Informatica Power Center 9.0.1

Informatica Audit Tables

BISP

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 hands-on practice for Informatica Audit Tables. Join our professional training program and learn from experts.

History:

Version	Description Change	Author	Publish Date
0.1	Initial Draft	Upendra Upadhyay	12th Aug 2011
0.1	Review#1	Amit Sharma	18th Aug 2011

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Objective:

Audit Tables are set of tables which contain workflow and session Information. In short these tables store information about workflow and session status, session statistics, wkf status, session start time, end time, src success rows, tgt success rows etc.

For this we have a valid mapping (on which mapping we need to audit) with valid session and work flow.

Process to implement Audit Tables:

- First create one dummy source column into source table.
- Now, create target table into Target Designer window.
- Now create mapping and then create variable by using Variable and Parameter submenu. And then create expression transformation.
- Now assign these user defined variable into Expression transformation.
- Now go to Workflow Manager and create workflow and go to Variable tab and create workflow variable.
- Now create session 1, you can also drag and drop and reusable session.
- Now create assignment task and specify predefined variable to workflow variable.
- Now, create session 2 for Informatica audit table and got to Components tab and specify mapp9ing and workflow variable into pres-session component tab.
- Now save and execute this mapping.

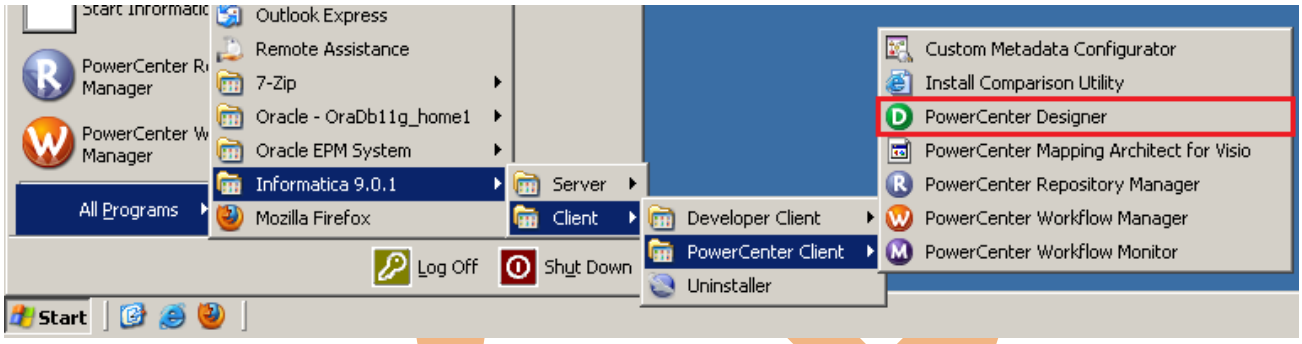
Structure of Process Control/Audit table

The table structure of the process control table is given below.

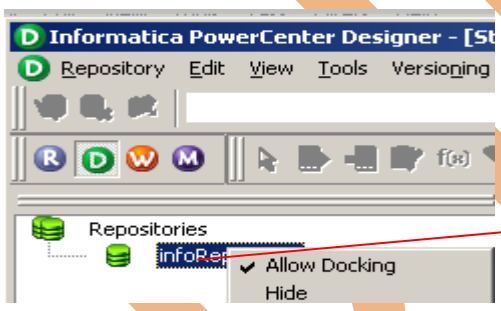
PROCESS_RUN_ID	Number(p,s)	11	A unique number used to identify a specific process run.
PROCESS_NME	Varchar2	120	The name of the process (this column will be populated with the names of the Informatica mappings.)
START_TMST	Date	19	The date/time when the process started.
END_TMST	Date	19	The date/time when the process ended.
ROW_READ_CNT	Number(p,s)	16	The number of rows read by the process.
ROW_INSERT_CNT	Number(p,s)	16	The number of rows inserted by the process.
ROW_UPDATE_CNT	Number(p,s)	16	The number of rows updated by the process.
ROW_DELETE_CNT	Number(p,s)	16	The number of rows deleted by the process
ROW_REJECT_CNT	Number(p,s)	16	The number of rows rejected by the process.
USER_ID	Varchar2	32	The etl user identifier associated with the process.

Importing Source and Target Table: Import data from source and create target table (There are two types to create target table, Manually or import from database). There are following step to importing source and target database (Table).

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

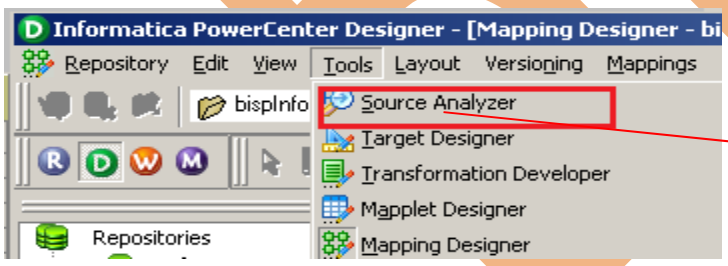


Step-2 Then Connect to Repository in Informatica Power Center Designer Right click on repository name and click on Connect.



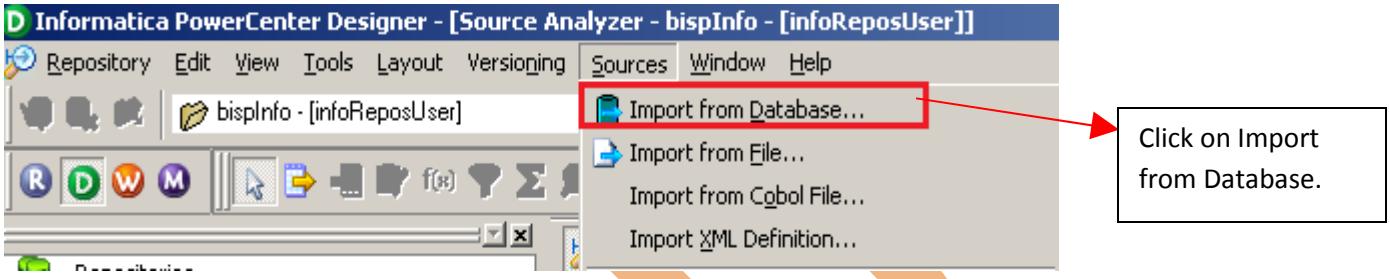
Right Click on InfoRepoUser.

Step-3 Now, create one dummy source or you can also import from database or Flatfile.

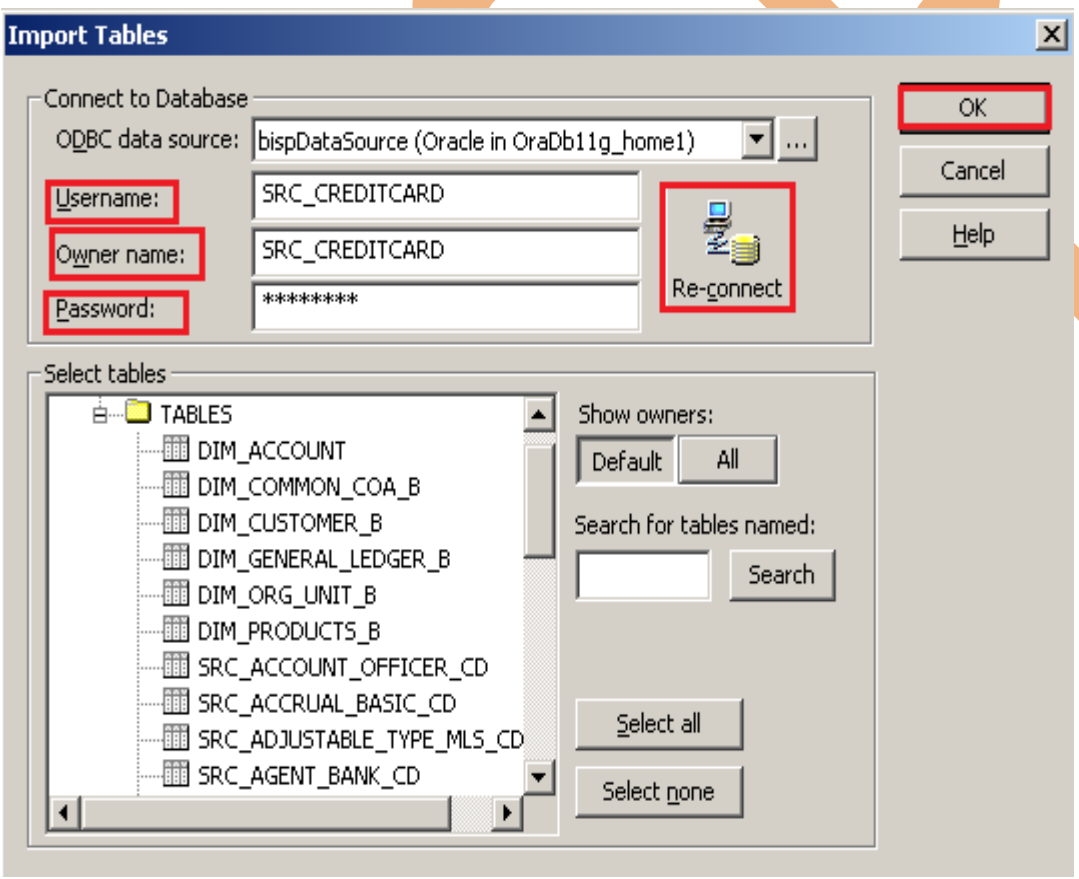


Select Source Analyzer

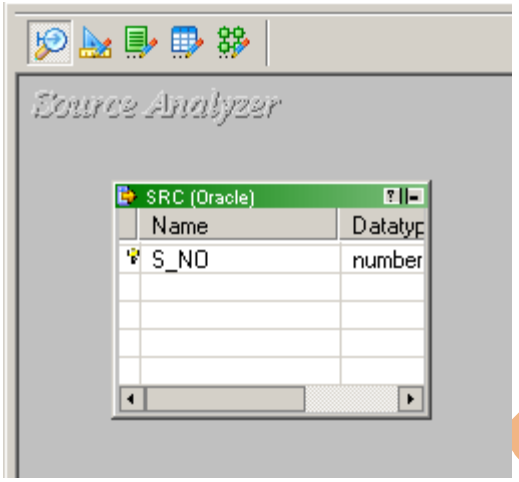
Step-4 And then go to Sources Menu in Informatica Power Center Designer Menu bar and select Import from database (Here some other options available such as Import from Database(import source data from RDBMS), Import from File(import source data from Flatfile), Import from Cobol File(import Cobol source), Import XML Definition(import source data from XML) etc.).



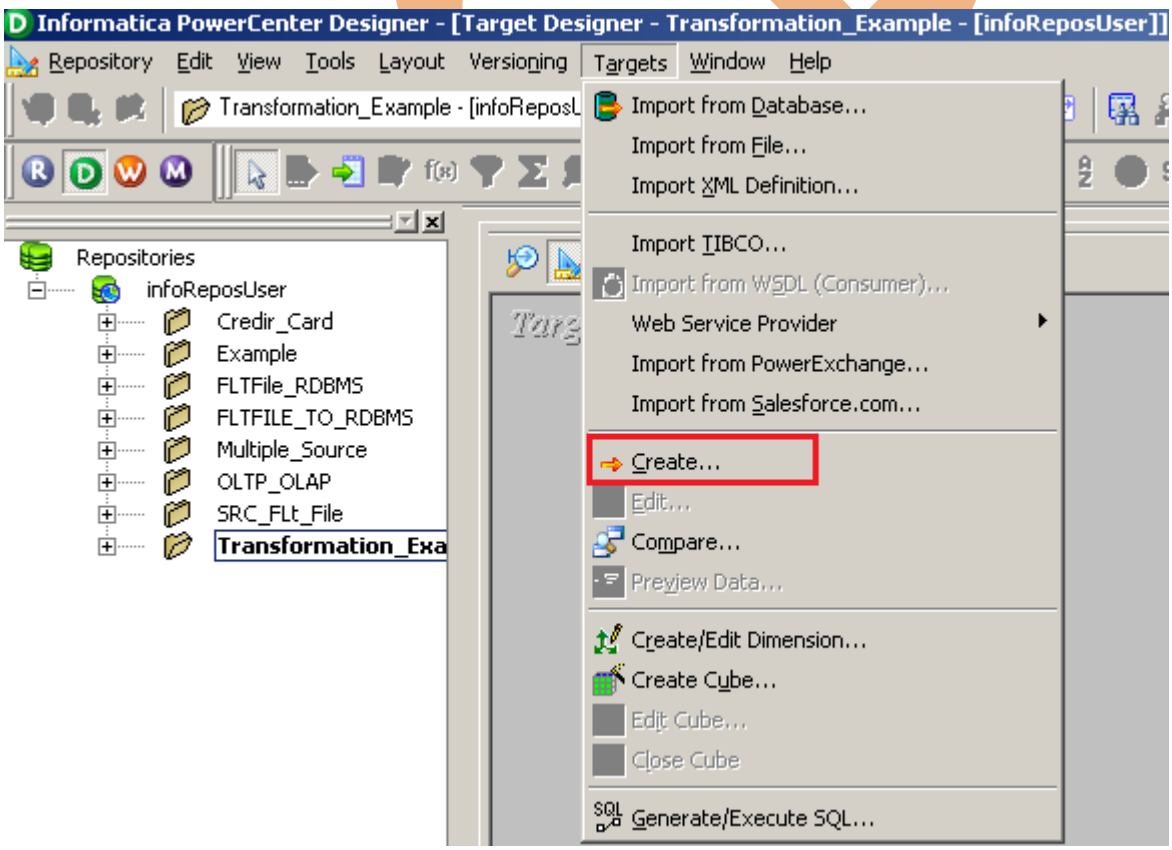
Step-5 Specify Username, Owner name and password then click on connect. Select source table and click on OK if you select all table, then click on select all and click OK.



