Experiment 1

Experiment No : 1

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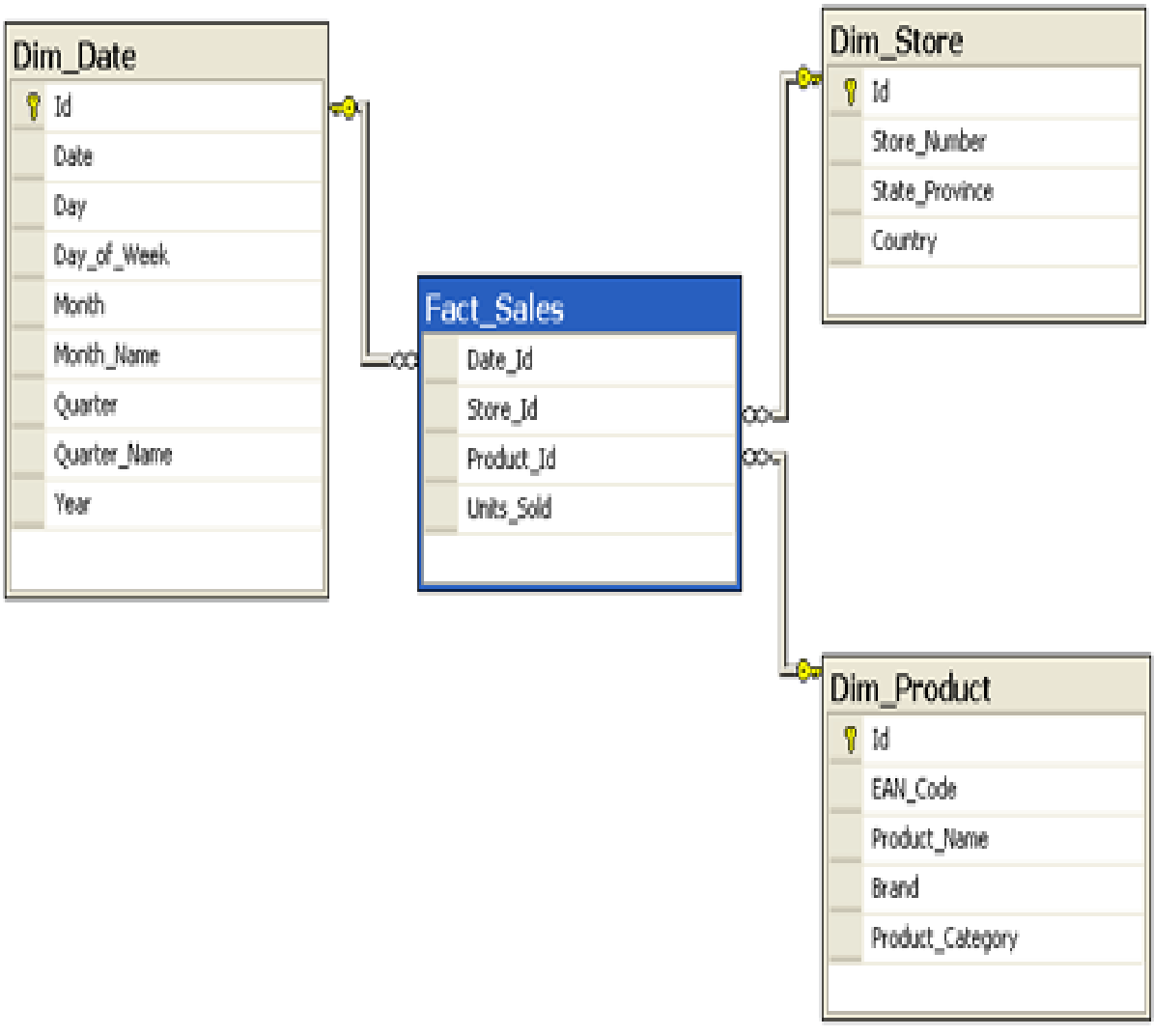
Title : Develop an application to design of Fact dimensional table, data mart using oracle.

