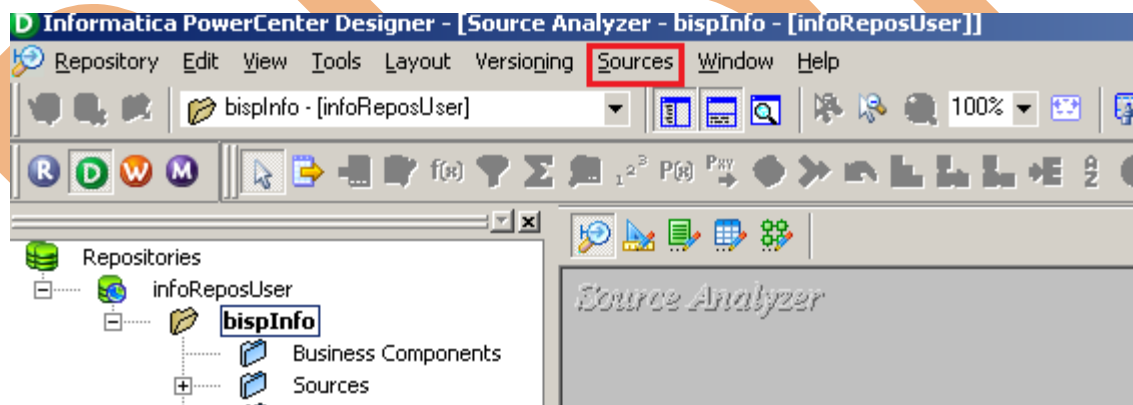
Step-2 Then Connect to Repository in Informatica Power Center Designer Right click on repository name and click on Connect.



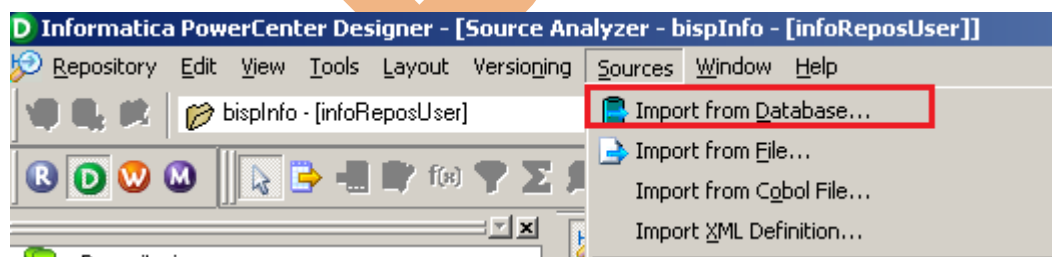
Step-3 Go to Tools Menu and click on Source Analyzer to import source table.



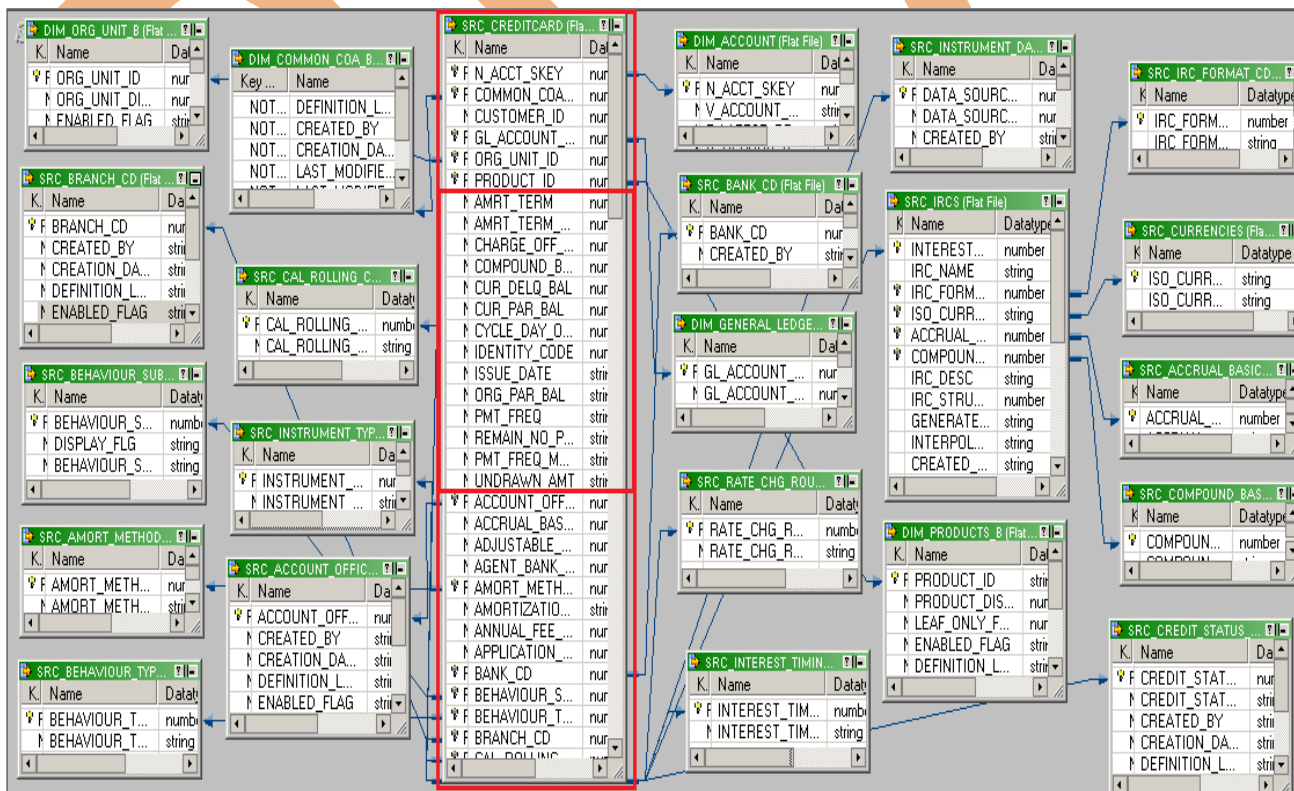
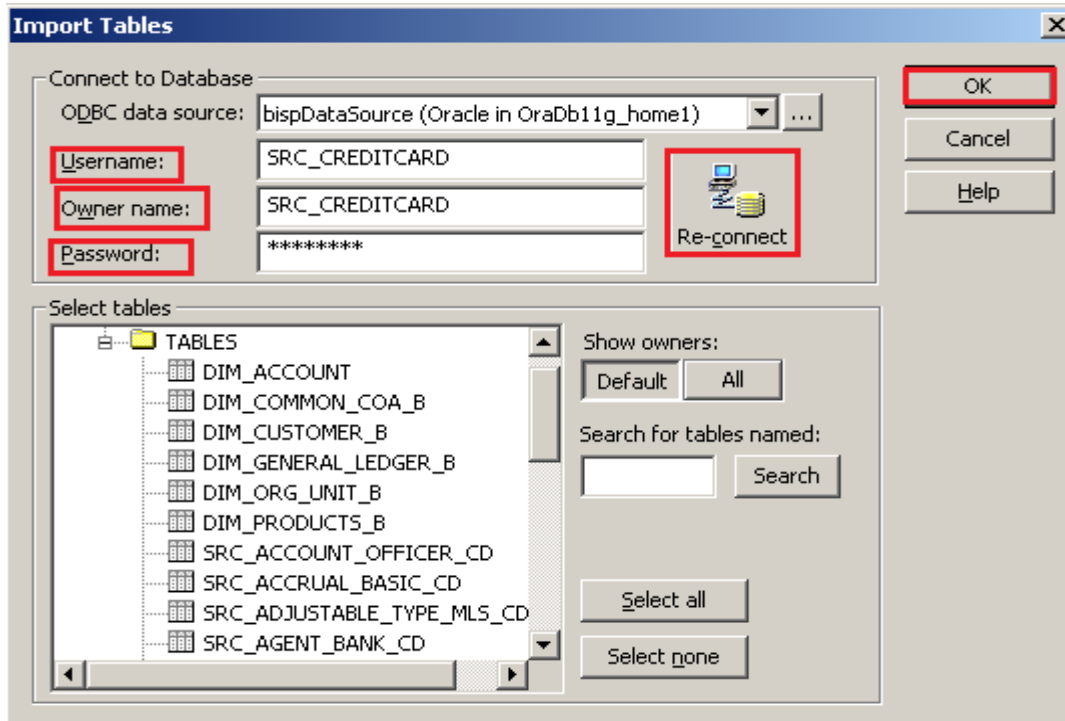
Step-4 And then go to Sources Menu in Informatica Power Center Designer.



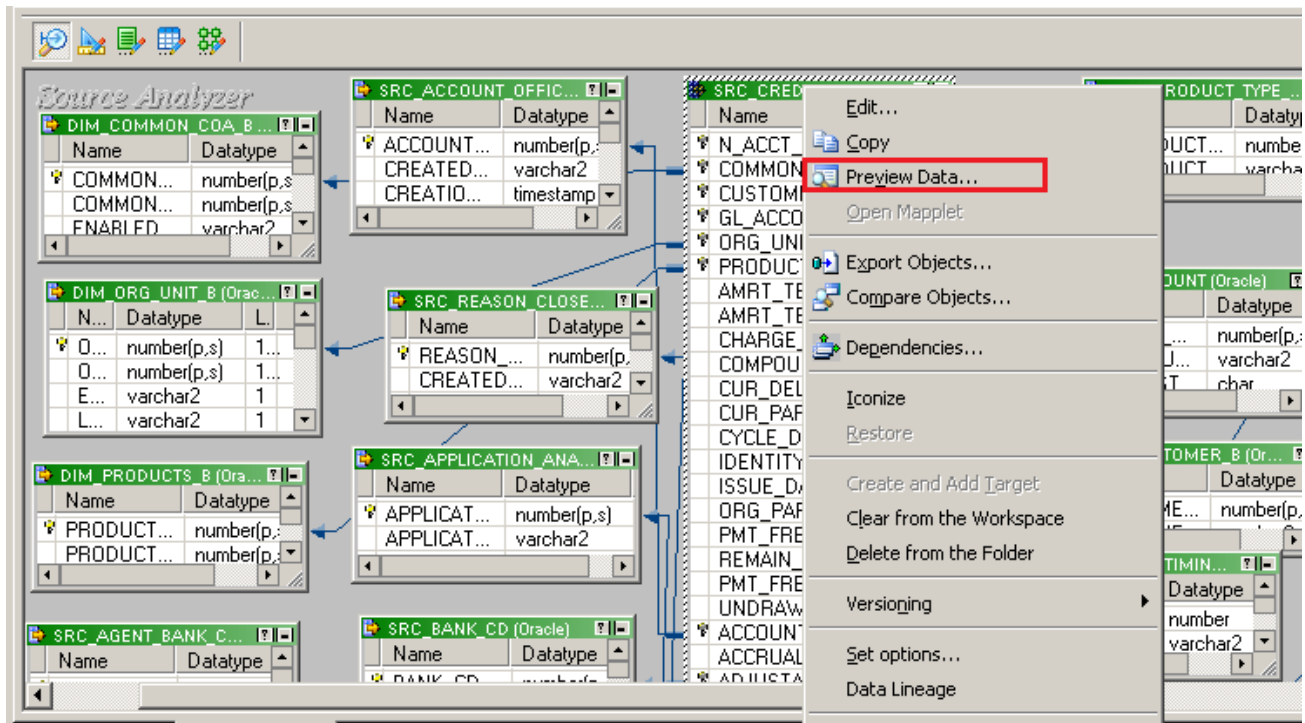
Step-4 And then select Source menu and click on Import from database



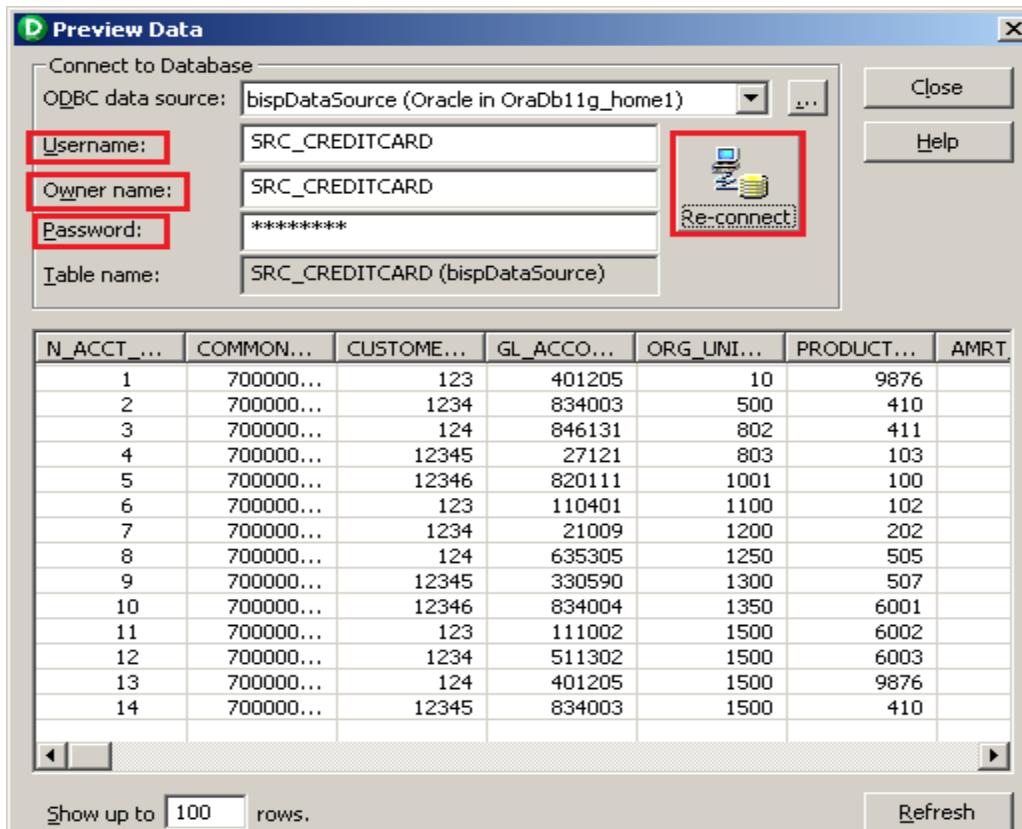
Step-5 Specify Username, Owner name, password and then connect. Then select source table and click OK.



Step-6 View data in source analyzer, Right click on SRC_CREDITCARD and select Preview Data.

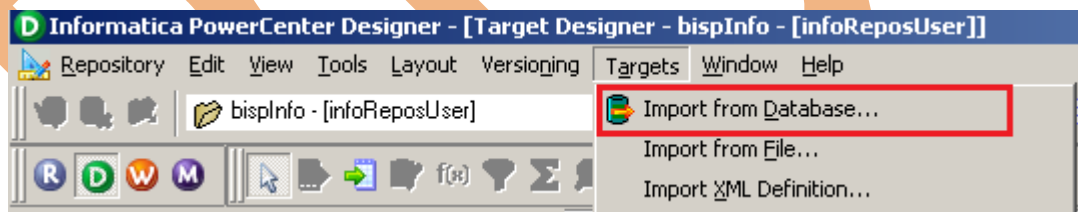


Step-7 Specify Username and Password and connect it. Then Close it.

