**SPRINT – 1**

GROUP-5

**GROCERIES AND MORE...**

**Presented by....**

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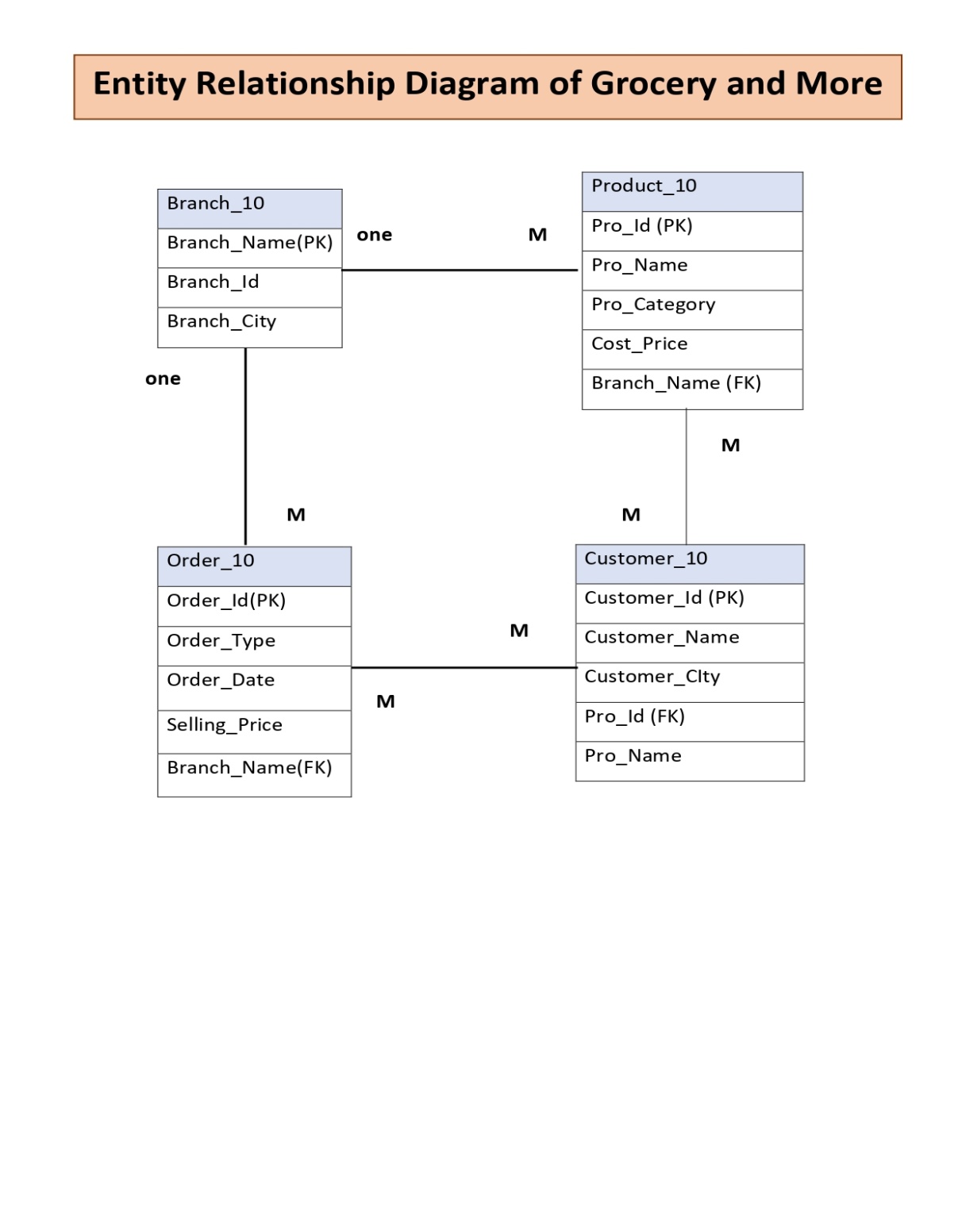
**ETL Sprint 1 Project Case Study ‘Grocery & More’**

**Problem Statement**

An online grocery chain 'Grocery & More' has multiple stores in different cities in India. Customers can either buy directly from the store or order their products online. 'Grocery & More' procures the products from different vendors. 'Grocery & More' wants to analyze their profit & margins for each store from data available for the last 3 years. They also want to analyze customer buying trends. To get that insight, 'Grocery & More' wants to create a Data Warehouse solution on which they can do data analytics.