Theory : * Fact dimension table.
A Fact dimension table is used in the dimensional model is data warehouse design. A Fact table is found at the centre of a start schema or snowFlake schema surrounded by dimension table. A Fact table consist of Facts of a particular buisness process.

* Example of Fact Table.
In the schema below, we have Fact table Fact_Sales that has given which gives us a number of units sold by date, by store and by product. All other tables such as DIM_DATE, DIM_STORE and DIM_PRODUCT are dimensional tables.

⊙ Measures Types :
1) Additive → As its name implied, additive measures as measures which can be added to all dimensions.
2) Non-additive → different from additive meas, measures that cannot be added to all dim.
3) Semi-additive → semi-additive measures are the measures that can be added to only some dim,


Dim_Date
Id
Date
Day
Day_of_Week
Month
Month_Name
Quarter
Quarter_Name
Year
Fact_Sales
Date_Id
Store_Id
Product_Id
Units_Sold
Dim_Store
Id
Store_Number
State_Province
Country
Dim_Product
Id
EAN_Code
Product_Name
Brand
Product_Category

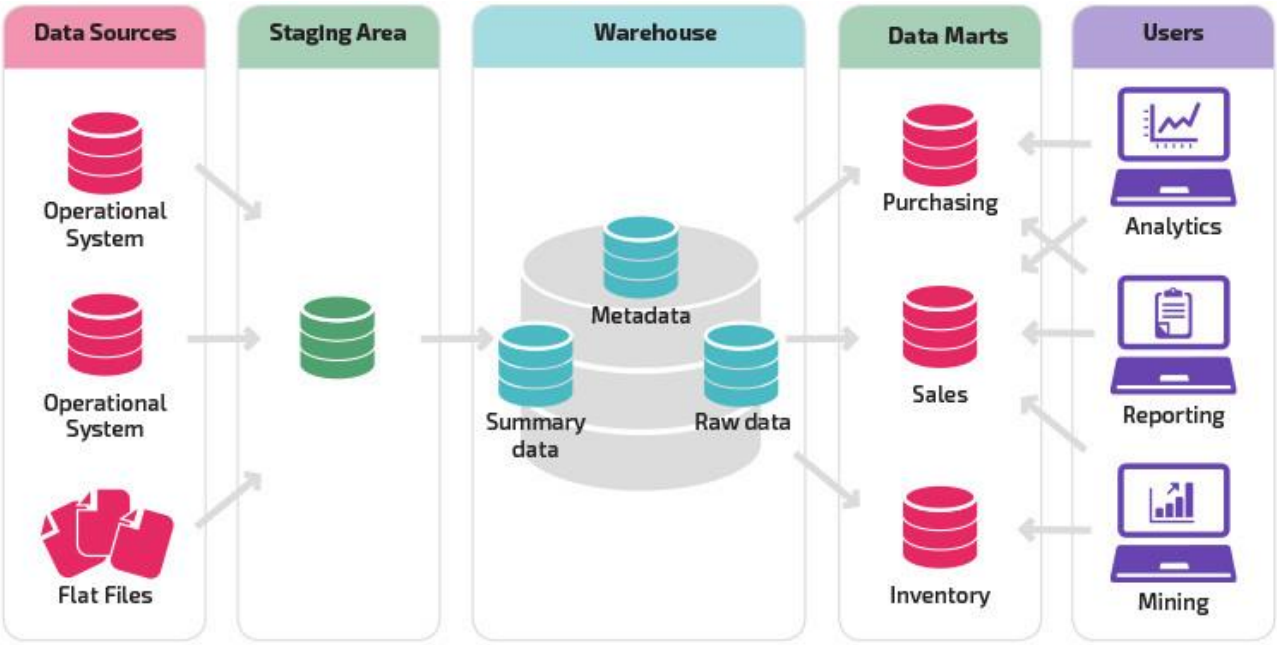
* Designing Fact Table steps.