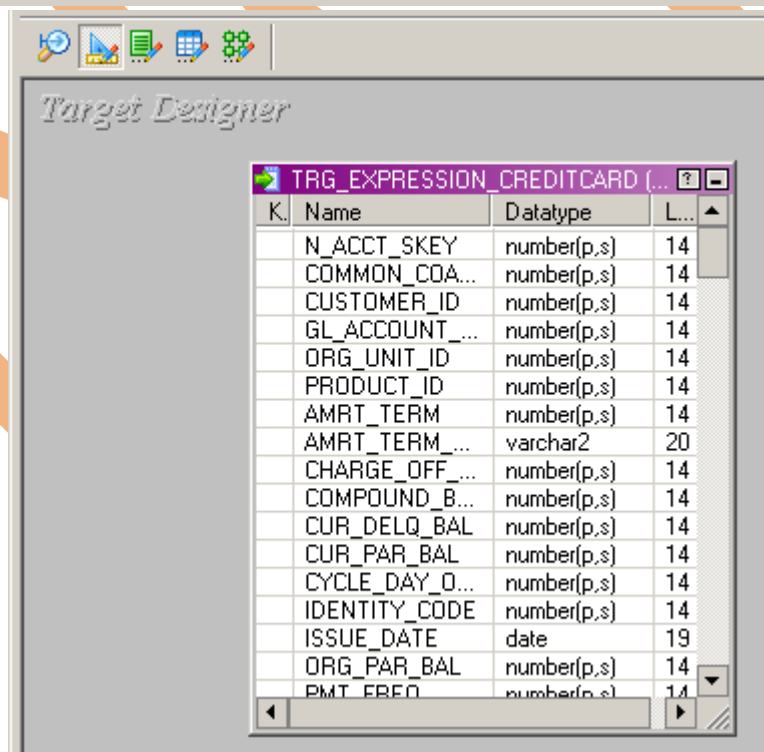
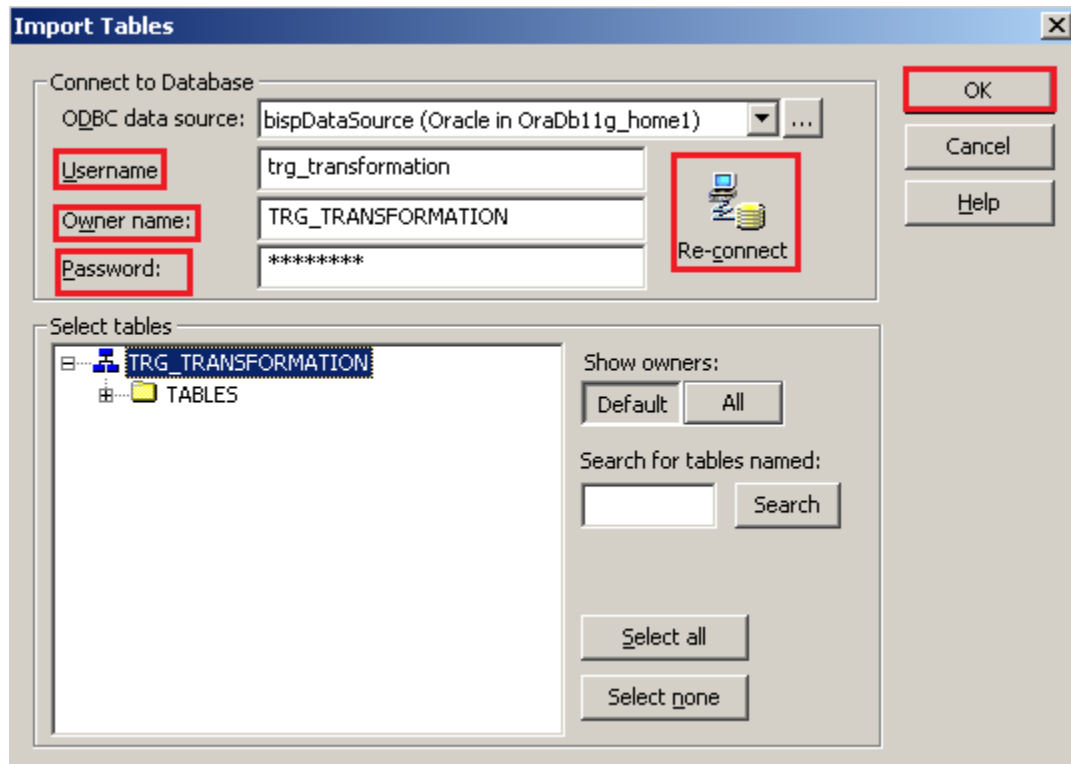


Step-8 Now click on Target Designer.

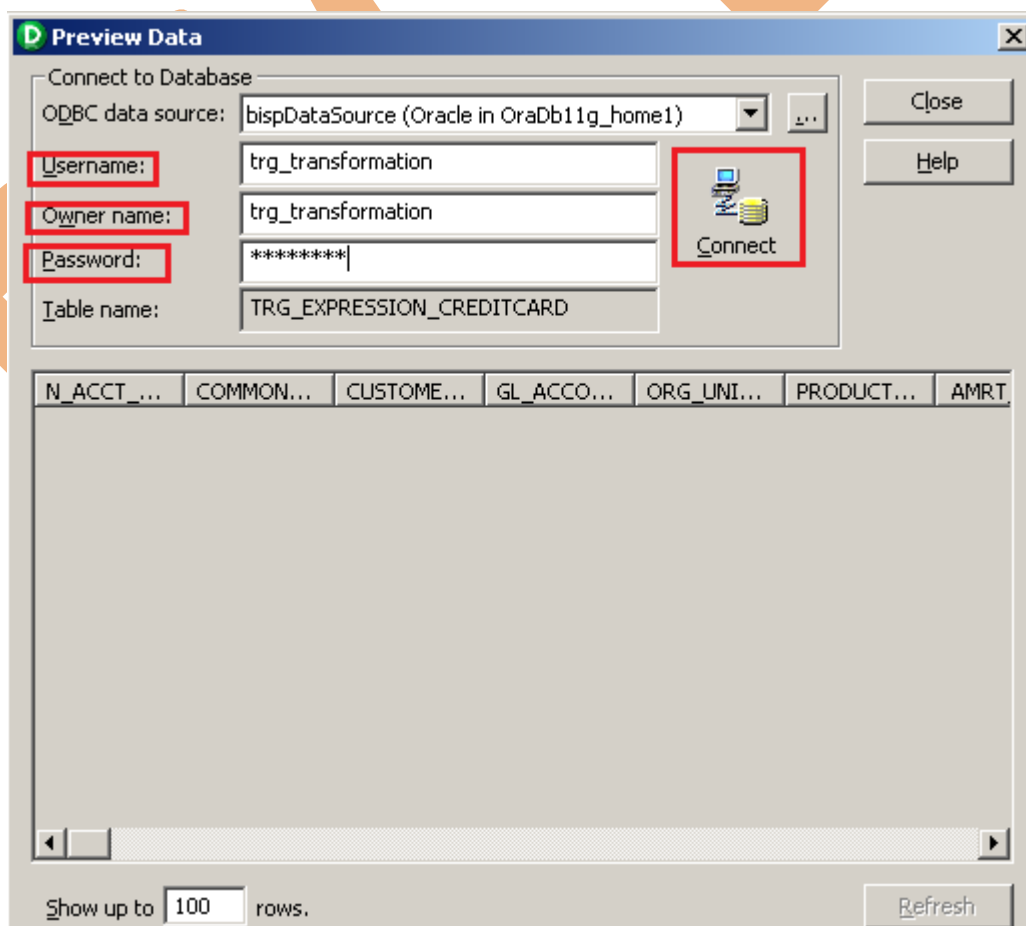
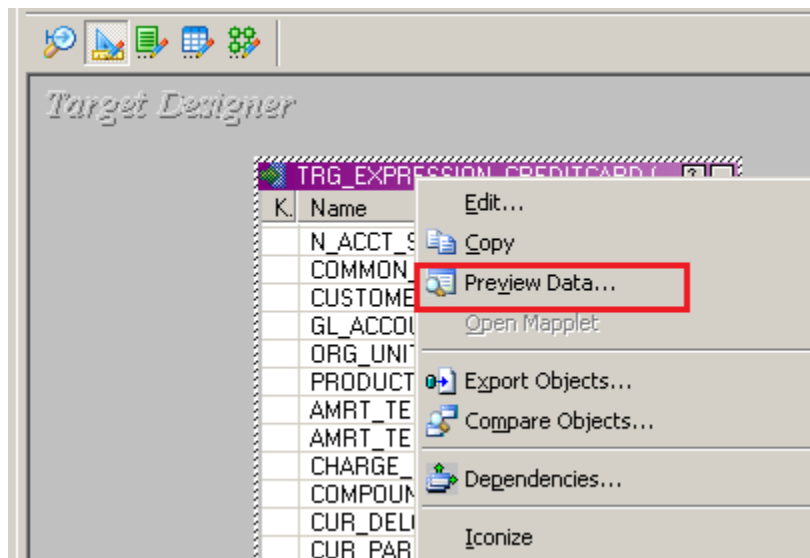
Step-9 And then select Target menu and click on Import from database to import target table.




Step-10 Specify Username, Owner name, password and then click on connect and then select table and then OK.



Step-11 To view data select table and Right click on that table after that specify Username and Password and connect it. Then Close it.

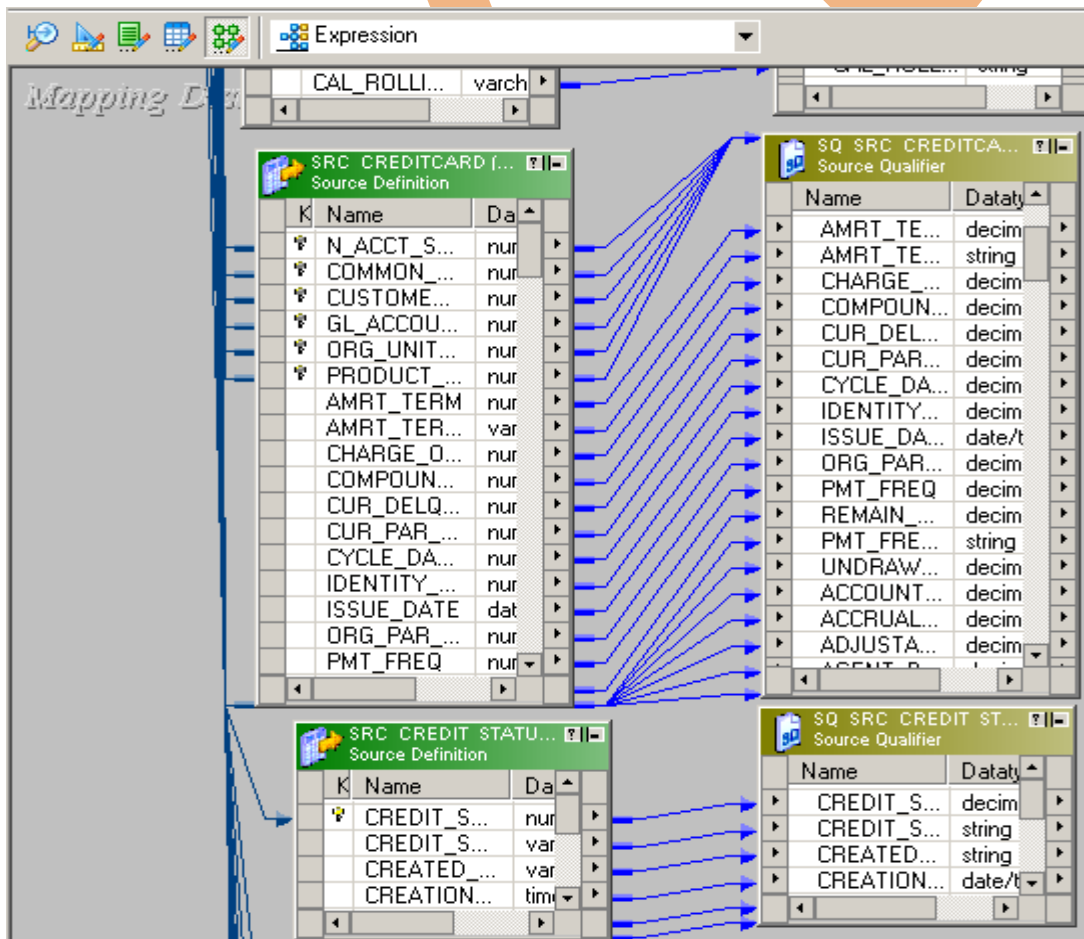


CREATE MAPPING AND DESIGNING EXPRESSIONS

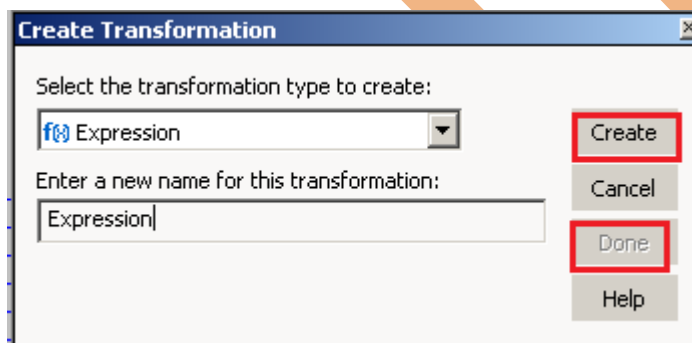
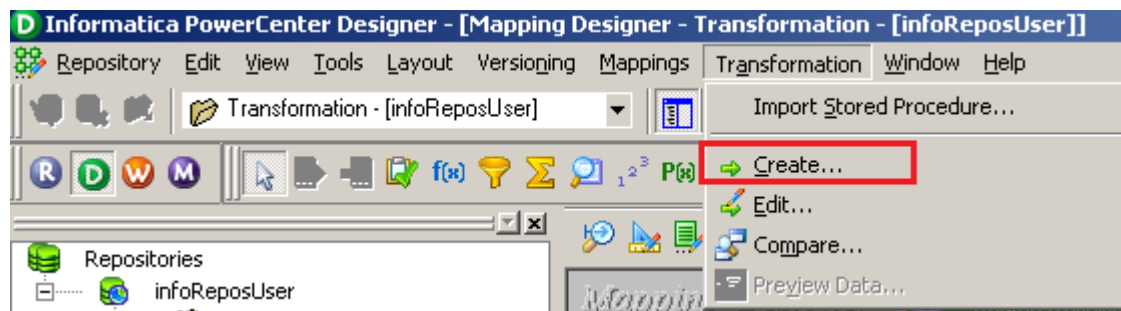
Step-1 Go to Mapping Designer  and Create New Mapping and then name of mapping and click OK.