**ENTITY RELATIONSHIP DIAGRAM**

The ER model defines the conceptual view of a database. It works around real-world entities and the associations among them.



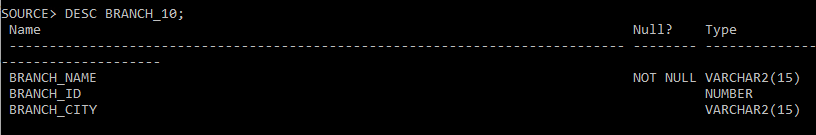
* **SOURCE TABLES**

BRANCH\_10:

Query:

* CREATE TABLE BRANCH\_10 (BRACH\_NAME VARCHAR2(15) PRIMARY KEY, BRACH\_ID NUMBER,BRANCH\_CITY VARCHAR2(15));

DESCRIPTION:

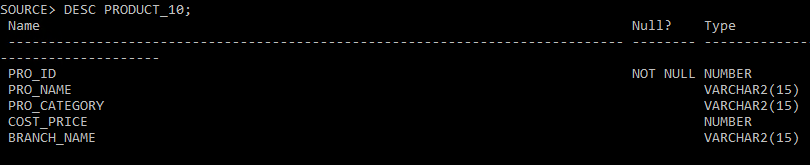


**PRODUCT TABLE:**

QUERY:

* CREATE TABLE PRODUCT\_10(PRO\_ID NUMBER PRIMARY KEY ,PRO\_NAME VARCHAR2(15),PRO\_CATEGORY VARCHAR2(15),COST\_PRICE NUMBER BRANCH\_NAME REFRENCES BRANCH\_10 (BRANCH\_NAME));

DESCRIPTION:

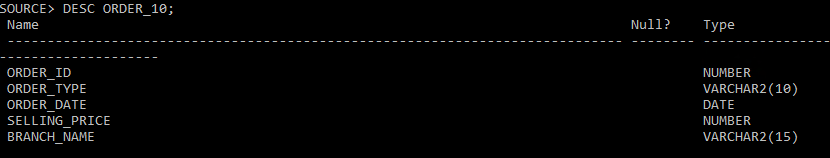


**ORDER TABLE:**

QUERY:

* CREATE TABLE ORDER\_10 (ORDER\_ID NUMBER,ORDER\_TYPE VARCHAR2(10),ORDER\_DATE DATE,SELLING\_PRICE NUMBER,BRANCH\_NAME REFRENCES BRACH\_10(BRANCH\_NAME));

DESCRIPTION:

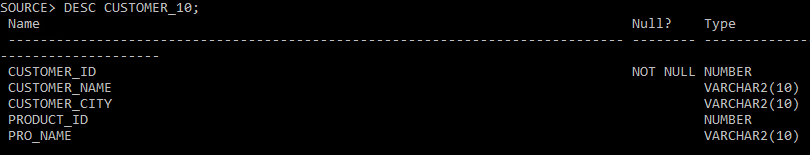


**CUSTOMER TABLE:**

QUERY:

* CREATE TABLE CUSTOMER \_10(CUSTOMER\_ID NUMBER PRIMARY KEY,CUSTOMER\_NAME VARCHAR2(10),CUSTOMER\_CITY VARCHAR2(10),PRODUCT\_ID REFRENCES PRODUCT\_10(PRO\_ID),PRO\_NAME VARCHAR2(10));

DESCRIPTION:



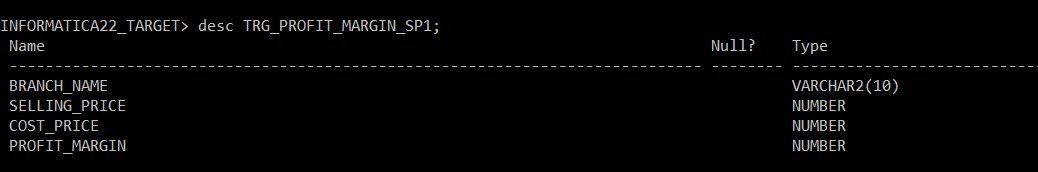
* **TARGET TABLES:**

**1.TRG\_PROFIT\_MARGIN\_SP1:**

QUERY:

