Analysis of Tourist Information System Model in North Sulawesi Province

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ABSTRACT
So far, information on tourism object in North Sulawesi Province especially accessed through internet site is still limited. Seekers of information on tourist attractions must access some internet sites to get the required information. The problem of this research is how the model of tourist information system that can record, process and present information about the tourist attraction in North Sulawesi Province and presents according to the needs of the searcher. Several methods are used to generate the model of tourist information system, beginning with conducting surveys, making observations on internet sites that provide tourist information. From the data collection steps are then analyzed to get the system needs of the tourist object. The data obtained is used as a reference for designing using several design tools that are use case, Entity relationalship diagram, context diagrm, data flow diagram, and Flowchart. The results of this study is a model / design that is very helpful development of tourist information systems that can help tourism development sector in North Sulawesi Province.

Keywords
Model, information system, tourist object.

1. INTRODUCTION
Tourism development has a very important meaning in terms of various aspects. In recent years the tourism sector has contributed both through foreign exchange and economic turnover, opening up the business opportunities of tourism services both directly and indirectly, and opening up many job opportunities. In line with this, promotion of tourist attraction in North Sulawesi Province continues to be done. Rather unfortunate that the information about the tourist attraction of North Sulawesi Province can be said is still very limited, especially information that can be accessed diinternet. Though Information technology has a great influence on all sectors of tourism [1].

There are several sites on the internet that provide information about the existing attractions in North Sulawesi Province, but the information presented is too focused on the description of the tourism object and still feels lacking for other supporting information regarding the sights, such as information about culinary, description of costs, places of worship, tourism events in an area and other information.

Internet users searching for information on tourist objects in North Sulawesi Province must access several sites to obtain the required information.

An information system that can provide information about tourism in North Sulawesi Province so that it can answer the needs of information seekers is a solution to things that have been happening. Creating a searcher accessing multiple sites to get information as needed requires time and resources.

So far there has been no research to build tourist information system in North Sulawesi Province. The possibility that this makes some sites that provide information about the object of tourism has not been able to meet the needs of information seekers about tourist attractions.

Some research on tourism information system such as presenting tourist object in geographical context on interactive tourism map that support Planning for tourism [1], Building a tourism website to introduce Rumah Dome New Nglepen to all people all over the world so it is expected to increase the country's foreign exchange . Using a flowchart and designing a display for a website page [2]. Other studies have examined the Cultural visits often begin before departure for the chosen destination. Visitors may have read articles about the exhibit, may have read books and guides about a city, may have seen some videos or asked for advice from friends or experts. All these activities now have technology partners in digital libraries that can be accessed via the internet [3], tourism information systems to support travel, built with some modeling such as entity relationalship diagrams and data flow diagrams [4].

Tourism information is an important need for information seekers in the capacity of visitors and prospective visitors in North Sulawesi Province. So it is necessary to conduct research that will result in an analysis of information systems model of tourist attraction that can answer the needs of information seekers about tourist attraction in North Sulawesi Province.

2. LITERATUR REVIEW
Model is a representation of an object, object, or ideas in a simplified form of a natural condition or phenomenon. The model contains information about a phenomenon created in order to study the actual phenomenon of the system. The model may be an imitation of a real object, system or event that contains only information that is deemed important for study [5]. System is a collection of interrelated parts or components and together function or move to achieve a goal [6].

Information is data that is processed into a form that is more useful and more meaningful to those who receive it [7]. The information system is a component consisting of human, information technology, and work procedures that process, store, analyze, and disseminate information to achieve a goal [8]. An information system is a system that can be defined by collecting, processing, storing, analyzing, disseminating information for a particular purpose. Like any system, an information system consists of inputs (data, instructions) and output (reports, calculations) [9].