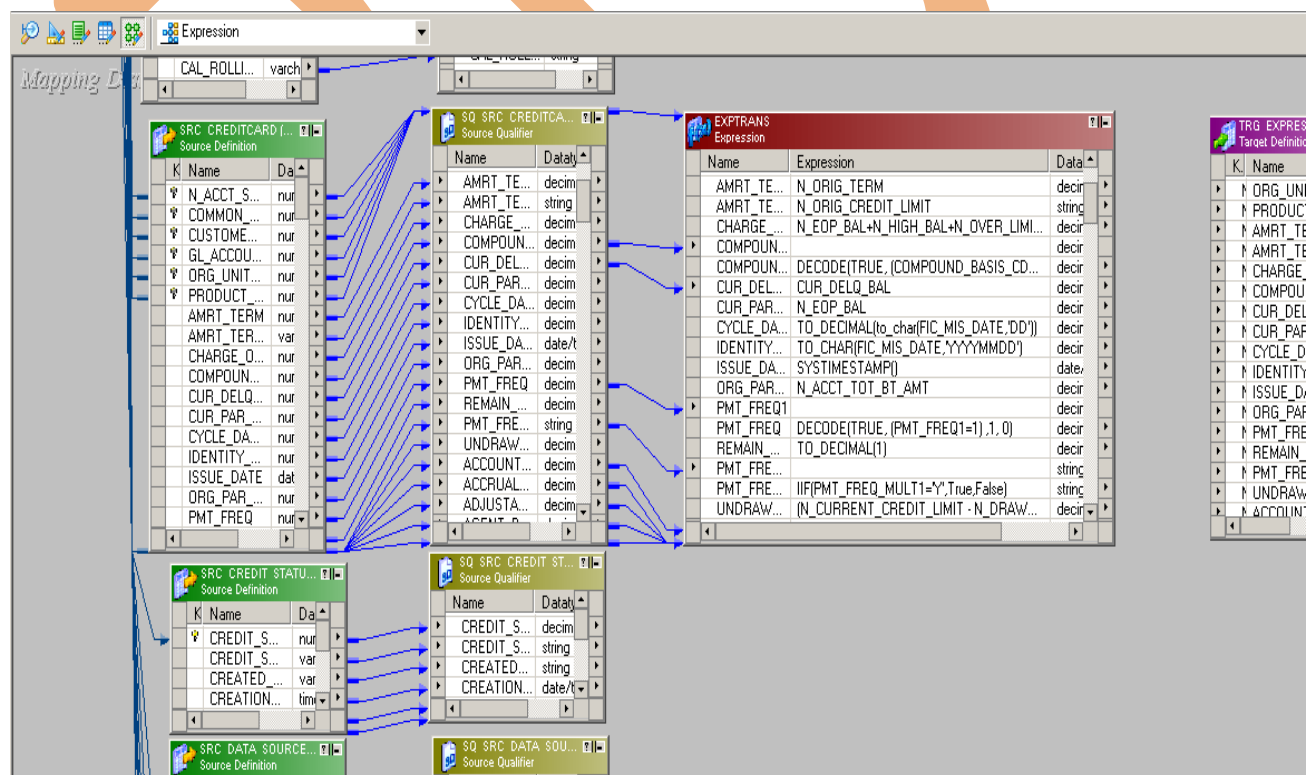
Step-2 Then drag and drop source and target data in Mapping Designer.



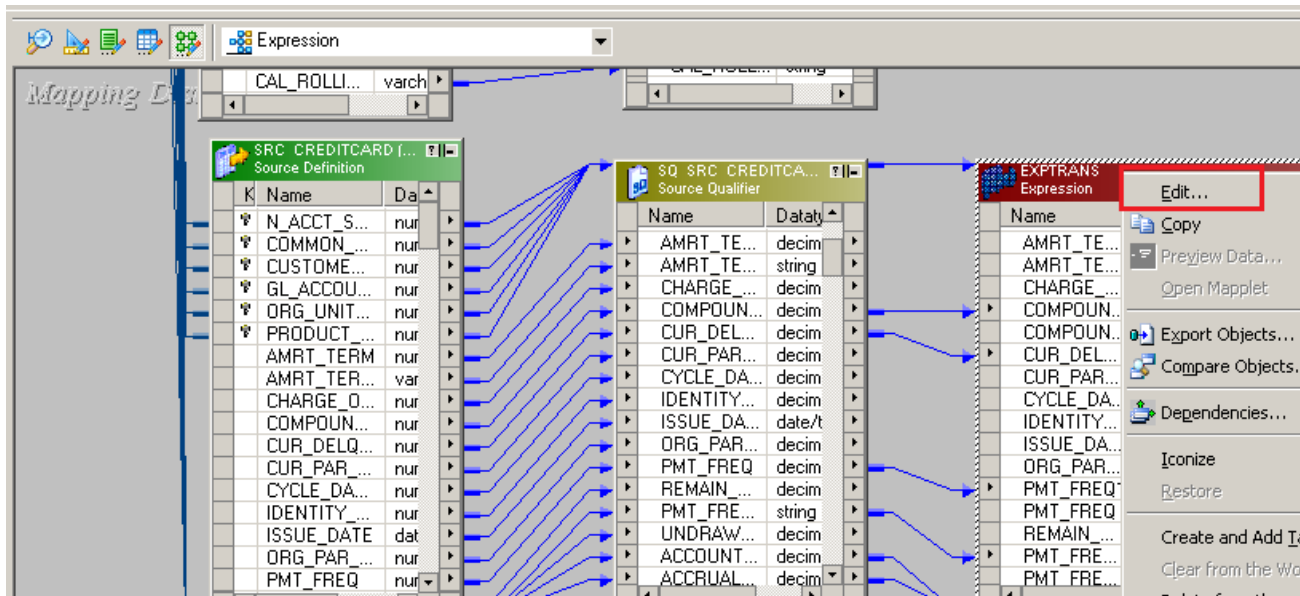
Step-3 Then create transformation, Click on Transformation menu and select Create. Then select Expression in dropdown and give name of transformation and click Create and then click Done.



Step-4 Then drag and drop all SQ_SRC_CREDITCARD Source Qualifier column into Expression Transformation table.



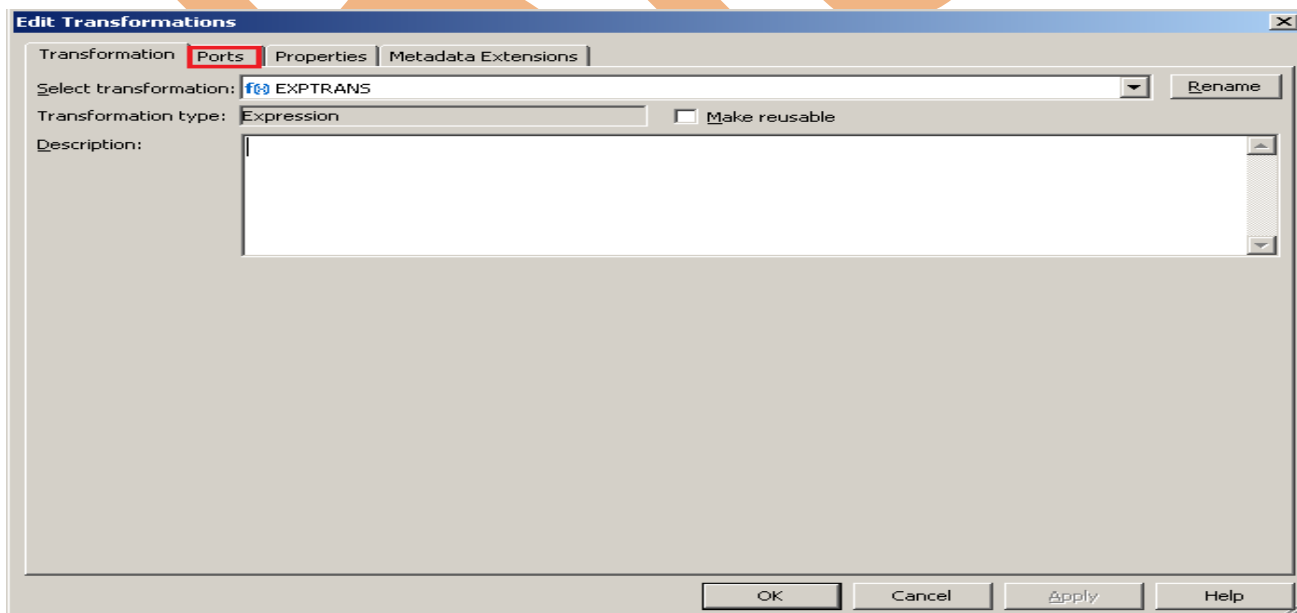
Step-5 Then right click on Expression transformation and select Edit.




Step-4 The expression transformation has the following tabs,

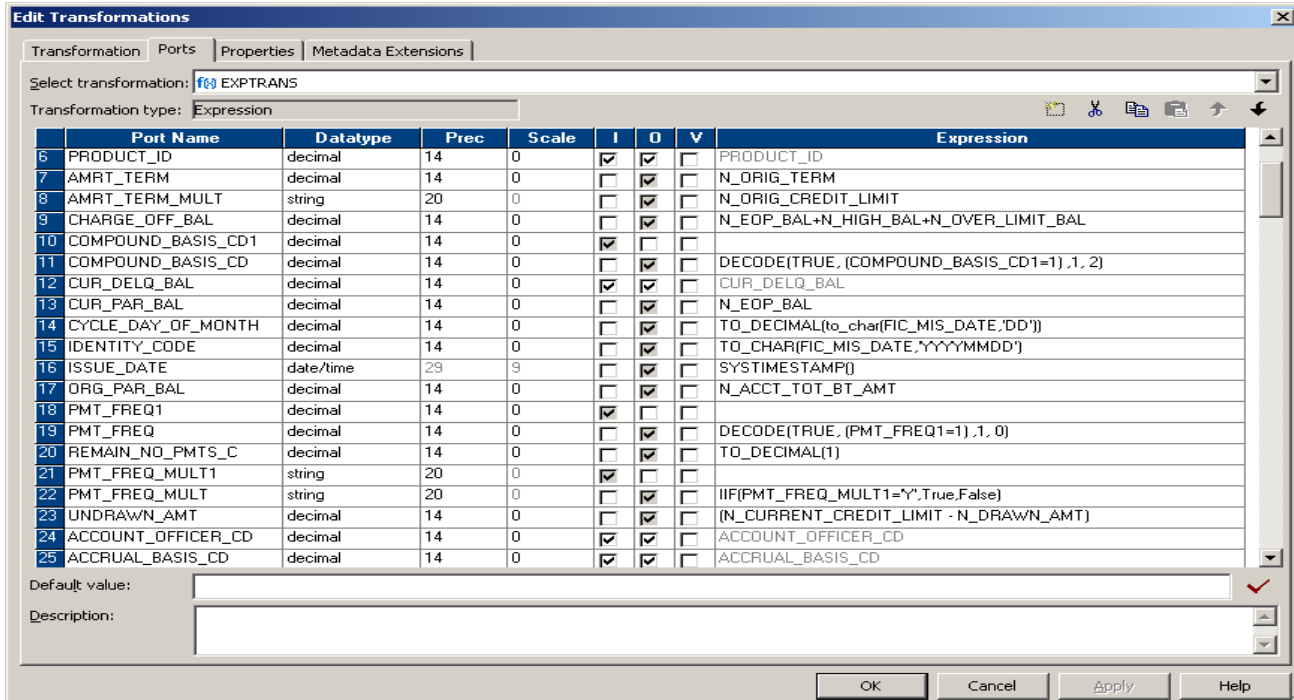
- **Transformation:** You can enter the name and description of the transformation. You can also make the expression transformation reusable.
- **Ports:** Create new ports and configuring the ports.
- **Properties:** Configure the tracing level to set the amount of transaction detail to be logged in session log file.
- **Metadata Extensions:** You can specify extension name, data type, precision, value and can also create reusable metadata extensions.

Go to Ports tabs.



Step-6 . Click on  to Add New Port. and configure components on the ports tab.

- **Port name:** Enter a name for the port.
- **Datatype:** Select the data type
- **Precision and scale:** set the precision and scale for each port.
- **Port type:** A port can be input, input/output, output or variable.
- **Expression:** Enter the expressions in the expression edit.



Edit Transformations

Transformation: **f89 EXPTRANS**

Transformation type: **Expression**

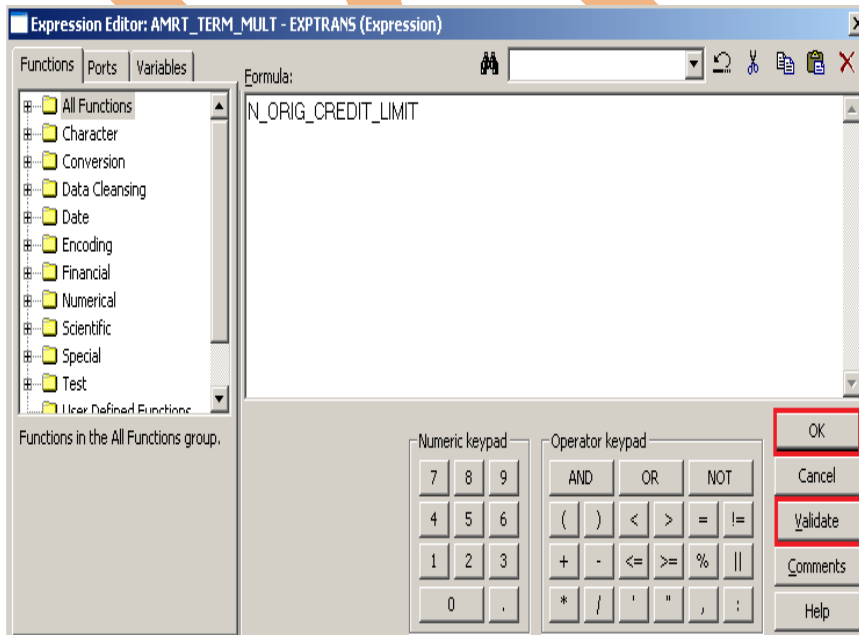
	Port Name	Datatype	Prec	Scale	I	O	V	Expression
6	PRODUCT_ID	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PRODUCT_ID
7	AMRT_TERM	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N_ORIG_TERM
8	AMRT_TERM_MULT	string	20	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N_ORIG_CREDIT_LIMIT
9	CHARGE_OFF_BAL	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N_EOP_BAL+N_HIGH_BAL+N_OVER_LIMIT_BAL
10	COMPOUND_BASIS_CD1	decimal	14	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	COMPOUND_BASIS_CD	decimal	14	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DECODE(TRUE, (COMPOUND_BASIS_CD1=1) .1, 2)
12	CUR_DELQ_BAL	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CUR_DELQ_BAL
13	CUR_PAR_BAL	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N_EOP_BAL
14	CYCLE_DAY_OF_MONTH	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TO_DECIMAL(to_char(FIC_MIS_DATE,'DD'))
15	IDENTITY_CODE	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TO_CHAR(FIC_MIS_DATE,'YYYYMMDD')
16	ISSUE_DATE	date/time	29	9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SYSTIMESTAMP()
17	ORG_PAR_BAL	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N_ACCT_TOT_BT_AMT
18	PMT_FREQ1	decimal	14	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19	PMT_FREQ	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DECODE(TRUE, (PMT_FREQ1=1) .1, 0)
20	REMAIN_NO_PMTS_C	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TO_DECIMAL(1)
21	PMT_FREQ_MULT1	string	20	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22	PMT_FREQ_MULT	string	20	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	IIF(PMT_FREQ_MULT1='Y',True,False)
23	UNDRAWN_AMT	decimal	14	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(N_CURRENT_CREDIT_LIMIT - N_DRAWN_AMT)
24	ACCOUNT_OFFICER_CD	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ACCOUNT_OFFICER_CD
25	ACCRUAL_BASIS_CD	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ACCRUAL_BASIS_CD

Default value:

Description:

OK Cancel Apply Help

Step-7 . Expression for AMRT_TERM and Validate it



Expression Editor: AMRT_TERM_MULT - EXPTRANS (Expression)

Functions Ports Variables

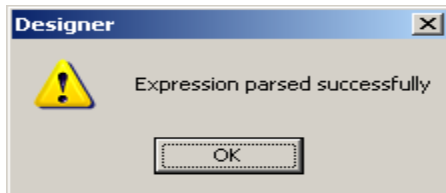
Formula:

Functions in the All Functions group.

