Homework Assignment 4

IT 532, Fall 2018

Due Date – Oct 24

1. What is the difference between the KeyColumn, the NameColumn, and the ValueColumn for a dimension attribute in SSAS?

Answer :

|  |  |
| --- | --- |
| keycolumn | * for internal use, may or may seen end users * use to attach the dimension tables and fact table |
| namecolumn | * for the display to end users |
| valuecolumn | * like the namecolumn , but can be used in filter |

1. What is the objective of physical data warehouse design? Specify different techniques that are used to achieve such objective.

Answer : The objective of physical data warehouse plan is to improve the performance of DW. There are three main techniques. The first one is use the materialized view, these views are physical objects in database and will operate join and precalculation in advance. The second one is index, unlike RDBMS will use B+tree, the DW will use bitmap join. Finally, we can use the similar partition mechanism in RDBMS to enhance performance in DW, such as vertical patition and horizontal partition.

1. An online order wine company requires the designing of a datawarehouse to record the quantity and sales of its wines to its customers. Part of the original database is composed by the following tables:

CUSTOMER (Code, Name, Address, Phone, BDay, Gender)

WINE (Code, Name, Type, Vintage, BottlePrice, CasePrice,Class)

CLASS (Code, Name, Region)

TIME (TimeStamp, Date, Year)

ORDER (Customer, Wine, Time, nrBottles, nrCases)

Identify the attributes associated with the fact, identify the dimensions and their attributes.Convert this ER schema to star schema.

Answer:

|  |  |
| --- | --- |
| fact | * order * customerKey * WineKey * TimeKey * soldBottles * totalPrice |
| dimension | * customer * customerKey * Code * Name * Address * Phone * BDay * Gender * WINE * WineKey * Code * Name * Type * Vintage * BottlePrice * CasePrice * Class\_code * Class\_name * region * TIME * TimeStamp * Date * Year |