1) Choosing buisness process to model - The first step is to decide what buisness process to model by gathering and understanding buisness needs and avaible data.
2) Declare the gain - by declaring gain means describing exact what a fact table record represents.
3) Choose the dimensions - once gain of Fact Table is started clearly, it times to determine dimensions.
4) Identify Facts - Identify carefully which Fact will appear in the Fact table.

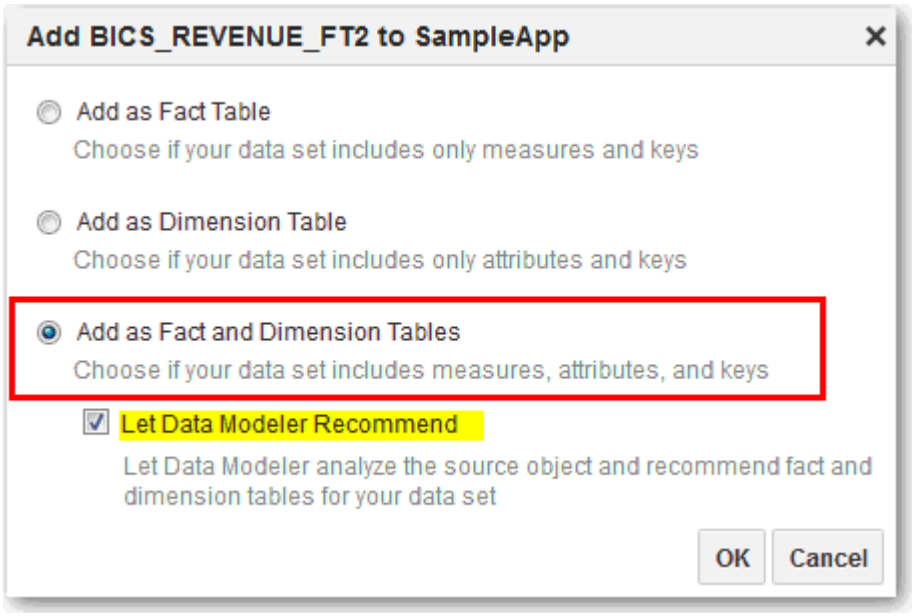
* Data Mart.

