



Informatica Power Center 9.0.1

Building Financial Data Mode - Lab#10

Hands-on Guide on Designing Rank Transformation

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 Rank Transformation. [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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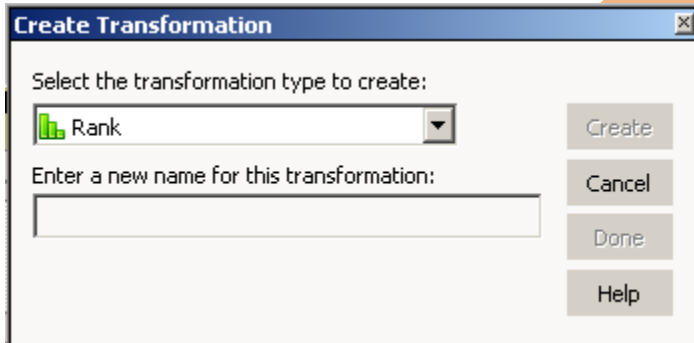
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Introduction

Rank in Informatica.

The Rank transformation allows us to select only the top or bottom rank of data. It Allows us to select a group of top or bottom values, not just one value.

Rank Transformation.



Process of Rank Transformation.



Description.

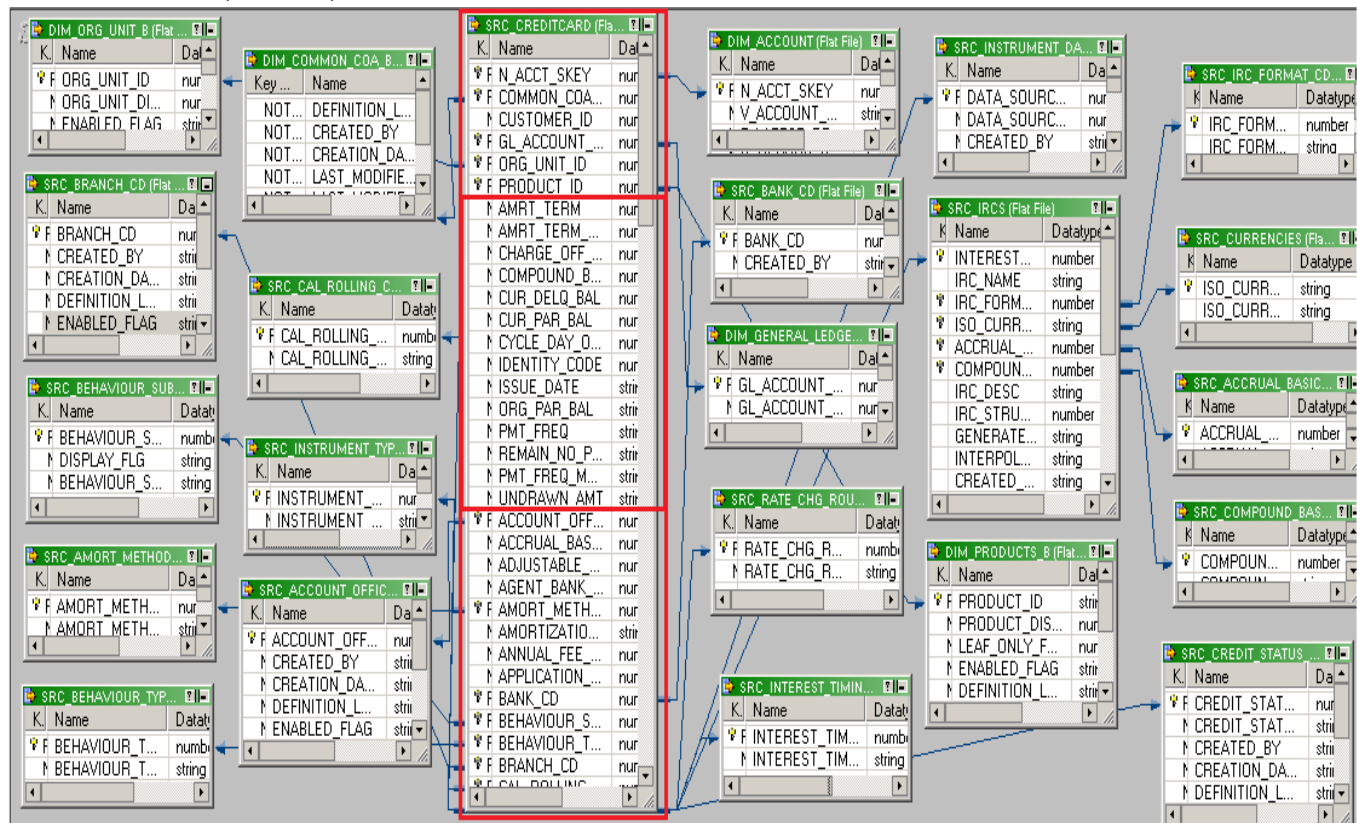
A Source Qualifier Transformation.

- Used Oracle 11g as a source database.
- Used Oracle 11g as a target database.

Actual Mapping - This is mapping for source and target column and CHARGE_OFF_BAL adjust to a rank.

Source Details				Target Details	
Entity Name	Field/Expression Name	Data Type	Is Null Allowed	Destination Entity Name	Destination Field Name
DIM_ACCOUNT	N_ACCT_SKEY	Number	N	TRG_R_CREDIT_CARD	ID_NUMBER
DIM_COMMON_COA_B	COMMON_COA_ID	Number	N	TRG_R_CREDIT_CARD	COMMON_COA_ID
DIM_CUSTOMER_B	CUSTOMER_ID	Number	Y	TRG_R_CREDIT_CARD	CUSTOMER_ID
DIM_GENERAL_LEDGER_B	GL_ACCOUNT_ID	Number	N	TRG_R_CREDIT_CARD	GL_ACCOUNT_ID
DIM_ORG_UNIT_B	ORG_UNIT_ID	Number	N	TRG_R_CREDIT_CARD	ORG_UNIT_ID
DIM_PRODUCTS_B	PRODUCT_ID	Number	N	TRG_R_CREDIT_CARD	PRODUCT_ID
SRC_CREDITCARD	AMRT_TERM	Number	Y	TRG_R_CREDIT_CARD	AMRT_TERM
SRC_CREDITCARD	AMRT_TERM_MULT	String	Y	TRG_R_CREDIT_CARD	AMRT_TERM_MULT
SRC_CREDITCARD	CHARGE_OFF_BAL	Number	N	TRG_R_CREDIT_CARD	CHARGE_OFF_BAL
SRC_CREDITCARD	COMPOUND_BASIS_CD	Number	Y	TRG_R_CREDIT_CARD	COMPOUND_BASIS_CD
SRC_CREDITCARD	CUR_DELO_BAL	Number	Y	TRG_R_CREDIT_CARD	CUR_DELO_BAL
SRC_CREDITCARD	CUR_PAR_BAL	Number	Y	TRG_R_CREDIT_CARD	CUR_PAR_BAL
SRC_CREDITCARD	CYCLE_DAY_OF_MONTH	Number	Y	TRG_R_CREDIT_CARD	CYCLE_DAY_OF_MONTH
SRC_CREDITCARD	IDENTITY_CODE	Number	N	TRG_R_CREDIT_CARD	IDENTITY_CODE
SRC_CREDITCARD	ISSUE_DATE	Date Time	Y	TRG_R_CREDIT_CARD	ISSUE_DATE
SRC_CREDITCARD	ORG_PAR_BAL	Number	Y	TRG_R_CREDIT_CARD	ORG_PAR_BAL
SRC_CREDITCARD	PMT_FREQ	Number	Y	TRG_R_CREDIT_CARD	PMT_FREQ
SRC_CREDITCARD	REMAIN_NO_PMTS_C	Number	Y	TRG_R_CREDIT_CARD	REMAIN_NO_PMTS_C
SRC_CREDITCARD	PMT_FREQ_MULT	String	Y	TRG_R_CREDIT_CARD	PMT_FREQ_MULT
SRC_CREDITCARD	UNDRAWN_AMT	Number	Y	TRG_R_CREDIT_CARD	UNDRAWN_AMT
SRC_ACCOUNT_OFFICER_CD	ACCOUNT_OFFICER_CD	Number	Y	TRG_R_CREDIT_CARD	ACCOUNT_OFFICER_CD
SRC_ACCRUAL_BASIS_CD	ACCRUAL_BASIS_CD	Number	Y	TRG_R_CREDIT_CARD	ACCRUAL_BASIS_CD
SRC_ADJUSTABLE_TYPE_MLS_V	ADJUSTABLE_TYPE_CD	Number	Y	TRG_R_CREDIT_CARD	ADJUSTABLE_TYPE_CD

Source Table(Model).



Name	Datatype
N_ACCT_...	number(p)
COMMON...	number(p)
CUSTOME...	number(p)
GL_ACCO...	number(p)
ORG_UNI...	number(p)
PRODUCT...	number(p)
AMRT_TE...	number(p)
AMRT_TE...	varchar2
CHARGE...	number(p)
COMPOU...	number(p)
CUR_DEL...	number(p)
CUR_PAR...	number(p)
CYCLE_D...	number(p)
IDENTITY...	number(p)
ISSUE_DA...	date
ORG_PAR...	number(p)
PMT_FREQ	number(p)
REMAIN...	number(p)
PMT_FRE...	varchar2
UNDRAW...	number(p)
ACCOUNT...	number(p)
ACCRUAL...	number(p)
ADJUSTA...	number(p)
AGENT_B...	number(p)
AMORT...	number(p)

Target Table.

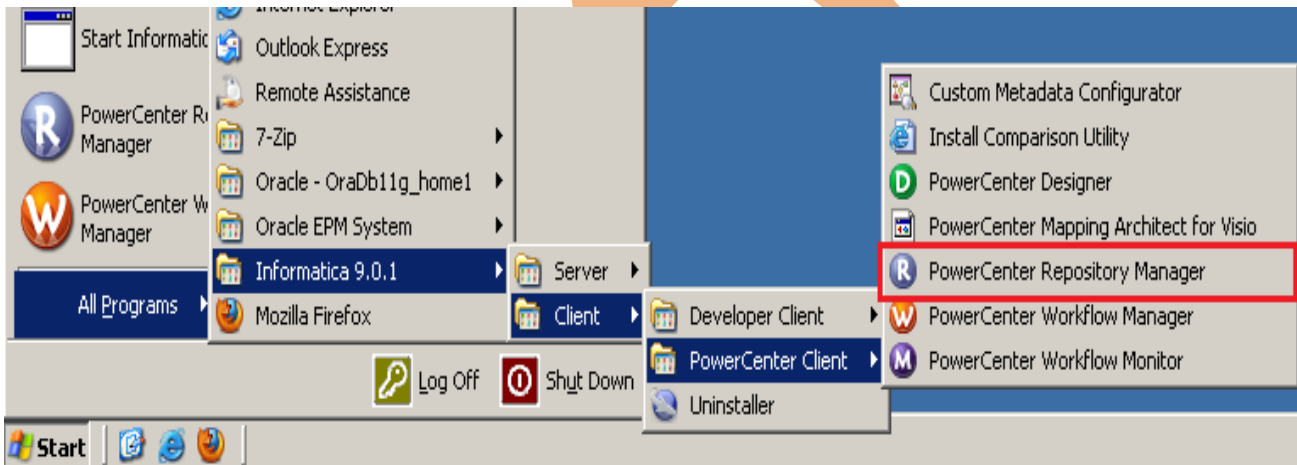
Target Design

Name	Datatype	Length
RANK_ID	number(...)	14
N_ACCT_S...	number(...)	14
COMMON_...	number(...)	14
CUSTOME...	number(...)	14
GL_ACCOU...	number(...)	14
ORG_UNIT...	number(...)	14
PRODUCT...	number(...)	14
AMRT_TERM	number(...)	14
AMRT_TER...	varchar2	20
CHARGE_O...	number(...)	14
COMPOUN...	number(...)	14
CUR_DELQ...	number(...)	14
CUR_PAR...	number(...)	14
CYCLE_DA...	number(...)	14
IDENTITY...	number(...)	14
ISSUE_DATE	date	19
ORG_PAR...	number(...)	14
PMT_FREQ	number(...)	14
REMAIN_N...	number(...)	14
PMT_FREQ...	varchar2	20
UNDRAWN...	number(...)	14
ACCOUNT...	number(...)	14
ACCRUAL...	number(...)	14
ADJUSTAB...	number(...)	14
AGENT_BA...	number(...)	14
AMORT_M...	number(...)	5

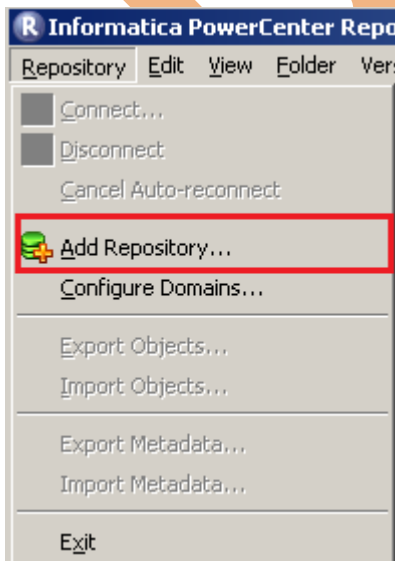
Creating Repository and Folder

Creating Repository & Connecting it.