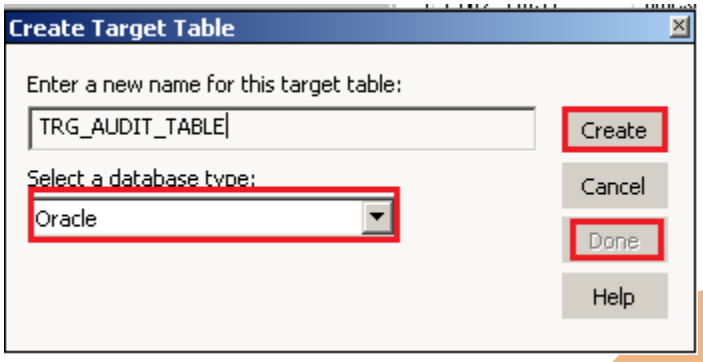
Step-6 Source table in source analyzer window. Then right click on Source table and select Preview Data to view data. If you want to edit some column and its relationship then you can do this from select Edit options. Also, some other options available such as Export Objects, Compare Objects, Dependencies.., Iconize etc.



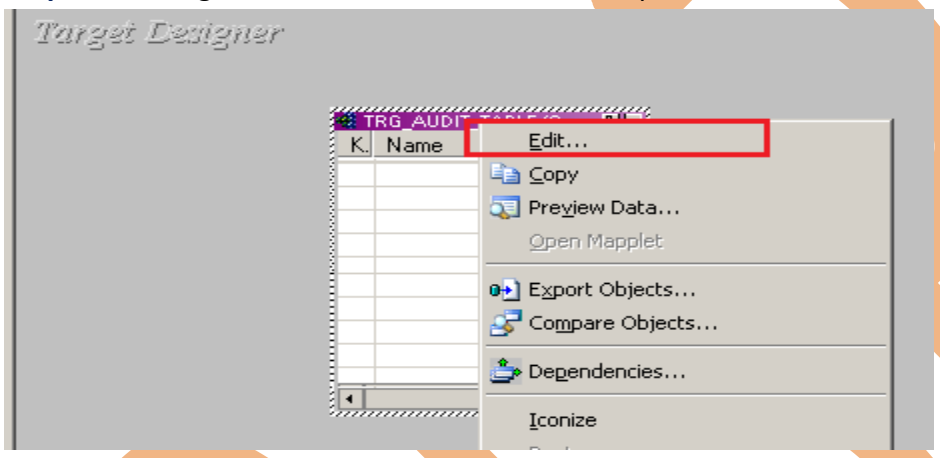
Step-7 Now click on Target Designer. And then select Target menu in Informatica Power Center Designer Menu bar and click on create to Target Table



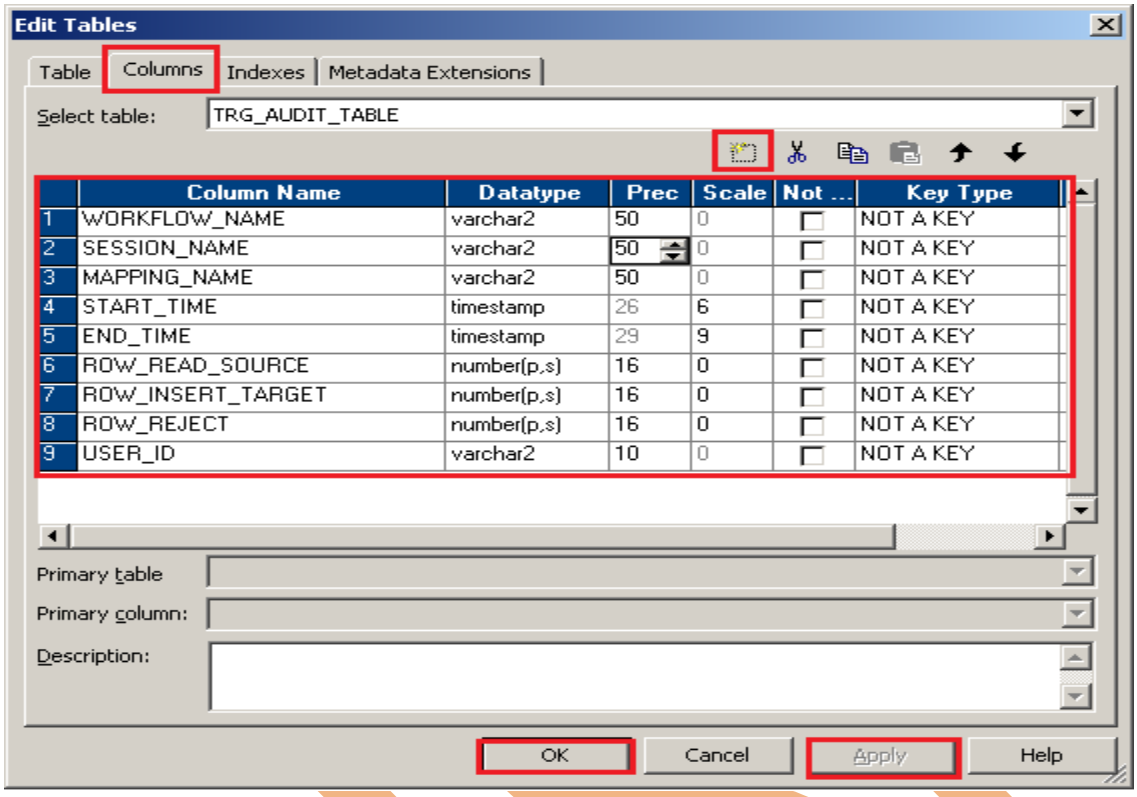
Step-8 Now, Give target table name and specify database type.



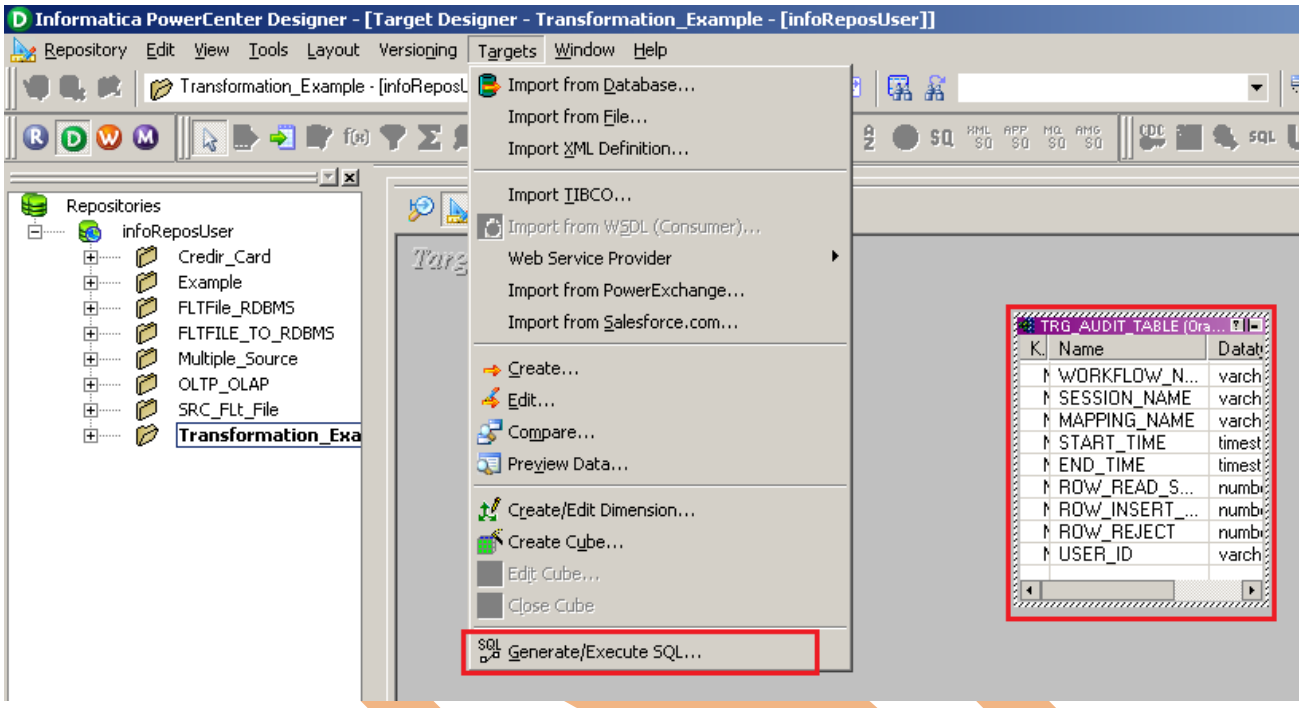
Step-9 Now, Right click on table and select Edit option to add column into target table.



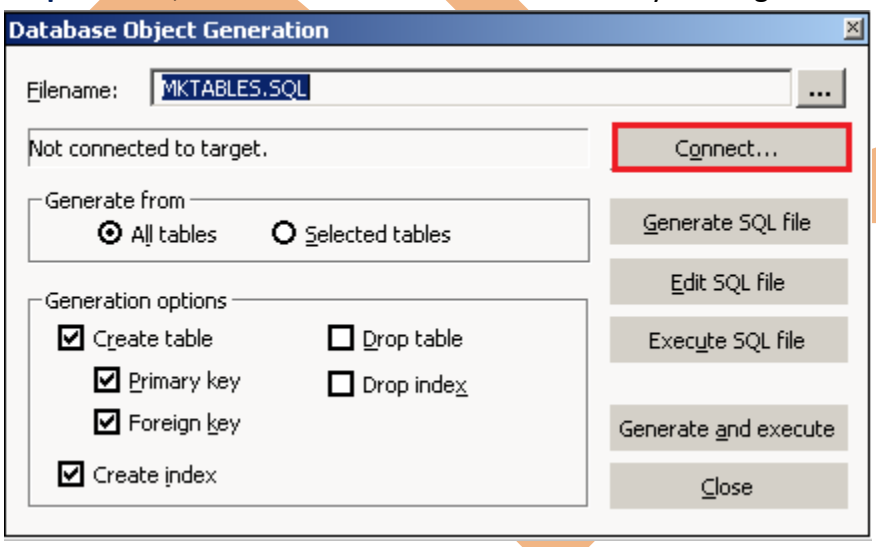
Step-10 Now click on Column tab to add column into target table and then click on add button and specify column name, data type and you can also specify key type into column tab.


Edit Tables
Table
Columns
Indexes
Metadata Extensions
Select table:
TRG_AUDIT_TABLE
Column Name
Datatype
Prec
Scale
Not ...
Key Type
1 WORKFLOW_NAME varchar2 50 0 NOT A KEY
2 SESSION_NAME varchar2 50 0 NOT A KEY
3 MAPPING_NAME varchar2 50 0 NOT A KEY
4 START_TIME timestamp 26 6 NOT A KEY
5 END_TIME timestamp 29 9 NOT A KEY
6 ROW_READ_SOURCE number(p,s) 16 0 NOT A KEY
7 ROW_INSERT_TARGET number(p,s) 16 0 NOT A KEY
8 ROW_REJECT number(p,s) 16 0 NOT A KEY
9 USER_ID varchar2 10 0 NOT A KEY
Primary table
Primary column:
Description:
OK
Cancel
Apply
Help

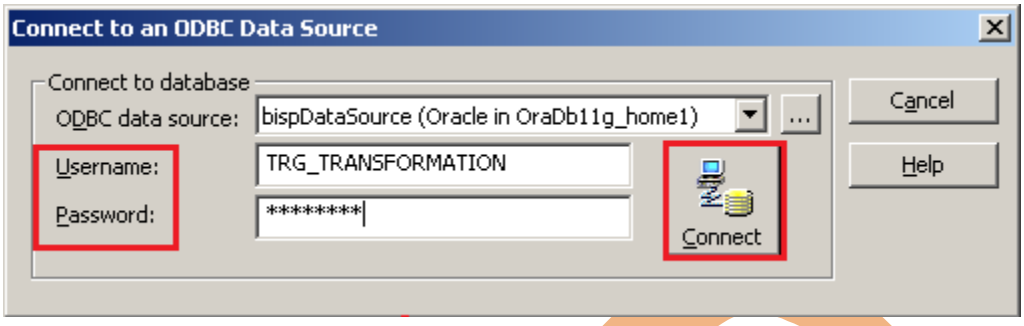
Step-11 Now, Select table and Generate/Execute SQL to generate this table into the target technology, so click on Target menu and then click on Generate/Execute SQL..