Tourist attraction is one of the important components in the tourism industry and one of the reasons visitors make the trip (something to see). Abroad tourist attraction called tourist

attraction (tourist attraction), while in Indonesia better known as a tourist attraction. About the understanding of the object of tourism, we can see from several sources, among others: 1. Government Regulation No.24 / 1979, Tourist attraction is the embodiment of human creation, lifestyle, cultural art and history of the nation and place of nature that has the attraction to visit . 2. Decree of the Ministry of Tourism, Post and Telecommunication No.KM 98 / PW: 102 / MPPT-87, Tourist object is a place or natural state that has tourism resources built and developed so it has the attraction and cultivated as a place visited traveler.

An area to be a good tourist destination, should develop three things for the region is interesting to visit, namely:

A. The existence of something that can be seen (something to see), meaning something interesting to see, in this case a different tourist attraction with other places (has its own uniqueness). Besides, it is also necessary to get attention to tourist attractions that can be used as entertainment when people visit later.

B. The existence of something that can be bought (something to buy), that there is something interesting that is typical to be purchased in this case used as a cendramata to take home to each place so that in the area there should be facilities to be able to shop that provides souvenirs and other handicrafts And must be supported also by other facilities such as money changer and bank.

C. The existence of something that can be done (something to do), which is an activity that can be done in that place that can make people who visit feel at home in that place.

From the description above, it can be concluded that a good tourist attraction and interesting to visit must have the beauty of nature and must also have the uniqueness and attractiveness to visit and also supported by the facility when enjoying it [**10**].

Various actions and facilities continue to be done to improve the tourism sector. One of the things that still need to be improved is the publication of tourism through the internet site. Some sites that provide tourism information including government-run tourism sites have not met the information seeker's needs. Most sites are too focused on tourism objects but have not yet presented other information such as culinary information, shopping center information for souvenirs, places of worship.

3. RESEARCH METHODS

3.1 Data Collection Techniques

The method used in this study is [11]:

1 Field and Literature Studies. This method is used to identify problems by going down, reading theories and previous studies.
2 Interview Method. This method is used to collect data related to the needs of the system to be built.
3 Architectural Method. The method used to design the system.

3.2 Design Techniques

Referring to the results of data collection and analysis, it is seen that the tourist information in North Sulawesi presented by sites on the internet is still limited. Needs of information seekers whether tourists or potential tourists to information about the object of tourism and things related to the object of tourism will be accommodated in the design of information systems in this study.

System design uses several techniques, namely Use case is a diagram describing the system functionality [11], entity relationalship, to represent the data objects and their relationships. A number of key components identified for an Entity relationalship are data objects, attributes, relationships, and different type indicators [12]. flowchart is a chart showing flow in the program or logical system procedure, and using the Data flow diagram to describe the flow of data within the system in a structured and clear [7].

4. RESULT AND DISCUSSION

The design of information system of tourism object of North Sulawesi Province which preceded by data collection to get the information system requirement specification, besides that also done observation to internet sites to get information intact about system to be built so that information presented according to information seeker need.

4.1 Use case

The built system consists of 2 (two) users, namely :

1. Administrator level users who can input data about the sights, can delete data and can see the data.
2. Users with visitor level with access rights can only view the inputted data in the form of information about tourism objects within the scope of North Sulawesi Province.

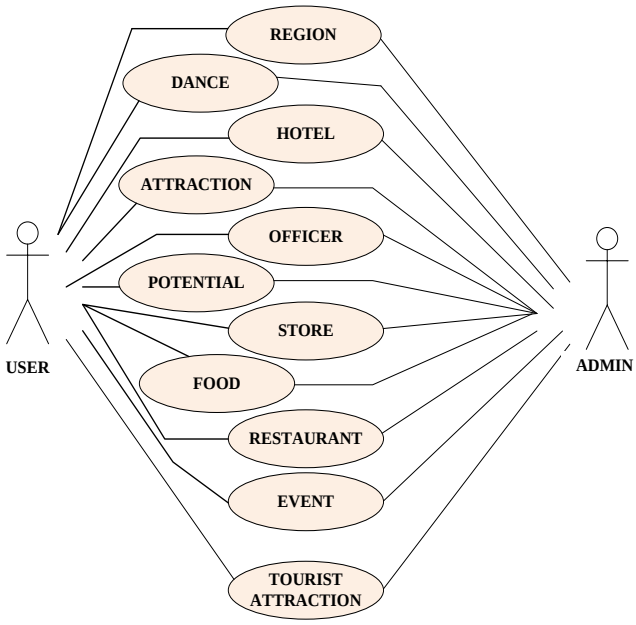

Fig 1. use case system

Use case tourist information system system represents system functionality.