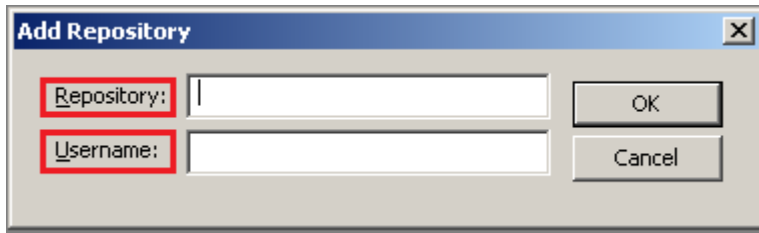
Step-1 First create repository, Click on Start -> All Programs -> Informatica 9.0.1 -> Client -> Power Center Client -> Power Center Repository Manager.



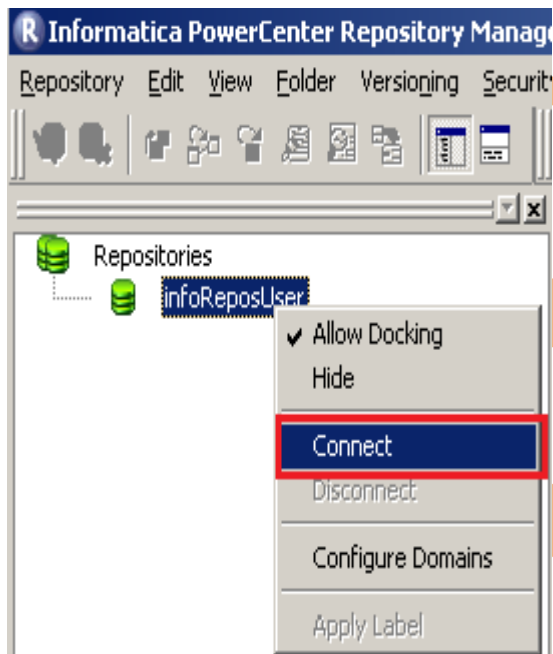
Step-2 Then click on Repository Menu and click on Add Repository.



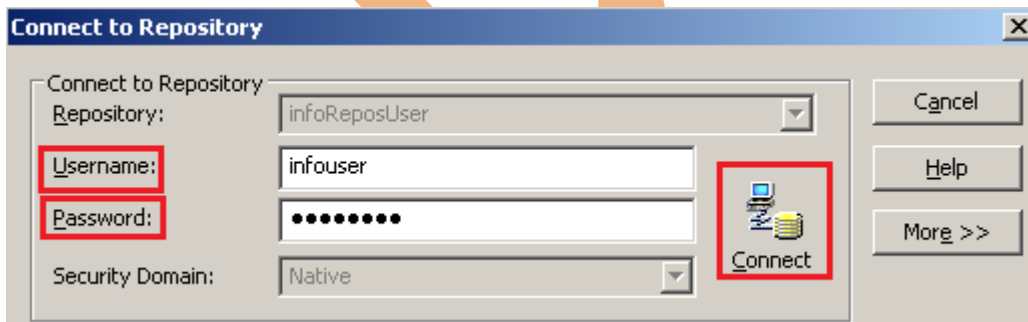
Step-3 Give information like Repository Name and Username. Then click on ok button and repository created successfully.



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



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

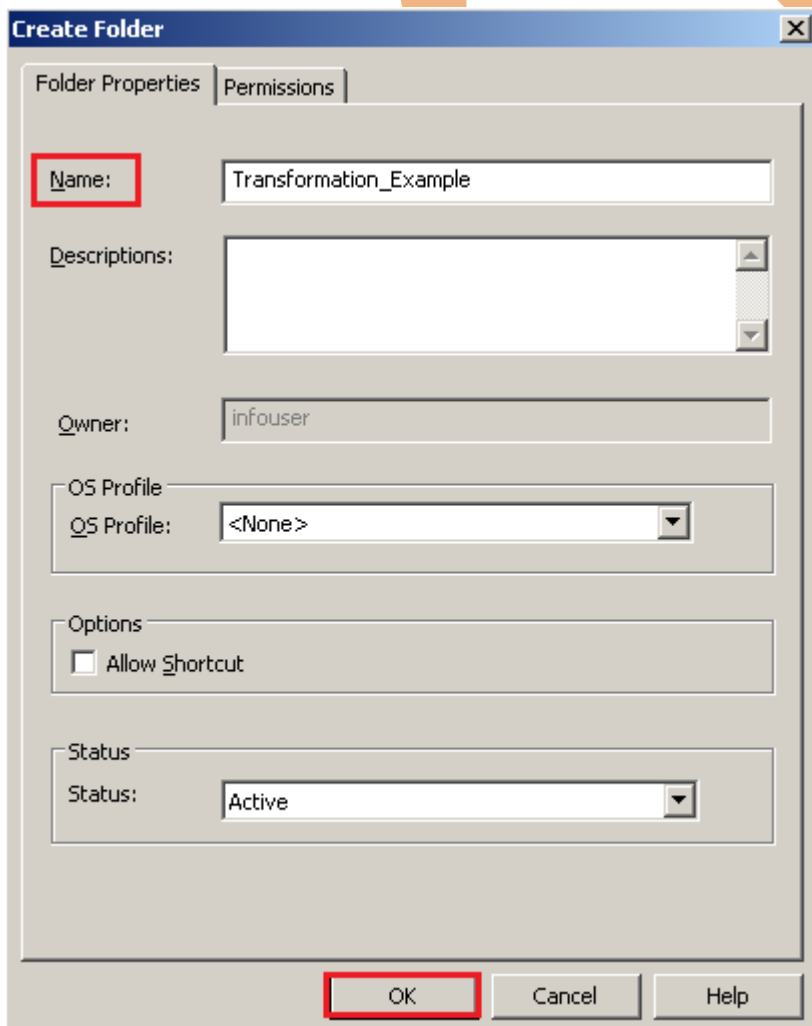


Creating Folder.

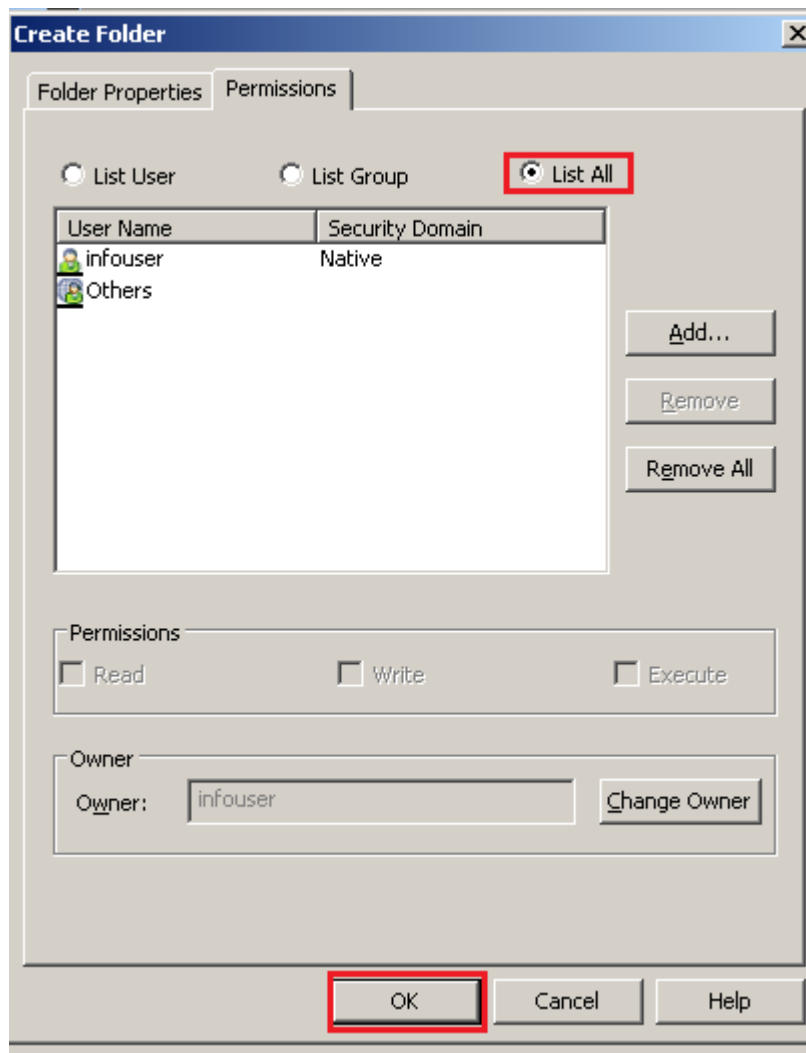
Step-1 Go to Informatica Power Center Repository Manager and click on Folder Menu and click on Create.



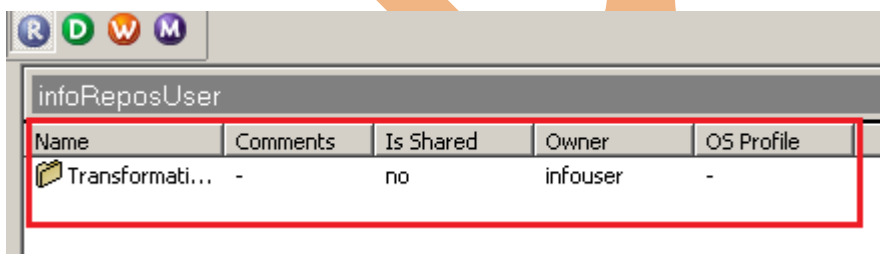
Step-2 Specify Name of Folder, Description, Owner, OS Profile, Options, Status and got to permissions tab.



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

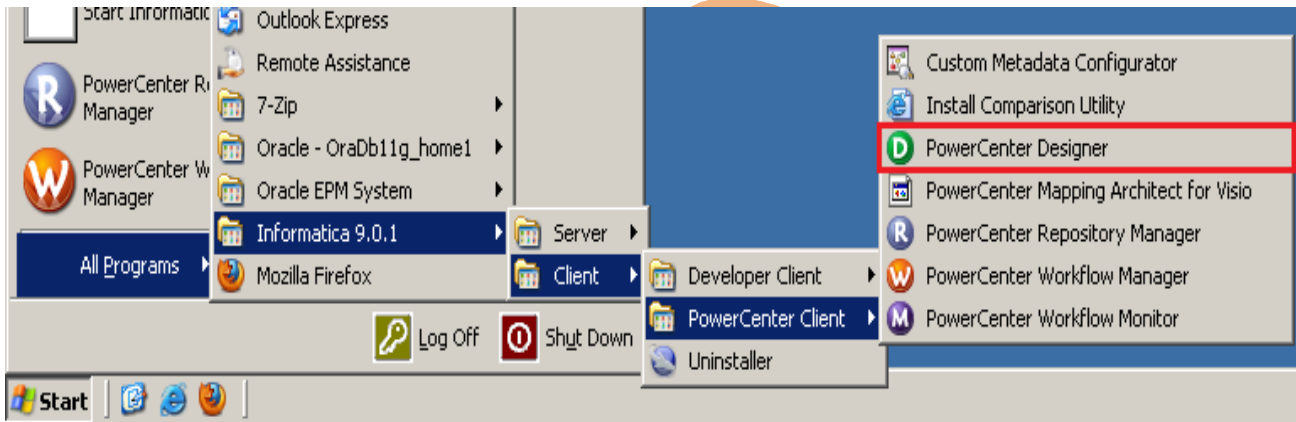


Step-4 This is newly created Folder

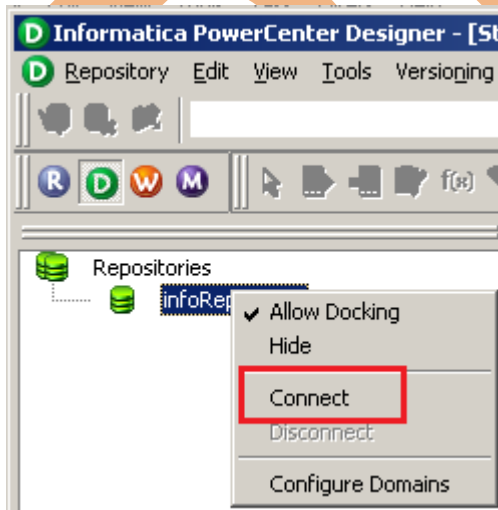


Importing Source and Target Table

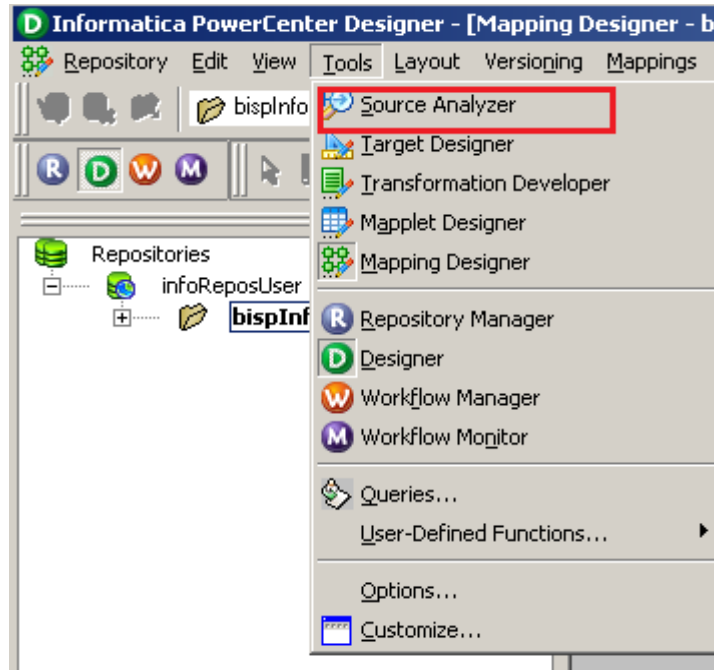
Step-1 Click on Start -> All Programs -> Informatica 9.0.1 -> Client -> Power Center Client -> Power Center Designer..