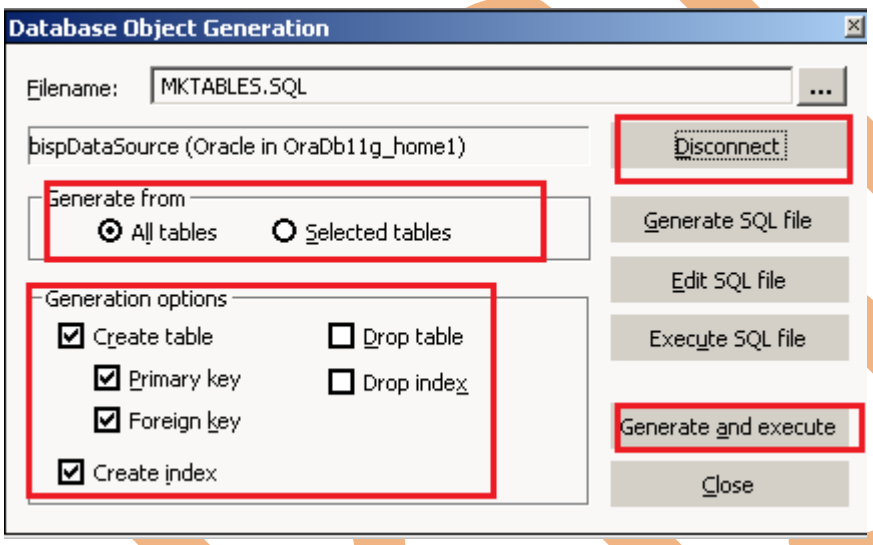
Step-12 Now, Click on connect button to connect your target technolog.



Step-13 Now, specify ODBC connection and also give Username and Password and then click on Connect button.



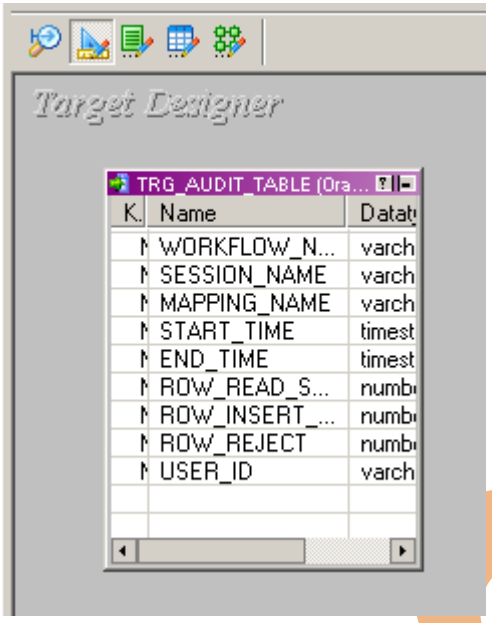
Step-14 Now, select Generate from only selected tables and also you can click on Create table options and in then last click on Generate and execute button and click on Close botton.



Step-15 This is create table script.

```
CREATE TABLE TRG_AUDIT_TABLE
(
  WORKFLOW_NAME     varchar2(50),
  SESSION_NAME      varchar2(50),
  MAPPING_NAME      varchar2(50),
  START_TIME        timestamp(6),
  END_TIME          timestamp(9),
  ROW_READ_SOURCE   number(16),
  ROW_INSERT_TARGET number(16),
  ROW_REJECT        number(16),
  USER_ID           varchar2(10)
)
SQL statement processed.
```

Step-16 This is target table into Target Designer window.



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CREATE MAPPING

Mappings represent the data flow b/w sources to targets. When the Informatica Power Center Server executes a session, it uses the instructions configured in the mapping to read, transform, and write data.

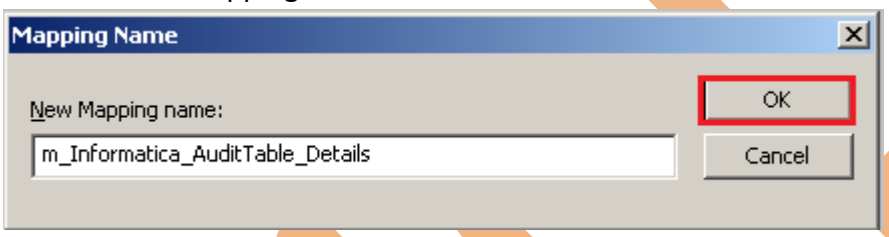
Every mapping must contain the following components:

Source definition: It describes the characteristics of a source.

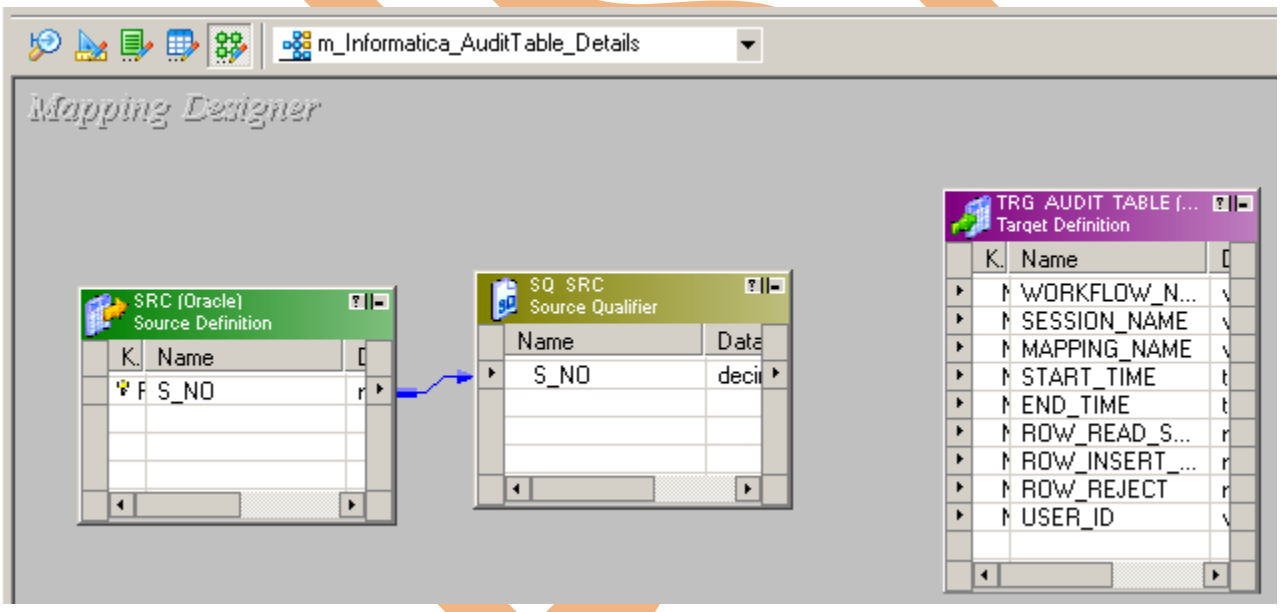
Transformation: A transformation is a repository object which reads the data, modifies the data and passes the data. Transformations in a mapping represent the operations that the integration service performs on the data.

Target definition: It describes the target table.

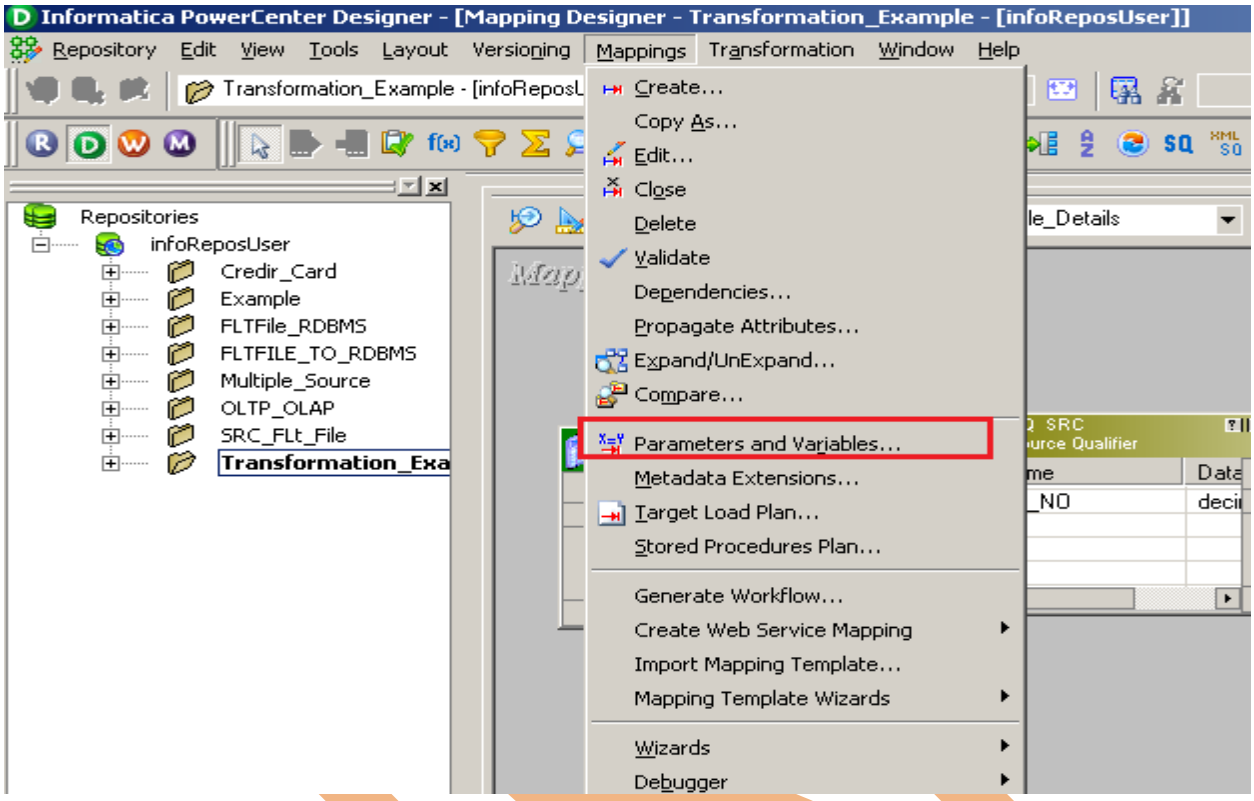
Step-1 Go to Mapping Designer and Create New Mapping for the Data Quality Check and then name of mapping and click OK button.



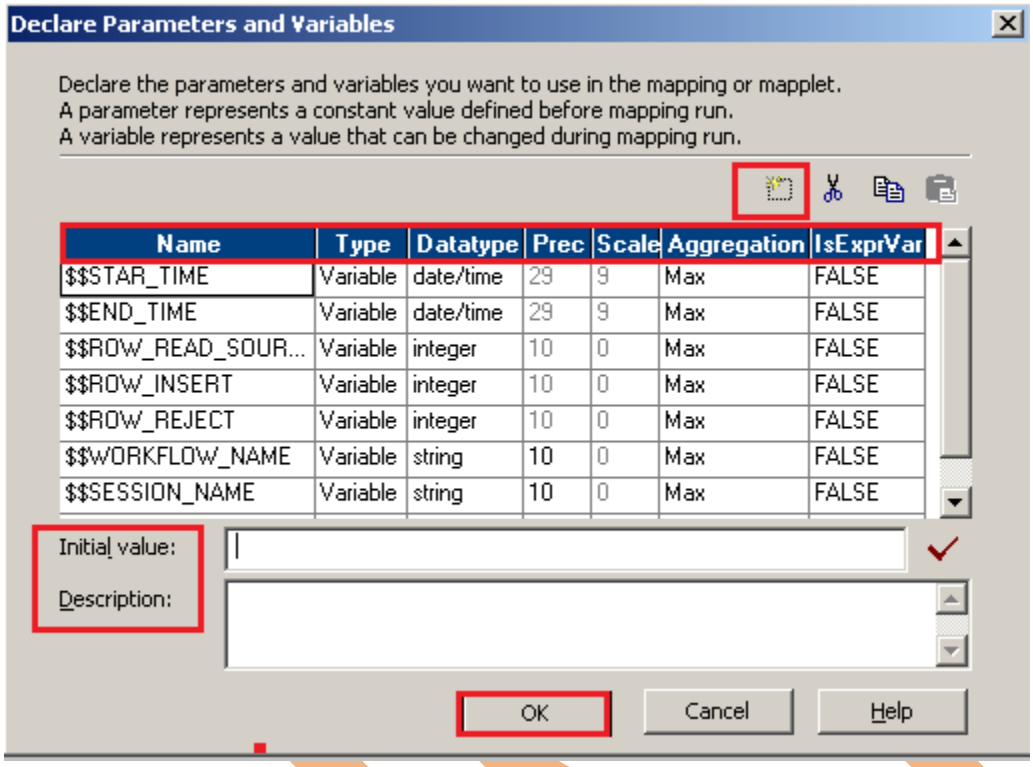
Step-2 Now, drag and drop source and target table into Mapping Designer Window.