There are 2 (two) actors in the system namely: admin and user. As shown in the figure, the admin interacts with the system on the data input function of the area, dance input, hotel input, object input, apparatus input, potential input, store input, culinary input, restaurant input, event input and system function in tourism information. While the user actor interacts with the system in the tourism information functionality.

4.2 Entity Relationalship

Based on data to be recorded into the information system, the design to establish the database using entity relationalship techniques.

The data that has been collected, analyzed and then transformed into a relational entity design model.

In the entity relationalship diagram tourist information system system there are several entities, namely regional entities, dances, hotels, objects, apparatus, potency, shop, culinary, restaurant, events that are related to the degree of each relationship.

Modeling entity relationalship diagram at the implementation stage is a database.

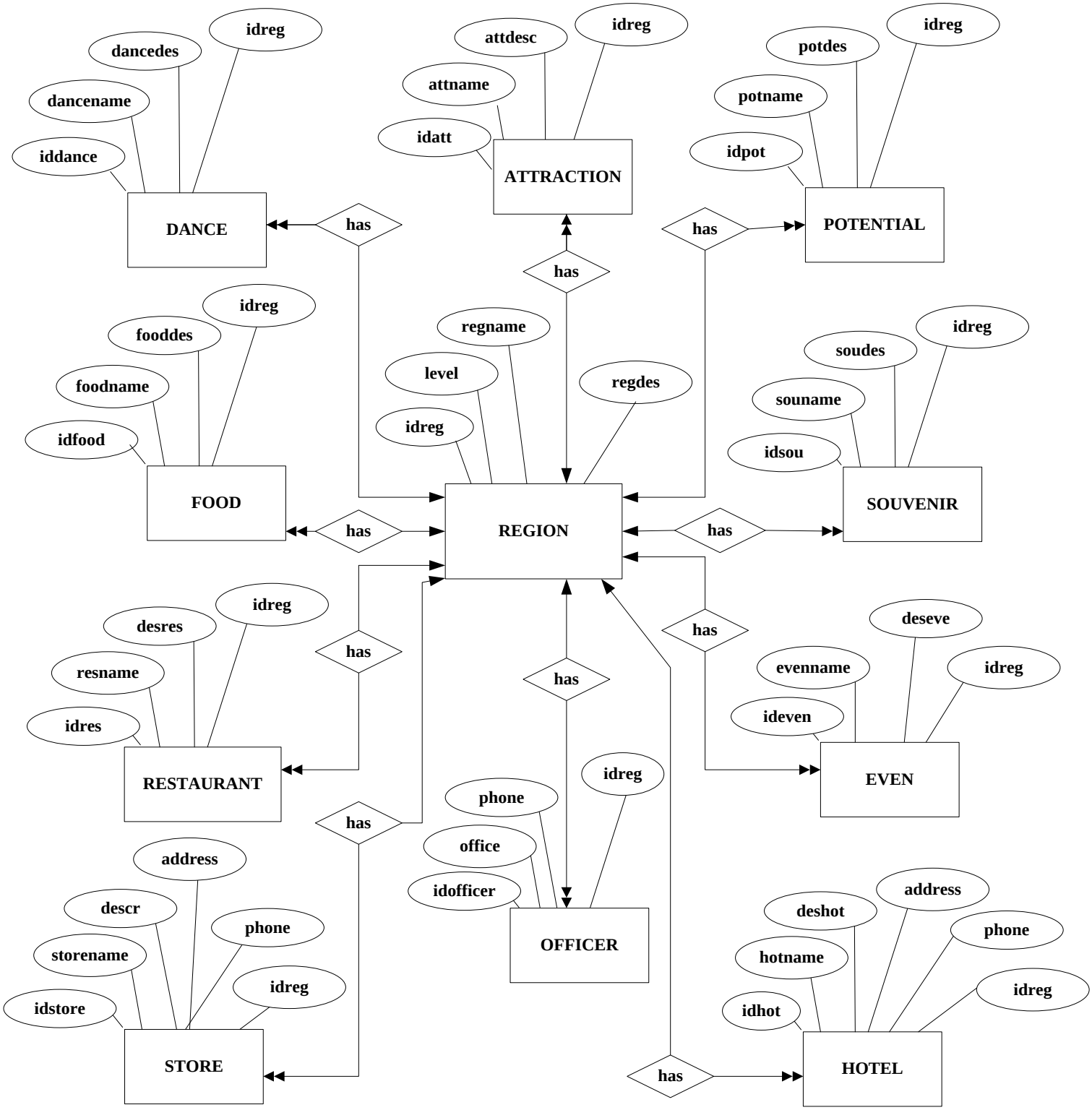

Fig 2. Entity relationalship

4.3 Context Diagram and Data Flow Diagram

Context diagram of tourist information system to increase tourism visits in North Sulawesi Province consists of entities by, dance, culinary, regional, restaurant, apparatus, tokoole, hotel, object, potency, event data flowing into the system, data and generate output flowing to the stakeholders. From the context diagram later downgraded to a data flow diagram

Level 1 data flow diagram of tourist information system.

In the diagram there are regional entities whose data flow in the master data input, then on the transaction process, there are entities by, dance, culinary, restaurant, apparatus, tokoole, hotel, object, potential, event data from various entities interact with data from the processed region file generates the files. Data derived various files processed on the report process where the process of data processing to generate report information flow to the entity stake holders.