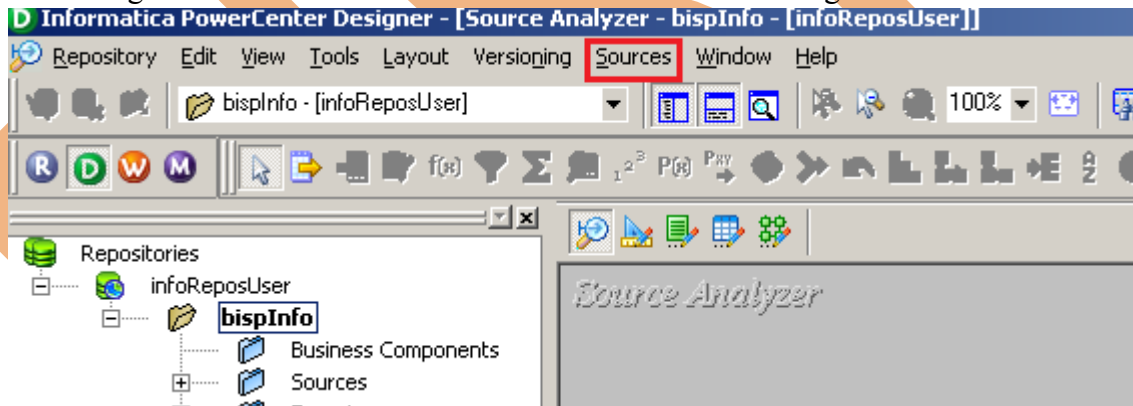
Step-2 Then Connect to Repository in Informatica Power Center Designer Right click on repository name and click on Connect.



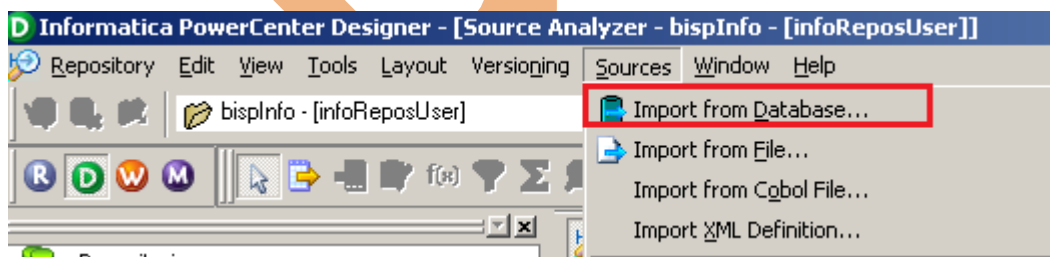
Step-3 Go to Tools Menu and click on Source Analyzer to import source table.



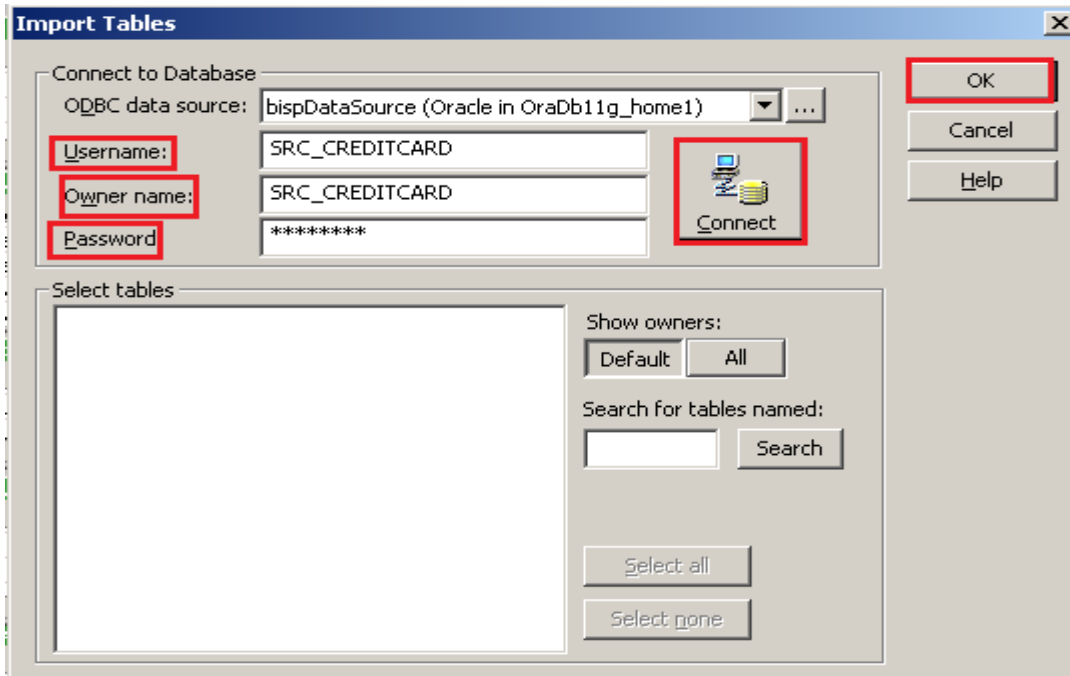
Step-4 And then go to Sources Menu in Informatica Power Center Designer.



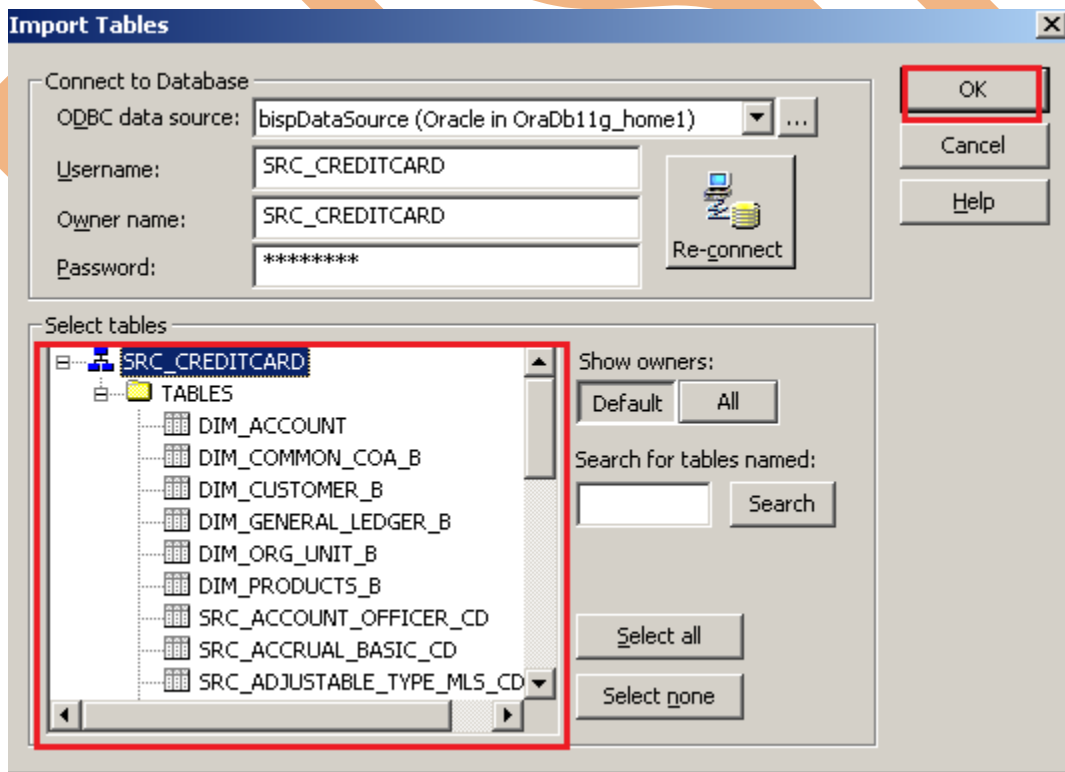
Step-5 And then click on Source menu and select Import from database.



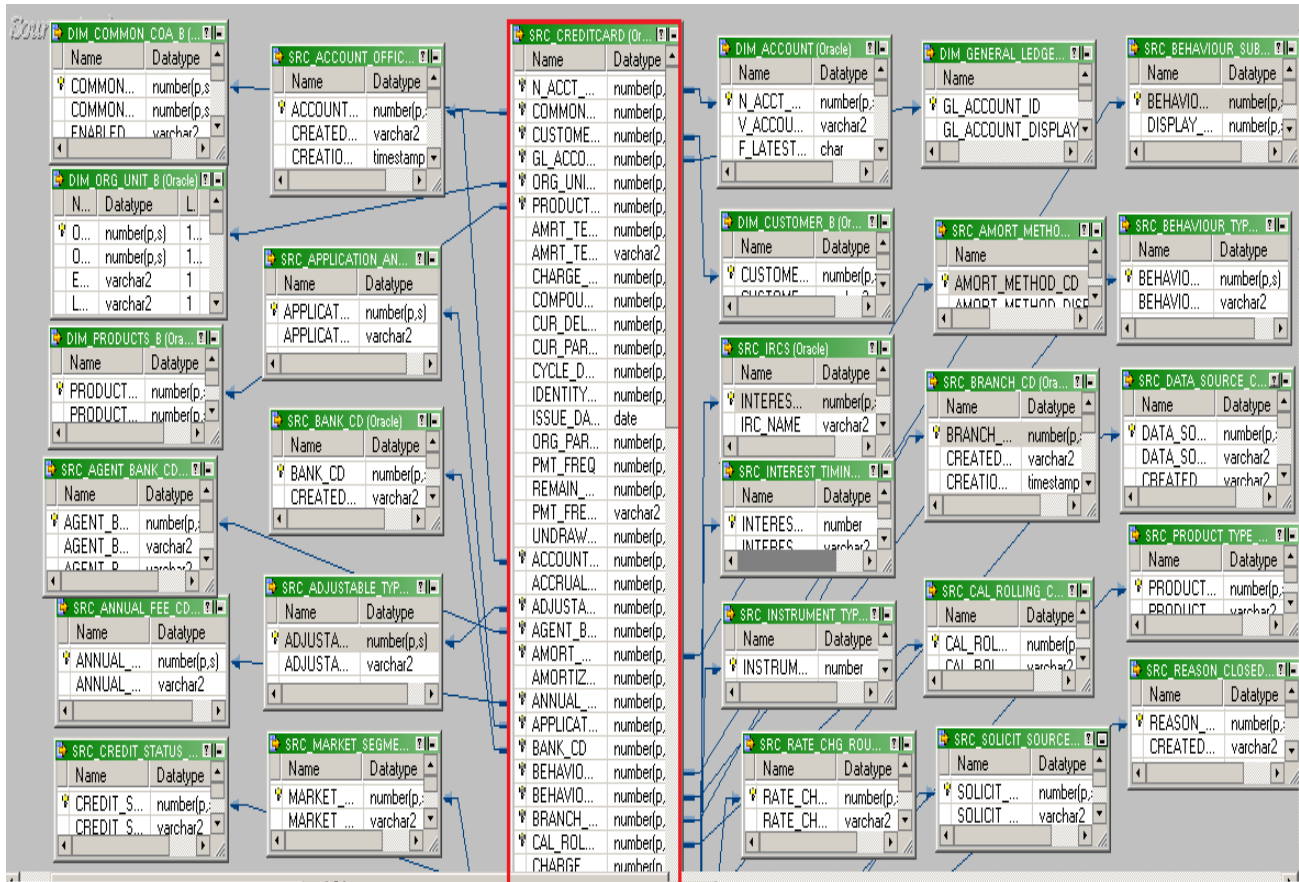
Step-6 Specify Username, Owner name, password and then connect.