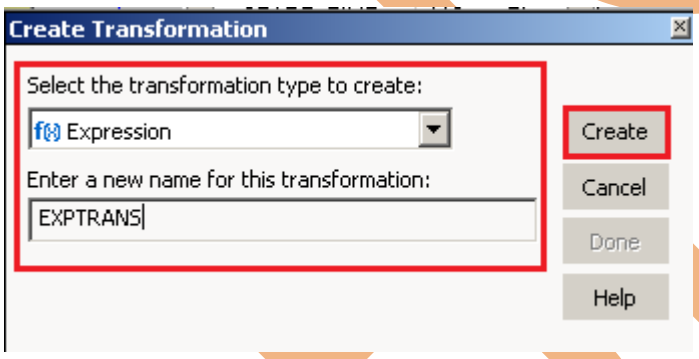
Step-3 Now, create Informatica variable. so click on Mappings menu and click on Parameters and Variables..



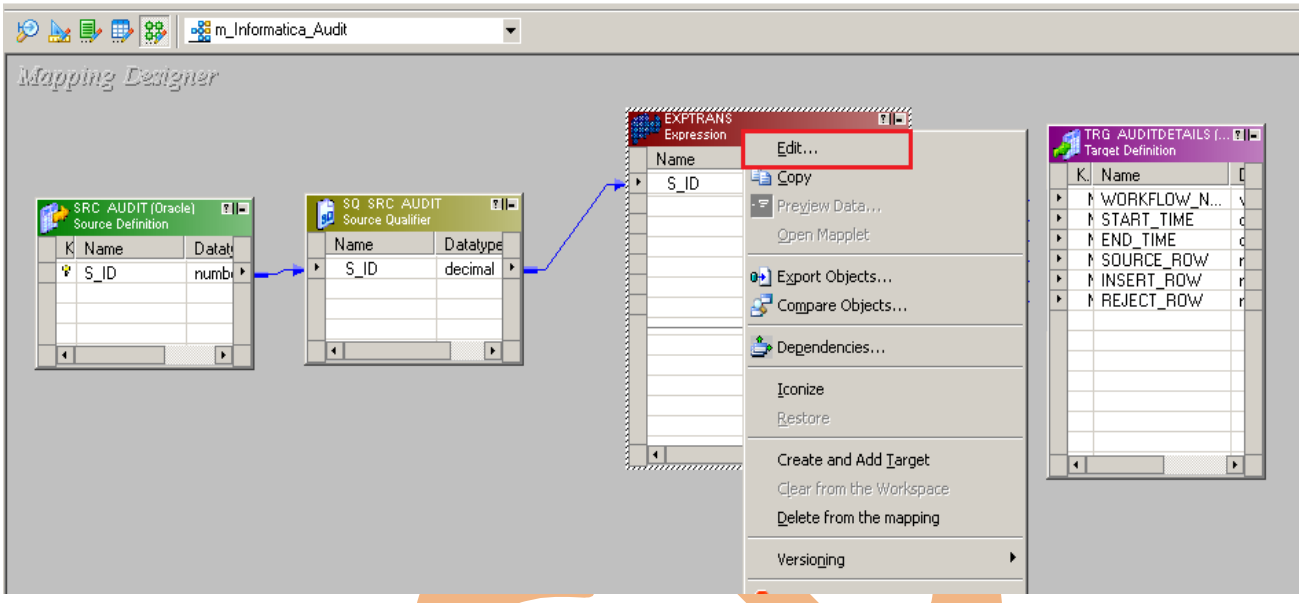
Step-4 Now, add user defined variable, so click on add button to add variable and also specify data type, Aggregation, Is ExprVar etc. and then specify Initial value and you can also define Description of variable and then click on OK button.



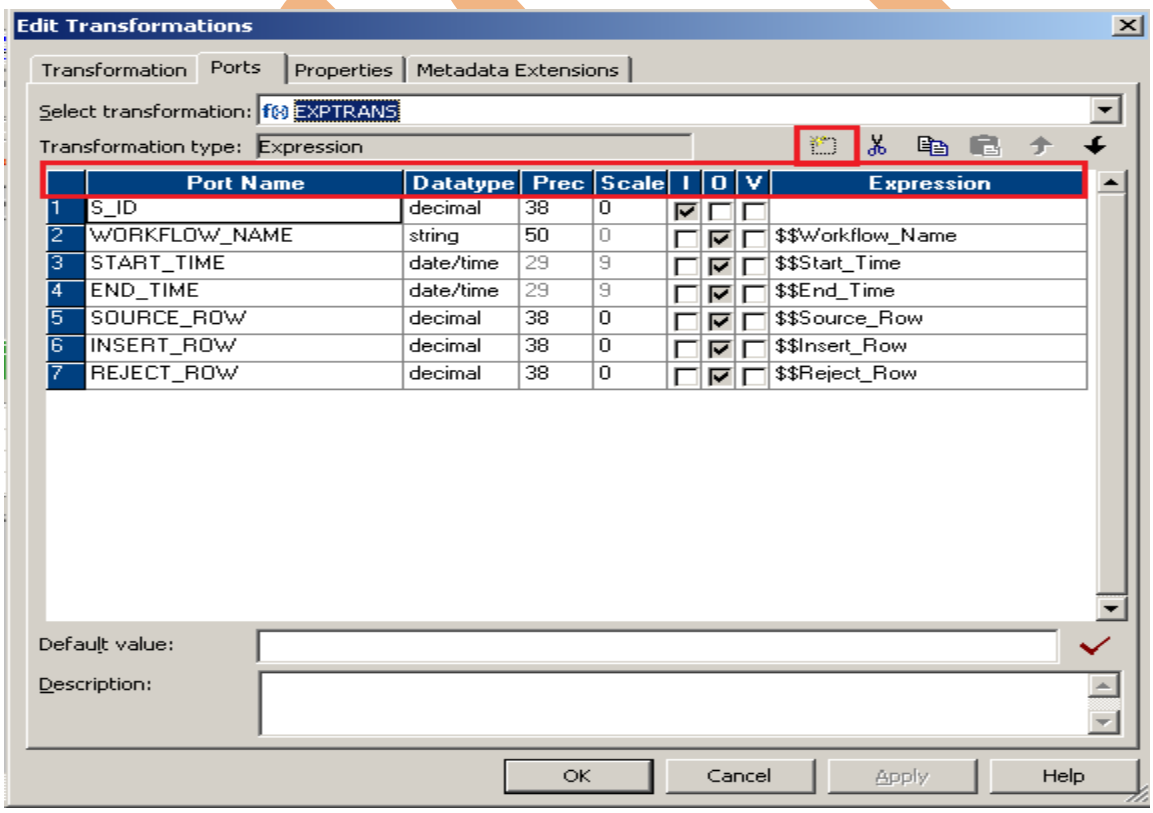
Step-5 Now, create expression transformation in Mapping Designer window.



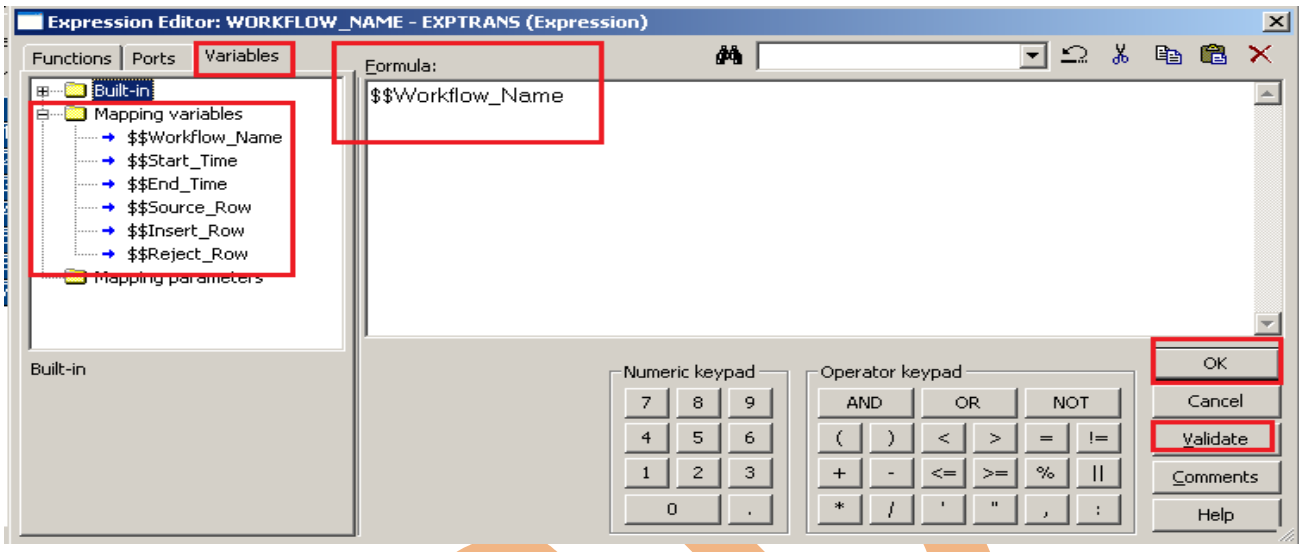
Step-6 Now, Pass source qualifier transformation column into expression transformation, and right click on Expression transformation table and select Edit.



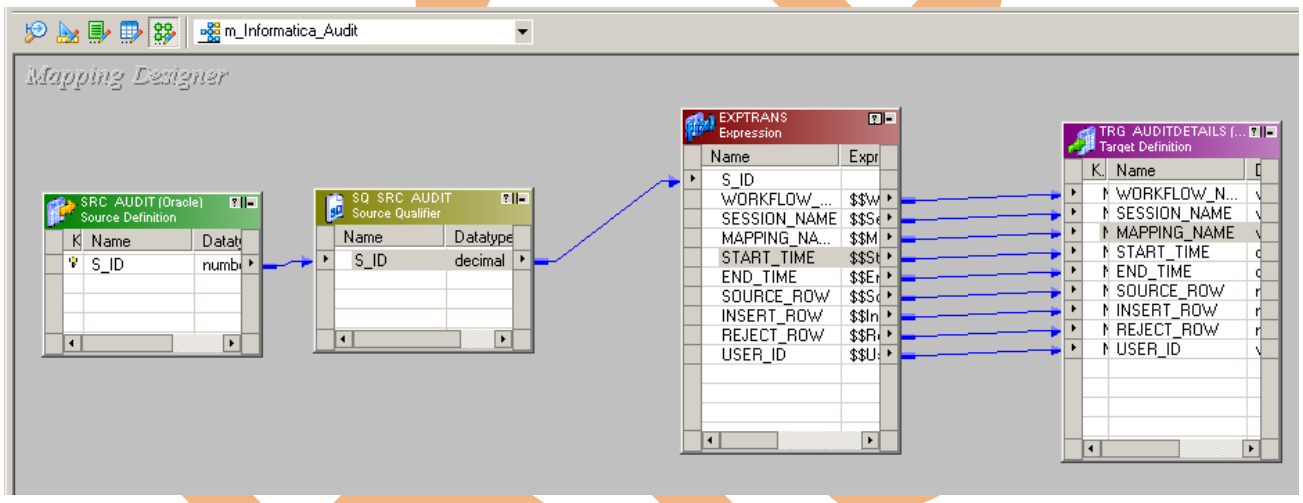
Step-7 Now, add column into Ports tab and also define Data type of Port Name, and then give expression on expression tab.



Step-8 And give expression on all created column into expression tab.



Step-9 Now, Map column to target table.



