DEVELOPMENT OF TOURISM EXPLORE APPLICATIONS IN THE LANGSA CITY

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ABSTRACT
Tourism is a trip that is carried out for recreation or vacation. Langsa City is one of the cities in Aceh, the area of the city of Langsa is 262.4 km². There are still many peoples inside and outside the city of Langsa who do not yet know the existing tourist destinations and transportation to go to the city of Langsa, so tourists lack information on transportation and tourist destinations in the city of Langsa. From this research, an application will be made to explore android-based tours that can provide tourist information and estimate costs. The method of research carried out in the construction of applications explore tours and reports making are the method of collecting data, analysis and design, implementation, testing, and conclusions making. Tourism application application developed to android and use ionic as a framework. Based on the evaluation conducted the application that was built can provide information about tourist destinations in the city of Langsa can also estimate the costs to be incurred by tourists.

Keywords: Tour, Langsa, Explore Tourism, Android.

1. INTRODUCTION
The city of Langsa is one of the cities in the province of Aceh, with an area of 262.4 km². The city of Langsa has the potential to become a tourist city Based on the geographical location of the city of Langsa in the part of Timu and a distance of 400km from the city of Banda Aceh [1].

Based on the results of interviews with mothers, there are still many tourists inside and outside the city of Langsa who do not know about the existing tourist destinations and transportation to go to the city of Langsa, so tourists lack information and tourist destinations in Langsa. At present the media used to promote tourist attractions to tourists still use print media such as brochures, banners, newspapers and social media, so that it requires an expense for distribution. Lack of knowledge of the costs and transportation used to visit, so make tourism hesitant to explore a tourist destination that has never been visited.

Based on these problems, this research will make an application to explore android-based tours that can provide tourist information and estimate costs. Therefore, researchers set a study entitled "Development of Applications to Explore Tourism in Langsa City.

2. THEORICAL BASIC
2.1 Langsa
The city of Langsa is one of the cities in the province of Aceh, with an area of 262.4 Km² within 400km of the city of Banda Aceh. Consisting of 5 sub-districts namely Langsa Barat sub-district, Langsa Kota, Langsa Timur, Langsa lama and Langsa Baro [1].

2.2 Tourism
Tourism is a journey carried out by a person or group within a certain period of time that has been planned from one place to another, with the aim of recreation or an interest so that his wishes can be fulfilled [2].

2.3 Explore
Explore, or commonly called Explorasi, is exploring or seeking action with the aim of finding new things that have never been for knowledge and can fulfill the information needed [3].

2.4 Traveler
Please as a person who conducts tourism activities or can also be referred to as a tourist. Free is divided into 3, namely foreign, domestic and local [4].

2.5 Transportation
Transportation is a transfer from one location to another, where the transfer is desired by another location. Transportation movements can be carried out with various means such as vehicles using power sources [5].

2.6 Travel
Travel is the movement of people with relatively remote locations that involve traveling by car, plane or other means [6].

2.7 Travel Agent
Travel agents are companies that prepare a trip for people who plan to travel like tourism [7].
2.8 Android

Android is a mobile operating system. First developed by Android Inc., an android application can be run on various devices that use an android operating system such as a smartphone [8].

2.9 Global Positioning System

The Global Positioning System or GPS is a system that can be used to inform the location of users located on the surface of the earth based on satellites. Using 24 satellites that send wave signals [9].

2.10 Google Maps API

Google maps API is a service provided by Google to users to develop applications. Users can take advantage of the services offered by Google Maps after registering and obtaining the free Google Maps API Key [10].

3. DISCUSSION

3.1 Problem Analysis

Problem analysis aims to describe the problems and constraints that exist when conducting research in disporapar. Langsa City. Based on the results of observations and interviews, the analysis of existing problems includes the following matters:

- Why travelers have trouble getting information about tourist destinations in the city of Langsa?
- Why tourists who will come to the city of Langsa find it difficult to estimate the costs to be incurred?

3.2 Data

Data analysis is an activity to examine data about the city of Langsa, especially about tourism that will be analyzed and will be used in the system. Here is a map of the city of Langsa which can be seen in the picture 1.

![Figure 1. Langsa Tourism](image)

3.3 Analysis Of General System Descriptions

The system to be built is the application "Explore Tourism". This application aims to help tourists go to the city of Langsa and carry out tourism activities. The following is a picture of the general description of the system can be seen in the picture 2.

![Figure 2. General System Description](image)

3.4 Functional Need Analysis

Functional requirements analysis describes the process of activities that will be applied in the system and explains the needs needed for the system to run properly.

3.4.1 Use Case Diagram

Use Case Diagram describes an interaction between one or more actors with the system to be created, can be seen in the Figure 3.

![Figure 3. Use Case Diagram](image)
3.4.2 Activity Diagram

Activity Diagrams are used to describe the process flow of the scenario that has been designed in each use case, can be seen in Figure 4.

3.4.3 Sequence Diagram

Sequence diagrams are used to describe interactions between objects and indicate communication between these objects, can be seen in the Figure 5.

3.5 Data Designing

Data design is a process to determine the contents of the data settings needed to support various system designs with the aim of making it easier to interpret the structure of information. The relation scheme can be seen in the Figure 6

3.6 Hardware Implementation

This section discusses the hardware used to build systems on mobile platforms and websites for applications to explore tourism in the city of Langsa. The mobile hardware details used can be seen in Table 1.