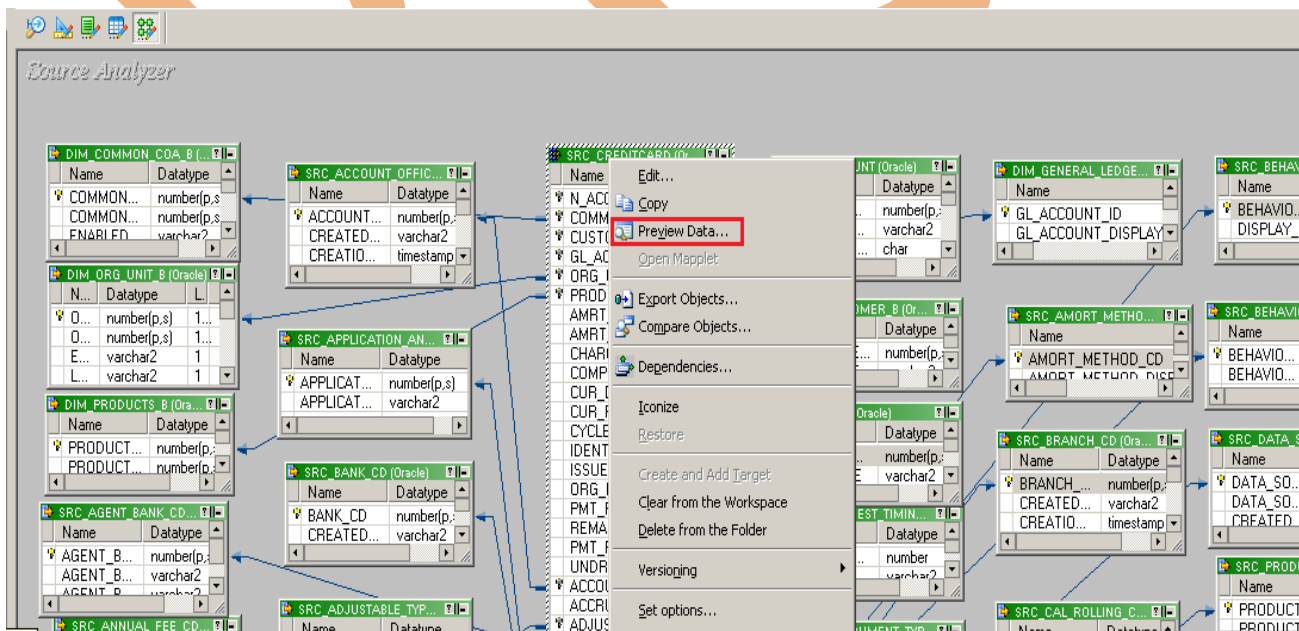
Step-7 Then select source table and click OK.



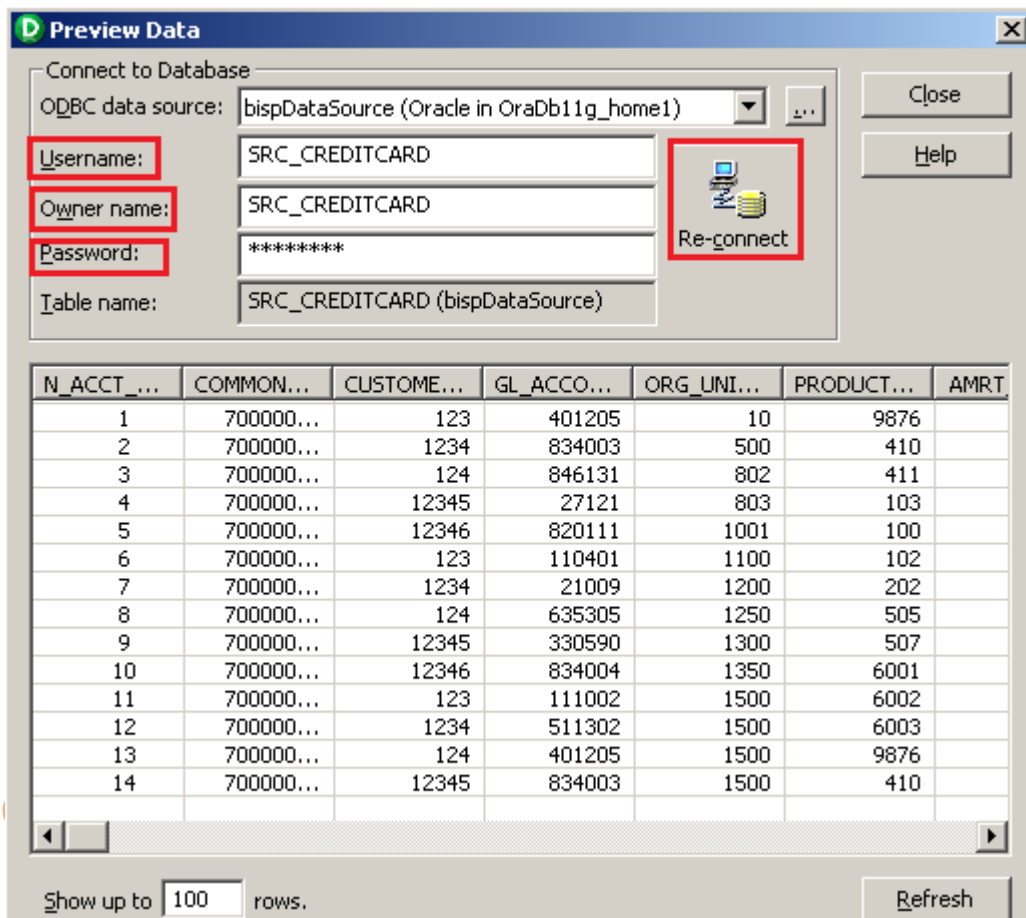
Step-8 These table's are extracted from source database.



Step-9 View data in source analyzer, Right click on SRC_CreditCard and select Preview Data.

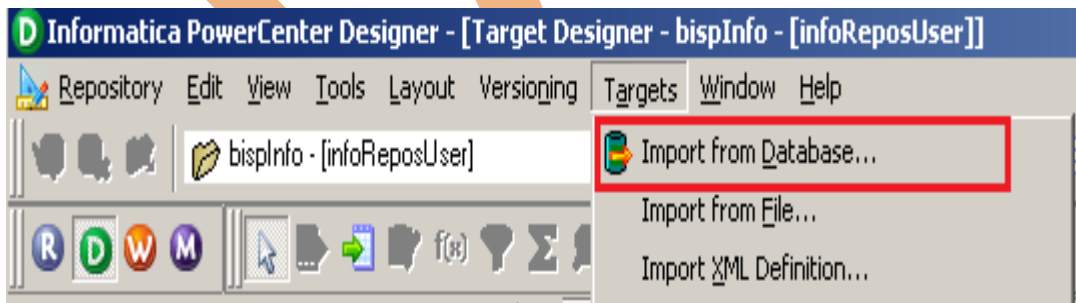


Step-10 Specify Username and Password and connect it. Then Close it.

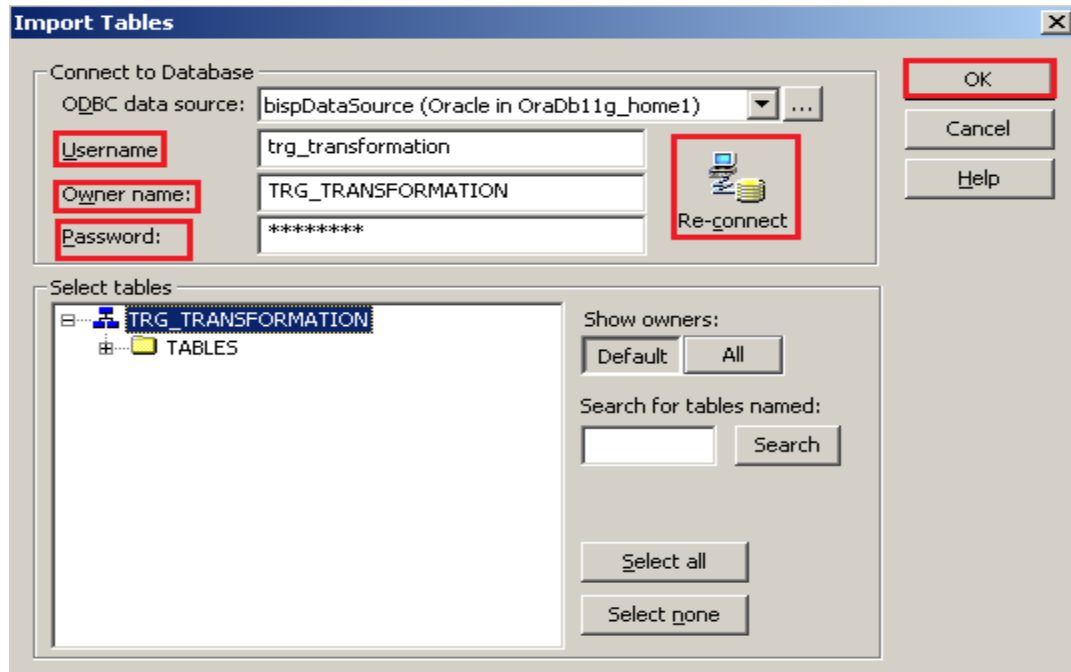


Step-11 Now click on Target Designer.

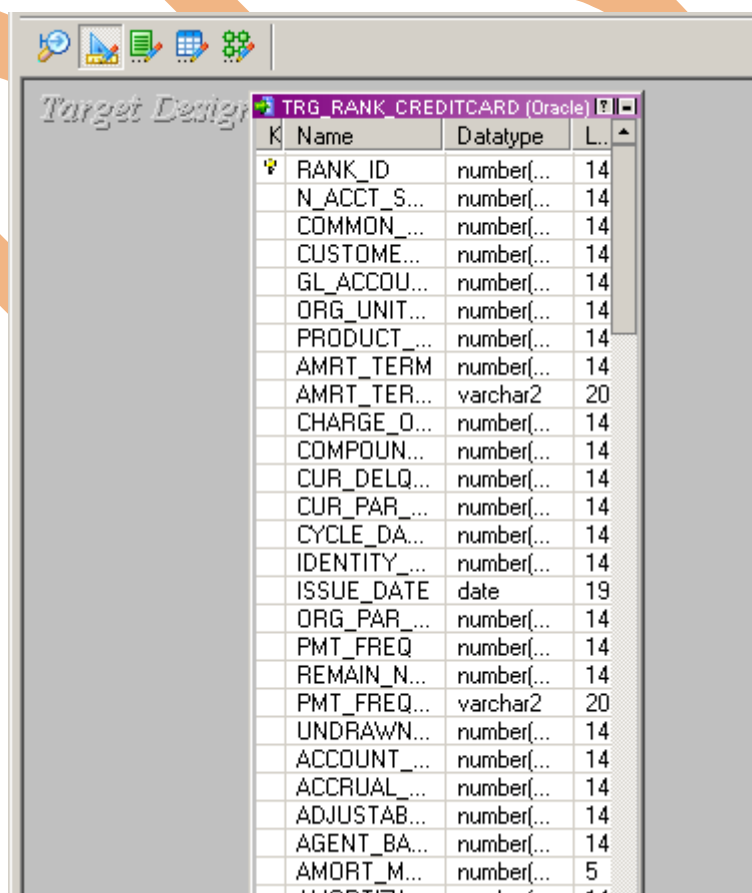
Step-12 And then select Target menu and click on Import from database to import target table.



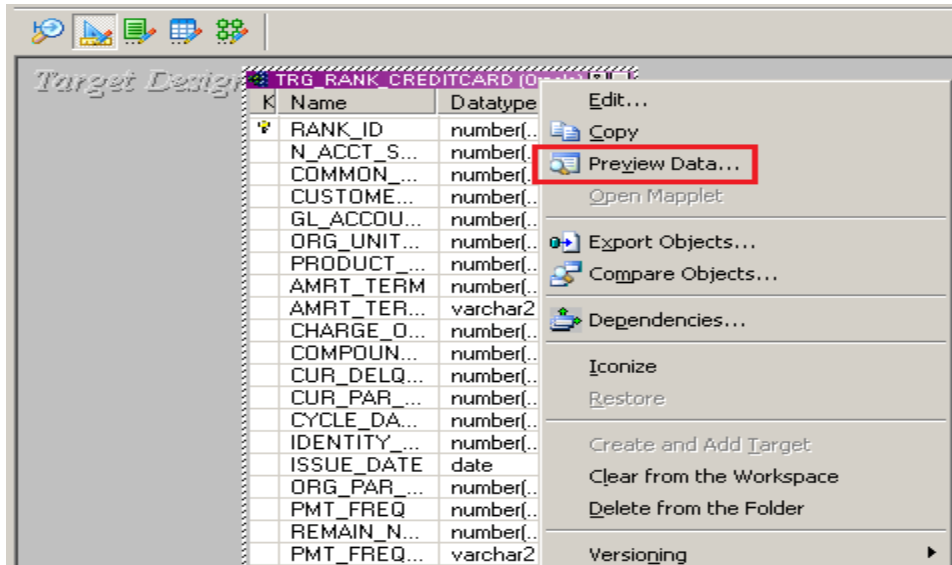
Step-12 Specify Username, Owner name, password and then click on connect and then select table and then OK.



