ANALYSIS AND DESIGN OF CONCEPTUAL MODELS OF DATA WAREHOUSE IN ARISTY WEDDING ORGANIZER

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Abstract: Wedding Organizer is a business that specializes in services that specifically help the bride and groom and families in the planning and supervision of the implementation of a series of events into a wedding party. The necessity of designing a conceptual model of data warehouse on a wedding organizer devoted to designing the model and the data flow that existed at the wedding organizer. The data warehouse is a collection of data from various sources placed together in a safae place for querying and reporting processes. The conceptual model of the data warehouse is a logic design that represents the data. Data warehouse design method used in the study is the dimensional data modeling Powell. The study resulted in the design of data into multiple tables then the tables is determined which inculeds the dimension tables and fact. The identification process is intended to design a star schema, snowflake schemas, and the fact constellation schema of existing data on the wedding organizer CV . Aristy so that in the future can be created a wedding organizer information system for CV. Aristy

Keywords: conceptual model of data warehouse, wedding organizer.

INTRODUCTION

A wedding organizer is a business engaged in the service sector that specifically assists the bride and groom and their families in planning and supervising the implementation of a series of wedding events according to a predetermined schedule. Wedding organizers provide information on various matters related to weddings, help formulate wedding concepts, provide facilities and coordinate with the building or hotel or venue provider vendors regarding catering, decorations, photographers, makeup artists, performers, and so on which are complement to a wedding ceremony.

The problem faced by wedding organizers is the large amount of data they have, but the data is processed manually in the form of unstructured files not into a database, causing less organized data processing that occurs and resulting in employees working at the wedding organizer sometimes finding it difficult to find files concerning the wedding preparation activities of the bride and groom who are clients of the wedding organizer itself. So it is necessary to make a data warehouse to support data collection and decision making.

According to Sebaa, Abderrazak Chikh [1]. A data warehouse is a collection of data from various sources that are placed together in a large storage area and then processed into a multidimensional storage form and designed for querying and reporting.

According to Mandeep Kaur Sandhu, [2] Data Warehouse (DW) is defined as "a subject-oriented, integrated, time-variant, non-volatile collection of data in support of management's decision-making process".

According to Geetika Saxena and Bharat Bhushan Agarwal in a journal entitled "Data Warehouse Designing: Dimensional Modeling and E-R Modeling" in 2014. "The data warehouse always contains data and information, on which management decisions can be reliably tested, analyzed, and monitoring using the data and information integration".

CV. Aristy is a wedding organizer located in the East Jakarta area, precisely on Jl. I Gusti Ngurah Rai Canal, Commercial Complex No. 12 Coffee Huts. CV. Aristy provides all the needs of the bride and groom, from catering, decoration, make-up, entertainment, souvenirs, invitations, and other needs in the form of wedding

packages. CV. Aristy works with several buildings or hotels in the Jabodetabek and Bandung areas, but CV. Aristy does not rule out the possibility for the bride and groom who want to hold a wedding at home or in other places.

Based on the explanation above, it is appropriate to need a data warehouse on CV. Aristy to facilitate data collection regarding all data needs needed for a wedding event and also data processing that aims to make a decision that is useful for CV Aristy development in the future.

RESEARCH METHOD

The research methodology carried out by the author in conducting research as follows:
1. Research Setting
   The research was conducted on 15 August 2015, 19 October 2015 and 18 November 2015.
2. Research Place
   The research was conducted in two places, namely:
   a. CV Aristy Office on Jl. I Gusti Ngurah Rai Canal, Commercial Complex No. 12 Pondok Kopi met with one of the employees of CV. Arisy, namely Mrs. Yana and Mrs. Meinar 1 meeting each.
   b. CV Aristy Office at the Grand Metropolitan Bekasi Function Hall met with the owner of CV. Arity namely Mr. Pras 1 meeting.
3. Research Subjects
   The subject of this research is one of the employees of CV. Aristy and owner of CV. Aristy.
4. Technical and Data Collection
   a. Interview
   1. The interview was conducted at the CV office. Aristy in point 2.a. The interviews conducted were unstructured interviews because the researchers considered this model to be the most flexible, where the subjects were given the freedom to freely describe their answers, then the researchers recorded all kinds of information obtained from the visits made. This information was provided by employees of CV. Aristy.
   2. The interview was conducted at the Aristy office. Aristy on point 2.b, the researcher conducted interviews for the data validation process which had previously been obtained by the researcher from the interview process to CV Aristy employees. At this stage, the interviews conducted still used the same technique, namely unstructured interviews.
5. Research Result
   The research conducted resulted in:
   1. The standard procedure that must be carried out by the bride and groom for the wedding organizer so that the event goes well, which the author then describes in a UML diagram, more precisely, namely using a Use Case Diagram.
   2. Any data related to the wedding organizer in compiling a wedding event which is then processed by the author to become a database. Meanwhile, there is some data that is company confidential, so at the database design stage the author labeled "CONFIDENTIAL" on the contents of the table created.

