CREATING A DIMENSION

TIME DIMENSION

- A time dimension provides the time series of information to describe our data .
- it helps to analyze data from several time periods and compare results between them.
- It provides to retrieve data by the time period
- It consist of four characteristics
- Levels
- Dimensions Attribute
- Level attributes
- Hierachies

- Levels : levels are like aggregation which help to sum up the data
- Users will want to see total summed up by certain time periods such as per day, per month, or per year.
- Theses becomes levels
- The warehouse builder has the following levels
- 1. day
- 2.Fiscal week
- 3.fiscal month
- 4.calendar month
- 5.fiscal quarter , calendar quarter
- Fiscal year, calendar year

- Dimensions :a piece of information we are going to store in the dimensions that can be found at more than one level
- Each level will have an ID that identifies that level , a start and end date for the time period, time spam that indicates number of days in that period and description of the level

- Level attributes : each level has level attributes that provides descriptive information about the value in that level
- For example : about MONTH level we will find the attributes that describes the value for month such as month of the year represents

- Hierarchy : a hierarchy is a structure in our dimensions that is composed of certain levels in order, there can be one or more hierarchies in dimensions
- calendar month, calendar year and calendar quarter can be hierarchy.
- We can view our data at each of this levels

Creating a Time dimensions

- 1.Right click on the Dimensions node and select new| Using TIME WIZARD to launch the Time Dimensions Wizard.
- Name this dimensions as DATE_DIM , if we name it as DATE ,it will generate an error because that is a reserved word in the Oracle database.
- 2.The next step will ask us what type of storage to use for our new dimensions

  We are going to select ROLAP ,WHICH RESULTS in the generation of relational database objects in a star schema

- 3.In step 3 will ask us to specify the data generation information for our dimensions
- It ask us what year we want to start with and then how many total years to include starting with that year.
- In other words depends on how much historical data we will available to us
- **We are going to set the start year to 2007 WITH the number of years set to three to bring us upto 2009**

- THE other option available to us on the data generation step is the type of Time dimension to create. It can be based on a calendar year. This provides us with flexibility to define our time dimensions based on what our company actually uses for its financial year.
- ACME TOY AND GIZMOS COMPANY operates on calendar year basis , so we will it set at calendar.

- 4. This step is where we choose the hierarchy and levels for our time dimensions
- we have two hierarchies , we can use Normal Hierarchy of day ,month quarter and year or we can choose the week Hierarchy.
- Note : if we choose the week hierarchy we wont be able to view data by month quarter or year .

- 5. in this step wizard will provide us the details about what is going to create.
- In the following image we can see the dimensions attribute , levels and hierarchies that will be created . It will consist of additional items at the both such as SEQUENCE AND MAP NAME

- SEQUENCE : is an object that will be created to populate the ID values with unique number.
- It is created by wizard automatically
- This ID value is used as what is called as SURROGATE identifier.
- This value stands in for the actual unique identifier for the record.
- the ACTUAL IDENTIFIER is called Business Identifier. It contains one or more attribute that have been selected by us to uniquely represented a one level record to differentiate it form another.

- When we link a dimension to cube , it will use that SURROGATE IDENTIFIERS. IN TERMS OF BUSINESS IDENTIFIER a code , it is used to represent the date for the level record

- Besides the dimensions that is created , we have a mapping that appears under the mapping node. Which will help to deploy , run the actual build our time dimesions

- 6. in this step , it will display a progress bar as it performs each step and will display the text in the main window indicating the step being performed. When it completes , we click on the next button and it takes us to final screen –the summary screen. At this point these objects have been created and we press FINISH button.