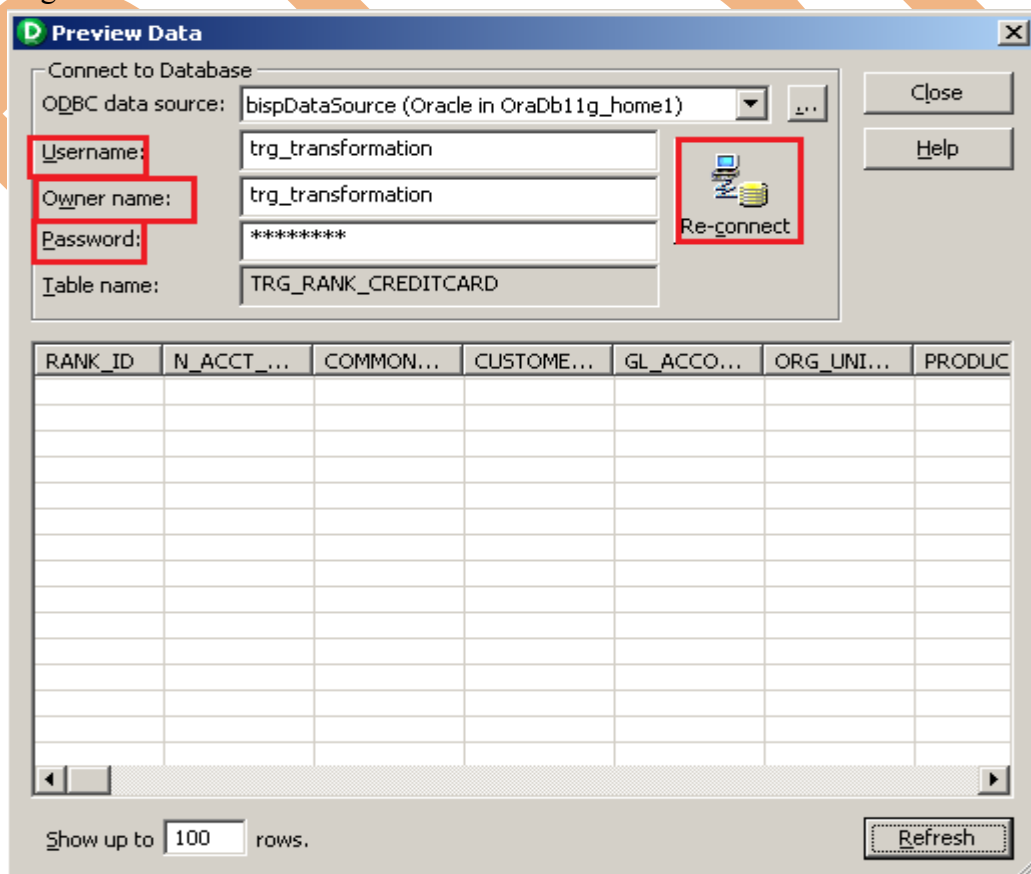
Step-13 Target table in Target Designer.




Step-14 To view data select table and Right click on that table after that specify Username and Password and connect it. Then Close it.



Step-15 Target data.

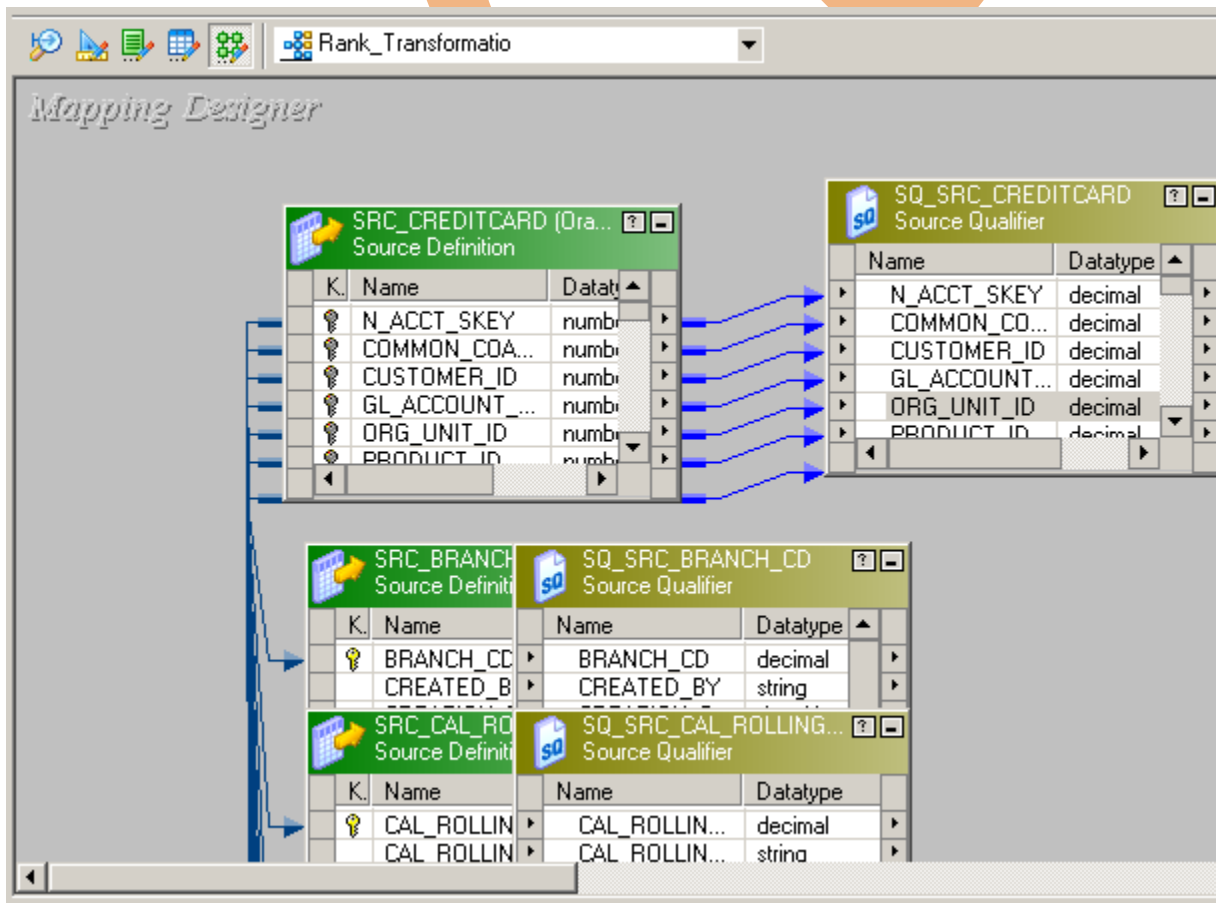


CREATE MAPPING AND RANK TRANSFORMATION

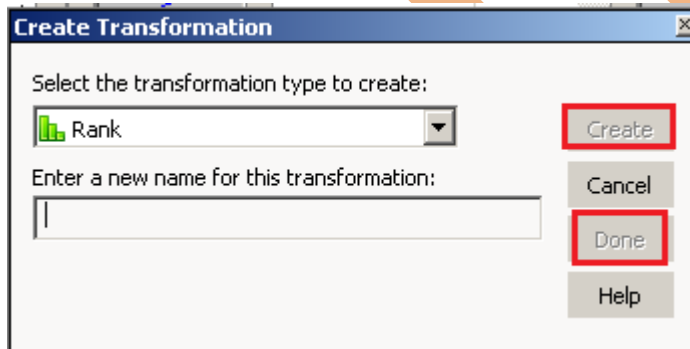
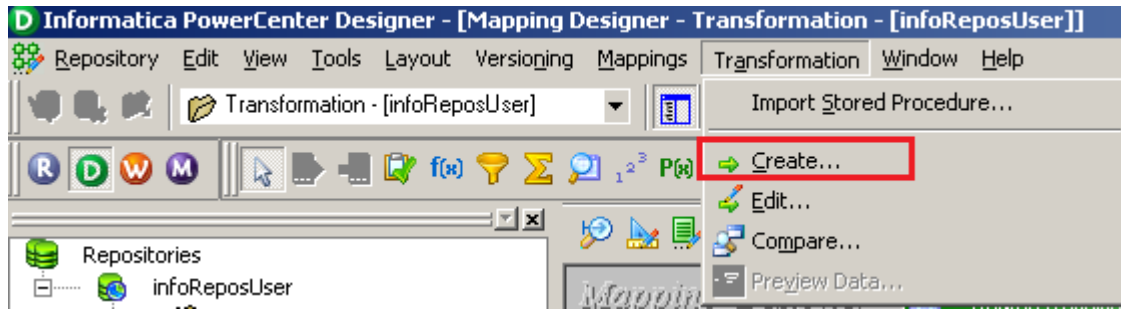
Step-1 Go to Mapping Designer  and Create New Mapping and then name of mapping and click OK.



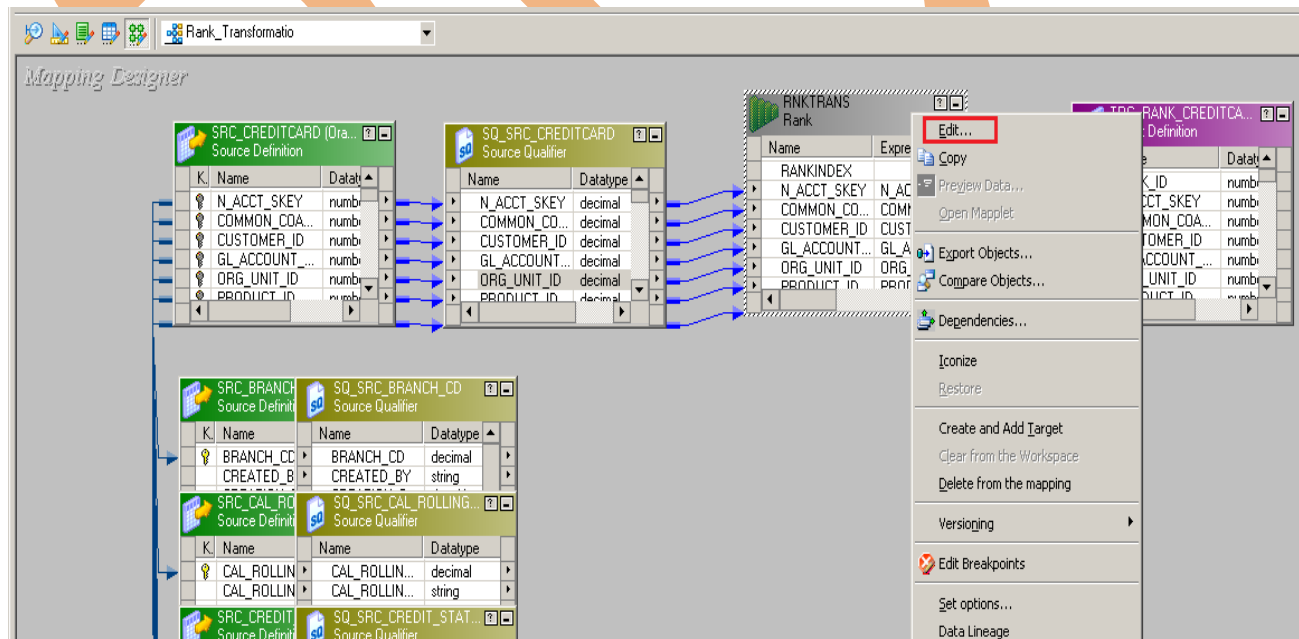
Step-2 Then drag and drop source and target data in Mapping Designer.



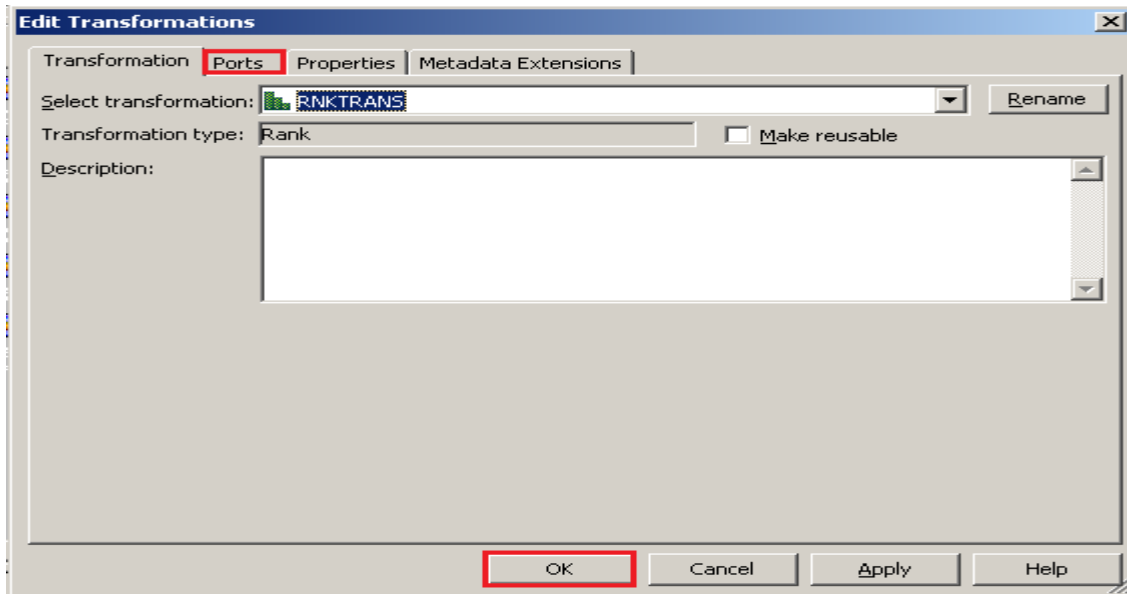
Step-3 Then create transformation, Click on Transformation menu and select Create. Then select Rank in dropdown and give name of transformation and click Create and then click Done.



Step-4 Then drag and drop all SQ_SRC_CREDITCARD Source Qualifier column into Filter Transformation table and then Right click on Rank Transformation select.



Step-5 Click on Ports tab.



Step-6 In the ports tab, check the Rank (R) option for the port which you want to do ranking. You can check the Rank (R) option for only one port. Here Rank by CHARGE_OFF_BAL to Top to Bottom.