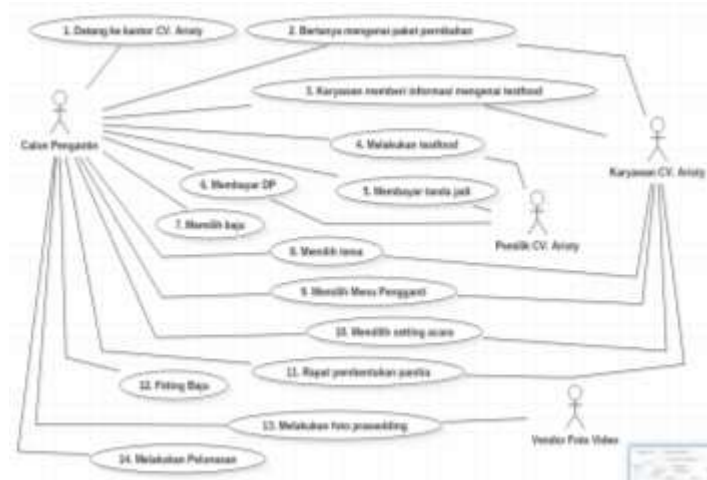**Use Case Diagram Of The Procedure For The Bride And Groom**

Figure 1. Use Case Standard Procedure Diagram for the Bride and Groom

Based on the picture above, it can be explained as follows:

1. The bride and groom come to the CV office. Aristy to get information about wedding packages to CV employees. Aristy.
2. The prospective bride and groom will be given the opportunity to do a test food first by CV employees. Aristy according to existing event locations to ensure choice. In this food test session, the prospective bride and groom will be invited by the owner of the CV. Aristy to see decorations, makeup, and so on including trying all the dishes that have been prepared by CV. Aristy. The bride and groom are allowed to do test food with CV. Aristy more than once.
3. For the bride and groom who have done a food test and then have made the choice to use the services of a wedding organizer CV. Aristy, then the next step is that the bride and groom choose the desired wedding package.
4. The bride and groom get information about the price of the chosen wedding package.
5. The prospective bride and groom pay a token of Rp. 5,000,000 which is done either in cash or by transfer to the account number of the owner of the CV. Aristy that has been provided.
6. The bride and groom pay a down payment (DP) at the time of 1 week after payment of the receipt of 30% of the price of the chosen wedding package.
7. The bride and groom choose the clothes to be used during the wedding ceremony.
8. The bride and groom choose the decoration theme according to the options available.
9. The bride and groom choose a menu if there is a menu that they want to exchange with another menu.
10. The bride and groom choose the event setting for the contract, reception, and/or other events before the wedding such as siraman, recitation, and so on.
11. The prospective bride and groom and the wedding organizer held a committee formation meeting.
12. The bride and groom fitting the clothes to be used.
13. The prospective bride and groom do a pre-wedding photo shoot if the selected package includes pre-wedding photos in it which are carried out by a photo video vendor in collaboration with CV. Aristy.
14. The prospective bride and groom are required to make payment no later than one month before the wedding ceremony takes place

Database Design

The researcher succeeded in obtaining the required data so that the data can be modeled into tables. There are several tables whose data is kept confidential by CV. Aristy is like one of them, namely the photo and video master table where the names of photo and video vendors cannot be given to researchers. As for the table explanation points, the table where the data is kept confidential contains records or contents with the text "CONFIDENTIAL".

Figure 2. Structure Table Master Adat (tbl_master_adat)

Image Caption:

a. It consists of 3 fields, namely no, kode_adat, and ket_adat, where the primary key in this table is custom_code.
b. The contents of the table are:

Tabel 1. Table Contents Master Adat (tbl_master_adat)

no	kode_adat	ket_adat
1	ADAT001	JAWA
2	ADAT002	SUNDA
3	ADAT003	NASIONAL
4	ADAT004	INTERNASIONAL
5	ADAT005	LAINNYA

Note: Table design is done for all master tables used.

Initial Transaction Design Table

Figure 3. Structure Table Transaksi Awal (tbl_trans_Awal)

Image Caption:

It consists of 8 fields namely no, kode_trans_awal, kode_cp, jumlah_dp, tgl_bayar, kode_kary, tgl_input, dan ket_trans_awal where to be primary key this table is kode_trans_awal.