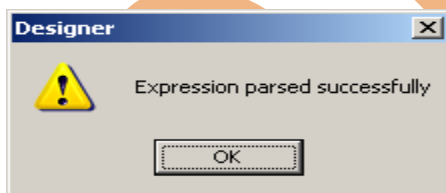
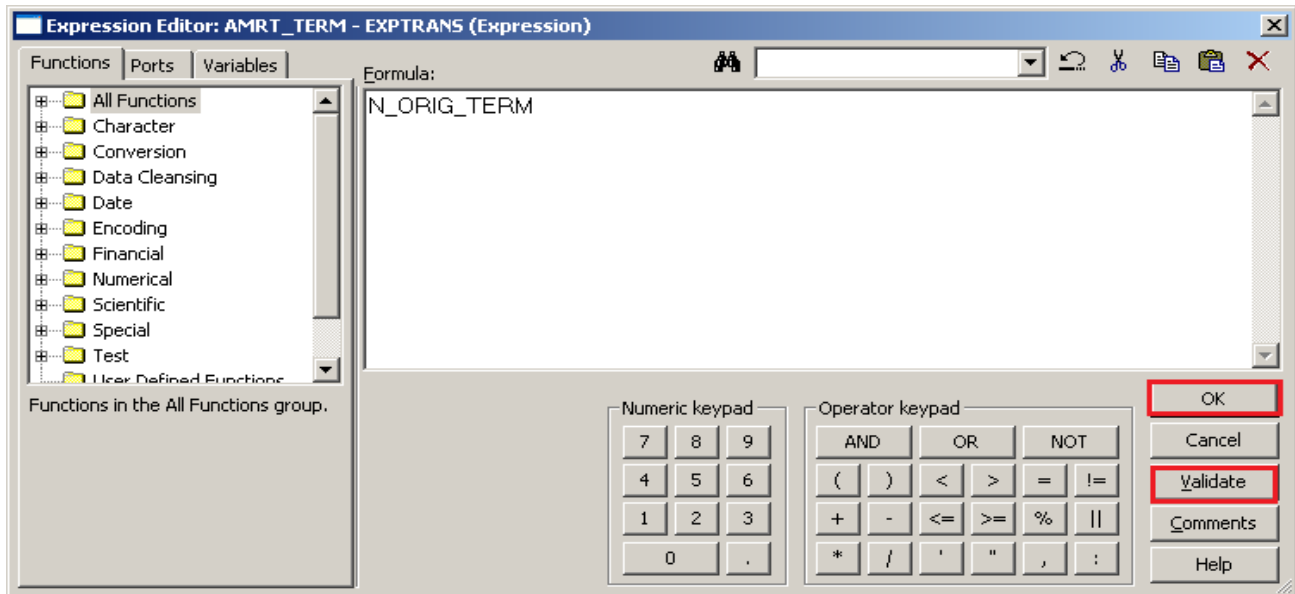
Numeric keypad: 7 8 9, 4 5 6, 1 2 3, 0 .

Operator keypad: AND OR NOT, () < > = !=, + - <= >= % ||, * / ' " , :

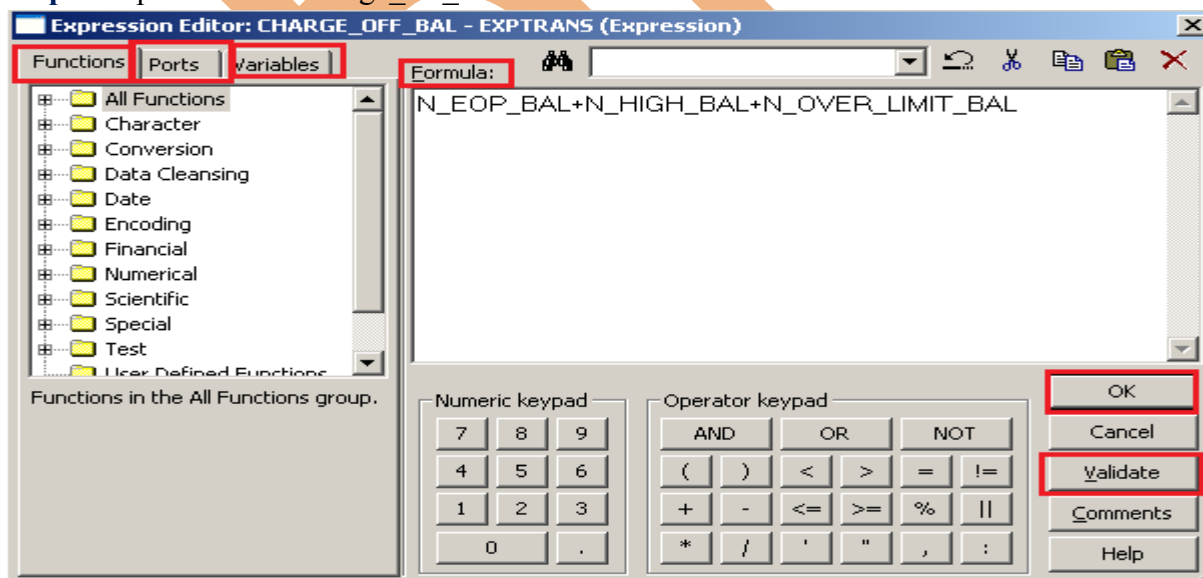
OK Cancel Validate Comments Help

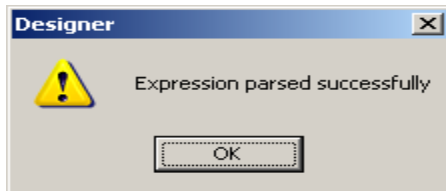


Step-8 Expression for AMIT_TERM_MULT and Validate it

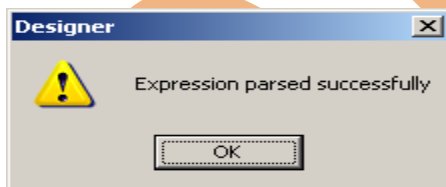
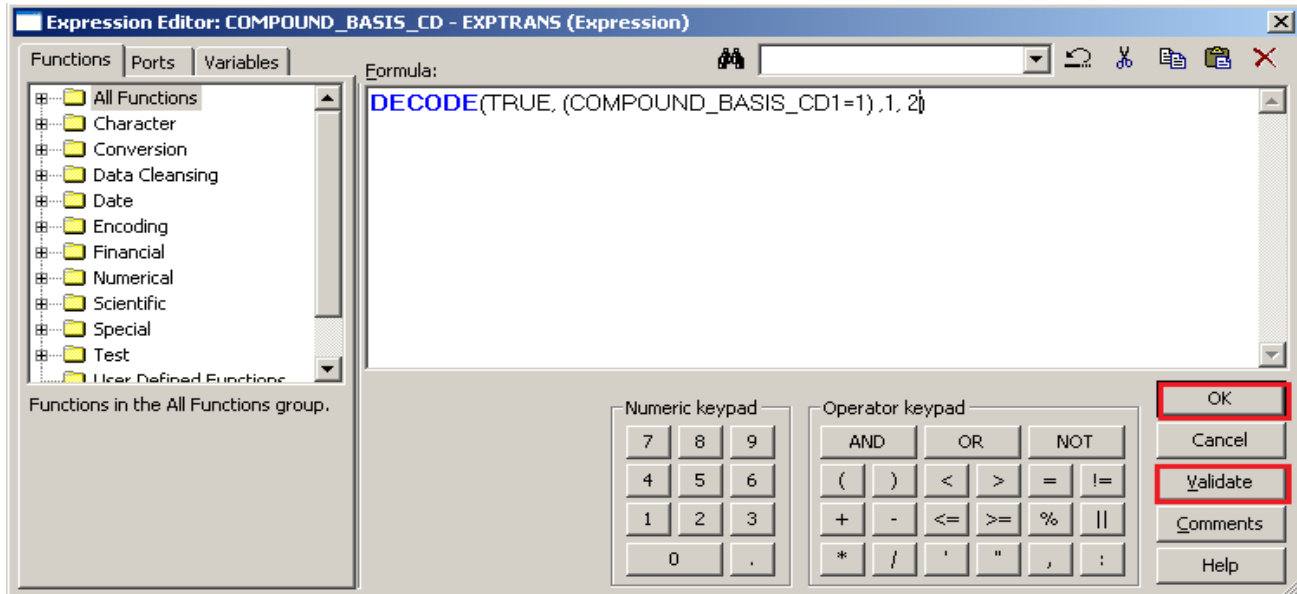


Step-9 Expression for Charge_off_bal and Validate it.

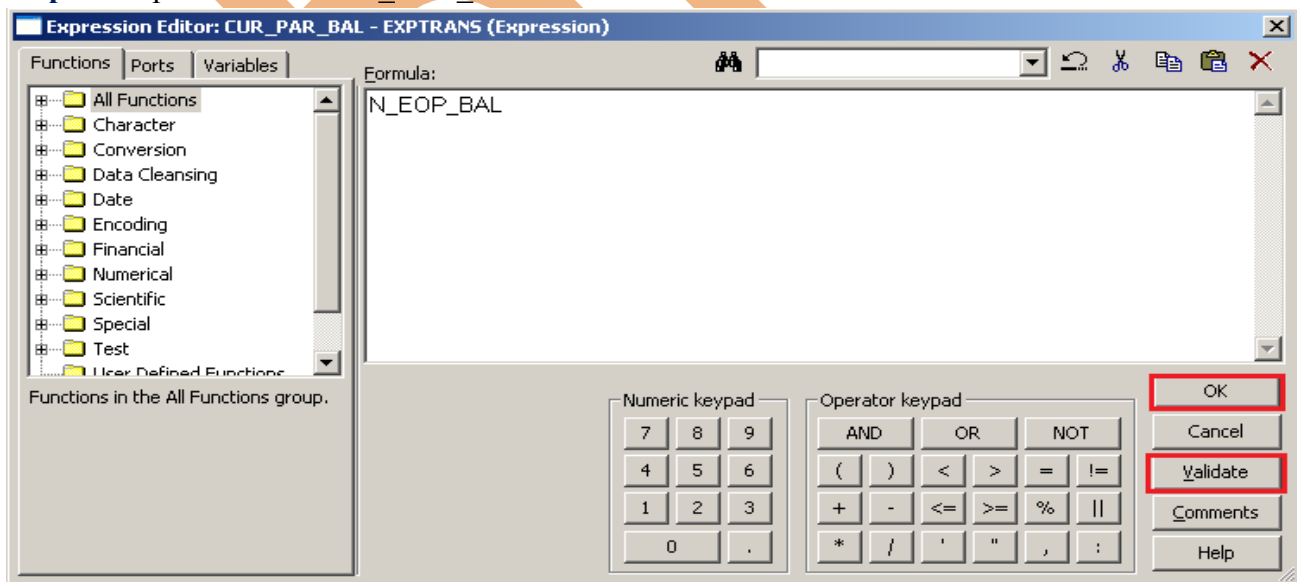


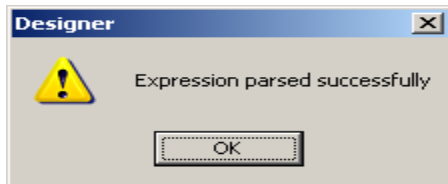


Step-10 Expression for COMPOUND_BASIS_CD and Validate it

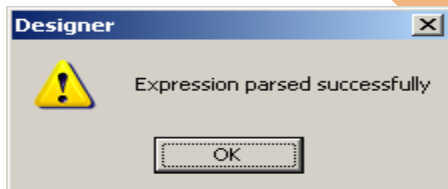
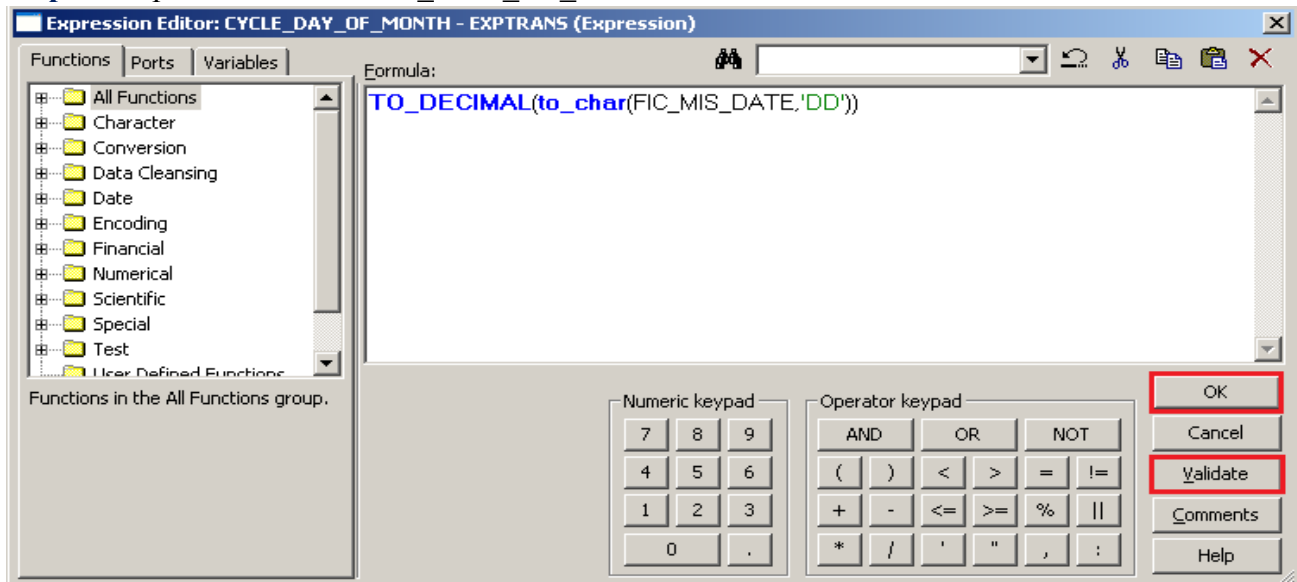