Edit Transformations

Transformation Ports Properties Metadata Extensions

Select transformation: **RNKTRANS**

Transformation type: Rank

	Port Name	Datatype	Prec	Scale	I	O	V	R	Expression	GroupBy
1	RANKINDEX	integer	10	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
2	N_ACCT_SKEY	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N_ACCT_SKEY	<input type="checkbox"/>
3	COMMON_COA_ID	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMMON_COA_ID	<input type="checkbox"/>
4	CUSTOMER_ID	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CUSTOMER_ID	<input type="checkbox"/>
5	GL_ACCOUNT_ID	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GL_ACCOUNT_ID	<input type="checkbox"/>
6	ORG_UNIT_ID	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ORG_UNIT_ID	<input type="checkbox"/>
7	PRODUCT_ID	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PRODUCT_ID	<input type="checkbox"/>
8	AMRT_TERM	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AMRT_TERM	<input type="checkbox"/>
9	AMRT_TERM_MULT	string	20	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AMRT_TERM_MULT	<input type="checkbox"/>
10	CHARGE_OFF_BAL	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CHARGE_OFF_BAL	<input type="checkbox"/>
11	COMPOUND_BASIS_CD	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPOUND_BASIS_CD	<input type="checkbox"/>
12	CUR_DELQ_BAL	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CUR_DELQ_BAL	<input type="checkbox"/>
13	CUR_PAR_BAL	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CUR_PAR_BAL	<input type="checkbox"/>
14	CYCLE_DAY_OF_MONTH	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CYCLE_DAY_OF_MON...	<input type="checkbox"/>
15	IDENTITY_CODE	decimal	14	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IDENTITY_CODE	<input type="checkbox"/>

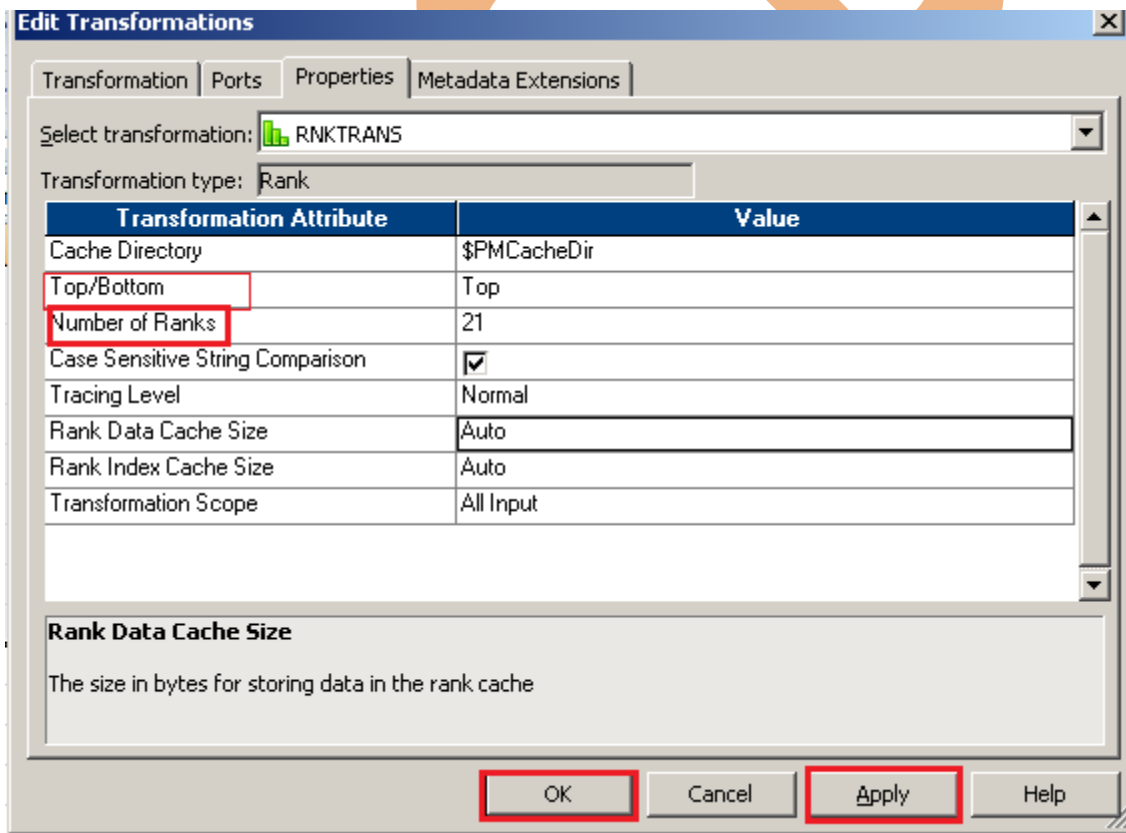
Default value: ERROR('transformation error')

Description:

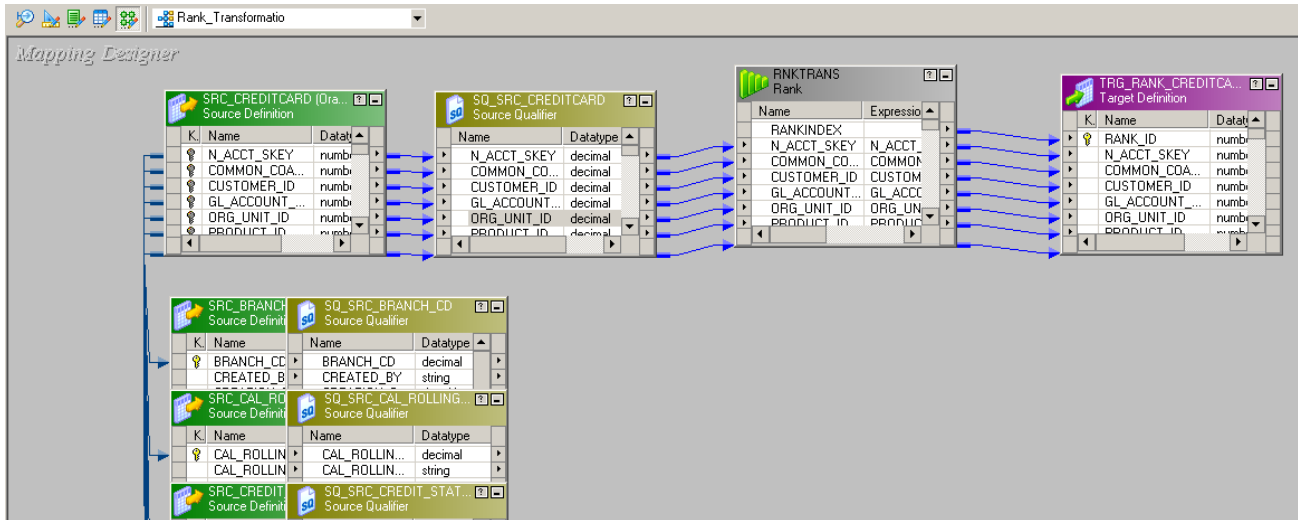
OK Cancel Apply Help

Step-7 In the Properties tab, Configuring the following Rank Transformation Properties and then click Apply button and then click OK.

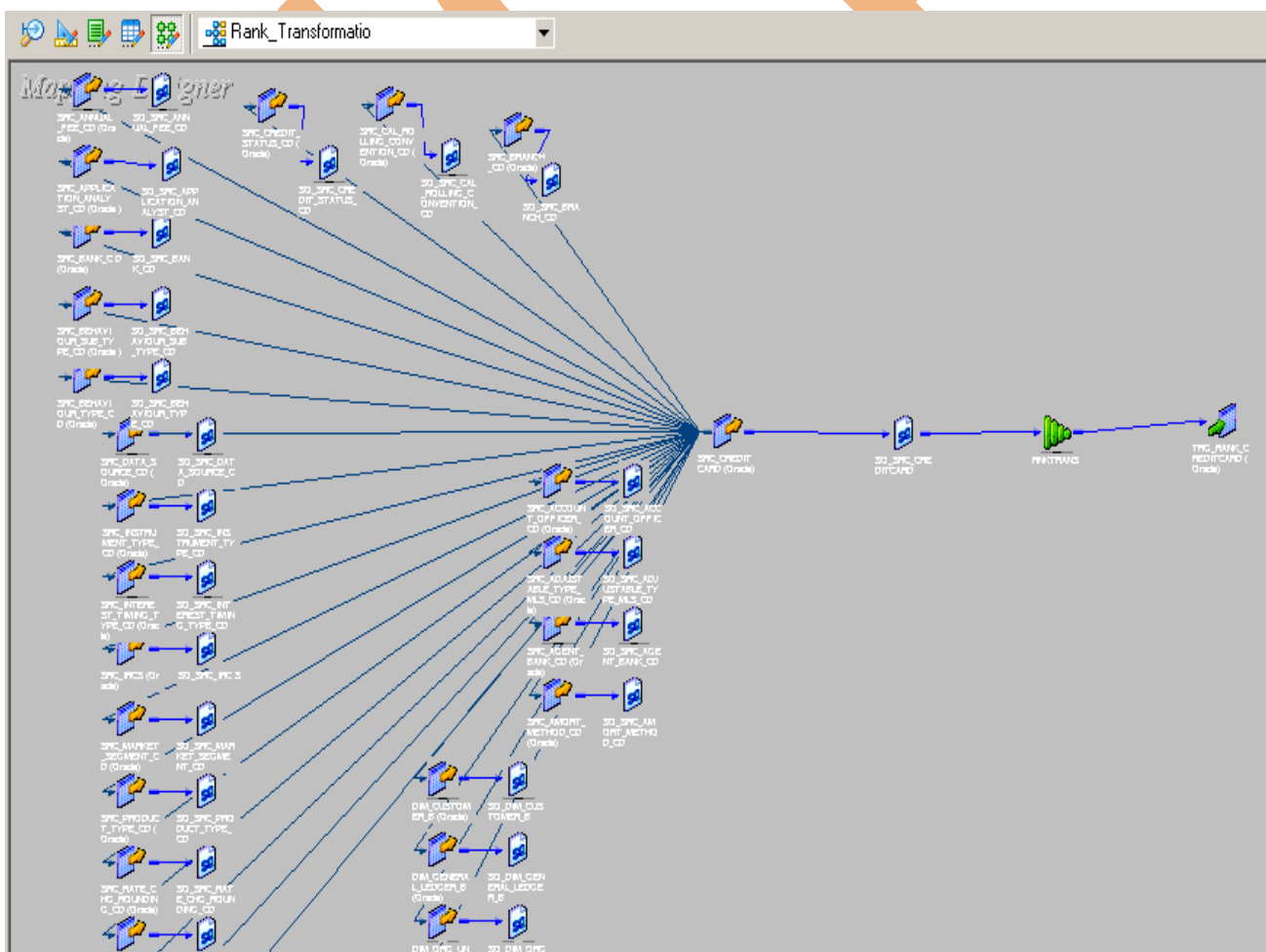
- **Cache Directory:** Cache Directory is, where the integration service creates the index and data cache files.
- **Top/Bottom:** Specify whether you want to select the top or bottom rank of data.
- **Number of Ranks:** specify the number of rows you want to rank.
- **Case-Sensitive String Comparison:** Used to sort the strings using case sensitive or not.
- **Tracing Level:** Amount of logging to be tracked in the session log file.
- **Rank Data Cache Size:** The data cache size default value is 2,000,000 bytes. You can set a numeric value, or Auto for the data cache size. In case of Auto, the Integration Service determines the cache size at runtime.
- **Rank Index Cache Size:** The index cache size default value is 1,000,000 bytes. You can set a numeric value, or Auto for the index cache size. In case of Auto, the Integration Service determines the cache size at runtime.



Step-8 Now connect the ports of rank transformation to the target definition.



Step-9 Complete Mapping Diagram.



