APPLICATION DEVELOPMENT OF TOURISM ROUTES JAYAPURA USES ASSISTED-GLOBAL POSITIONING SYSTEM (A-GPS) BASED ANDROID

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ABSTRAK

The city is the capital of Jayapura, Papua Province westernmost tip of eastern Indonesia. The city is known for very rich natural beauty that is still maintained, typical and unique culture to places of interest to visit. Jayapura is very strategic to be managed as best as possible for the purpose of tourism. Good nature tourism, culinary tourism, as well as historical places. The smooth running of the activities not regardless of the availability of means of transport.

But still very poor in the delivery of tourism information and means of transport in the city of Jayapura, resulting in less menggeliatnya the tourism sector in the city of Jayapura.So the existence of the required efforts to resurrect Tourism-tourism etc. Therefore transport the public gives the mobility of the community. Some people from Jayapura as wellas tourists visiting the city of Jayapura, still experiencing confusion to choose which route should be taken to get to a place that wants to land on. So is a hotel or lodging, less tourists know the information about the hotel or the guesthouse around tourist attractions. less tourists know the information about the hotel or the guesthouse around tourist attractions.

Based on the results of testing on the application of tourism routes in the city of Jayapura, this application can help tourists who visit to Jayapura for information objects. Good nature tourism, culinary tourism, as well as recommend nearby hotels the desired tourism tourists.

1. INTRODUCTION

Growing activities in the sectors of culture and tourism as well as the facilities and infrastructure in the city of Jayapura. The city is known for very rich natural beauty that is still maintained, typical and unique culture to places of interest to visit. Jayapurais very strategic to be managed as best as possible for the purpose of tourism. Good nature tourism, culinary tourism, as well as historical places. The smooth runningof the activities not regardless of the availability of means of transport. Transportation public transit play an important role in the dynamics of the economy and of the city.

With still very poor in the delivery of tourism information and means of transport in the city of Jayapura, resulting in less menggeliatnya the tourism sector in the city ofJayapura. So the existence of the required efforts to resurrect Tourism-tourism etc.

Public transport gives the mobility of the community. Some people from Jayapura as well as tourists visiting the city of Jayapura, still experiencing confusion to choosewhich route should be taken to get to a place that wants to land on. This leads to a lack of information on the routes of public transport in the city of Jayapura, so theyprefer cabs as angkutanya, although rates tend to be more expensive. In addition to choosing a taxi tourists often utilize social media to ask angkot anywhere that needs to be in there in order to get to the destination location.

Therefore, the above issues with the need to design and build the application routes tourism city of Jayapura-based android. So it is

expected to help tourists who want to visit tourist sites, can use public transport routes, and can recommend the Inn or hotel nearby attractions in the city of Jayapura.

2. METHODOLOGY

The method of research done in the thesis about the tourism route Jayapura is through search and literature data through field observation to the Service culture and-Jayapura.

While the method of software development is done is as follows:Validation Idea

1. In the early stages where the validation of ideas is one of the crucial stages. From the analysis using the Javelin Board, we can know the critical point, the identification of the problem, assumptions, do the testing methods, and also the determination of the criteria of success.

2. Design System
   The design of this system using Google Design Sprint. The design of the Sprint is the practice of the method used by Google to help the startup Venture in making prototype briefly and can be immediately performed repair.

3. Implementation
   At this stage, implementation using Agile Scrum model. Where one of the scrum software engineering method by using the principles of the Agile approach, which rests on the strength of team collaboration, incremental product and process iterationsto achieve the end result.

4. Testing System
   Testing phase system using Usability testing is a technique used to evaluate the product by testing it directly on the user.

3. RESULT AND DISCUSSION

3.1 Validation Idea

Validate the idea before the idea was applied in a programming was very important, because with validating the idea then we can mengeatahui whether those ideas could be developed further or not. Validate the idea can be done by pouring the idea into the mockup validation then do to people who are not known and are not familiar with these ideas as well as allowing he did interviews in order to more clearly and effectively.determination of main problems

On The writing of Thesis titled development of tourism routes Jayapura applicationseither using A-GPS android based, has three major problems, namely:



Picture 3.1 Determination main Problem

3.2 Analysis System Specifications

System requirements specification is a software needs resulting from the process of analysis. Analysis of software requirements specification which will be explained is the analysis of the functional needs and specifications are non-functional. The following is the analysis of the needs of functional software which can be seen in the Table below.