Step-11 Expression for CUR_PAR_BAL and Validate it

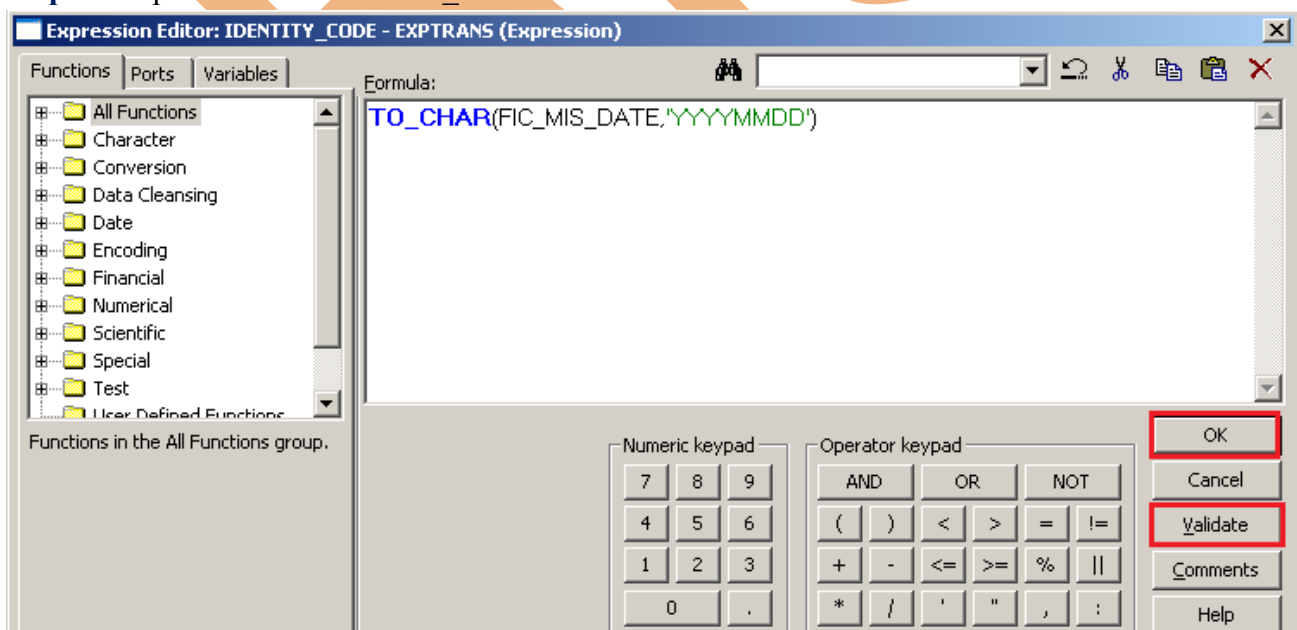


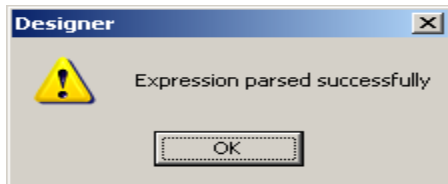


Step-12 Expression for CYCLE_DAY_OF_MONTH and Validate it

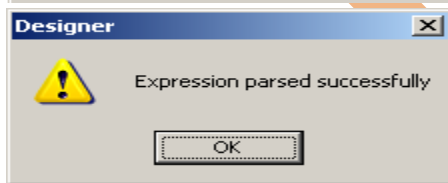
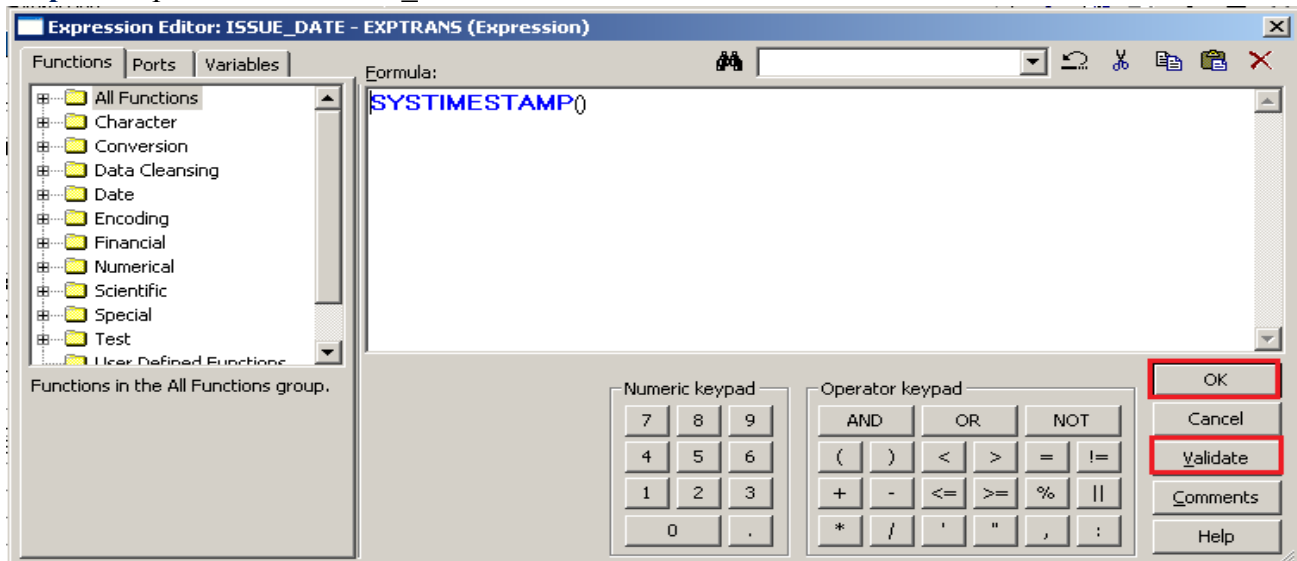


Step-13 Expression for IDENTITY_CODE.

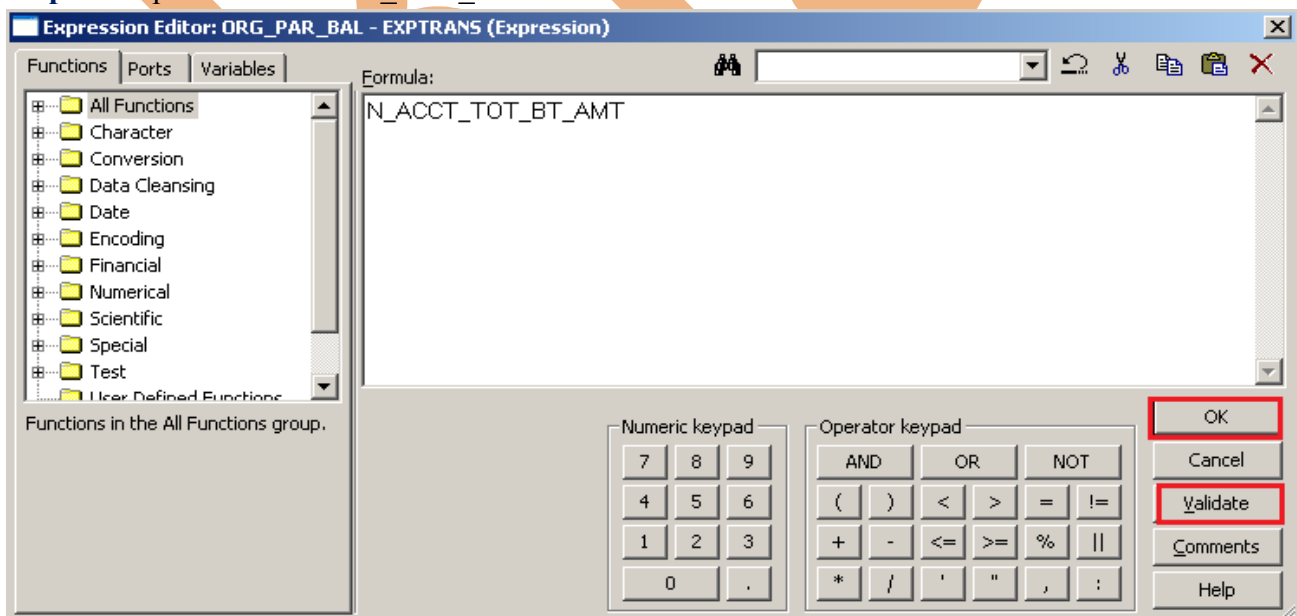


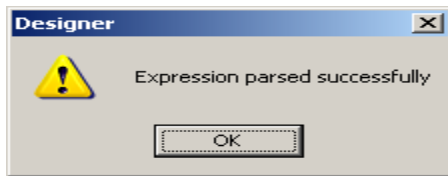


Step-14 Expression for ISSUE_DATE and Validate it

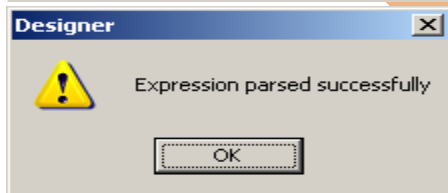
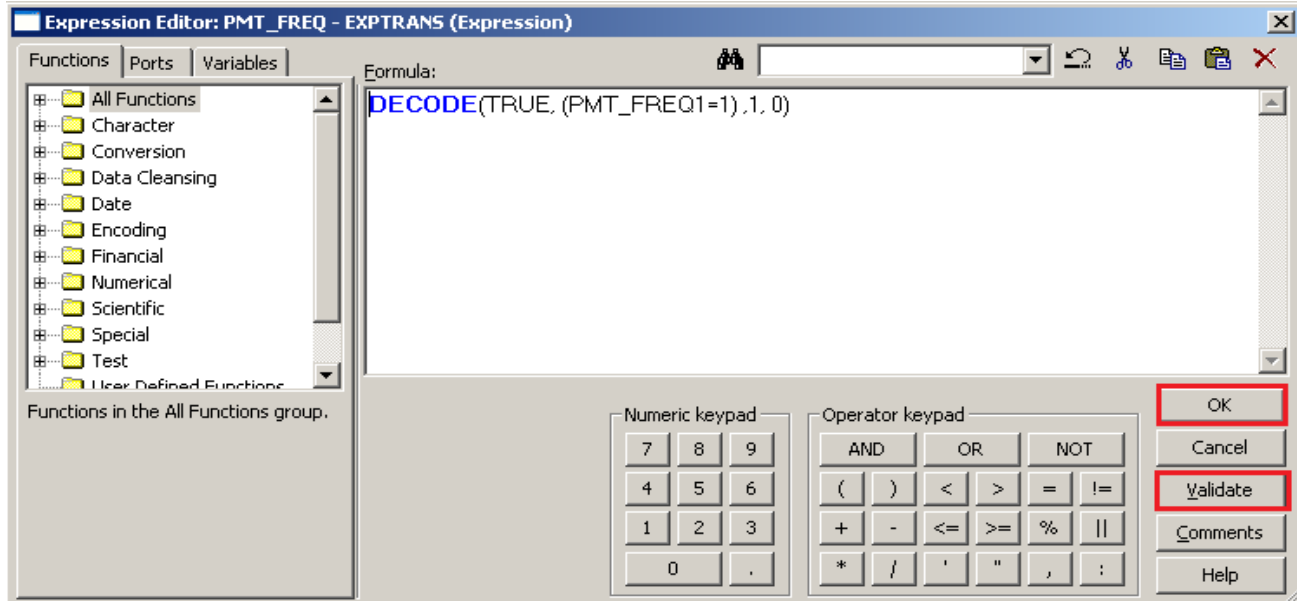


Step-15 Expression for ORG_PAR_BAL and Validate it

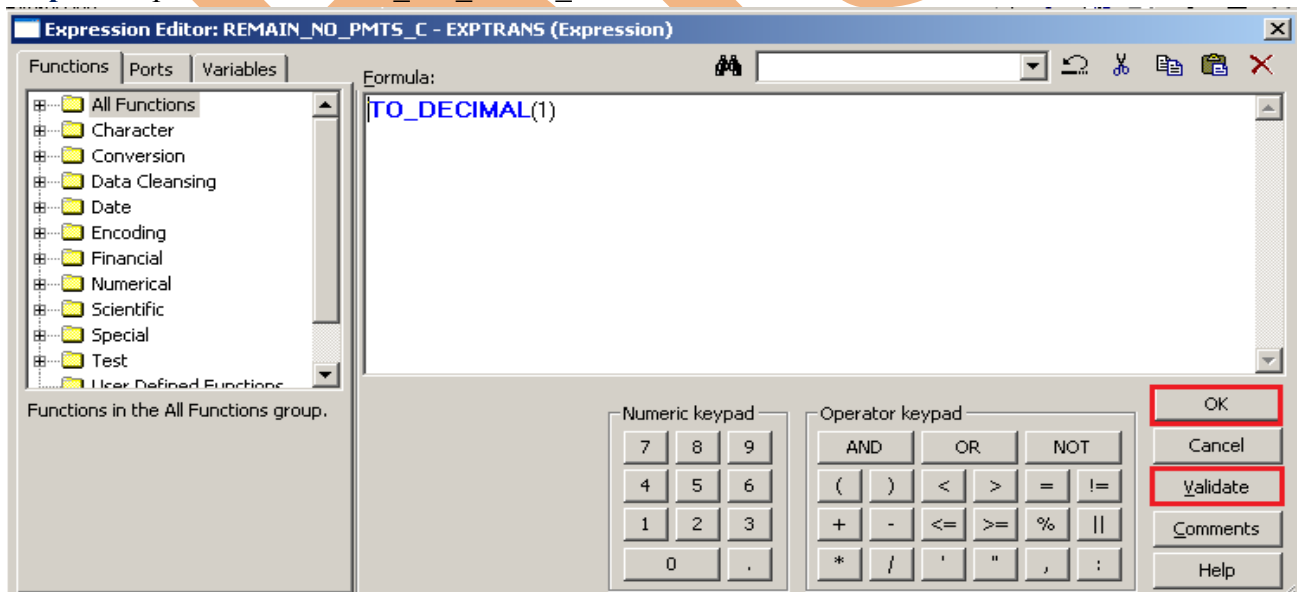


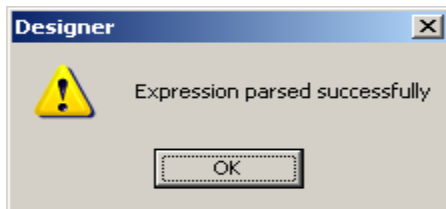


Step-16 Expression PMT_FREQ and Validate it.