Step-10 Now, Save this mapping

03/21/2013 15:17:48 ** Saving... Repository infoReposUser, Folder Transformation_Example

---

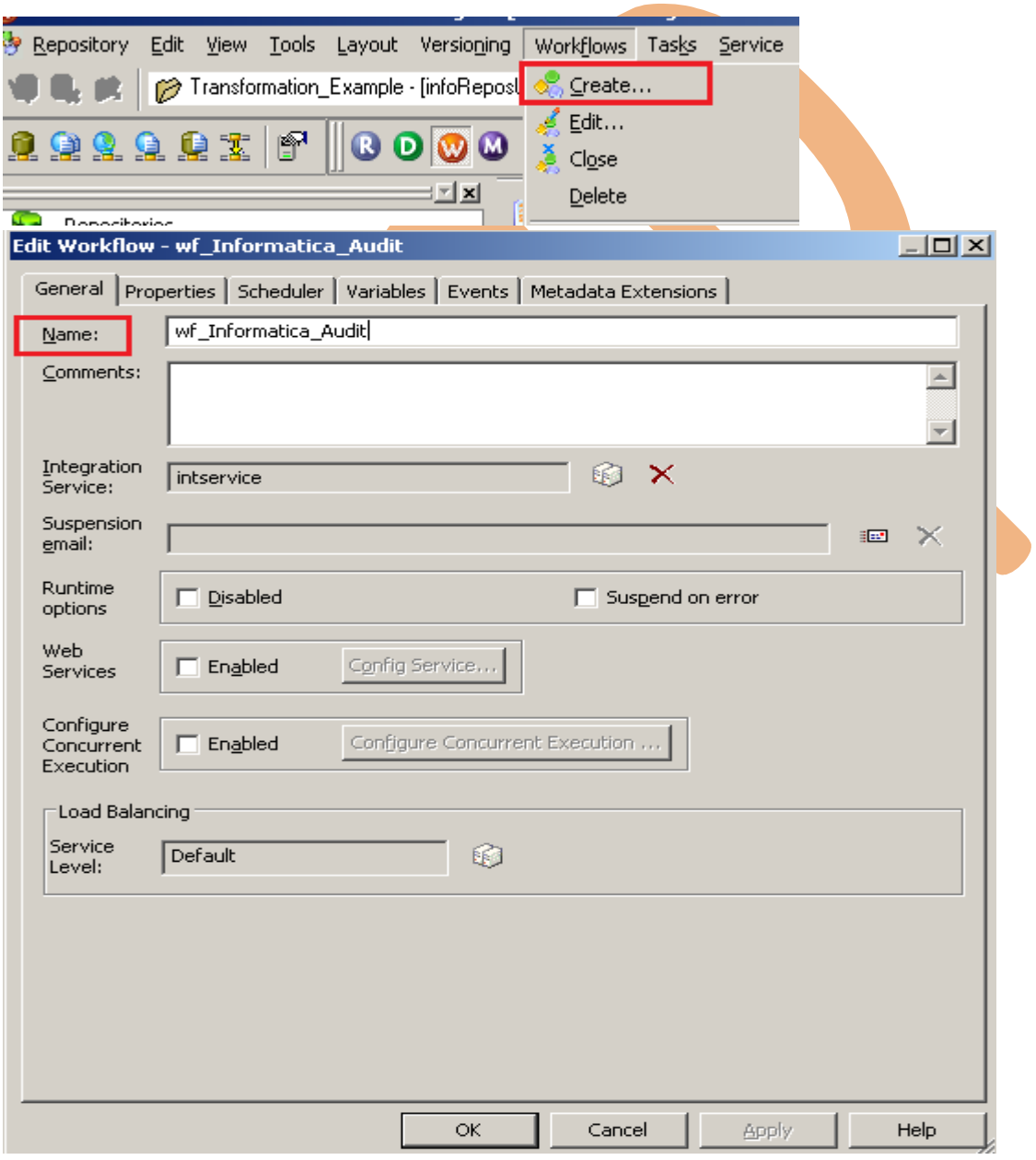
source bispDataSource:SRC_AUDIT inserted.
Target TRG_AUDITDETAILS inserted.
Validating transformations of mapping m_Informatica_Audit...
...transformation validation completed with no errors.
Validating data flow of mapping m_Informatica_Audit...
...data flow validation completed with no errors.
Parsing mapping m_Informatica_Audit...
...parsing completed with no errors.

******** Mapping m_Informatica_Audit is VALID ********
mapping m_Informatica_Audit inserted.

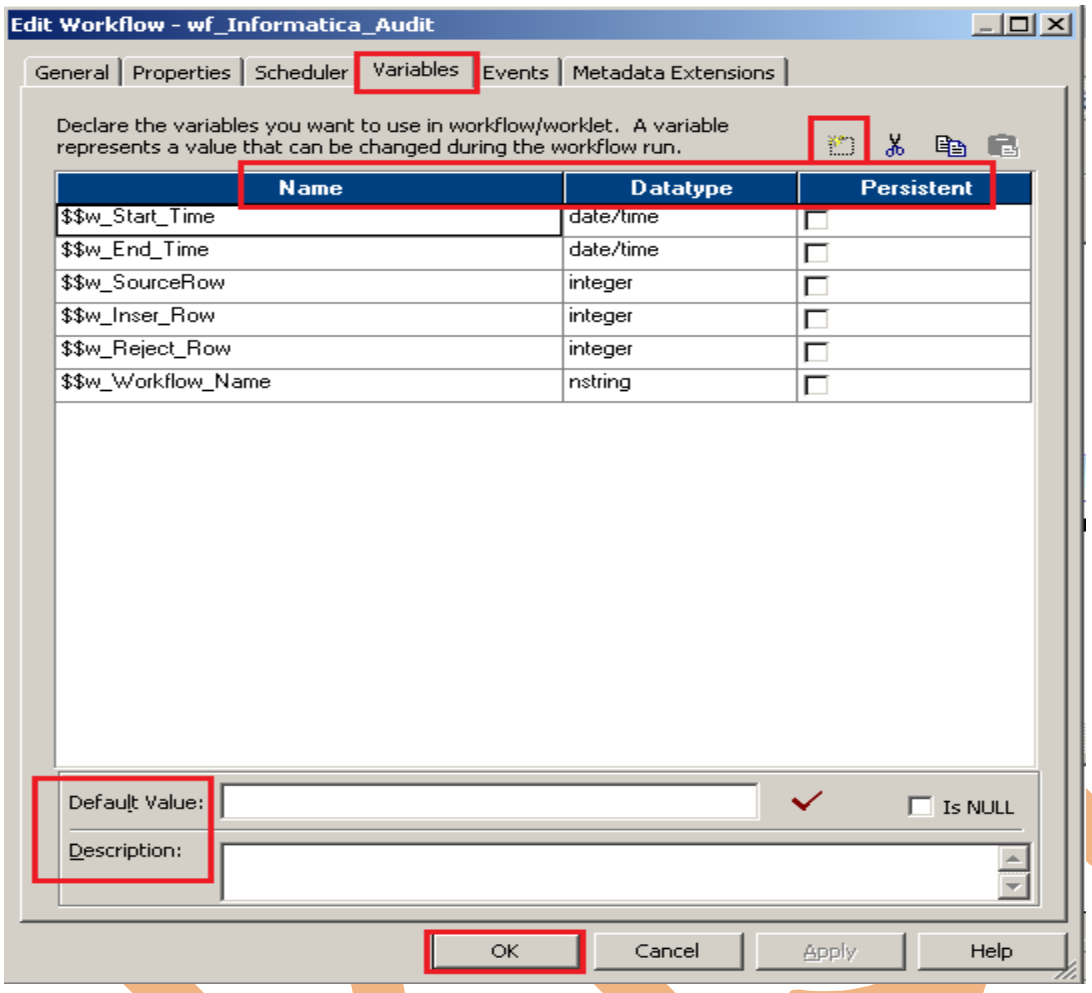
CREATE WORKFLOW

Workflow Manager: Workflow load the data between source to target b/w sequential manner. And also Define run-time properties for a mapping, known as sessions.

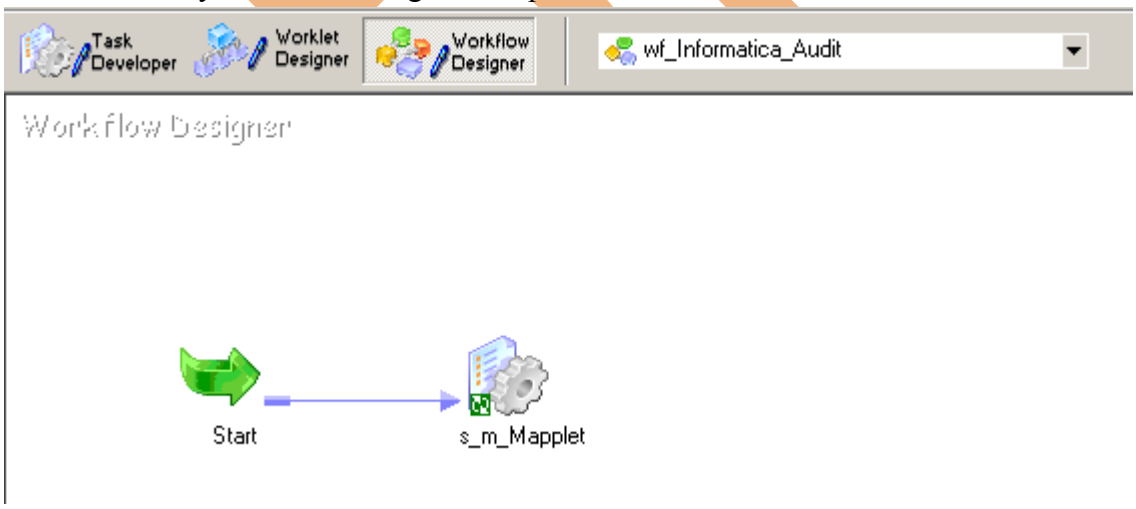
Step-1 Open Informatica PowerCenter Workflow Manager and then go to go to workflow designer and click on workflow menu to create workflow. Specify name and then go to Variables tab.



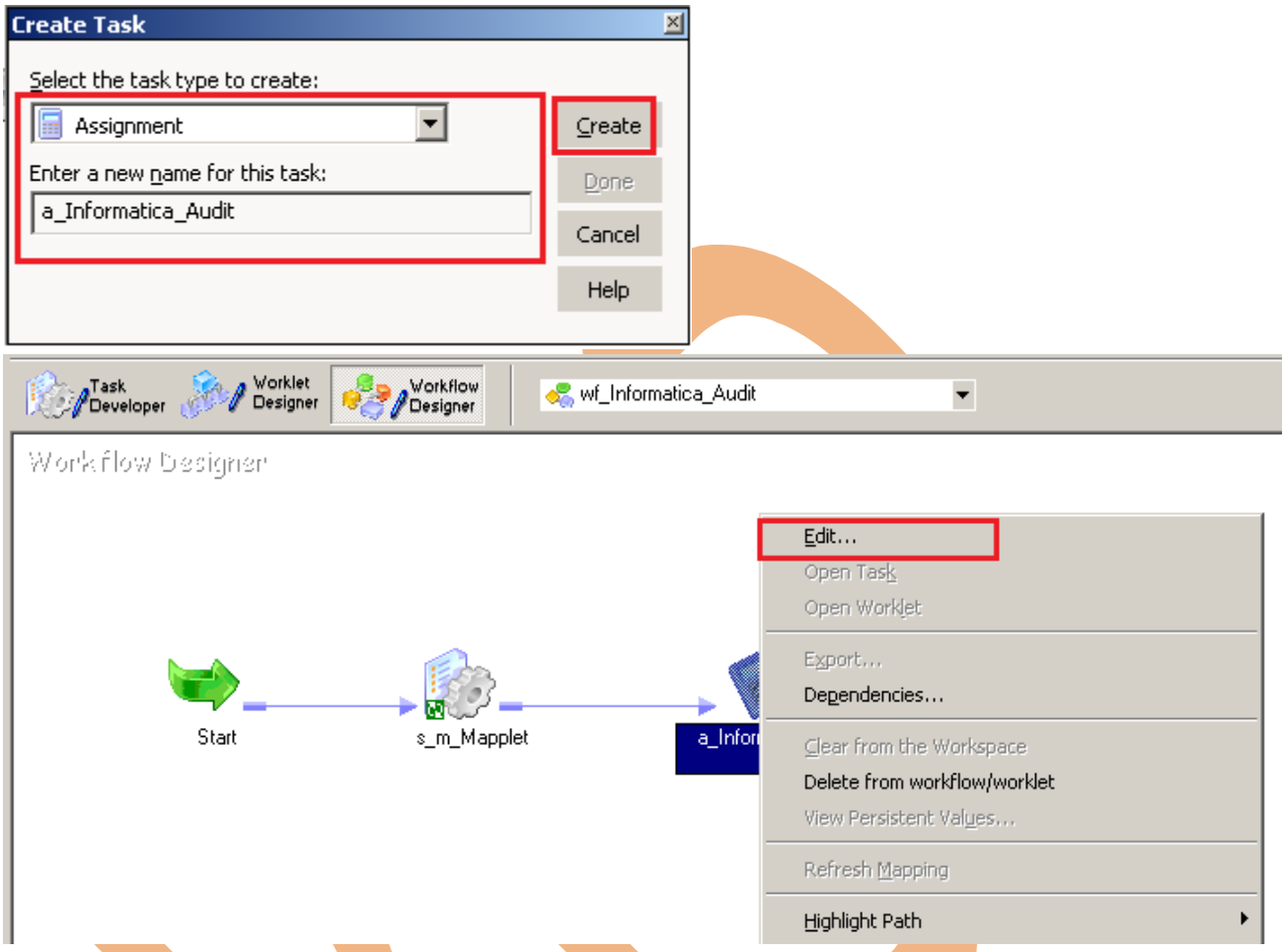
Step-2 Now, specify variable in variable tab, click on add button to add variable and also specify Datatype of variable and you can also set Default value of variable and then click on OK button