* CREATE TABLE TRG\_PROFIT\_MARGIN\_SP1(BRANCH\_NAME VARCHAR2(10),SELLING\_PRICE NUMBER,COST\_PRICE NUMBER, PROFIT\_MARGIN NUMBER);

DESCRIPTION:

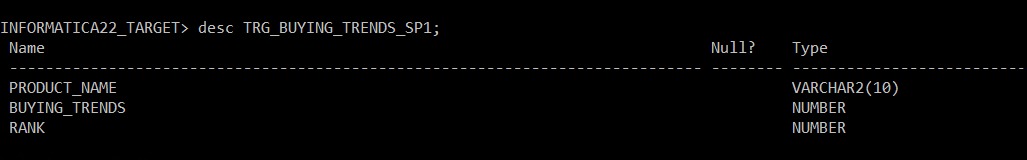


**2.TRG\_BUYING\_TRENDS\_SP1:**

QUERY:

* CREATE TABLE TRG\_BUYING\_TRENDS\_SP1(PRODUCT NAME VARCHAR2(10),BUYING\_TRENDS NUMBER, RANK NUMBER);

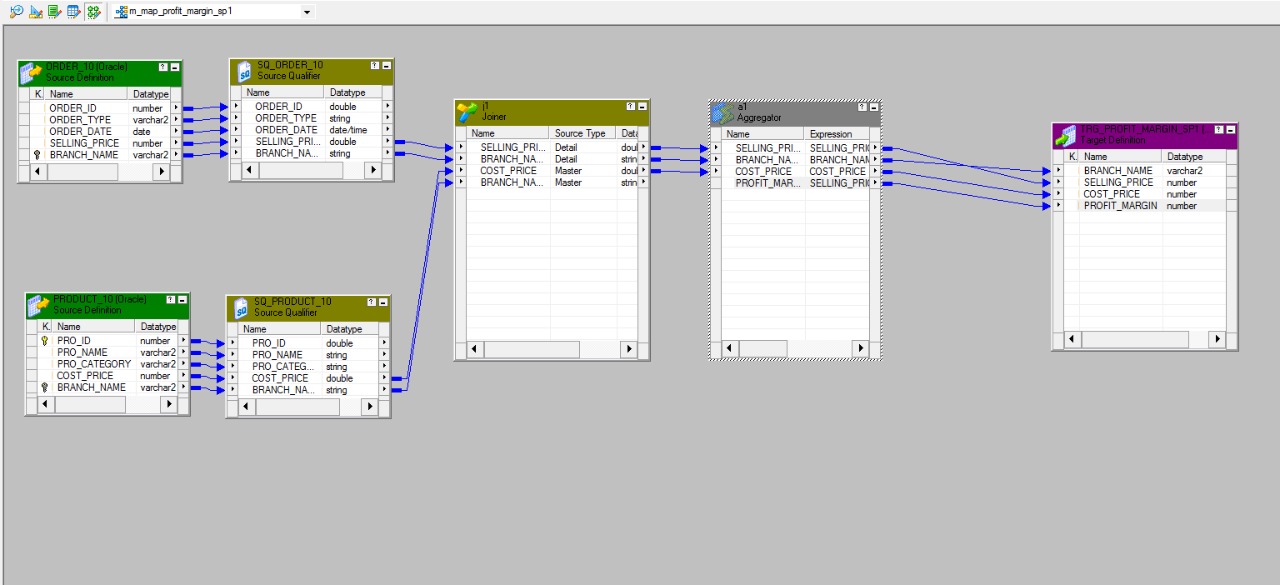
DESCRIPTION:



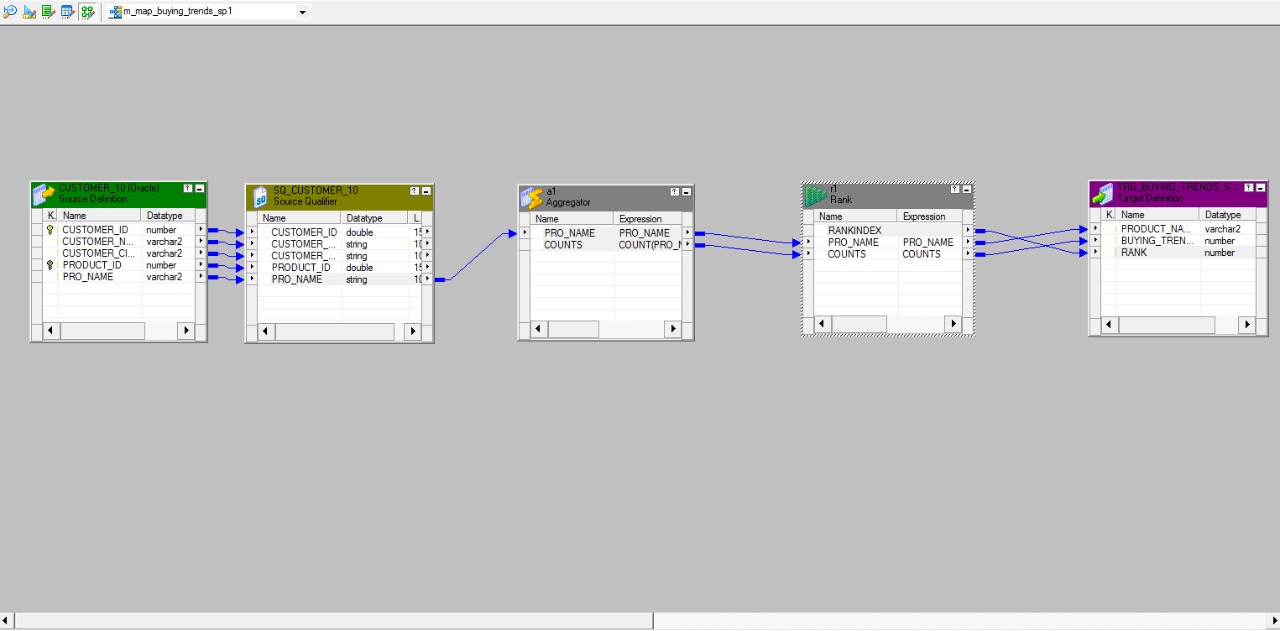
**MAPPINGS**

**MAPPING 1:**

M\_MAP\_PROFIT\_MARGIN\_SP1:



M\_MAP\_BUYING\_TRENDS\_SP1:



**TEST CASES**

**UNIT TESTING:**

Unit testing involves the testing of each unit or an individual component of the software application. It is the first level of functional testing. The aim behind unit testing is to validate unit components with its performance.

**#1) Test Case ID: T1**

**Test Case Purpose:**Validate workflow – WF\_S\_M\_MAPP\_EATING\_PREFF

**Test Procedure:**

* Go to workflow manager
* Open workflow
* Workflows menu-> click on validate

**Input Value/Test Data:**Sources and targets are available and connected  
Sources:CUSTOMER\_6  
Mappings: M\_MAPP\_EATING\_PREFF  
Targets: EATING\_PREFERENCES  
Session: S\_M\_MAPP\_EATING\_PREFERENCES

Transformations:

1.Aggregator: COUNT aggregator is used to group and count Eating preference of Customers

2.Rank- RANK Transformation is used to rank eating preferences of rows.

**Expected Results:**Message in workflow manager status bar: “Workflow WF\_S\_M\_MAPP\_EATING\_PREFF is valid “

**Actual Results:**Message in workflow manager status bar: “Workflow WF\_S\_M\_MAPP\_EATING\_PREFF is valid “

**Remarks: Pass**

**Tester Comments:**

Retrieved the data from source table CUSTOMER\_6 and grouped it in 3 category Vegan ,Vegetarian, Non-Vegetarian using transformations. The output is useful to identify the eating preference of customers.

**#2) Test Case ID: T2**

**Test Case Purpose:**Validate workflow – WF\_S\_M\_PURCHASE\_PREFF

**Test Procedure:**

* Go to workflow manager
* Open workflow
* Workflows menu-> click on validate

**Input Value/Test Data:**Sources and targets are available and connected  
Sources: TOUR\_6  
Mappings: M\_MAPP\_PURCHASE\_PREFF  
Targets: PURCHASE  
Session: S\_M\_MAPP\_PURCHASE\_PREFF

Transformations:

1.Aggregator: COUNT aggregator is used to group and count Eating preference of Customers

2.Rank: RANK Transformation is used to rank eating preferences of rows.