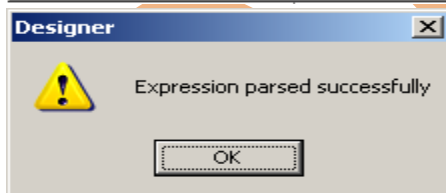
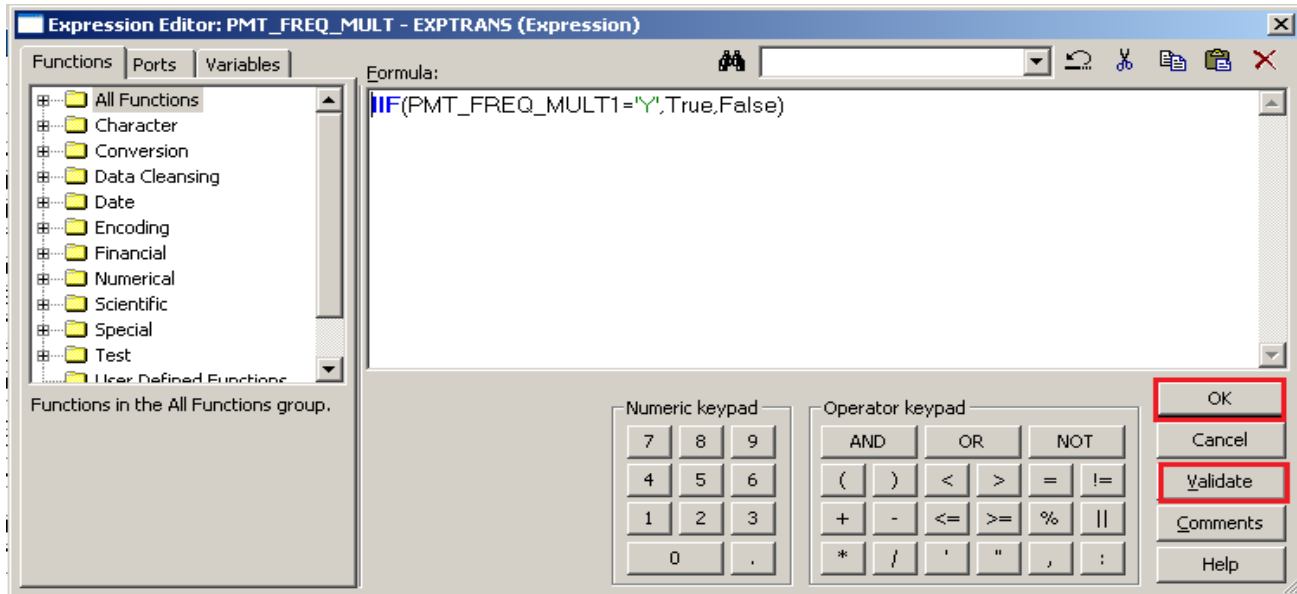


Step-17 Expression REMAIN_NO_PMTS_C and Validate it.

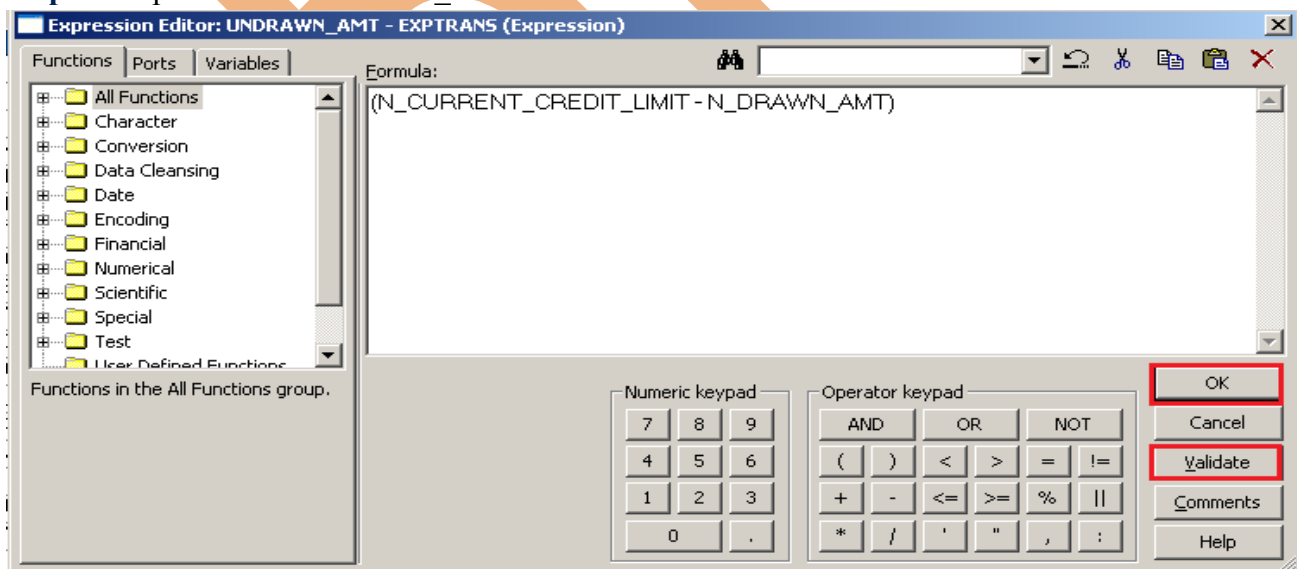


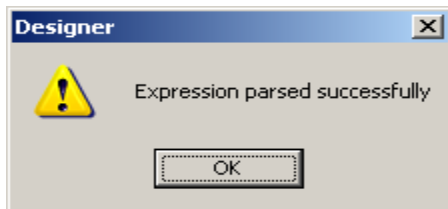


Step-18 Expression PMT_FREQ_MULT and Validate it.

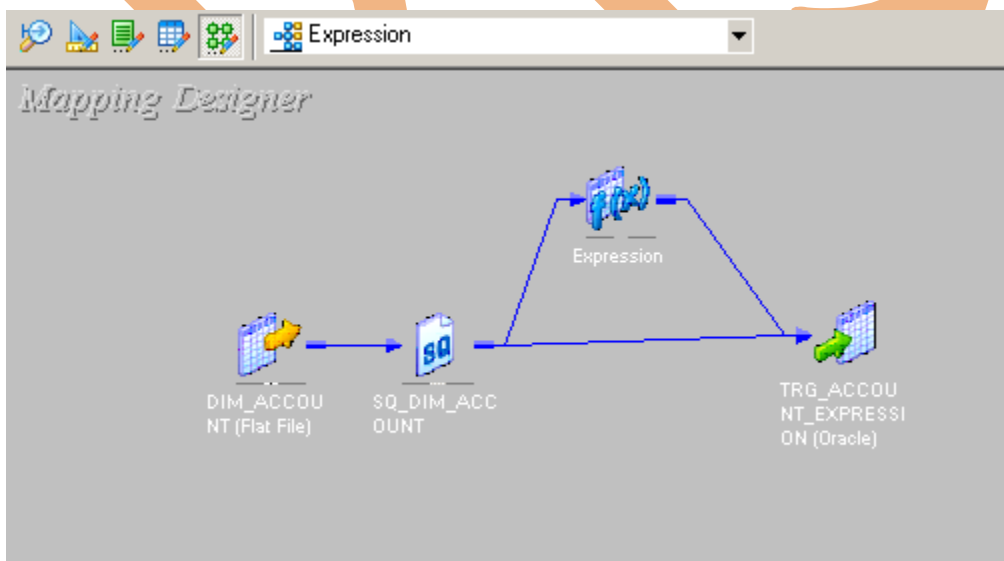
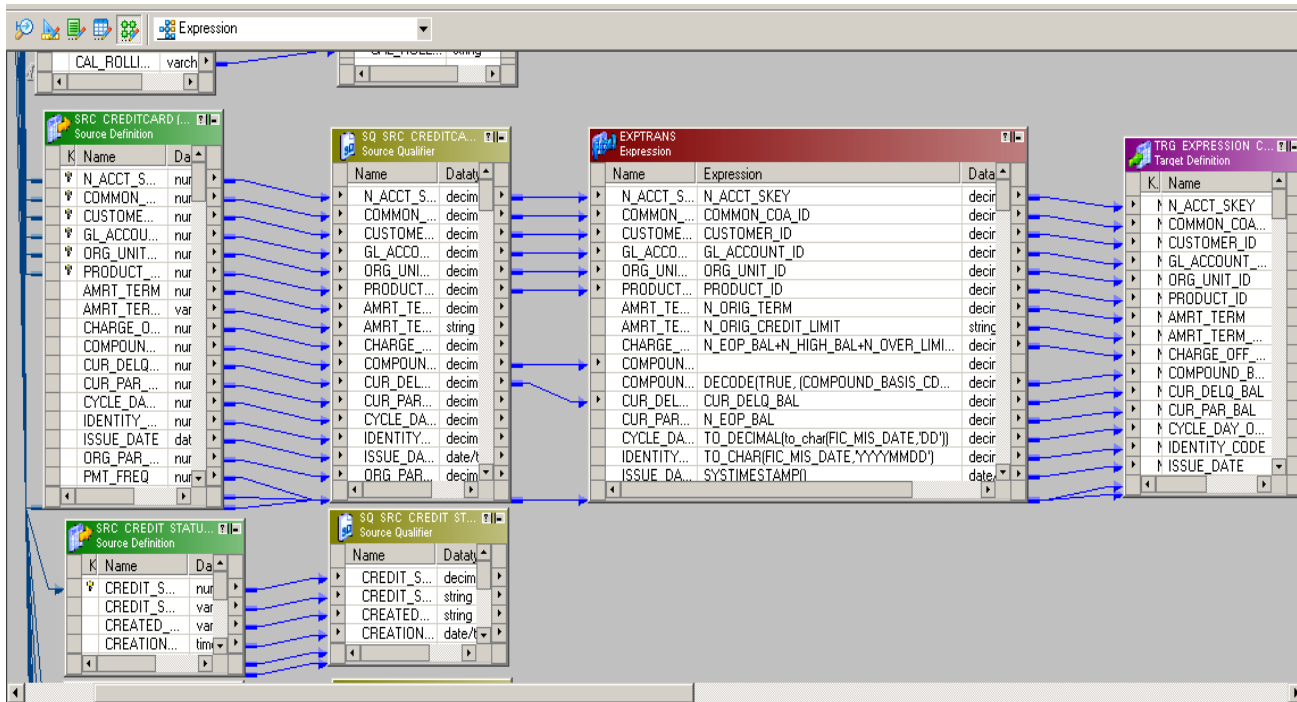


Step-19 Expression UNDRAWN_AMT and Validate it.





Step-20 . Now Create Mapping.



Step-11 . Save this mapping.

10/30/2012 15:01:51 ** Saving... Repository infoReposUser, Folder Credir_Card

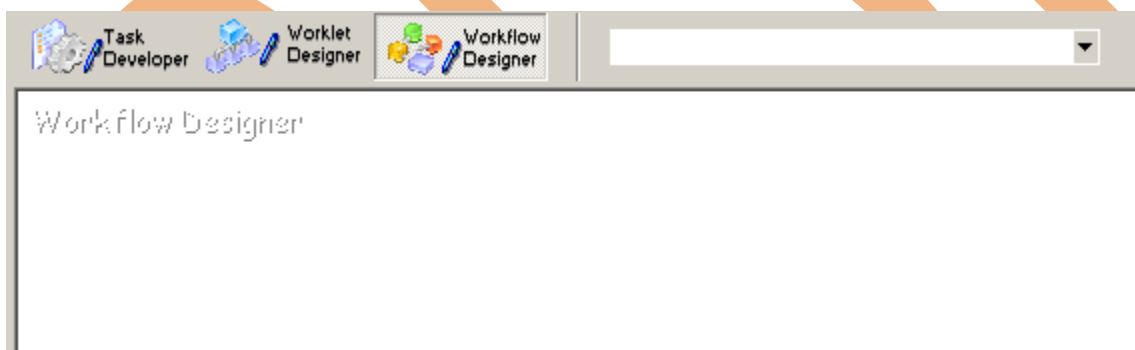
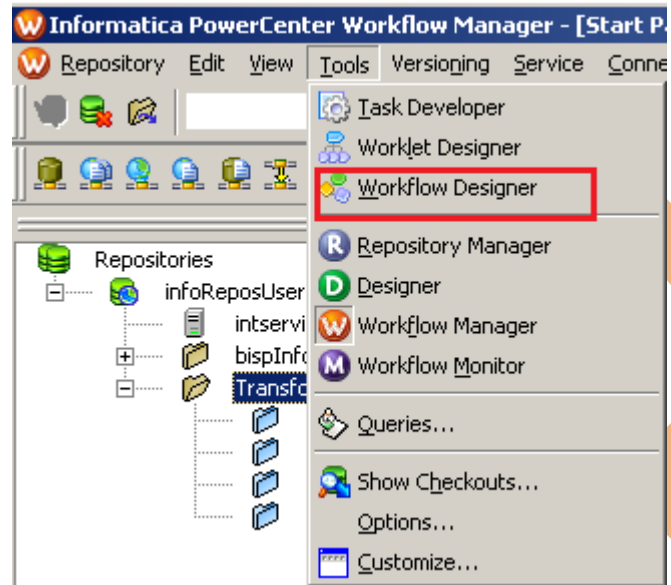
Validating transformations of mapping Expression...
...transformation validation completed with no errors.
Validating data flow of mapping Expression...
...data flow validation completed with no errors.
Parsing mapping Expression...
...parsing completed with no errors.