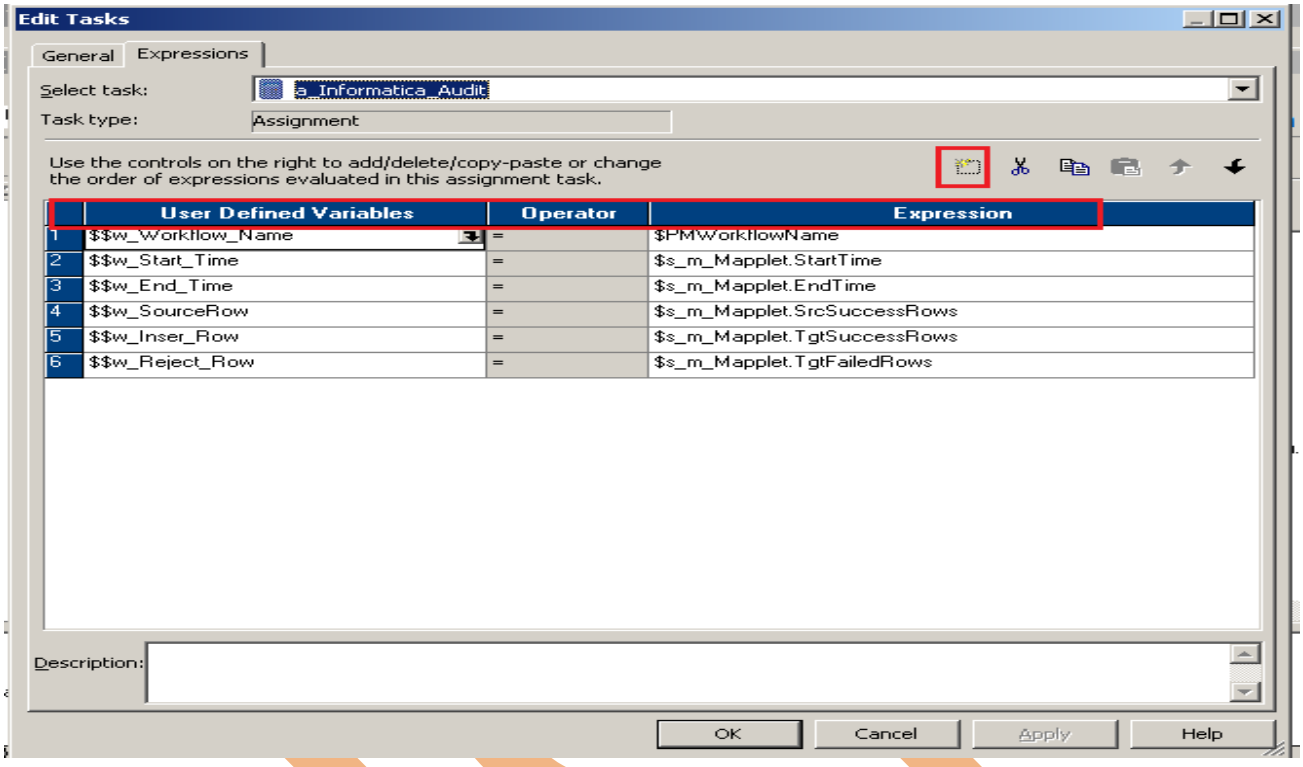
Step-3 Firstly we need to another session means which session you want to statistics so first create session first or you can also drag and drop reusable session.



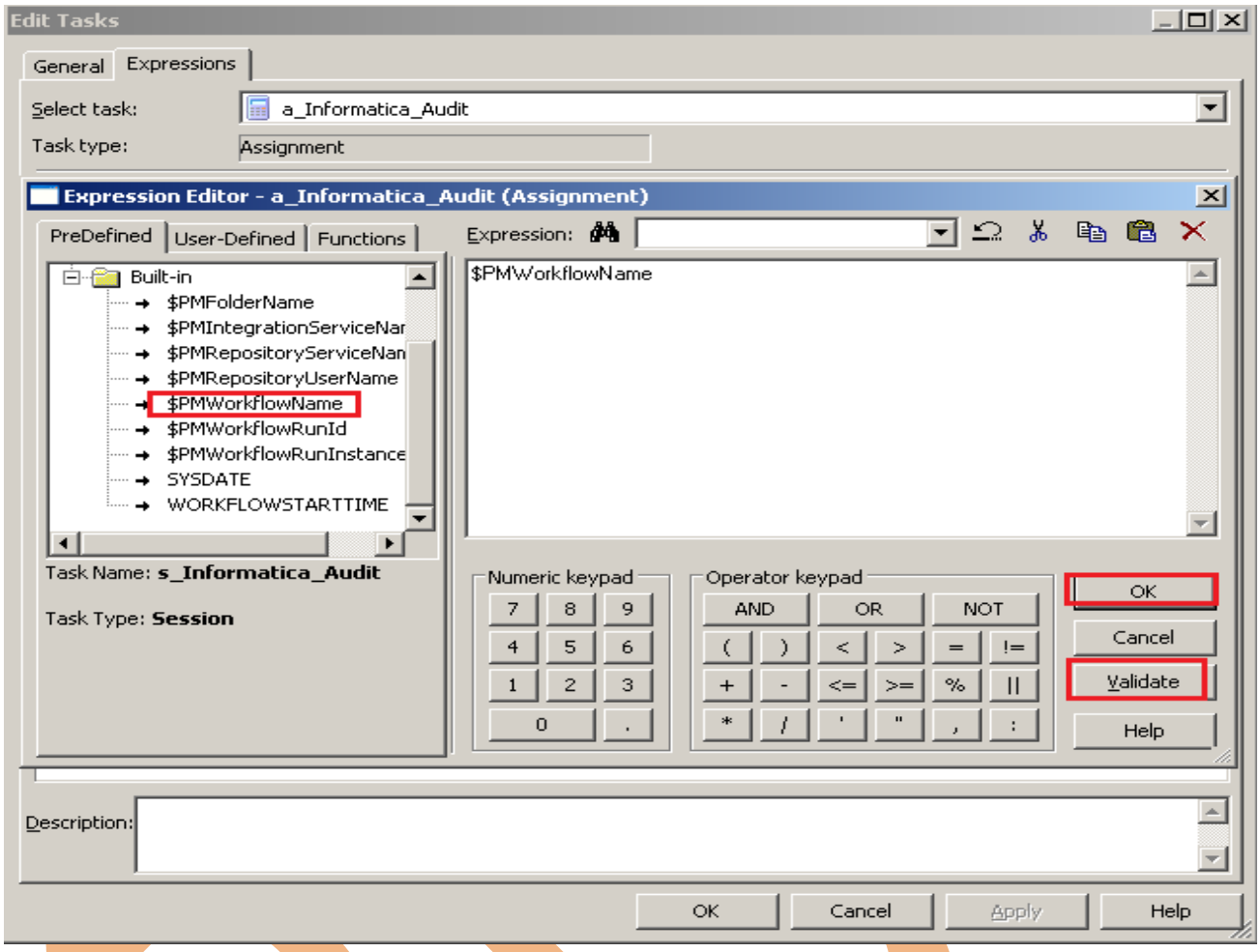
Step-4 Now create assignment task and edit that task and then edit user defined variables on that you get variables that you already have in mappings



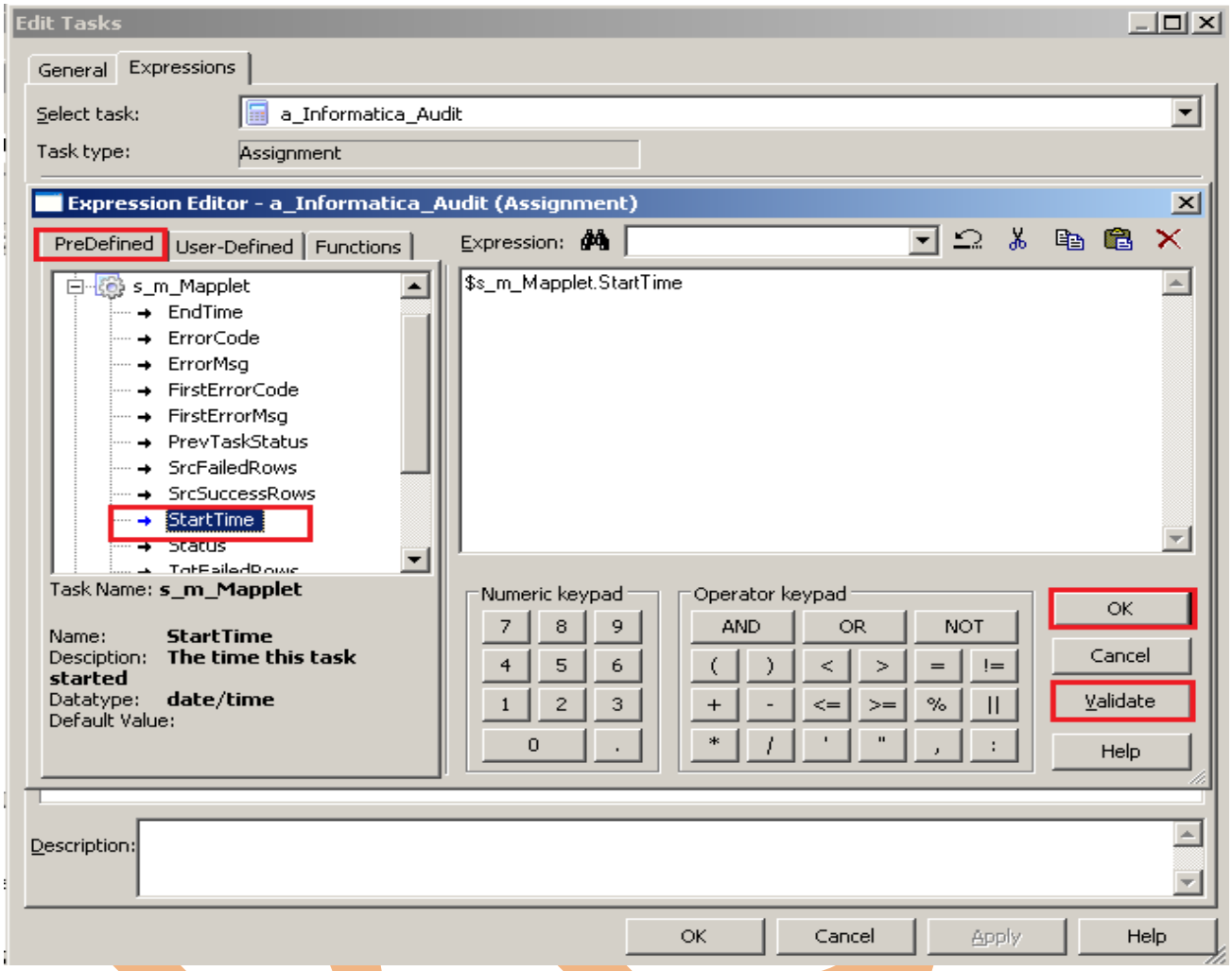
Step-5 Now, go to Expressions tab and create User Defined Variable and then give Expression.



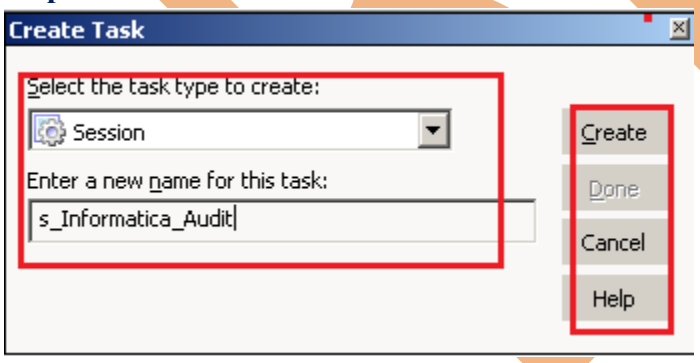
Step-6 And select PreDefined Variable. You can also select User-Defined variable of Function.


Edit Tasks
General
Expressions
Select task:
a_Informatica_Audit
Task type:
Assignment
Expression Editor - a_Informatica_Audit (Assignment)
PreDefined
User-Defined
Functions
Expression:
Built-in
$PMFolderName
$PMIntegrationServiceNar
$PMRepositoryServiceNan
$PMRepositoryUserName
$PMWorkflowName
$PMWorkflowRunId
$PMWorkflowRunInstance
SYSDATE
WORKFLOWSTARTTIME
$PMWorkflowName
Task Name: s_Informatica_Audit
Task Type: Session
Numeric keypad
7 8 9
4 5 6
1 2 3
0 .
Operator keypad
AND OR NOT
( ) < > = !=
+ - <= >= % ||
* / ' " , :
OK
Cancel
Validate
Help
Description:
OK
Cancel
Apply
Help

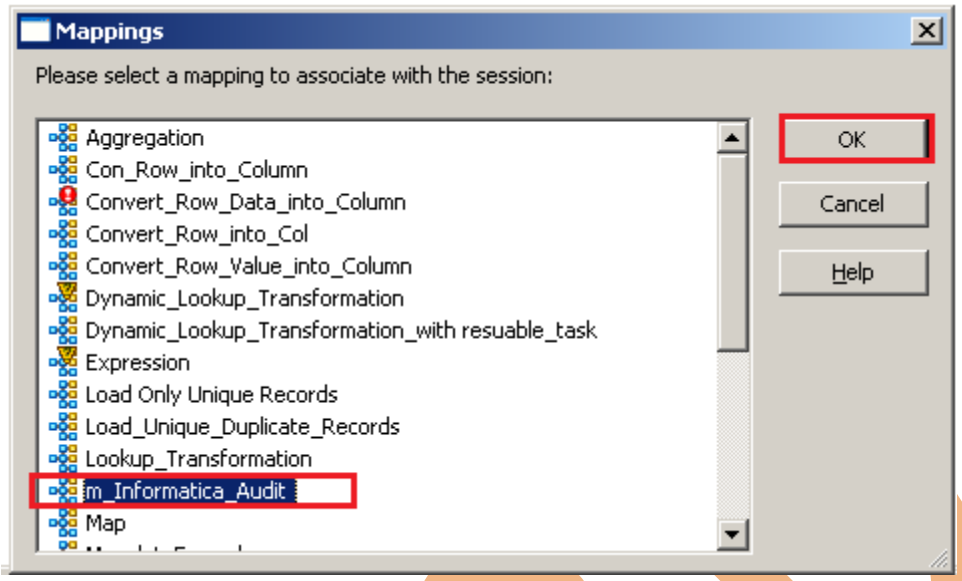
Step-7 In here, you give expression. and then click on OK button.