Step-10 And then save it (ctrl+s) and check mapping is VALID.

```
-----  
10/23/2012 16:44:15 ** Saving... Repository infoReposUser, Folder Transformation_Example  
-----
```

```
Validating transformations of mapping Rank_Transformatio...
```

```
...transformation validation completed with no errors.
```

```
Validating data flow of mapping Rank_Transformatio...
```

```
...data flow validation completed with no errors.
```

```
Parsing mapping Rank_Transformatio...
```

```
...parsing completed with no errors.
```

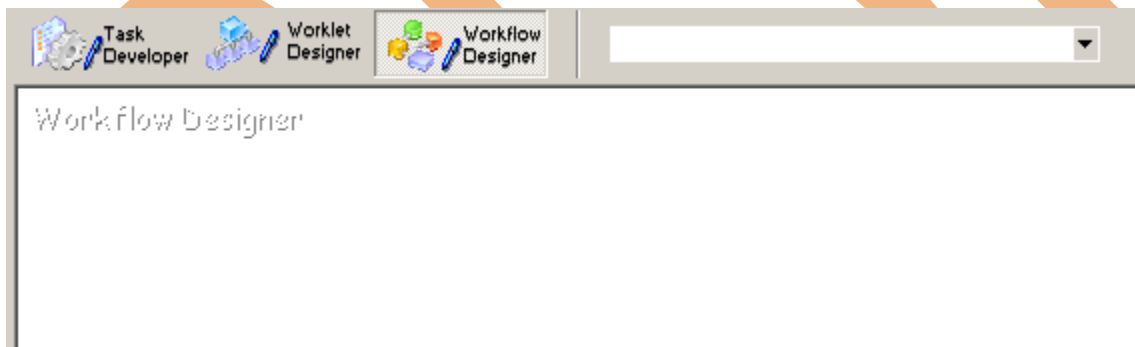
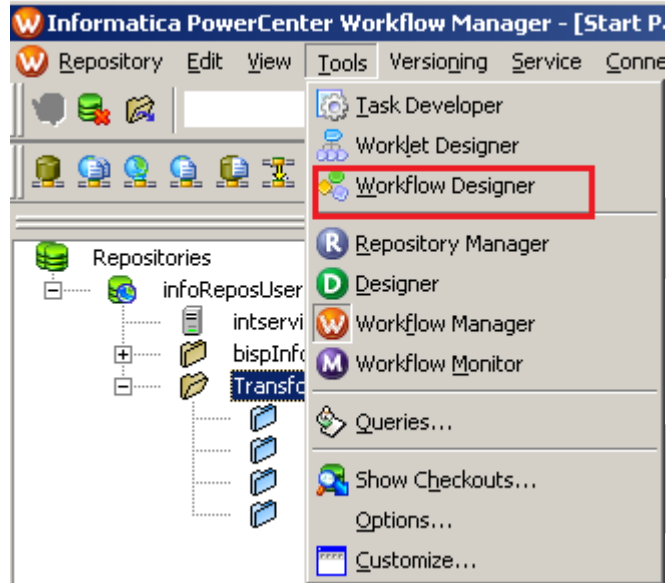
```
***** Mapping Rank_Transformatio is VALID *****
```

```
mapping Rank_Transformatio updated.  
-----
```

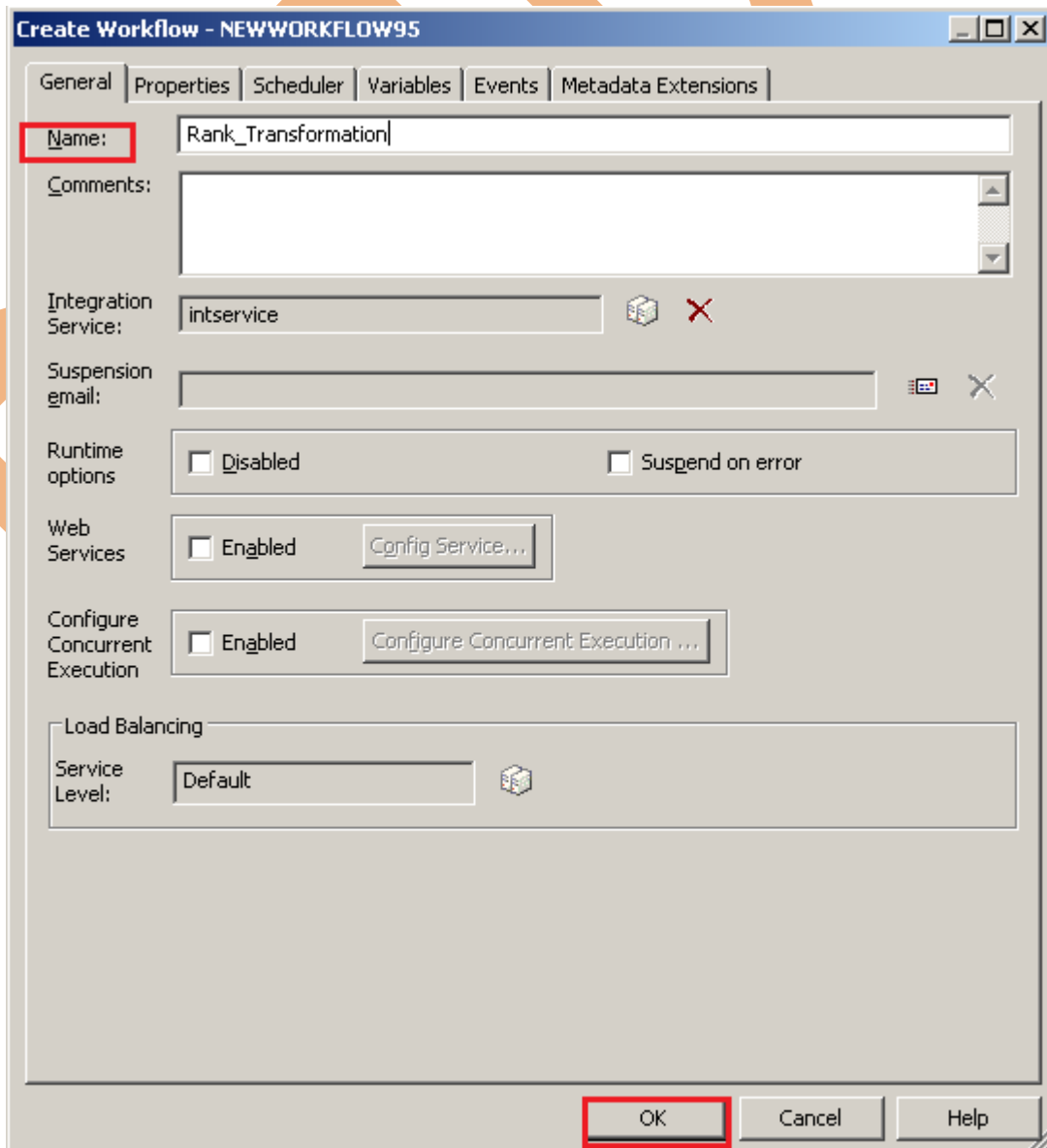
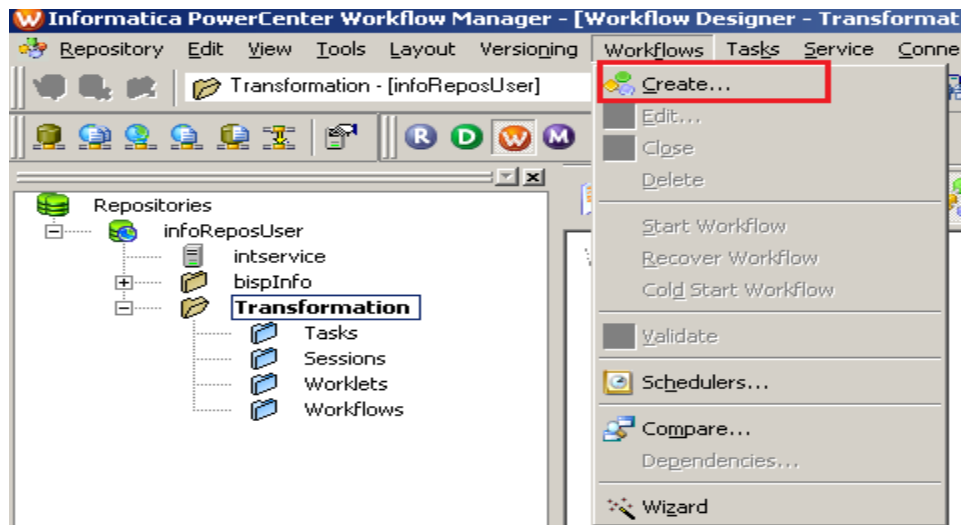


CREATE WORKFLOW

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.



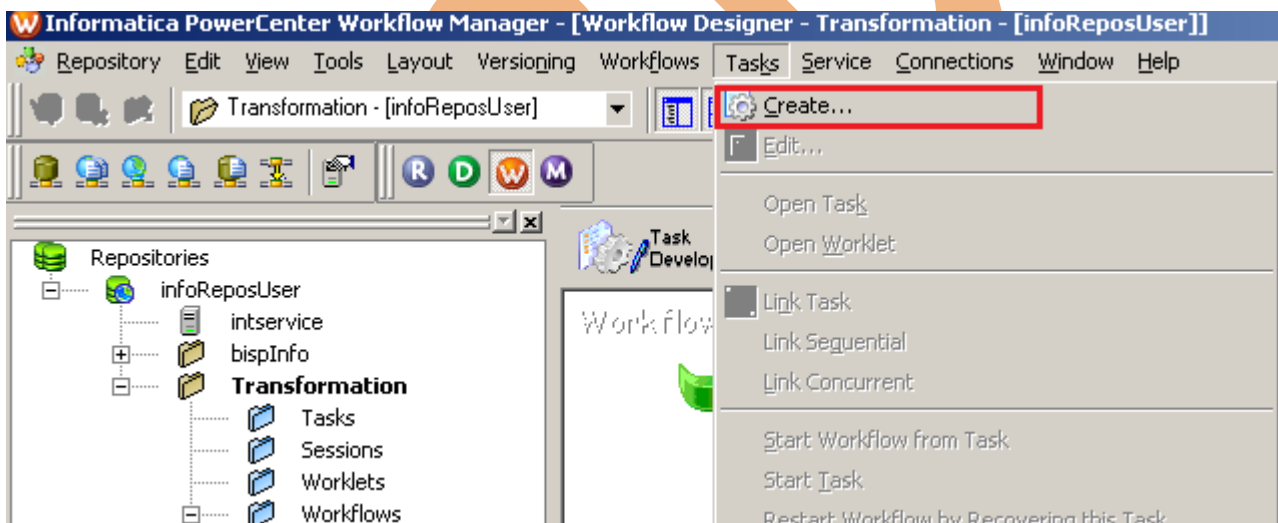


Workflow Designer

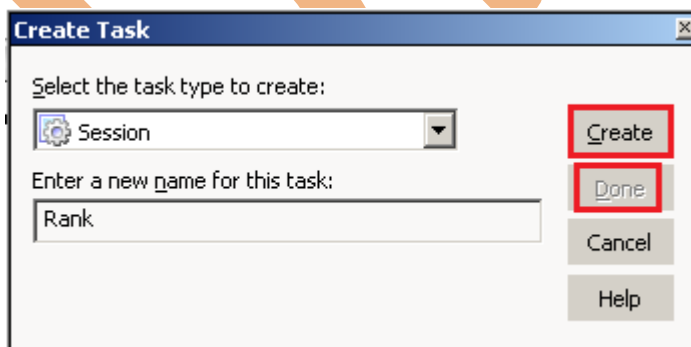


Start

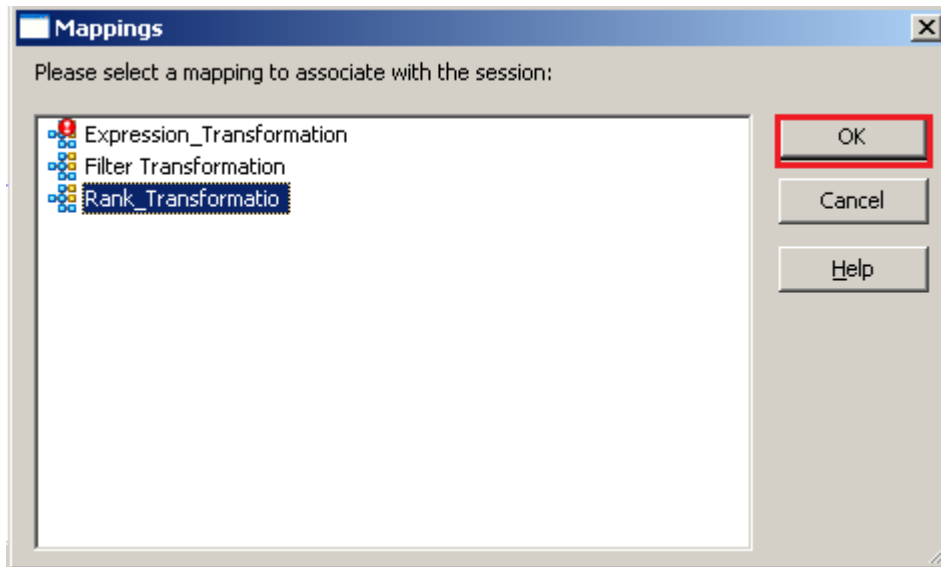
Step-3 Now create Task, Go to Tasks Menu and click Create.



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



Step-5 Select Mapping to associate with the session.



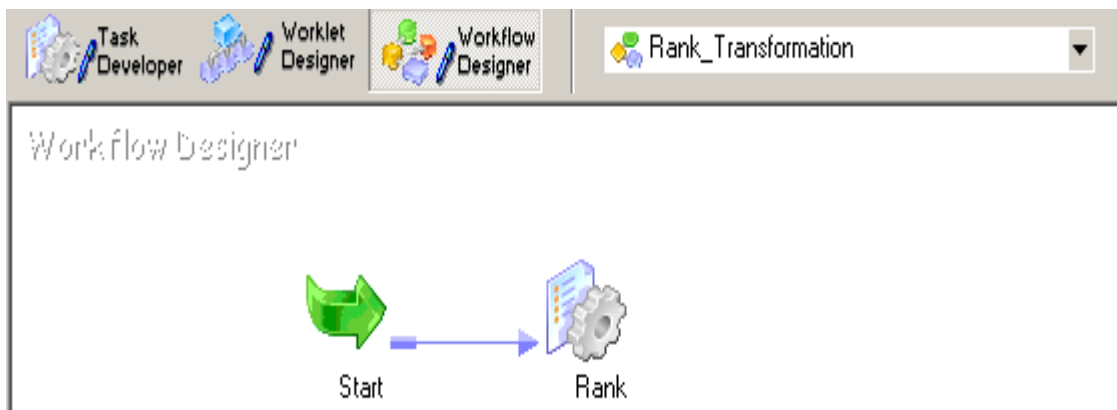
Step-6 Workflow Designer Window.