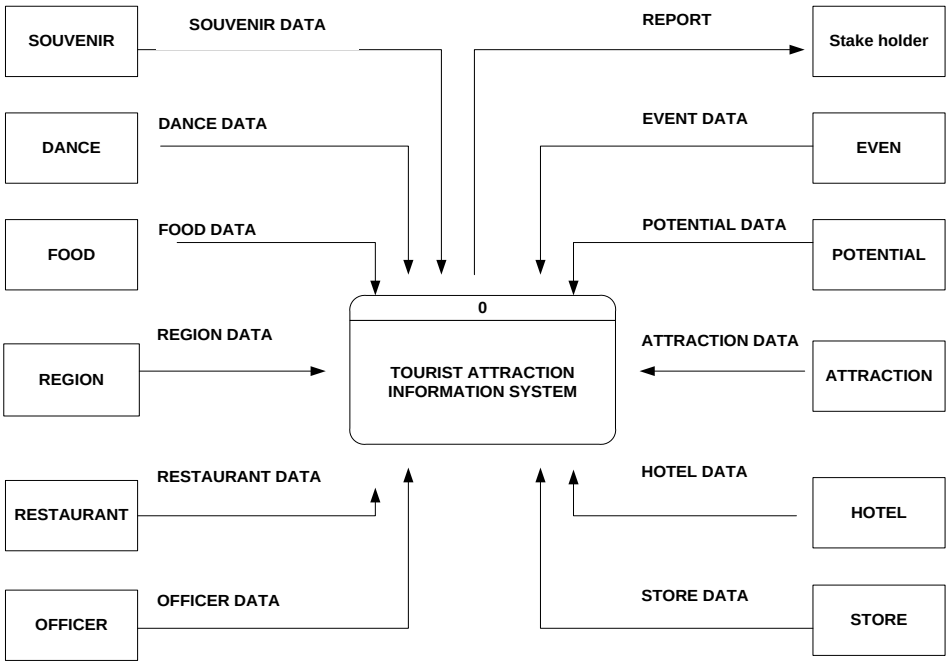

Fig 3. Context diagram

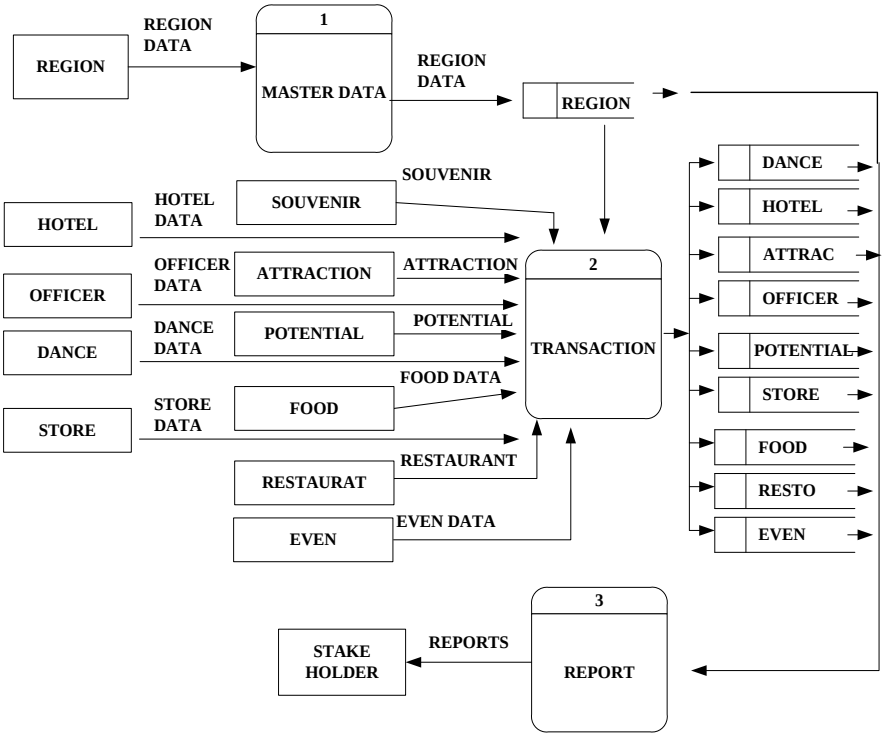

Fig 4 Data Flow Diagram

4.4. Flowchart

Flowchart is used to design the menu used on the system

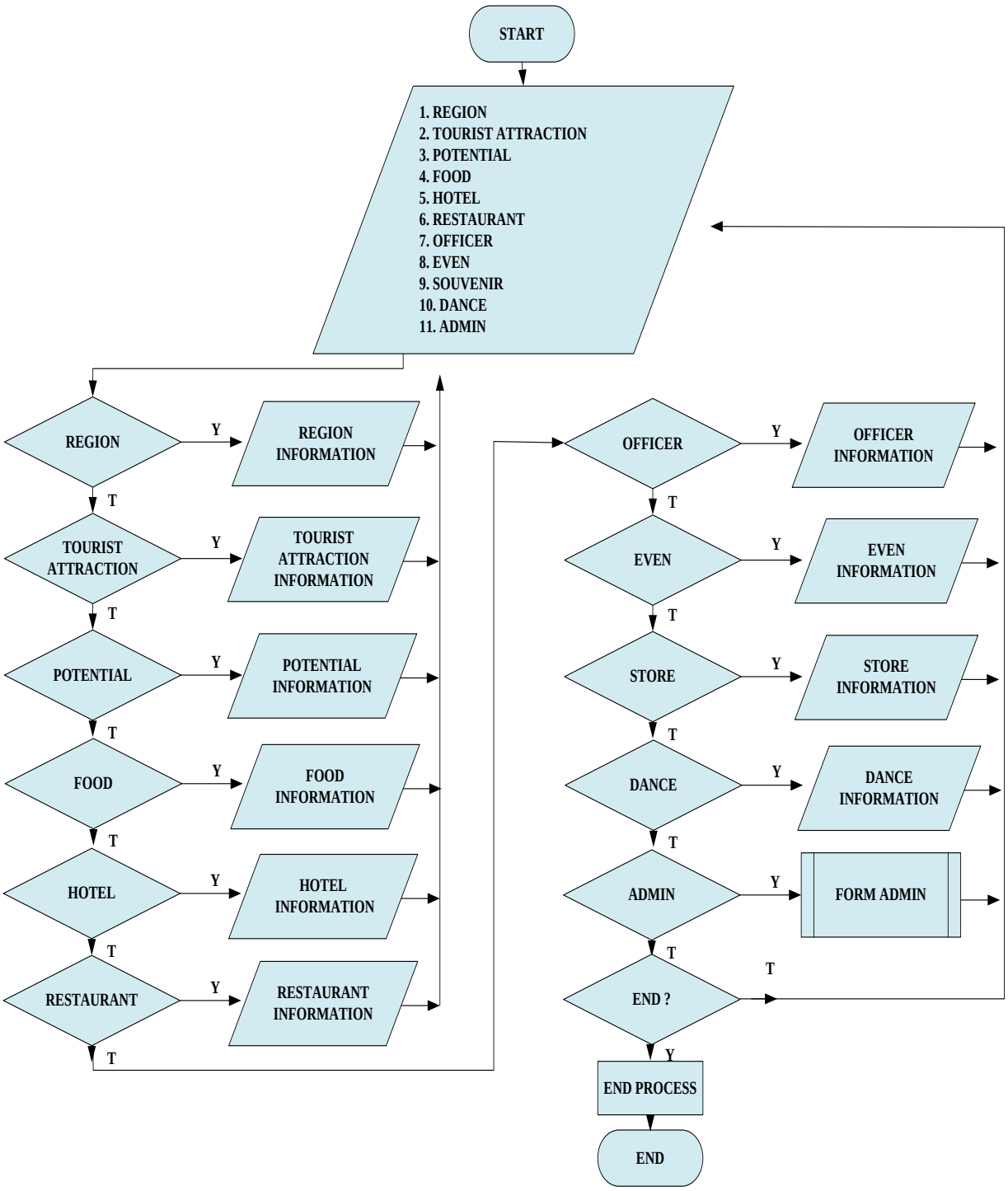

Figure 4. Flowchart Menu

Flowchart Menu

1. User can choose sub menu of area, tourist object, tourism object potential, culinary, hotel, restaurant, apparatus, event, souvenir shop, dance, admin and out
2. When the user selects the menu area, then the system will display the page area that informs the region exists in the region of North Sulawesi province
3. When the user selects the menu of a tourist object, then the system will display the tourist object page inform the tourist object
4. When the user selects a menu of potential tourist objects, then the system will display a potential tourist page that informs potential tourist attraction.