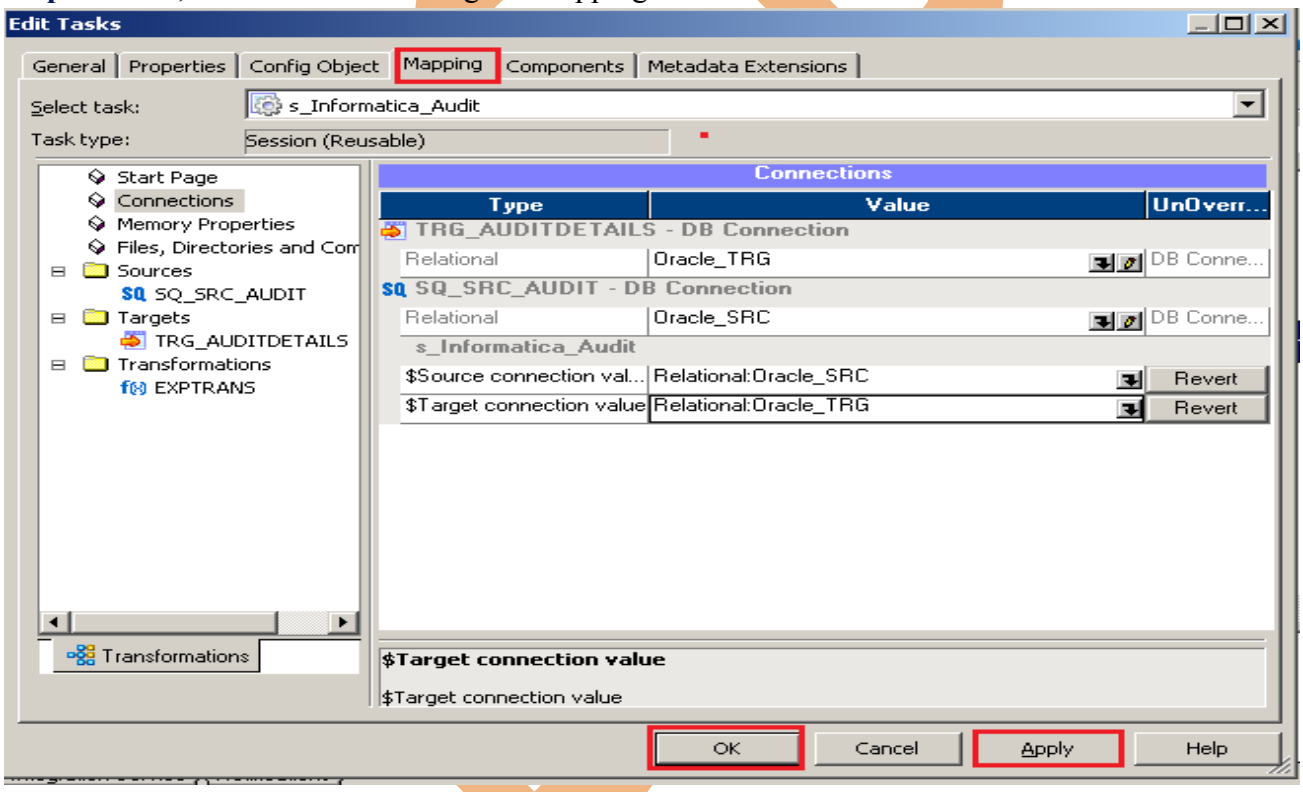
Step-8 Now create session for Audit details.



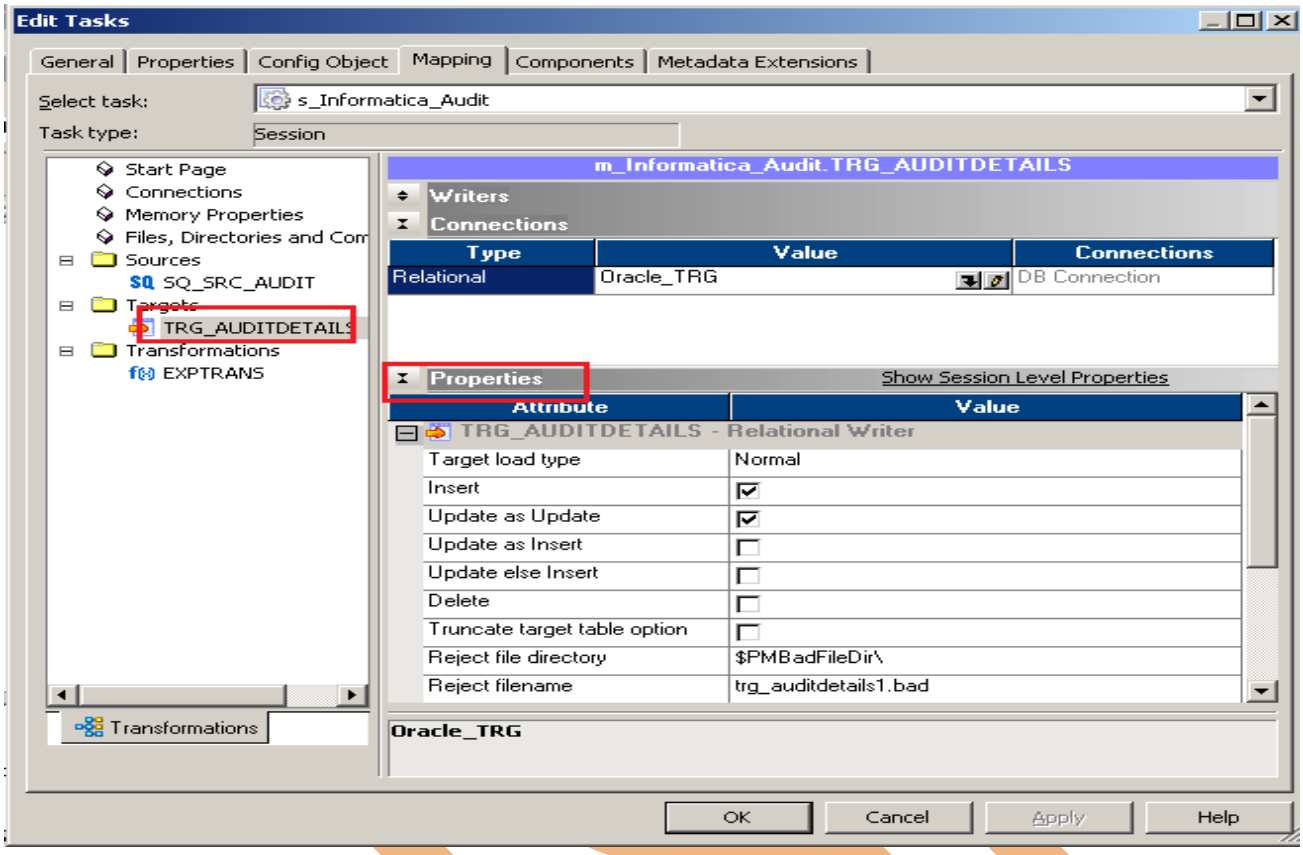
Step-9 And mapping for this session.



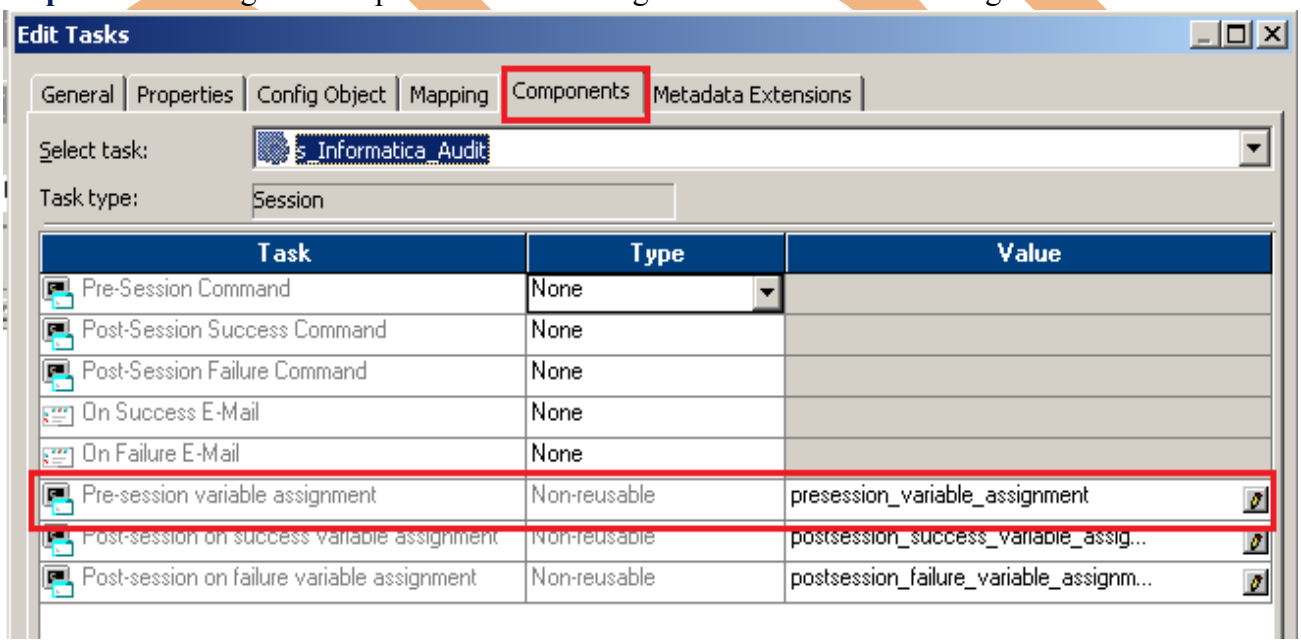
Step-10 Now, Edit this session and go to mapping tab to edit the connection information.



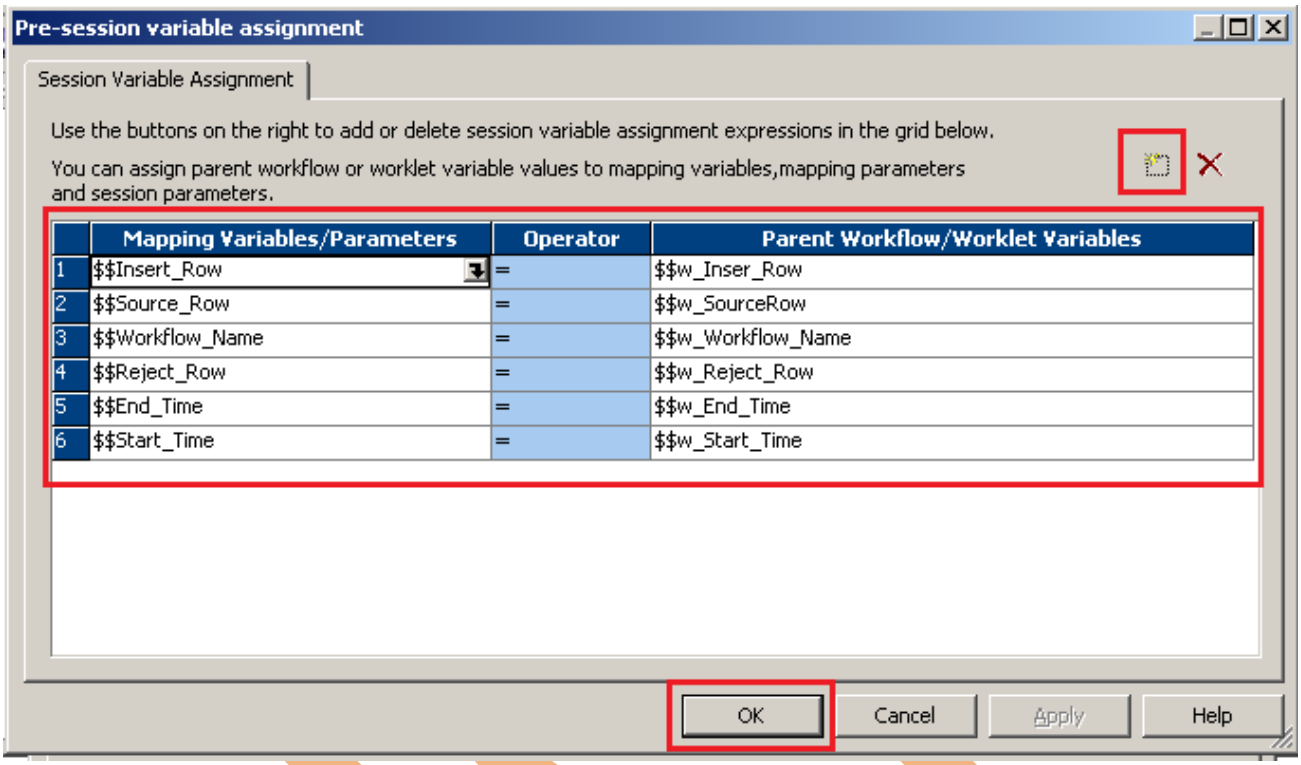
Step-11 Now, Edit the target table property.