**Expected Results:**Message in workflow manager status bar: “Workflow WF\_S\_M\_MAPP\_PURCHASE\_PREFF is valid “

**Actual Results:**Message in workflow manager status bar: “Workflow WF\_S\_M\_MAPP\_PURCHASE\_PREFF is valid “

**Remarks: Pass**

**Tester Comments:**

Retrieved the data from source table TOUR\_6 and grouped it in 3 category Domestic, International, Localising transformations. The output i.e target table PURCHASE is useful to identify the purchase preference of customers.

**#3) Test Case ID: T3**

**Test Case Purpose:**Validate workflow – WF\_S\_M\_MAPP\_VISITOR\_TIME\_TYPE

**Test Procedure:**

* Go to workflow manager
* Open workflow
* Workflows menu-> click on validate

**Input Value/Test Data:**Sources and targets are available and connected

Sources: VISITOR\_6  
Mappings: M\_MAPP\_VISITOR\_TIME\_TYPE  
Targets: VISITOR\_TYPE , DATE\_TIME.   
Session: S\_M\_MAPP\_VISITOR\_TIME\_TYPE

Transformation:

* For target table – VISITOR\_TYPE

1.Aggregator: To count Visitors type

2.Rank : To Rank the rows according to count of visitors type.

* For target table – DATE\_TIME

1.Expression : To convert data type of DATETIME column from DATE/TIME to String.

2.Aggregator : To COUNT the peak hours of most visitors visit

3.Rank : Ranking the date time on basis of peak hours.

**Expected Results:**Message in workflow manager status bar: “Workflow WF\_S\_M\_MAPP\_VISITOR\_TIME\_TYPE is valid “

**Actual Results:**Message in workflow manager status bar: “Workflow WF\_S\_M\_MAPP\_VISITOR\_TIME\_TYPE is valid “

**Remarks: Pass**

**Tester Comments:**

Retrieved the data from source table VISITOR\_6 in order to know the most crowded visiting hours and the type of visitors whether it is LOCAL or TOURIST various using transformations. The output i.e target table VISITOR\_TYPE and DATE\_TIME are useful to identify the peak hours and type of visitors of destination.

**INTEGRATION TESTING:**

Integration testing is the second level of the software testing process comes after unit testing. In this testing, units or individual components of the software are tested in a group. The focus of the integration testing level is to expose defects at the time of interaction between integrated components or units.

**Mappings are:-**

1. m\_map\_profit\_margin\_sp1
2. m\_map\_buying\_trends\_sp1

**Test Case ID: T1**

**Test Case Purpose**: Validate Mapping,m\_map\_profit\_margin\_sp1, Validate Workflow, wf\_m\_map\_profit\_margin\_sp1

**Test Procedure:**

* + - * Go to Mapping
      * Connect Source and Target
      * Use Transformation
      * Connect All and then Save it
      * Go to menu> mapping> Click on validate

**Input Value/Test Data:**

Sources: ORDER\_10, PRODUCT\_10

Target**:** TRG\_PROFIT\_MARGIN\_SP1

**Transformation:**

1. Joiner **–** joint condition is used to join fields between the two sources.
2. Aggregator- Aggregator is used to group and calculate profit & margin of products based on branch name.

**Expected Result:**

1. Check Mapping =>Mapping is validate
2. Go to workflow =>Message in workflow manager status bar: “Workflow wf\_s\_m\_map\_profit\_margin\_sp1 is valid”

**Actual Result:** Message in workflow manager status bar: ”Workflow wf\_s\_map\_profit\_margin\_sp1 is valid”

**Remarks** : **Pass**

**Tester comments:**

The data from source tables i.e. ORDER\_10 and PROFIT\_10 are joined together to calculate the profit. This is used to calculate accurate profit each Branch wise.

**Test Case ID: T2**

**Test Case Purpose**: Validate Mapping m\_map\_buying\_trends\_sp1, Validate Workflow

wf\_s\_ m\_map\_buying\_trends\_sp1

**Test Procedure:**

* + - * Go to Mapping
      * Connect Source and Target
      * Use Transformation
      * Connect All and then Save it
      * Go to menu> mapping> Click on validate

**Input Value/Test Data:** Connect Sources and Target tables

Source Table**:** CUSTOMER\_10

Target Table: TRG\_BUYING\_TRENDS\_SP1

**Transformation:**

**Aggregator:** COUNT Aggregator is used to group and count product name

**Rank:** RANK is used to rank Buying products.

**Expected Result:**

1. Check Mapping=> Mapping is validate
2. Go to workflow > Message in workflow manager status bar: “Workflow

wf\_s\_ m\_map\_buying\_trends\_sp1 is valid”

**Actual Result:** Message in workflow manager status bar : ”Workflow

wf\_s\_ m\_map\_buying\_trends\_sp1is valid”

**Remarks** : **Pass**

**Tester comments:**

The data is retrieved from CUSTOMER\_10 in order to count the most purchased product and rank it. This table is useful to know the current buying trends. The output will be show in sql.