The contents of the table are:

Tabel 2. Isi Tabel Transaksi Awal (tbl_trans_awal)

N o	kode_trans_ awal	kode_ cp	jumlah_ dp	tgl_bay ar	kode_k ary	tgl_inp ut	ket_trans_a wal
1	TRA001	CP001	2500000 0	2016-01-05	KARY0 01	2016-01-15	Transfer BCA

Note: Table design is done for all master tables used.

RESULT AND DISCUSSION

Determine the Dimension Table

A dimension table is a table that contains detailed data where the primary key in the dimension table is a foreign key in the fact table. The dimension tables made by the author in this study include the following:

Figure 4. Table design is done for all master tables used.

Determine the Fact Table

A fact table is a table that generally contains something that can be measured or calculated, such as price, number of items, and so on. The fact table is also a collection of primary keys in the dimension table. The fact table made by the author in the study includes the following:

Figure 5. Create The Star Schema

Below is a description of the star schema for the bride and groom registration process at the wedding organizer CV. Aristy.
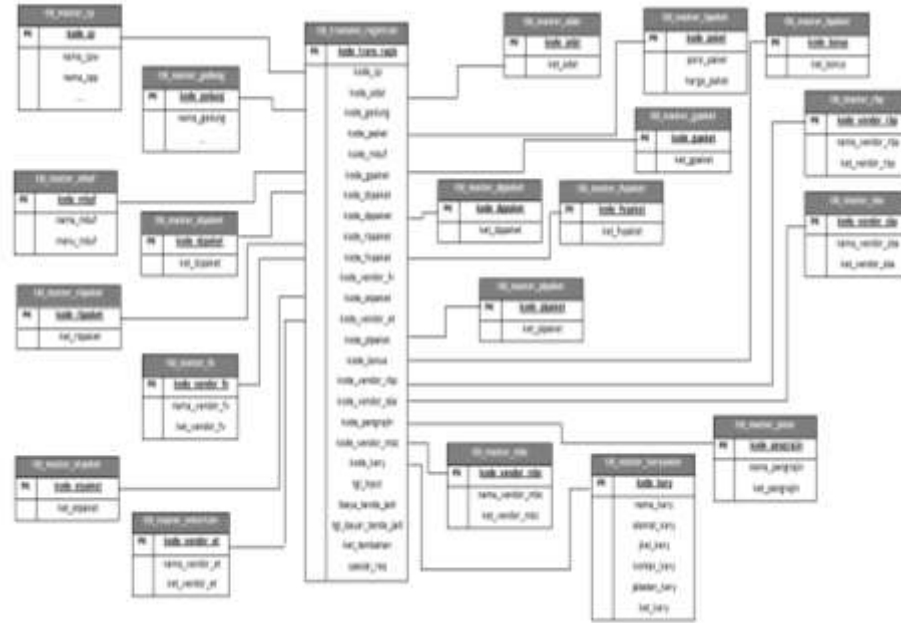

Figure 6. Star Schema

Based on the figure above, it can be explained that the existing fact table is the registration transaction table, which stores foreign key codes which are the primary keys of the related dimension tables. The related dimension tables total 20 dimension tables used. The attribute that is calculated in the fact table is the field of biaya_tanda_jadi.

Create The Snowflake Schema

Here is a description of the snowflake schema which is the development of the star schema of the bride and groom registration process at the wedding organizer CV. Aristy that has been made before.
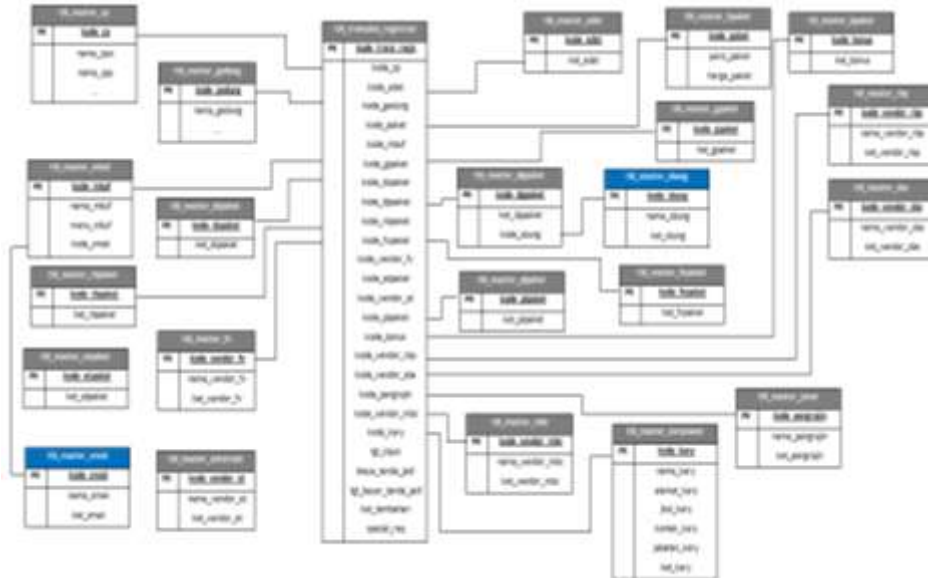