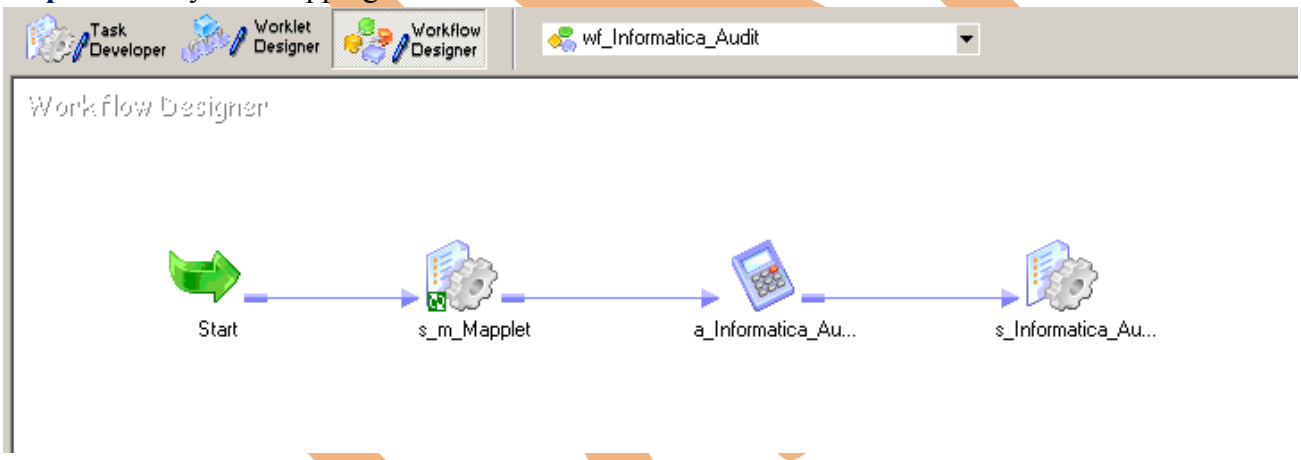
Step-12 And then go to Components tab and assign Pre-session variable assignment.



Step-13 Now assign Mapping variable and Workflow variable by using the add button.



Step-14 Finally this mapping look like as.



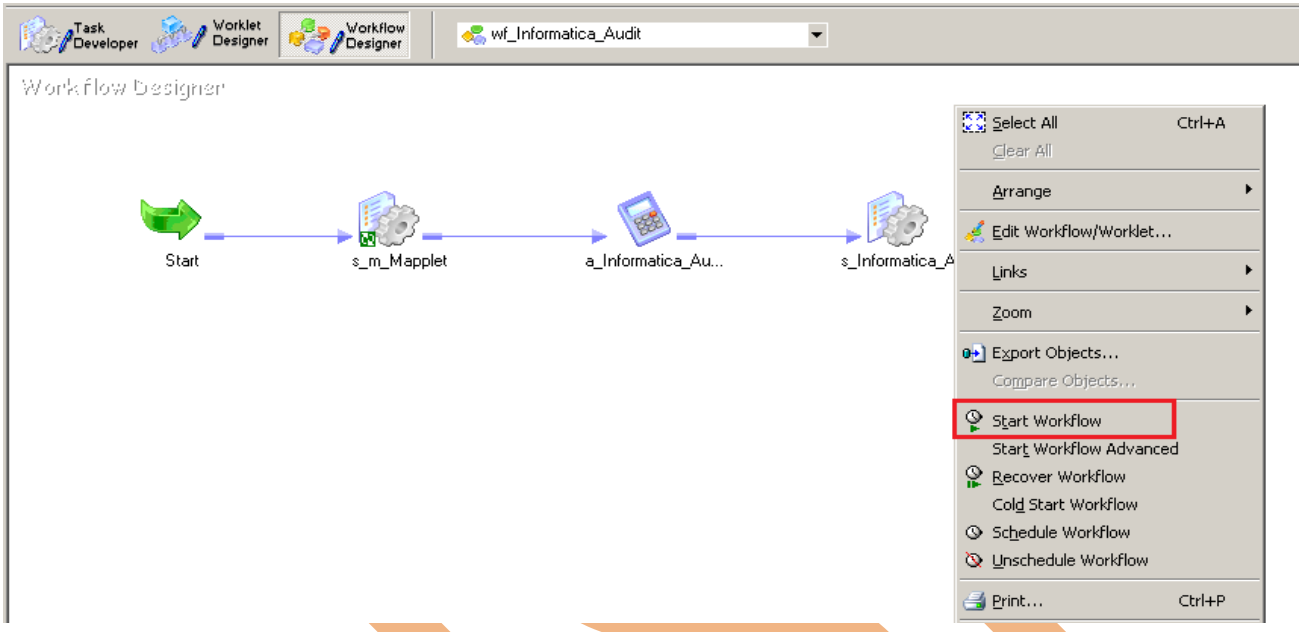
Step-15 Now, Save this mapping.

```
------------------------------------------------------------
03/22/2013 17:03:11 *** Saving... Repository infoReposUser, Folder Transformation_Example
------------------------------------------------------------
Validating the flow semantics of Workflow wf_Informatica_Audit...
...flow semantics validation completed with no errors.

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

******** Workflow wf_Informatica_Audit is VALID ********

Workflow wf_Informatica_Audit updated.
------------------------------------------------------------
```

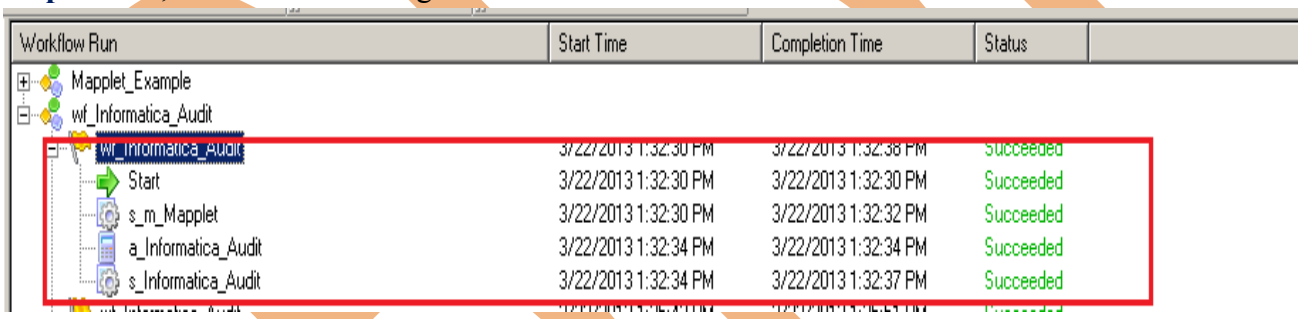
Execute Workflow, Review data and Check log File

Workflow monitor: Workflow monitor is helpful in monitoring and tracking the workflow created in Informatica power center.

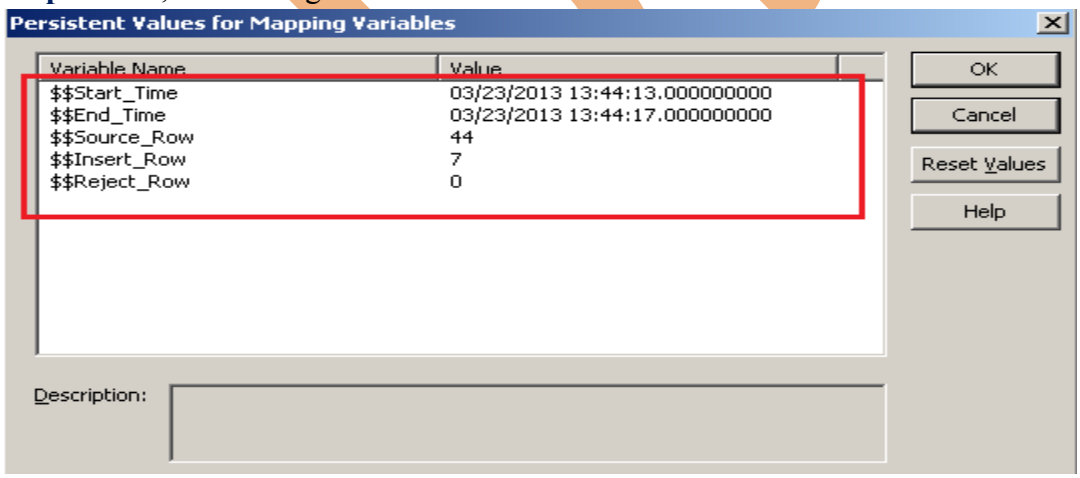
Step-1 Now Start Workflow, Right click on Workflow Designer Window and Click on Start Workflow.

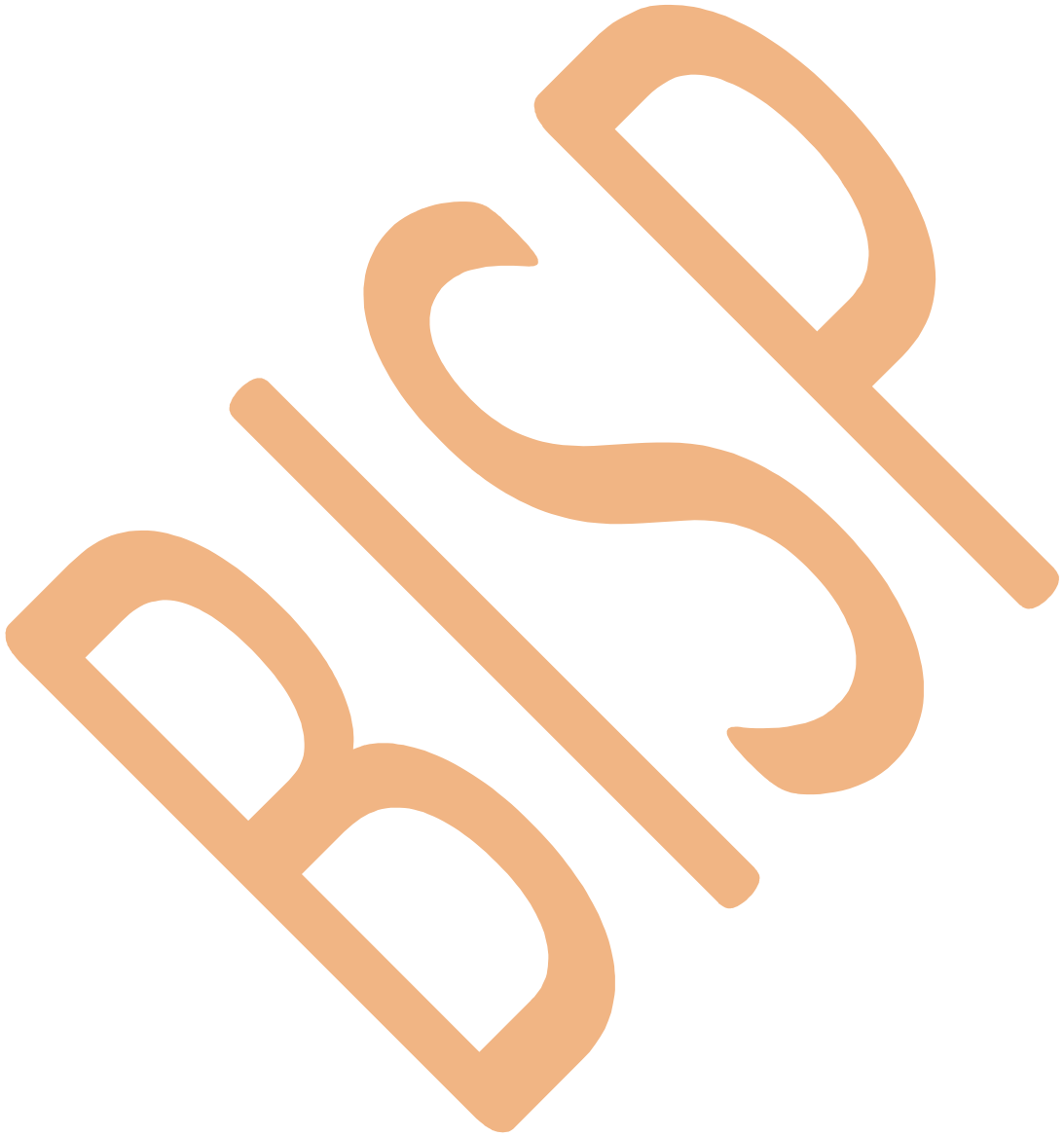


Step-2 Now, check execution log into Informatica Workflow Monitor.



Step-3 Now, review target table data.




BISP