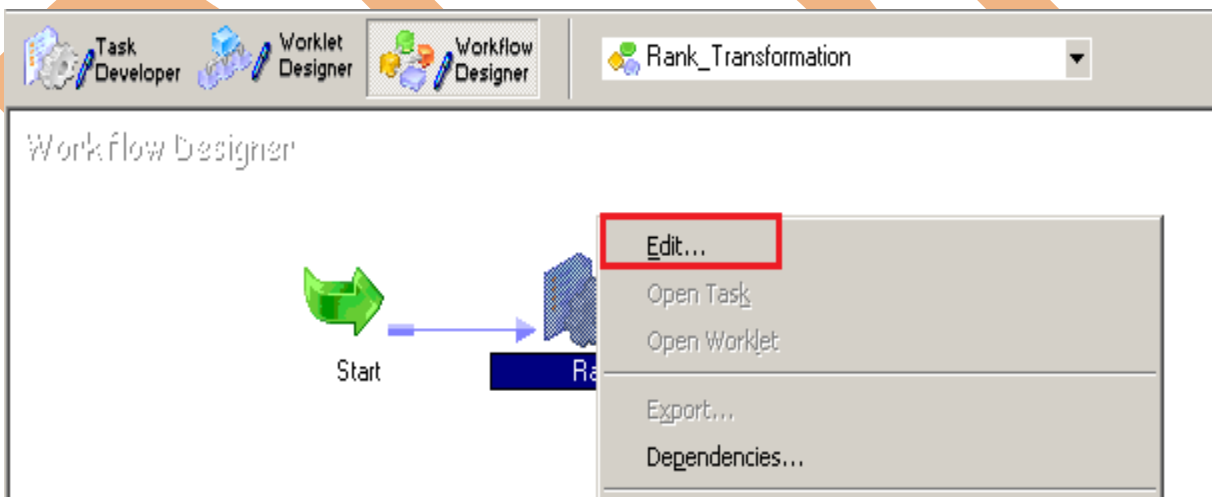
Step-7 Now create flow B/W Workflow to Task. Select Line Task and link to Start to Filter.



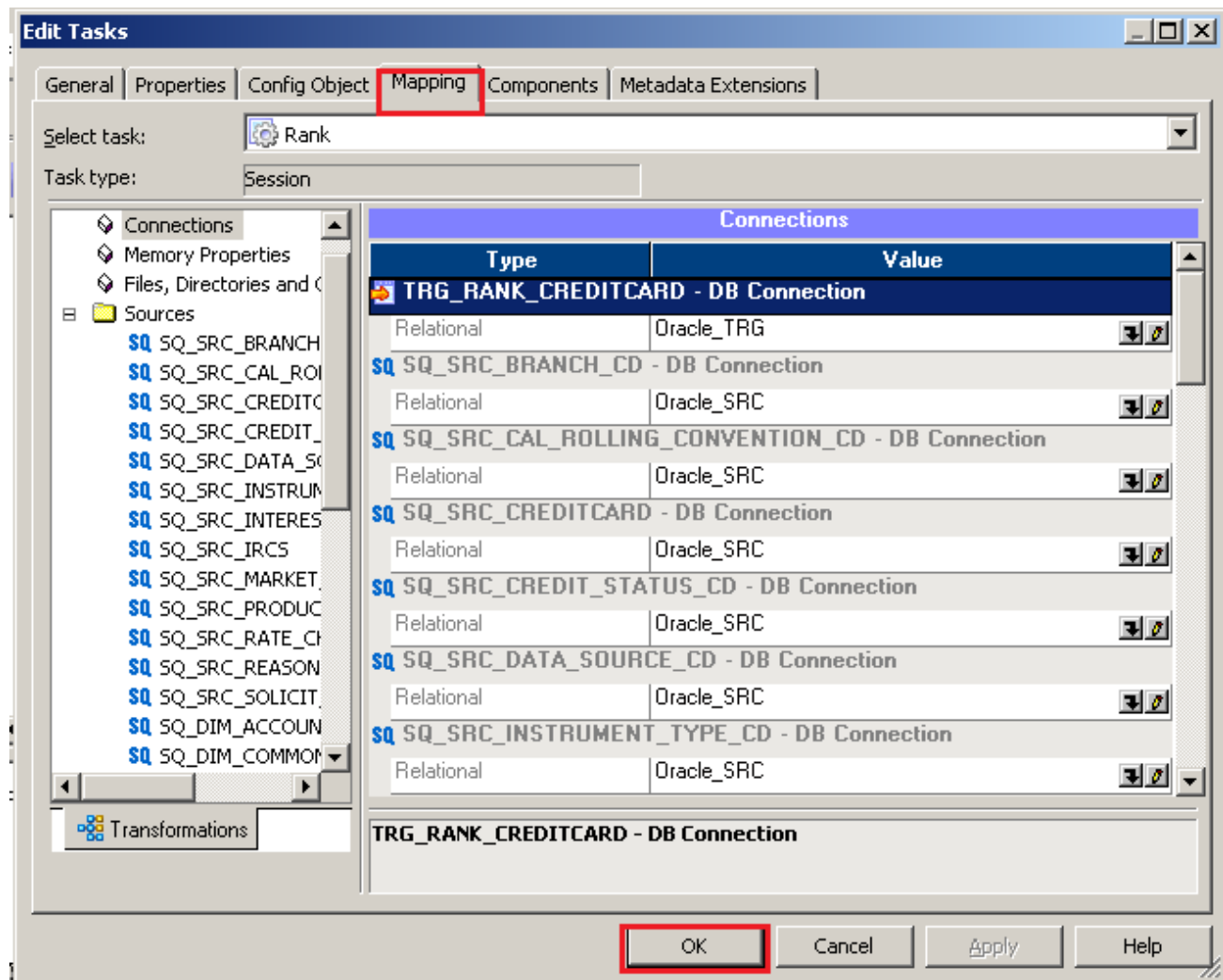
Step-8 Work Designer Windows



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



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



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

10/23/2012 16:55:34 ** Saving... Repository infoReposUser, Folder Transformation_Example

Validating the flow semantics of Workflow Rank_Transformation...
...flow semantics validation completed with no errors.

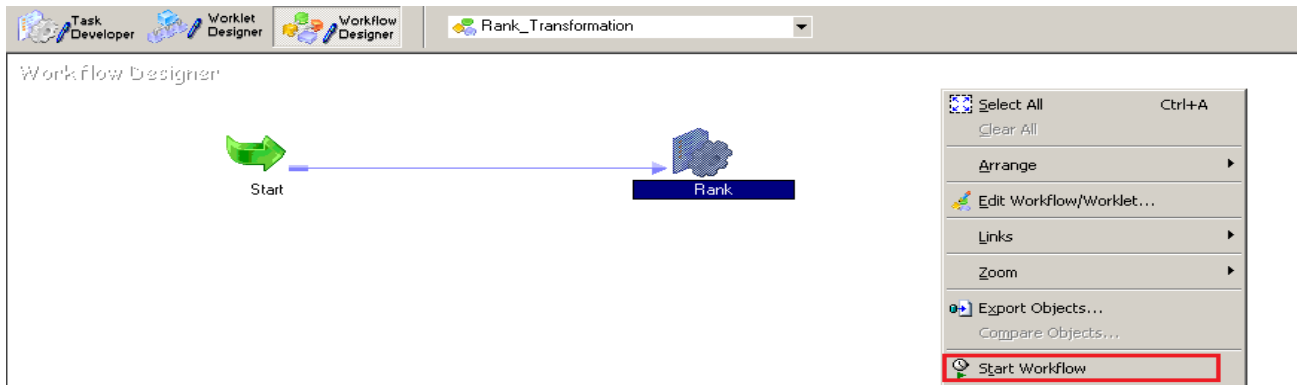
Validating tasks of Workflow Rank_Transformation...
...Workflow Rank_Transformation tasks validation completed with no errors.

***** Workflow Rank_Transformation is VALID *****

Workflow Rank_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.

Task Name	Start Time	End Time	Status
Rank_Transform...	10/23/2012 5:00:36 PM	10/23/2012 5:01:32 PM	Succeeded
Rank	10/23/2012 5:00:42 PM	10/23/2012 5:01:31 PM	Succeeded

Step-2 Session log.

Severity	Timestamp	Node	Thread	Message Co...	Message
INFO	10/23/2012 5:00:36 PM	node01_mitest	7276	LM_36435	Starting execution of workflow [Rank_Transformation] in folder [Transformation_Example] last saved by user [infouser].
INFO	10/23/2012 5:00:36 PM	node01_mitest	7276	LM_44206	Workflow Rank_Transformation started with run id [58], run instance name [], run type [Concurrent Run Disabled].
INFO	10/23/2012 5:00:36 PM	node01_mitest	7276	LM_44195	Workflow [Rank_Transformation] service level [SLPriority:5,SLDispatchWaitTime:1800].
INFO	10/23/2012 5:00:40 PM	node01_mitest	7276	LM_44253	Workflow started. Clients will be notified.
INFO	10/23/2012 5:00:40 PM	node01_mitest	7276	LM_36330	Start task instance [Start]: Execution started.
INFO	10/23/2012 5:00:41 PM	node01_mitest	7276	LM_36318	Start task instance [Start]: Execution succeeded.
INFO	10/23/2012 5:00:41 PM	node01_mitest	7276	LM_36505	Link [Start -> Rank]: empty expression string, evaluated to TRUE.
INFO	10/23/2012 5:00:42 PM	node01_mitest	7276	LM_36388	Session task instance [Rank] is waiting to be started.
INFO	10/23/2012 5:00:42 PM	node01_mitest	7632	LM_36682	Session task instance [Rank]: started a process with pid [15576] on node [node01_mitesha].
INFO	10/23/2012 5:00:42 PM	node01_mitest	7632	LM_36330	Session task instance [Rank]: Execution started.
INFO	10/23/2012 5:01:21 PM	node01_mitest	7956	LM_36488	Session task instance [Rank]: [TM_6793 Fetching initialization properties from the Integration Service. : [Tue Oct 23 17:01:14 2012]]
INFO	10/23/2012 5:01:21 PM	node01_mitest	7956	LM_36488	Session task instance [Rank]: [DISP_20305 The [Preparer] DTM with process id [15576] is running on node [node01_mitesha]. : [Tue Oct 23 17:01:14 2012]]
INFO	10/23/2012 5:01:21 PM	node01_mitest	7956	LM_36488	Session task instance [Rank]: [PETL_24036 Beginning the prepare phase for the session.]
INFO	10/23/2012 5:01:21 PM	node01_mitest	7956	LM_36488	Session task instance [Rank]: [TM_6721 Started [Connect to Repository].]
INFO	10/23/2012 5:01:21 PM	node01_mitest	7956	LM_36488	Session task instance [Rank]: [TM_6722 Finished [Connect to Repository]. It took [0.734375] seconds.]
INFO	10/23/2012 5:01:21 PM	node01_mitest	7956	LM_36488	Session task instance [Rank]: [TM_6794 Connected to repository [infoBennel] user in

Severity: INFO
Timestamp: 10/23/2012 5:00:36 PM
Node: node01_mitesha
Thread: 7276
Process ID: 796
Message Code: LM_36435
Message: Starting execution of workflow [Rank_Transformation] in folder [Transformation_Example] last saved by user [infouser].

Step-3 Now view data in Target RDBMS (Oracle 11g)

The screenshot shows the Oracle SQL Developer interface. The title bar indicates the user is 'admin' and the current table is 'TRG_R_CREDIT_CARD'. The interface includes a menu bar with options like 'Columns', 'Data', 'Constraints', 'Grants', 'Statistics', 'Column Statistics', 'Triggers', 'Dependencies', 'Details', 'Partitions', 'Indexes', and 'SQL'. Below the menu bar is a toolbar with icons for various actions and a 'Filter:' field with the placeholder text 'Enter Where Clause'. The main area displays a table with the following columns: RANK_ID, N_ACCT_SKEY, COMMON_COA_ID, CUSTOME..., GL_ACCOUNT_ID, ORG_UNIT_ID, PRODUCT_ID, and RANK_CHARGE_OFF_BAL. The first and last columns are highlighted with red boxes. The table contains 13 rows of data.

RANK_ID	N_ACCT_SKEY	COMMON_COA_ID	CUSTOME...	GL_ACCOUNT_ID	ORG_UNIT_ID	PRODUCT_ID	RANK_CHARGE_OFF_BAL	
1	1	12	700000564	1234	511302	1500	6003	12569
2	2	13	700000571	124	401205	1500	9876	9603
3	3	5	700000568	12346	820111	1001	100	5464
4	4	3	700000563	124	846131	802	411	5454
5	5	8	700000557	124	635305	1250	505	2348
6	6	2	700000562	1234	834003	500	410	1532
7	7	6	700000555	123	110401	1100	102	1253
8	8	14	700000561	12345	834003	1500	410	999
9	9	10	700000559	12346	834004	1350	6001	958
10	10	7	700000556	1234	21009	1200	202	695
11	11	1	700000561	123	401205	10	9876	544
12	12	9	700000558	12345	330590	1300	507	369
13	13	4	700000565	12345	27121	803	103	132