***** Mapping Expression is VALID *****
mapping Expression updated.

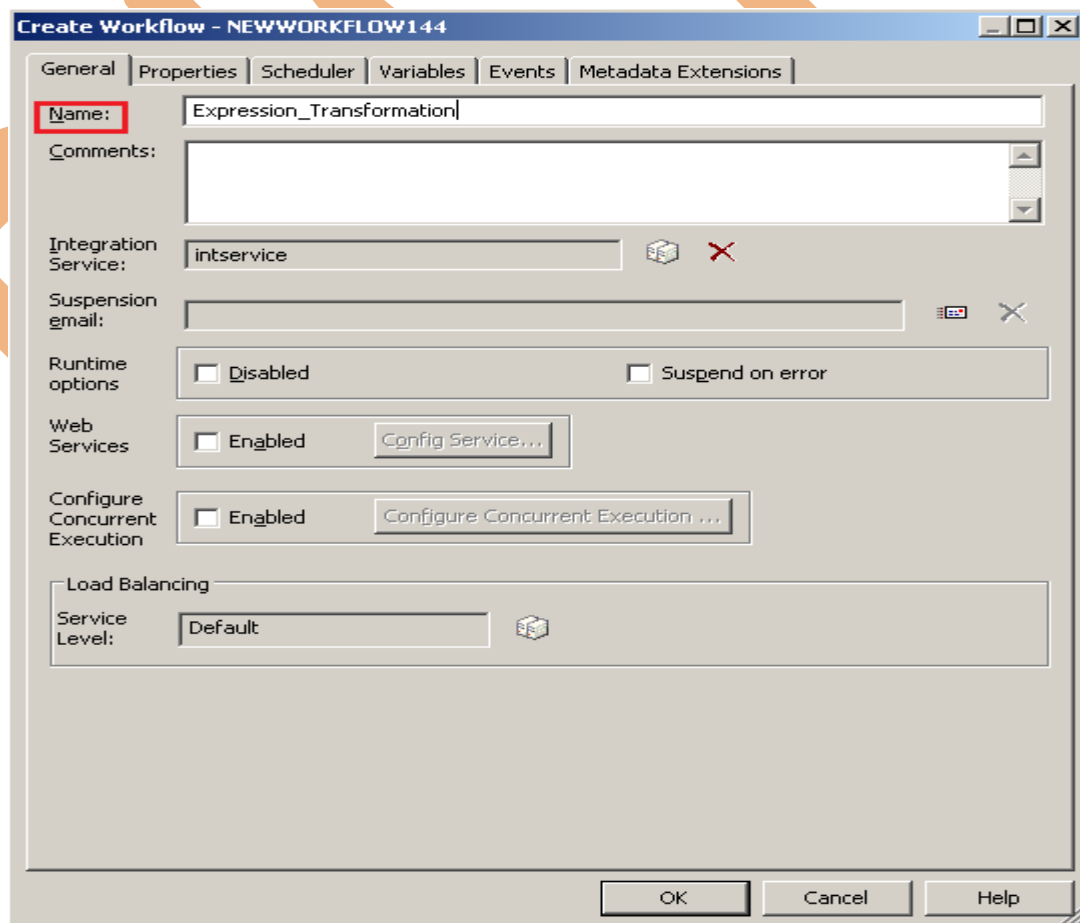
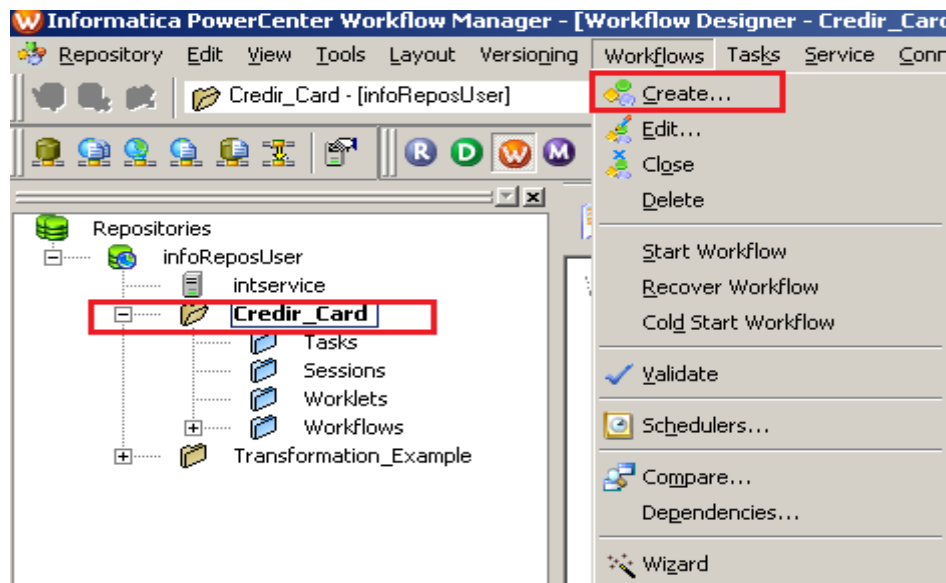
BISP

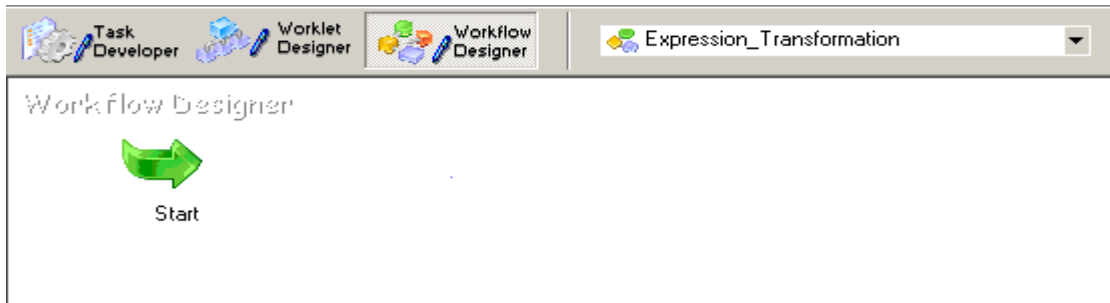
CREATE WORKFLOW

Step-1 Now go to Informatica Power Center Workflow Manager, and go to Tools menu and select Workflow Designer.

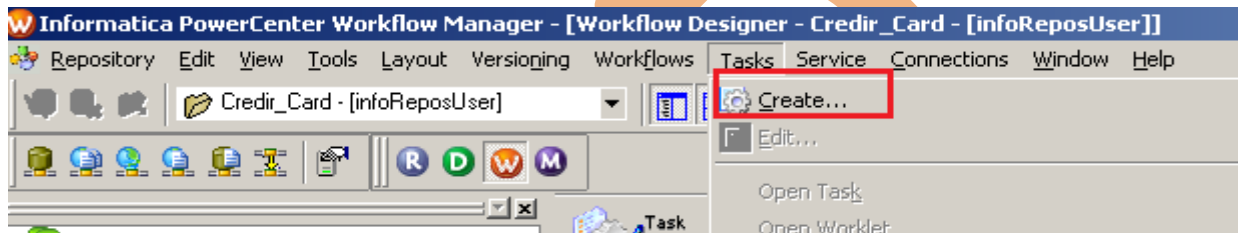


Step-2 Now to create workflows, Go to Workflows menu and select Create. After that Name of workflow and click OK buttons.

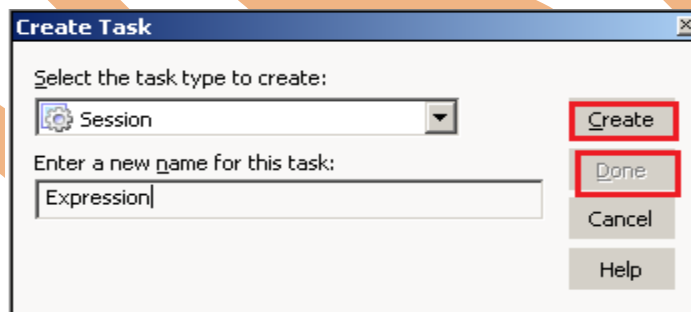




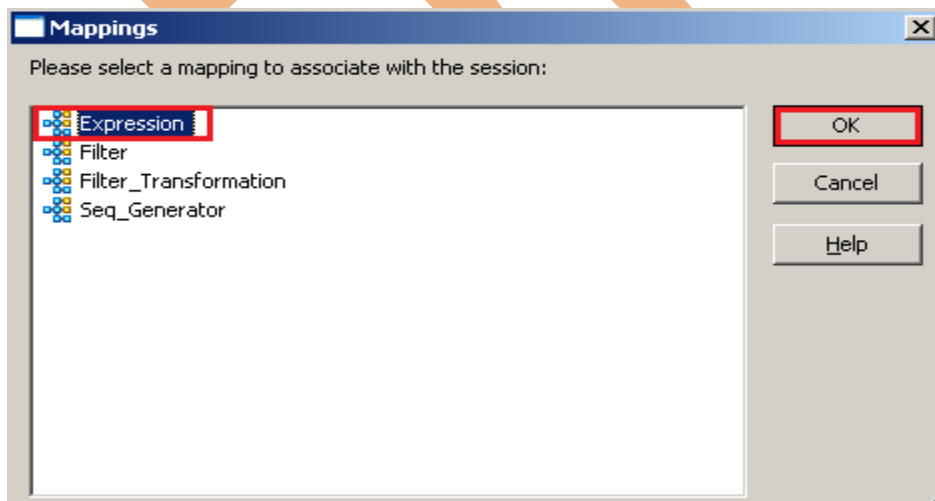
Step-3 Now create Task, Go to Tasks Menu and click Create.



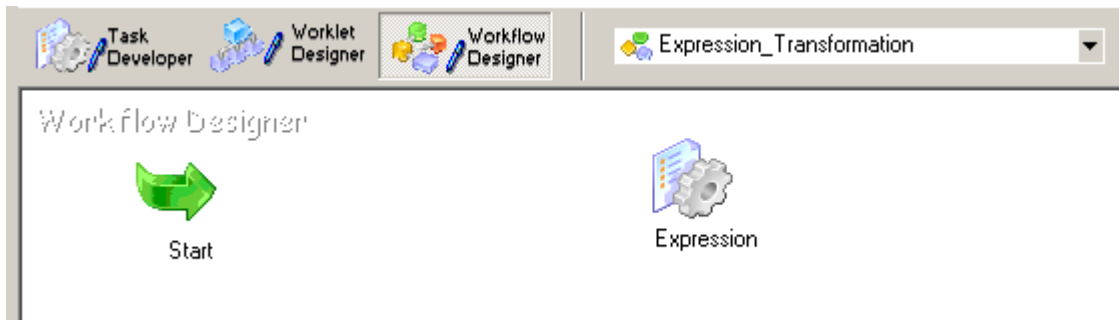
Step-4 Now select session and insert Name of task.



Step-5 Select Mapping to associate with the session.



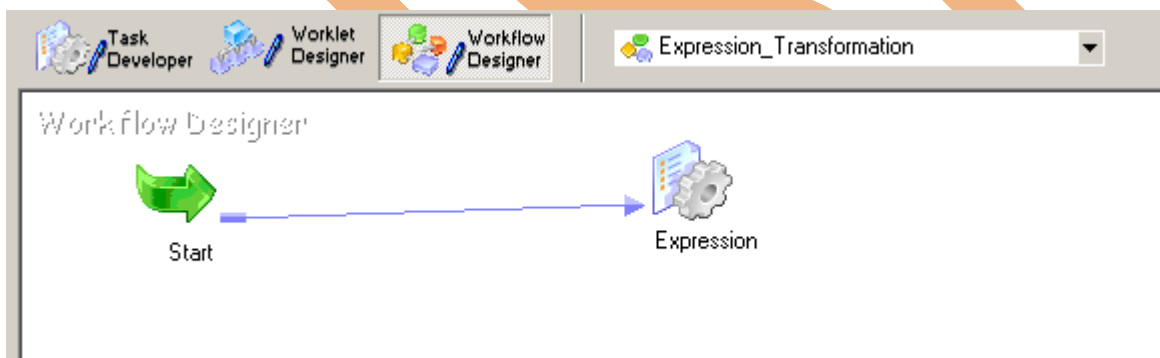
Step-6 Workflow Designer Window.



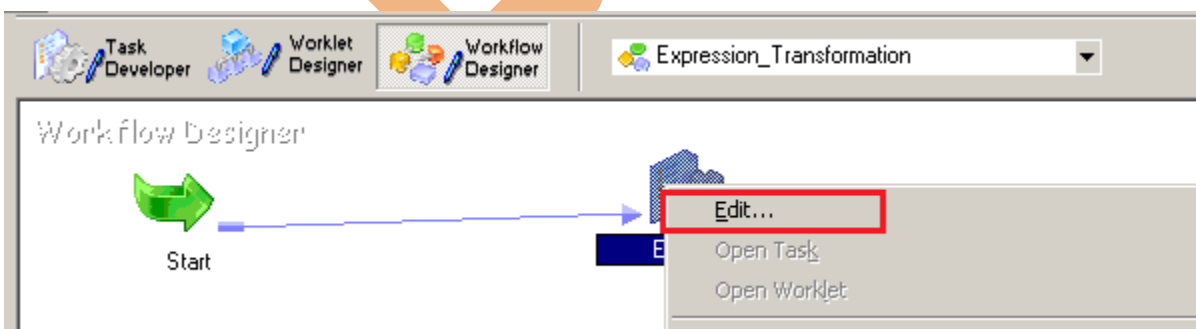
Step-7 Now create flow B/W Workflow to Task. Select Line Task and link to Start to Filter.



Step-8 Work Flow Designer Windows.



Step-9 Now Configure Connection to Target, Then Right Click on Expression and Edit, Then Click Mapping tab and configure connection for your Target table schema in oracle 11g RDBMS. And then click OK.



Step-10 Select DB Connection for Source and Target Relation Database in Mapping tab.

The screenshot shows the 'Edit Tasks' dialog box with the 'Mapping' tab selected. The 'Select task:' dropdown is set to 'Expression'. The 'Task type:' is 'Session' and 'Make reusable' is unchecked. The 'Description:' field is empty. The 'Mapping name:' is 'Expression'. The 'Resources:' field is empty with an 'Edit' button. At the bottom, there are checkboxes for 'Fail parent if this task fails', 'Fail parent if this task does not run', and 'Disable this task'. There is also a section for 'Treat the input links as:' with radio buttons for 'AND' (selected) and 'OR'. The bottom of the dialog has 'OK', 'Cancel', 'Apply', and 'Help' buttons.