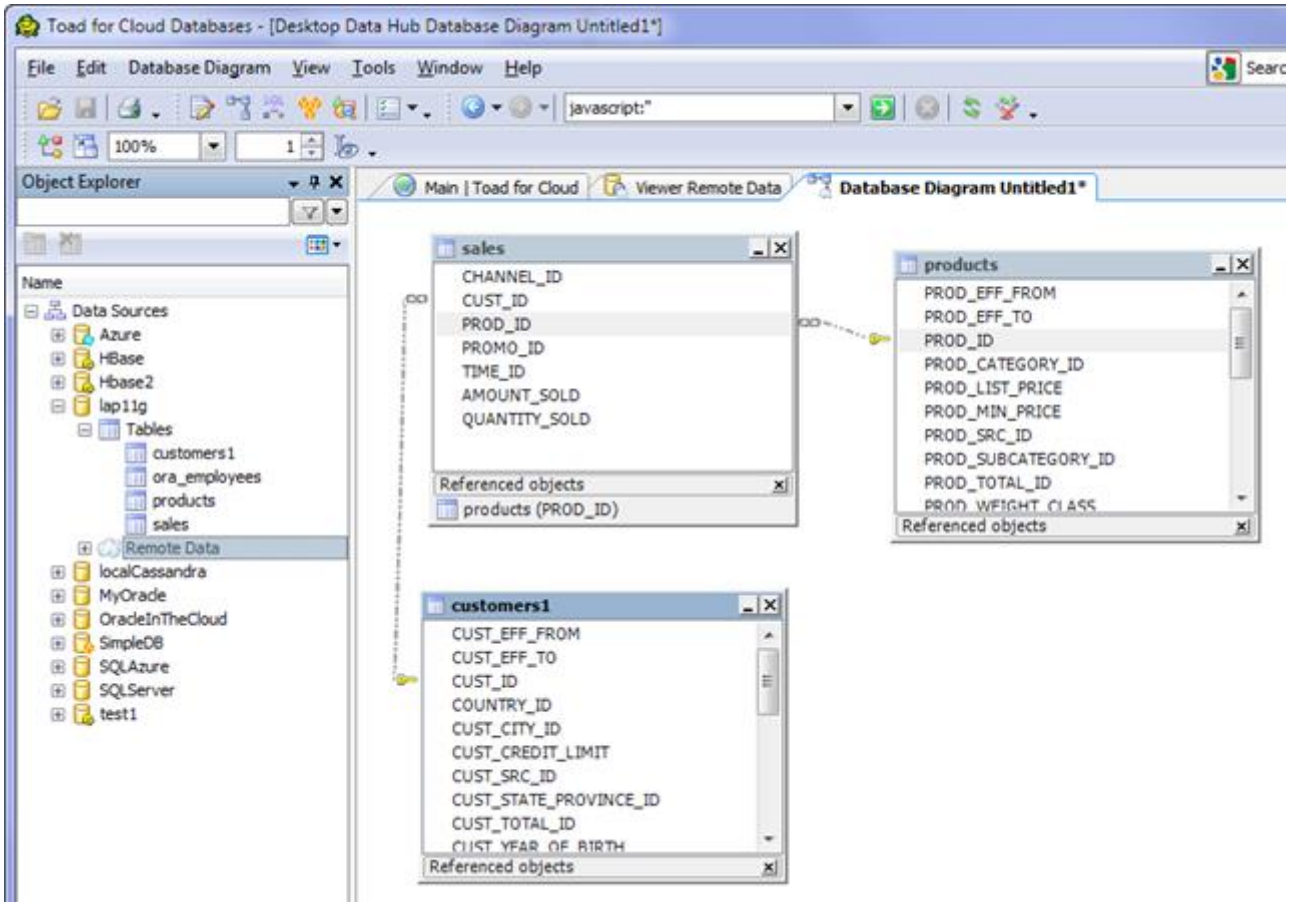
A data mart is subset of data warehouse oriented to a specific buisness line. Data mart contain repositories of summarized data collection of For analysis on a specific section or unit within an organization.
eg. sales department.

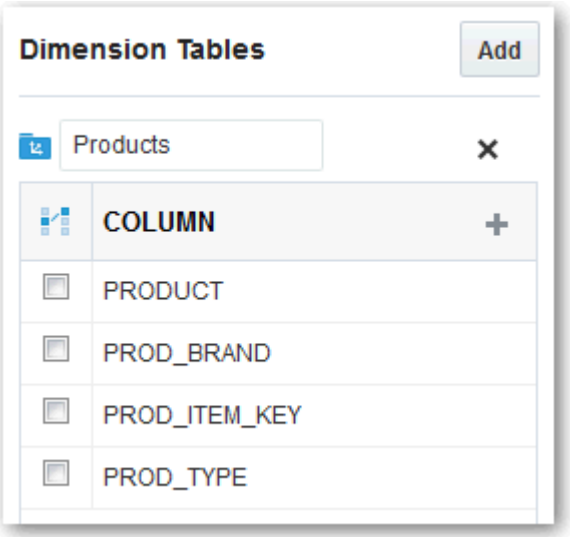
A) Focus - Functional organization area
B) DataSource - Few sources linked to one line.
C) Size - less than 100GB
D) Normalization - No preference betn norm & denorm
E) Cost - Typically from $10,000 upwards
F) Setup Time - 3-6 months
G) Data Held - Typically summarized data