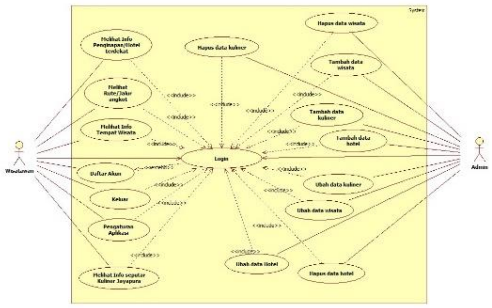
Table 3.2 Functional requirements specification

No	Code	description of requirement
1	SKPL-F001	The system displays the main page of the application.
2	SKPL-F002	The system displays the tourist attractions in the city of Jayapura based on the desires of the users/visitors.
3	SKPL-F003	The system displays the results of a search of an Inn or hotel nearby the intended tourist sites in the city of Jayapura. The system displays the tourist attractions in the city of Jayapura based on the desires of the users/visitors.
4	SKPL-F004	The system displays the search results or culinary souvenirs fr om Jayapura that selected by the user/tourists to visit.
5	SKPL-F005	The system displays a menu of routes minibus in the town of Jayapura, which is chosen by the user/tourists to visit.
6	SKPL-F006	The system displays the application settings page such as change password and can be stored in the database.
7	SKPL-F007	The system displays a page or form a new list of accounts such as your name, emailusernames and passwords are then stored in database.
8	SKPL-F008	The system displays a menu logout to exit your account application.
9	SKPL-F009	The system displays the add form data and new tourist can store data into the database.
10	SKPL-F010	The system displays the add form data food and can save the data into a new culinary database.
11	SKPL-F011	The System displays the add form data and can save the data into a new hotel/lodging database.
12	SKPL-F012	The system displays the change of data form and can save the data changes being entered by admin.
13	SKPL-F013	The system displays the change of data form the culinary and can save the data changes being entered by admin.
14	SKPL-F014	The system displays the change of data form the hotel and be able to save changes to the data being entered by admin.
15	SKPL-F015	The system displays the add form data using public transportation route in the town of Jayapura.
16	SKPL-F016	The system displays the change of data form the route of minibus in the town of Jayapura.

3.3 Use Case Diagram

Use case diagram is a diagram that illustrates the interaction between the system and the user. Use case diagrams easy to understand because the plot clear and

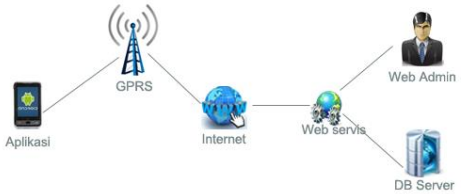
structured according to mess with the system to be built. Here is a use case diagram in Jayapura city tour route applications.



Picture 3.3 Use Case Diagram

3.4 analysis of system architecture

the physical architecture of the system to be built consisting of android mobile applications as a front-end web application base, and as admin as well as the back-enddatabase. System architecture in construction of tourism routes Jayapura application uses Assisted Global Positioning System (A-GPS) android-based it can be seen in the following figure.



Picture 3.4 Arsitektur Sistem

3.4 Google Desain Sprint Planning

Design sprint is a method created by google with the intention of assisting developers solve design problems and test in a short time 2-5 day. Design sprint consists of six stages:

a. Understand

- User Interview
- Focus on the needs of the User
- Conduct a Survey

b. Define

In addition to understanding main problems experienced by the user, filter and make the concept of the invention as well as the menjabarkannya with design principles should also be done. And in the end the user feel good because of the problemsexperienced are already solved and the solution is obtained. Following is the display of strategy and focus of the application to be built:

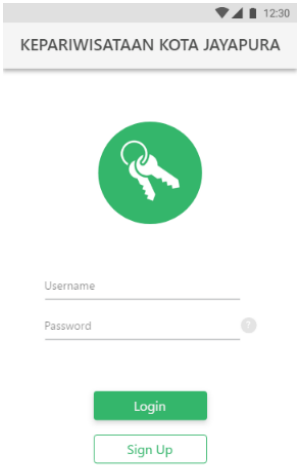
1. Display application or interface built focus based on the needs of users or end-users.
2. To add creativity and imagination, then do look for reference the interface in other applications such as UI/UX so that users can easily and comfortably use applications that will be built

b. Decide

At this stage do centralize and unify the ideas into one main idea. The main idea ofthis is that later will be processed on the next step that is doing the design of the prototype. Based on the results of the ideas obtained then the conclusion is bringing together those ideas with a good solution that is built with the application interface or a good display, easy to use, easy to understand and accessible to end-users as well as with this application the user is being greatly helped and being the solution of the problems that affect them while travelling to the city of Jayapura Indonesia.

c. Prototipe

At this stage, do the manufacturing design to validate an idea quickly and at low cost. The following is the prototype that has been designed in accordance with the needs of the user and the ideas that emerged.



