

CASE STUDY: - INFORMATICA

TEAM MEMBERS GROUP (8): -

PUSTHAKALA DHARAN TEJ (10885)

Analyzed the source and target tables in the informatica and gave my insights on how to create the mapping designer.

HARSH SHARMA (10870)

Understood on how to go through the informatica step by step for analyzing the total revenue of every customer. Created the aggregator transformation and filter transformation.

KANISHK KASHYAP (10873)

Every step of mapping was monitored and created by me and created the filter transformation for monthly division of data.

RITIK SAINI (10888)

Informatica monitoring of workflow and creating a workflow. All the errors were handled, and sessions logs were created and saved for understanding how the workflow is running.

SOM SUBHRA DATTA (10896)

Transformations and all the mapping phases were done. Created filter, router and expression transformation. Dictated all the documentation for this case study.

PROBLEM STATEMENT

Total revenue generated by each customer i.e., the total amount spent by the customer on all the products. If the total revenue generated by the customers greater than 5000 give the customer a discount of 10%

THE CASE STUDY

1. Create mapping

- Open informatica power center designer and create a new mapping.
- We are Taking 3 relevant source tables from the database for the mapping those are, Customers, Orders and Orders_Item.
- On the common columns of Customer_id and Order_id, the 3 source table are connected using Joins.

- Adding a new target table named as Customer_Totals to the mapping.
- The appropriate source columns are mapped with the target columns.
- After mapping validate and save.

2. Create Target Definition

- In the target we have already defined customer_totals, which is now dragged and dropped in the warehouse designer
- Now we edit the table, by making the customer_id as not a primary key and the order_id and item_id as a primary key
- While editing check the options of create table, drop table, primary key, foreign key
- After that we generate/execute SQL from the menu
- Connect to the database of the target
- If the SQL script file runs without any errors, validate it and then save it

3. Working with Transformations

- Select Mapping Designer from the Tools menu and then create from the transformations Menu.
- Choose Transformation Type as Aggregator transformation to the group. Aggregator transformation is created in the workspace.
- In the aggregator transformation group the data by customer_Id and calculate the total revenue generated for the month as SUM(ORDERS.TOTAL_AMOUNT).
- Now we need 1 more column DISCOUNT_FLAG that will contain a boolean value which will calculate if TOTAL_REVENUE >5000;
- Therefore, we will create 1 expression transformation to the mapping for the above.
- Adding another expression transformation for a new column DISCOUNT_AMOUNT Expression IF (DISCOUNT_FLAG = "Y", TOTAL_REVENUE* 0.1);
- Adding a router transformation to the mapping based on the value of DISCOUNT_FLAG.
- Add two target tables-CUSTOMER_TOTALS_DISCOUNT and CUSTOMER_NO_DISCOUNT to the mapping.
- Map the appropriate columns to the target tables.
- Connect the router transformation to the target tables.

4. Add a filter transformation:

- As we know understood the granularity of analysis can be done through month wise transaction of every customer, so we need to filter out records where the month of the order is not current month.
- Granularity: it is the level of analysis what you expect from the client
- In the mapping designer we create a filter transformation where we take the month of the order as a port.
- Under the properties the filter condition needs to be changed. We need to check if the month of the order is not equal to the current month, this condition will filter out all those records where the month is not the current month.
- Now validate the conditions if no error occurs apply and save that transformation.
- Map the transformation with customer, orders.

5. Add Lookup transformation:

- Now we use a lookup transformation.

- The Lookup transformation performs lookups by joining data in input columns with columns in a reference dataset.
- Informatica use lookup transformation because a lookup table gets created so any additional information that is required can be retrieved from database or a flat file. It is mainly used to retrieve the data associated with source data based on key column.
- So, now we add a new lookup transformation to the mapping.
- The mapping transformation is then configured to lookup customers email address from the customer table based on the customer id.
- New transformation comes up to the mapping which is expression transformation.
- The Expression transformation calculates values within a single row.
- Use the Expression transformation to perform non-aggregate calculations. For example, you might use an Expression transformation to adjust bonus percentages or to concatenate first and last names.
- As we already understood expression transformation, we then add then we configure the expression transformation recently created where the customers email address from the lookup transformation and a unique appropriate message is concatenated to create a new column email body.
- The concatenation statement is validated if no error present int it we save it.

6. Add a Target Load Order group:

- Now to analyze the customers who will get discount and those customers who, will not get any discount we will create target order group.
- Add the customers_total table and the two target table customer_totals_discount and customer_totals_no_discount to the target load order group. This load order group will help us analyze customers_totals_discount.
- Finally following the same steps as we did above, we configure the target load order group to load the table sin this particular order.
- CUSTOMER_TOTALS
- CUSTOMER_TOTALS_DISCOUNT
- CUSTOMER_TOTALS_NO_DISCOUNT

These are the two final analysis that we must do where we have divided total revenue of all the customers in such a way that we can analyze that customers which are applicable for discount (having total revenue for the current month more than 5000) and customers not applicable for discount

7. Load data:

- Now after everything is done its time to load the data and create a workflow.
- Workflow is a group of instructions/commands to the integrations service in Informatica. The integration service is an entity which reads workflow information from the repository, fetches data from sources and after performing transformation loads it into the target.
- The workflow designer we create something called session reference with a map that we have created, Now we have to set the connections to the informatica servers of each source and target definitions in the mapping to the corresponding databases for extracting and loading the data while running their workflow.
- During configuration of the session the source needs to be connected to the source database and the target needs to be connected target database.
- In the target 'Attributes' select 'Normal' as the target load type and Truncate Table Option for truncating the table prior to any loading.
- Finally, the last step after all the configuration we validate the workflow and then if there is no error we start the workflow.

- In the PowerCenter Monitor is everything is okay we should get two succeeded session logs then to test everything perfectly we go to the SQL plus in cmd, enter the target database and run the select query on all the Target tables.
- If there is no error we will get all the data of customers who is applicable for discount and not applicable for discount.