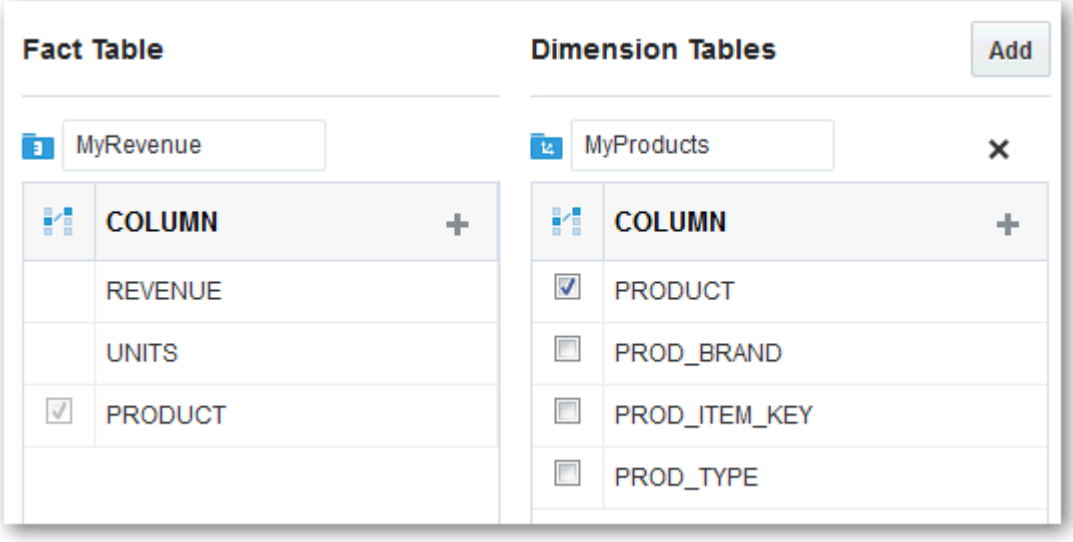

Data Sources
Staging Area
Warehouse
Data Marts
Users
Operational System
Operational System
Flat Files
Metadata
Summary data
Raw data
Purchasing
Sales
Inventory
Analytics
Reporting
Mining

Result


Add BICS_REVENUE_FT2 to SampleApp
Add as Fact Table
Choose if your data set includes only measures and keys
Add as Dimension Table
Choose if your data set includes only attributes and keys
Add as Fact and Dimension Tables
Choose if your data set includes measures, attributes, and keys
Let Data Modeler Recommend
Let Data Modeler analyze the source object and recommend fact and dimension tables for your data set
OK
Cancel


Toad for Cloud Databases - [Desktop Data Hub Database Diagram Untitled1*]
File Edit Database Diagram View Tools Window Help
Object Explorer
Main | Toad for Cloud
Viewer Remote Data
Database Diagram Untitled1*
Name
Data Sources
Azure
HBase
Hbase2
lap11g
Tables
customers1
ora_employees
products
sales
Remote Data
localCassandra
MyOracle
OracleInTheCloud
SimpleDB
SQLAzure
SQLServer
test1
sales
CHANNEL_ID
CUST_ID
PROD_ID
PROMO_ID
TIME_ID
AMOUNT_SOLD
QUANTITY_SOLD
Referenced objects
products (PROD_ID)
products
PROD_EFF_FROM
PROD_EFF_TO
PROD_ID
PROD_CATEGORY_ID
PROD_LIST_PRICE
PROD_MIN_PRICE
PROD_SRC_ID
PROD_SUBCATEGORY_ID
PROD_TOTAL_ID
Referenced objects
customers1
CUST_EFF_FROM
CUST_EFF_TO
CUST_ID
COUNTRY_ID
CUST_CITY_ID
CUST_CREDIT_LIMIT
CUST_SRC_ID
CUST_STATE_PROVINCE_ID
CUST_TOTAL_ID
Referenced objects


Dimension Tables
Add
Products
COLUMN
PRODUCT
PROD_BRAND
PROD_ITEM_KEY
PROD_TYPE


Fact Table
MyRevenue
COLUMN
REVENUE
UNITS
PRODUCT
Dimension Tables
Add
MyProducts
COLUMN
PRODUCT
PROD_BRAND
PROD_ITEM_KEY
PROD_TYPE

Conclusion

In this assignment we understood Fact Dimension Table and Data Mart concepts in data warehouse.