Picture 3.5 Prototipe Aplikasi Login

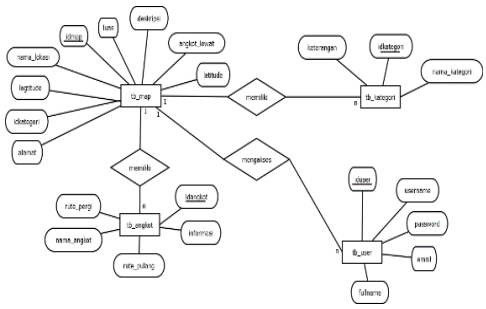
d. Validate

Once the design prototype is finished then, performed the validation to users, with the aim if they can interact using a prototype was made. Is it already reaches the desired destination.

3.5 Analysis Database

The following is the analysis database that are used in the application of tourism routes Jayapura, either a relational database consisting of ERD and Schema Relationships ERD

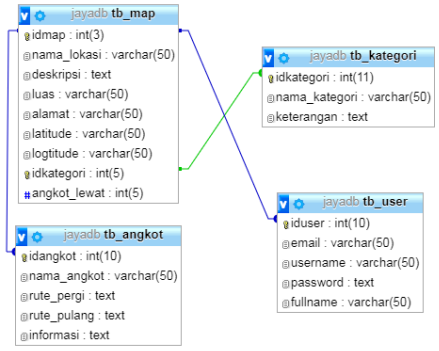
ERD is one of the models used to design databases with the aim of describing thedata with relation to a database. The following is an ERD from an application the application routes tourism city of Jayapura.



Picture 3.6 ERD

b. Scheme Relation

Relation database schema in the application system of routes tourism city of Jayapura, is as follows:the application system of routes tourism city of Jayapura, is as follows:



Picture 3.7 Scheme Relation

3.6 Implementation and Testing System

Implementation of the system is a procedure performed to complete the design that is in an approved system design document and agree to, install and use it and test the feasibility of the system have been made. Thus, applications that are createddo not deviate from the design of the system in accordance with the objective.

a. Implementation Of Interface

Interface implementation is a picture of the interface system that had been built earlier in the design of the interface. Implementations of this interface are applied on each page of the interface system. The system interface is built that is a front end that is android and mobile system back end in the form of Web page. Implementation of interface on the tourist route application Jayapura mobile systems this can be seen in the following table.

Table 3.4 Implementation Application Interface Mobile

No	Mobile Interface System	Description	Physical File
1	Register	The home page of the application as a new account registration for tourists	RegisterActivity.java
2	Login	Page to enter into the application and access the menu provided	LoginActivity.java
3	Tourism	Page to see a list of attractions, this menu as the main page after successful login	PariwisataActivity.java
4	Hotel	This page to see a list of hotels is available on application	HotelActivity.java
5	Culinary	This page to see a list of culinary place available on application	KulinerActivity.java
6	Minibus Routes	This page to choose a route using public transportation to get to the tourist areas	RouteActivity.java

b. Pengujian Sistem

Fronted aaplication testing scenario presents sequence and things in test on the frontend application

Table 3.6 Application Testing Scenario Frontend

No	Test Item	Grain Testing	Types of Test
1	Register	Registration of a new user account by entering your name, email, password	*Blackbox*
2	Login	Verify the login data of travelers with entering your username and password	*Blackbox*
3	Tourism	Tour search data	*Blackb*

No	Test Item	Grain Testing	Types of Test
		input	*ox*
		Press picture tour	
4	Hotel	Hotel search data input	*Blackbox*
		Press pictures of the hotel	
5	Culinary	Culinary search data input	*Blackbox*
		Press the culinary picture	
6	Minibus Routes	Press menu the type of minibus	*Blackbox*

4. CONCLUSION

Based on the test results obtained from research conducted in the preparation of this final task and refers to the purpose of the research that has been created, it can be concluded that:

1. This application can help tourists who visit to jayapura for information objects – tourist attractions.
2. Application in awoke can help travelers to get hotel information from the nearest tourist attractions.
3. Application in awoke may recommend public transport that can be used to reach tourist attractions.
4. Applications that are built can help travelers to find information on sale of food typical of jayapura.

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