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Octa Core</td>
</tr>
<tr>
<td>Memory</td>
<td>Ram 2 GB, Internal 16 GB</td>
</tr>
<tr>
<td>Operating System</td>
<td>Android Versi 7.1 (Nougat)</td>
</tr>
<tr>
<td>Feature</td>
<td>Gps, Internet</td>
</tr>
</tbody>
</table>

3.7 Software Implementation

This section discusses the hardware used to build systems on sites in the city of Langsa. The mobile hardware details can be seen in Table 2.

<table>
<thead>
<tr>
<th>Software Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows Operating System 10, 64-bit</td>
</tr>
<tr>
<td>Google Chrome browser</td>
</tr>
<tr>
<td>Connected to the internet</td>
</tr>
<tr>
<td>Text Editor Sublime Text</td>
</tr>
</tbody>
</table>

3.8 Interface Implementation

3.8.1 Android Interface

Figure 7 is the appearance of the website login interface for administrator.
Figure 7. User Login Interface Display

Figure 8 is a website dashboard interface for administrator.

Figure 8. Manager Dashboard Interface Display

Figure 9 is the website's tourist interface for administrator.

Figure 9. Tourist Interface Display

Figure 10 is a map website interface for administrator.

Figure 10. Hotel Interface Display

3.8.2 Android Interface

Figure 11 is the display of the Android application login interface for users.

Figure 11. User Login Interface Display

Figure 12 is the appearance of the Android application's home interface for users.

Figure 12. User Home Interface

Figure 12 is a tourist interface display of the android application for users.

Figure 13. User Tourism Interface Display

Figure 13 is the Hotel interface of the android application for users.
Figure 14. Hotel User Interface

Figure 14 is an Android display interface Hotel Details application for users.

Figure 15. User Hotel Interface Detail Display

Figure 15 is the user interface detail of the Android tour application.

Figure 16. User Interface Interface View

3.9 Beta Testing Questionnaire

The testing questionnaire is a data processing technique that is a step in processing the data that has been obtained to be used as research so that it can be concluded. The following is a statement from the questionnaire submitted to tourists. The calculation of the results of the assessment can be seen in the table 3.

### Table 3. Kuesioner Beta Testing Questionnaire

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the information in this application enough to help you explore the city of Langsa?</td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>Value</td>
<td>5</td>
</tr>
<tr>
<td>Frequency of Answers</td>
<td>15</td>
</tr>
<tr>
<td>Number of Samples</td>
<td>30</td>
</tr>
<tr>
<td>Total Value</td>
<td>(15<em>5)+(15</em>4)+(0<em>3)+(0</em>2)+(0*1)= 135</td>
</tr>
<tr>
<td>Result</td>
<td>135/(30*5)*100= 90%</td>
</tr>
</tbody>
</table>

3.10 Beta Testing Interview

Beta testing is done to find out the assessment of the tour de langsa application conducted by interview method. Interviews are conducted with the public and store managers to find out the extent to which the system built can solve the problems described previously. The results of the interview can be seen in table 4 and table 5.

### Table 4. Interview 1 Beta Testing

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>In your opinion, can this Tour de Langsa application help promote products to be sold?</td>
<td>This application can help simplify the process of promotion of products to be sold, besides that it simplifies the process of purchasing customers</td>
</tr>
<tr>
<td>In your opinion, is the navigation on the Tour de Langsa application very clear?</td>
<td>I think this application is very suitable</td>
</tr>
<tr>
<td>In your opinion, is the interface given by the Tour de Langsa app easy enough?</td>
<td>In my opinion, the interface is very good and very simple</td>
</tr>
<tr>
<td>According to you, the Tour de Langsa application is easy to understand and use?</td>
<td>In my opinion, the appearance of this application is very simple so it is very easy to understand and use</td>
</tr>
<tr>
<td>Do you have a suggestion that this application can be even better? If you have</td>
<td>My advice for the future is to be able to order through the application</td>
</tr>
</tbody>
</table>
Table 5. Interview 2 Beta Testing

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>In your opinion, can this Tour de Langsa application help promote products to be sold?</td>
<td>Yes, this application really helps promote products that will be sold, besides this application can facilitate the process of selling goods for example in seeing the goods or products sold</td>
</tr>
<tr>
<td>In your opinion, is the navigation on the Tour de Langsa application very clear?</td>
<td>Navigation in this application is appropriate</td>
</tr>
<tr>
<td>In your opinion, is the interface given by the Tour de Langsa app easy enough?</td>
<td>The interface is very easy to use because in my opinion the appearance of this application is very common in an application</td>
</tr>
<tr>
<td>According to you, the Tour de Langsa application is easy to understand and use</td>
<td>This application is very easy to understand and use because in my opinion the appearance of this application is very common in an application</td>
</tr>
<tr>
<td>Do you have a suggestion that this application can be even better? If you have suggestions, please explain.</td>
<td>My advice on the souvenir menu is displayed so that people who want to buy can see the product</td>
</tr>
</tbody>
</table>

4. CLOSING

4.1 Conclusion
Based on the results of testing the tour de langsa application on the android platform, the conclusion is that the tour de langsa application can provide information about tourist destinations in the city of Langsa and the tour de langsa application can estimate the costs to be incurred by tourists.

4.2 Suggestion
The tour de langsa application that was built is an application of tourist recommendations, hotels and estimated costs. Therefore there are some suggestions that can be used as a reference for the development of this software in the future so that it can be better so that it can keep up with technological developments. The suggestions for the development of the tour de langsa application are as follows:

- This application can be added features to make hotel and travel reservations.
- This application can be added to the optimal travel route features from tourist locations to tourist sites and hotels.
- Develop the platform of this application besides Android.

BIBLIOGRAPHY