5. When the user selects the culinary menu, the system will display culinary page informing culinary
6. When the user chooses the hotel menu, the system will display the hotel page informing the hotel within the territory of North Sulawesi province
7. When the user chooses the hotel menu, the system will display the restaurant page informing the restaurant within the region of North Sulawesi province
8. When the user selects the apparatus menu then the system will display the apparatus page informing the apparatus that is within the scope of North Sulawesi Province
9. When the user selects the menu event then the system will display an event page that informs events that are done in North Sulawesi Province Priovinsi
10. When the user selects the souvenir shop menu then the system will display the event page informing the sovenis store in North Sulawesi Province Priovinsi
11. When the user selects the dance menu then the system will display a dance page that informs the typical dance of North Sulawesi Province Priov
12. When the user selects the admin menu then the system will display the admin page
13. When the user selects the exit menu then the system will process out of the information system.

5. CONCLUSION

The research that started from the data collection stage that recorded the needs of visitors to get the system specification, then with the analysis resulted in the design of Entity Relational, flowchart, data flow diagram, and use case, in the future can be implemented to build applications that can present information about tourism object in Sulawesi Province North that suits the needs of information seekers both tourists and potential tourists.

6. ACKNOWLEDGMENTS

Thanks to the Ministry of Research and Technology of Technology and Higher Education , which has funded this research with competitive grants program in 2016.

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