**REGRESSION TESTING:**

Regression testing is a type of software testing. Test cases are re-executed to check the previous functionality of the application is working fine, and the new changes have not produced any bugs.

**Mappings are:-**

1. m\_map\_profit\_margin\_sp1

2. m\_map\_buying\_trends\_sp1

**#1).Test Case ID: T1**

**Test Case Purpose**: Validate Mapping m\_map\_profit\_margin\_sp1, Validate Workflow, wf\_m\_map\_profit\_margin\_sp1

**Test Procedure**:

* Go to Mappings
* Select option debugger
* Start debugger >Next>Use an existing session instances>Next>Select session>Next>Target table option>finish.
* Next in instances.

**Input Value/Test Data**:

Sources: ORDER\_10, PRODUCT\_10

Target : TRG\_PROFIT\_MARGIN\_SP1

**Transformation**: 1. Joiner – A join condition is used to join fields between the two sources. 2. Aggregator - Aggregator is used to group and calculate profit & margin of products based on branch name.

**Expected Result**: 1. Check Mapping => Mapping is validate 2. Go to workflow => Message in workflow manager status bar: “Workflow wf\_s\_m\_map\_profit\_margin\_sp1 is valid”

**Actual Result**: Message in workflow manager status bar:”Workflow wf\_ s\_map\_profit\_margin\_sp1 is valid”

**Remarks: Pass**

**Tester comments**: The data is retrieved from two source tables i.e. ORDER\_10 and PRODUCT\_10 are joined together to calculate the profit. It is useful to give accurate profit according to each Branch wise.

**#2).Test Case ID: T2**

**Test Case Purpose**: Validate Mapping m\_map\_buying\_trends\_sp1, Validate Workflow wf\_s\_ m\_map\_buying\_trends\_sp1

**Test Procedure:**

* Go to Mappings
* Select option debugger
* Start debugger• >Next>Use an existing session instances>Next>Select session>Next>Target table option>finish.
* Next instances.

**Input Value/Test Data**: Connect Sources and Target tables

Source Table : CUSTOMER\_10

Target Table : TRG\_BUYING\_TRENDS\_SP1

**Transformation:**

1.Aggregator: COUNT Aggregator is used to group and count Product name

2.Rank: RANK Transformation is used to rank Buying Products according to customer preference.

**Aggregator**: COUNT Aggregator is used to group and count product name

**Rank**: RANK is used to rank Buying products.

**Expected Result:**

1. Check Mapping=> Mapping is validate

2. Go to workflow > Message in workflow manager status bar: “Workflow Wf\_s\_ m\_map\_buying\_trends\_sp1 is valid”

**Actual Result**: Message in workflow manager status bar : ”Workflow Wf\_s\_ m\_map\_buying\_trends\_sp1 is valid”

**Remarks**: **Pass**

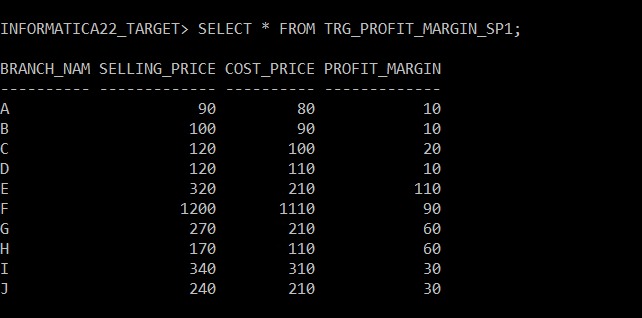
**Tester comments:**

The data is retrieved from CUSTOMER\_10 in order to count the most purchased product and rank it. This table is useful to know the current buying trends and also give rank according to product

**OUTPUT:**

QUERY:

* SELECT \* FROM TRG\_PROFIT\_MARGIN\_SP1;



* SELECT \* FROM TRG\_BUYING\_TRENDS\_SP1;