Figure 7. Snowflake Schema

Based on the picture above, it can be explained that the difference with the star schema in point 4.1 is found in the table which is colored blue, namely tbl_master_smak (for food suppliers) and tbl_master_sbung (for flower suppliers). The primary key in the tbl_master_smak table is code_smak, where this code_smak becomes a foreign key in the tbl_master_mbuf table (buffet menu), which means that you can know who is the food supplier for the food on the buffet menu. The primary key in the tbl_master_sbung table is

code_sbung, where code_sbung becomes a foreign key in the tbl_master_dpaket table (package aisle decoration) which means you can find out who is the supplier of flowers for the aisle decoration. In the tbl_transaksi_registrasi fact table, it is not necessary to enter the kode_smak and the kode_sbung because they are already represented by the kode_mbuf and the kode_dpaket.

Create a Fact Constellation Schema

Here is a description of the fact constellation schema made for the wedding organizer CV. Aristy
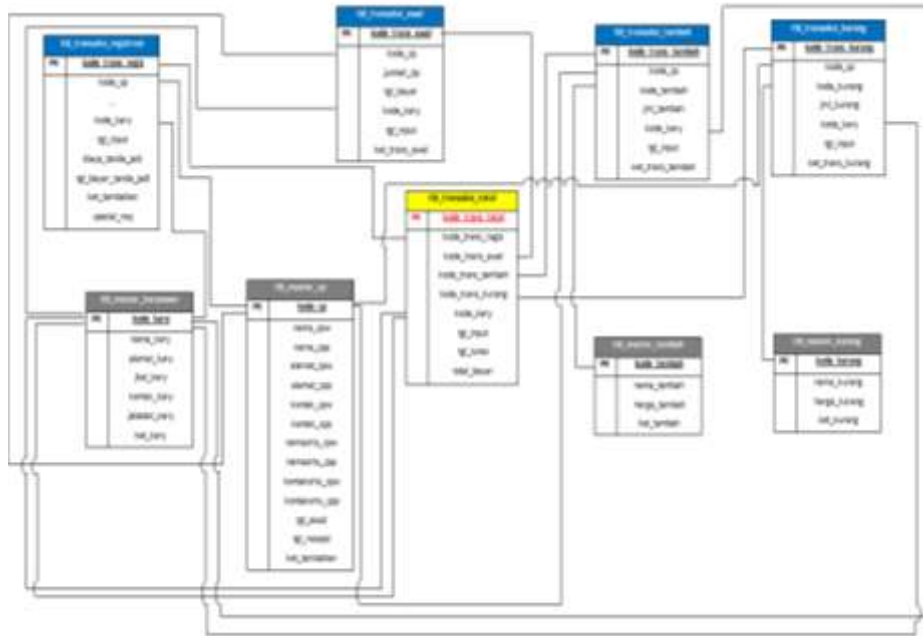

Figure 8. Fact Constellation Schema

Based on the image above, it can be seen that the fact table and dimension table share the primary key. The yellow table is the fact table, namely tbl_trans_total, which holds all transaction results marked with a blue table. The table in gray is the dimension table. In the yellow table there are attributes that are printed in red, where these attributes are primary key attributes which indicate the total transaction code which is a collection of registration transactions, initial transactions, addition transactions, and deduction transactions. Therefore, if the wedding organizer CV. Aristy wants to get a report on overall transactions, you can go through the tbl_trans_total table.

CONCLUSION AND SUGGESTIONS
Conclusion

The researcher succeeded in designing a fact constellation schema model for the data which was successfully obtained from the results of observations made directly at the wedding organizer office CV. Aristy. Based on the data obtained, the researcher can determine how many dimension tables and fact tables must be made where there are 26 dimension tables and 5 fact tables. Researchers have also succeeded in creating a table structure based on the data obtained and implementing the data into a database using MySQL software.

Suggestion

The researcher suggests that for future work, by using the results of the research that has been done, a wedding organizer information system can be designed on CV. Aristy so that it can facilitate the process of data collection and data processing related to the wedding of clients or prospective brides who work with CV. Aristy.

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