Edit Tasks

General | Properties | Config Object | **Mapping** | Components | Metadata Extensions

Select task: Expression

Task type: Session ☐ Make reusable

Description:

Mapping name: Expression

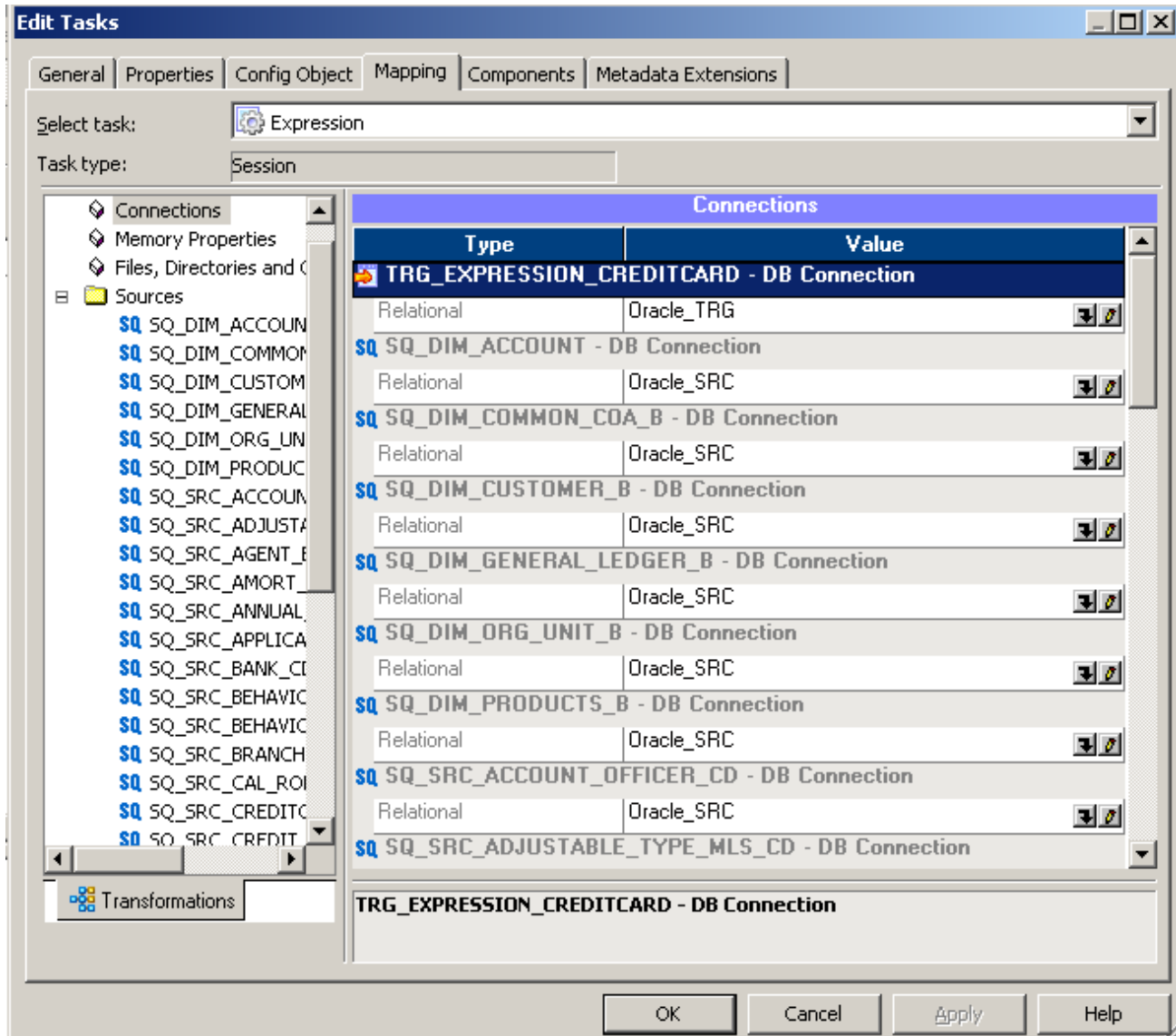
Resources: Edit

☐ Fail parent if this task fails
☐ Fail parent if this task does not run
☐ Disable this task

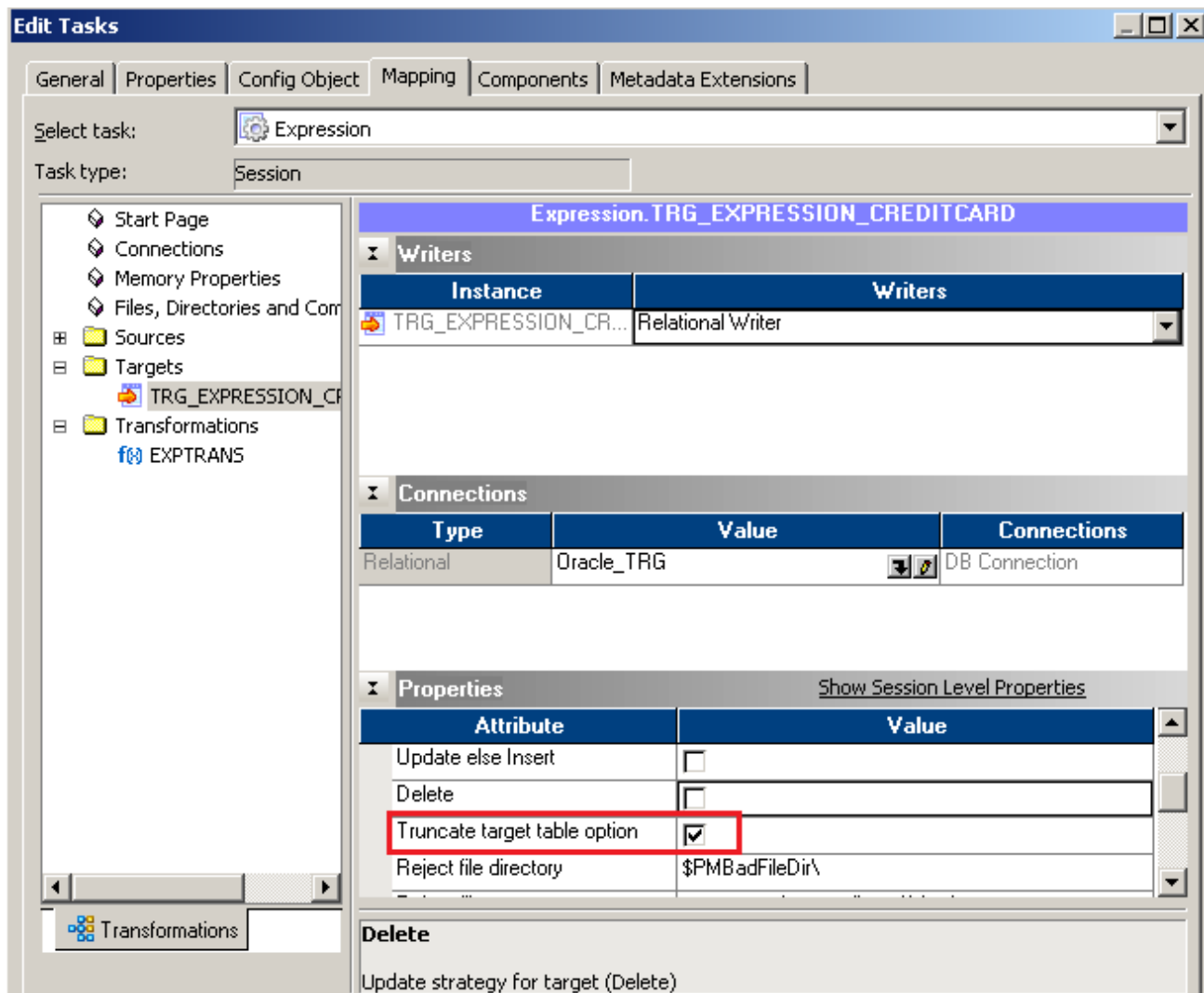
Treat the input links as:
☒ AND ☐ OR

OK Cancel Apply Help

Step-10 DB Connection.



Step-10 Select Target table Property.



Step-11 Now save (ctrl+s) this workflow and check it.

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✓validating the flow semantics of Workflow Expression_Transformation...
..flow semantics validation completed with no errors.

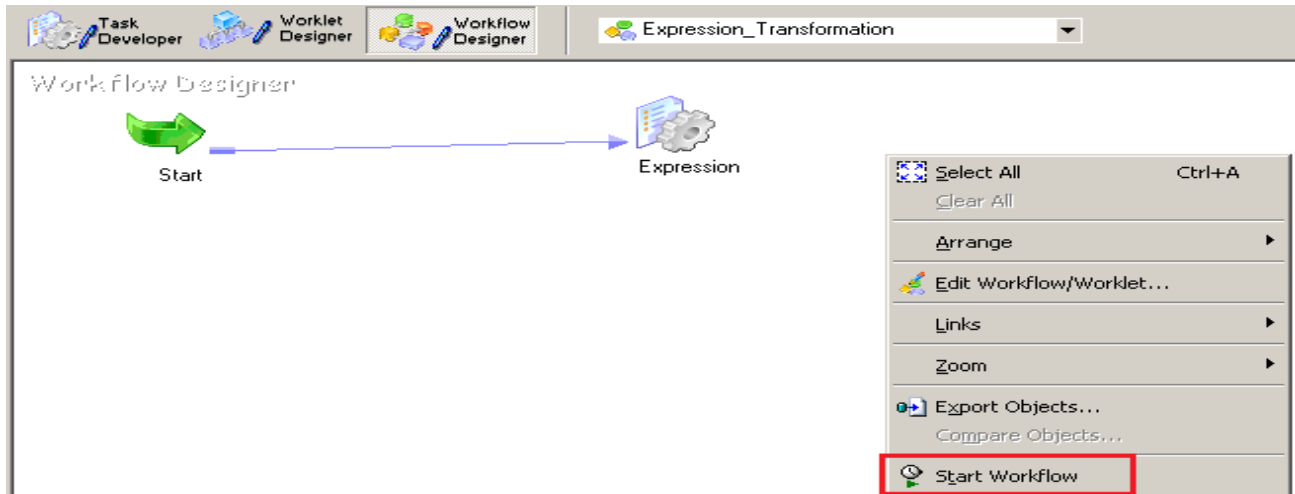
✓validating tasks of Workflow Expression_Transformation...
..Workflow Expression_Transformation tasks validation completed with no errors.

***** Workflow Expression_Transformation is VALID *****

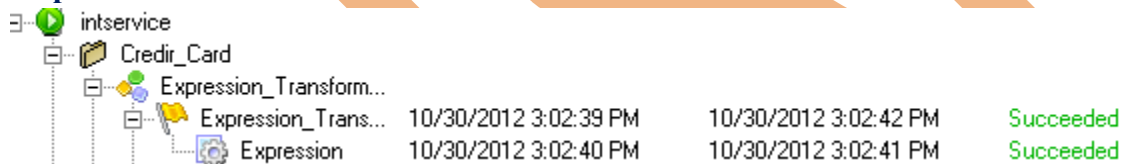
Workflow Expression_Transformation updated.

WORKFLOW MONITOR AND VIEW TARGET DATA

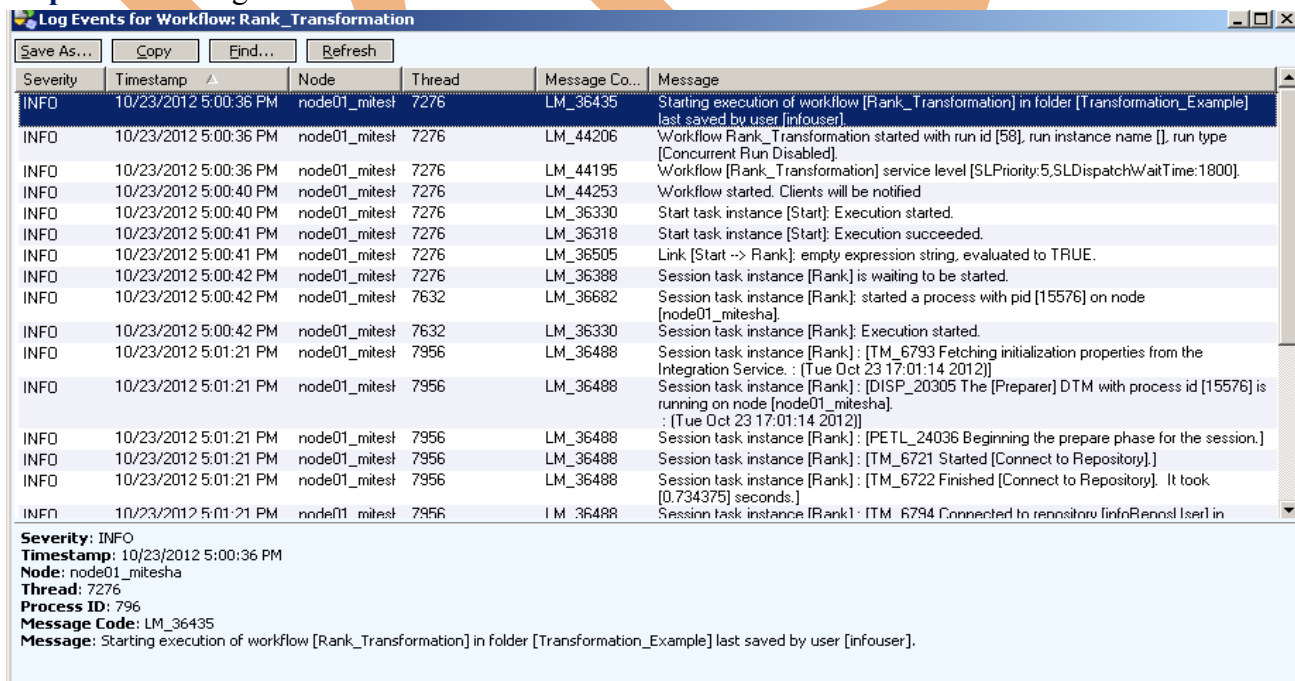
Step-1 Now Start Workflow, Right click on Workflow Designer Window and Click on Start Workflow.



Step-2 Check session in Informatica PowerCenter Workflow Monitor.



Step-3 Session log.



Step-4 Now view data in Target RDBMS (Oracle 11g)

admin TRG_EXPRESSION_CREDITCARD												
Columns	Data	Constraints	Grants	Statistics	Column Statistics	Triggers	Dependencies	Details	Partitions	Indexes	SQL	
Sort... Filter: Enter Where Clause												Actions...
N_ACCT_SKEY	COMMON_COA_ID	CUSTOMER_ID	GL_ACCOUNT_ID	ORG_UNIT_ID	PRODUCT_ID	COMPOUND...	CUR_DELO_BAL	CYCLE_DA...	IDENTITY_CODE	ISSUE_DATE	PMT_FREQ	REMA
1	1	700000561	123	401205	10	9876	1	1001	30	20121030	15-NOV-12	0
2	2	700000562	1234	834003	500	410	2	1100	30	20121030	15-NOV-12	1
3	3	700000563	124	846131	802	411	2	1200	30	20121030	15-NOV-12	1
4	4	700000565	12345	27121	803	103	2	1250	30	20121030	15-NOV-12	1
5	5	700000568	12346	820111	1001	100	1	1300	30	20121030	15-NOV-12	0
6	6	700000555	123	110401	1100	102	2	1350	3	20121003	15-NOV-12	1
7	7	700000556	1234	21009	1200	202	2	1001	28	20121028	15-NOV-12	1
8	8	700000557	124	635305	1250	505	2	1100	28	20121028	15-NOV-12	0
9	9	700000558	12345	330590	1300	507	2	1200	28	20121028	15-NOV-12	1
10	10	700000559	12346	834004	1350	6001	2	1250	28	20121028	15-NOV-12	0
11	11	700000560	123	111002	1500	6002	2	1300	28	20121028	15-NOV-12	0
12	12	700000564	1234	511302	1500	6003	2	1001	3	20121003	15-NOV-12	1
13	13	700000571	124	401205	1500	9876	1	1100	3	20121003	15-NOV-12	1
14	14	700000561	12345	834003	1500	410	2	1200	3	20121003	15-NOV-12	0