

# Towards Smart Village: Rides Management Mobile Application As Tourism Digital Promotion And Marketing in Society 5.0 Era

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## ABSTRACT

In the context of developing tourism in various regions in Indonesia, many areas are developing the potential around them to be used as tourist attractions that can attract visitors or what are then referred to as "tourist villages." In its introduction, tourist villages also need promotion through digital media. One of the efforts to market to the wider community and make it easier for people who want to visit tourist villages to purchase entrance tickets for rides and find out information about what types of rides are available. By using the Agile-Scrum development method, it is possible to produce a product Implementation of the Tourism Village Mobile Application for the Ticket Management and Tourism Rides Management Module, in the form of an application where visitors can purchase tickets and tour packages through the tourist village application on their smartphone. The application does not only sell entry tickets but also sells ride tickets available in the tourist village.

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## I. Introduction

In the context of developing tourism in various regions in Indonesia, many areas are developing the potential around them to become tourist attractions that can attract visitors. Efforts to develop and utilize various national to increase employment, community income, regional and state income, and foreign exchange earnings[1]. One of the tourism developments in the area is like a tourist village. The development of a tourist village can help the area in improving its economic welfare.

One of the factors that need to be considered in developing a very large tourism potential is marketing. Marketing aims to introduce a tourist spot to the public so that tourists know about it then feel interested and want to visit the tourist attraction. The existing tourist objects in various regions are currently increasing with the concept of a tourist village, but the lack of marketing carried out by the government makes the newly discovered tourist attraction less well known among the public. With the existence of quality marketing techniques in accordance with the times, it is hoped that it will be able to introduce tourist objects, especially newly emerging attractions so that they can increase the number of tourists.[2]

Community activities in the digital era are carried out online whenever they want quickly. In addition, the impact of the COVID-19 pandemic has increased digital access. Promotion through digital media is also needed for the introduction of tourist villages[4]. Previous research on tourism has been widely developed, including the development of tourism digitization for camping ground [5], digitizing cashless payments [6] and smart village development [7].

## II. Methods

### A. Development

The development method used is the Agile Scrum method. This method is considered to have advantages over other development methods, which is why it is enough to do it with a small team to produce applications that are suitable for the environment and easily adapt to changes during the

development process. In addition, the optimal use of software development time is also generated[8][4]

The method of development using scrum, is a technique formed from several stages of the process, from the product backlog to the sprint retrospective. The following is a complete explanation of the stages of the scrum method.[9][10]

1. Backlog

Backlog is a list of requirements or features that have business value for partners and must be completed during system development.

2. Sprint

Sprints are part of the work that is required to be fulfilled according to the time scheduled in the time-box and has been specified in the backlog.

3. Scrum Meetings

Scrum meetings are held as a scheduled meeting activity during the sprint to discuss the work that has been done, the problems faced, and the completion targets as material for the discussion of the next meeting.

4. Presentation Demo

Demo application in front of partners to be evaluated in order to improve application features after coding is done using Dart, Flutter, API, MySQL, and XAMPP programming languages.

#### B. User Documentation

In the Implementation of the Tourism Village Mobile Application the Rides Management have documentation at every stage of system creation [11]. This documentation makes it easy for users to use the Tourism Village Mobile Application as a marketing strategy and for tourism village promotion as for documentation for users as follows:

1. Observation and Data Collection Phase

The author collects information and data by observing the Watu Gambir tourist village in Karanganyar..

2. System Analysis and Design Phase

Analyze the system design used to determine the goals and facilities to be used in the system, such as entity relationship diagrams, use case diagrams, use case text, and data structures and data discussions.

3. Implementation Phase of System Design

The process of making the system is based on the results of the analysis design and the system design that has been made. Create a database and write code (writing program code).

4. System Testing and Implementation Phase

Doing testing on the system to test that it is running according to the design and re-assessment and repair of errors that occur so that the application becomes better and perfect.

### III. Result and Discussion

#### A. Product Description

Successful destinations can be structured as the 6As of tourism destinations: (1) Attractions which can be natural such as mountain; artificial such as amusement parks; or cultural such as music festival; (2) Accessibility refers to the entire transportation system within destination that comprise of available routes, existing terminals and adequate public transportations; (3) Amenities characterise all services facilitating a convenient stay, namely accommodation, gastronomy and leisure activities; (4) Available Packages refer to the availability of service bundles by intermediaries to direct tourists' attention to certain unique features of a respective destination; (5) Activities refer to all available activities at the destination which mainly trigger tourists to visit the destination; and (6) Ancillary Services are those daily use services which are not primarily aim for tourist such as bank, postal service and hospital[12]. It is deemed important for destinations to properly maintain each of their 6As to be highly competitive in the industry. However, with consumers taking over the process of co-creation, destinations need to realise that conventional approach has become obsolete and they need to interconnect all their stakeholders to facilitate a dynamic co-creation process to increase destination competitiveness [13].

Implementation of the Tourism Village Mobile Application to support a smart city [14], the Tourism Rides in the form of an application , which User is a visitor who purchases a tour ticket or ticket for the available rides and pays for the ticket. For an overview of the business processes of the applications built, see Fig 1.

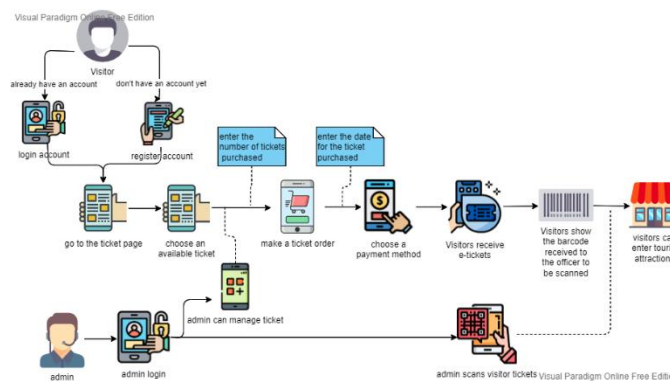


Fig. 1. Rides Management Process Business

Visitors must log in or log in first to the application. If they don't have an account first, they must register or register an account first. After the visitor enters the ticket page, several ticket options will appear. After the visitor selects a ticket, the visitor enters detailed ticket purchase information, such as how many tickets are for adults or children, and the date of the ticket. To receive e-tickets, visitors must make a payment in advance. Payments can be made in cash at tourist sites or with a digital wallet. If you have made a payment, the admin will verify the payment, and the ticket will be issued and sent to the visitor's account. When visitors will enter a tourist location, they must first show the barcode available in the e-ticket to the officer there to be scanned, after the scan is successful, the visitor can enter the tourist location. The tour admin can withdraw funds if the visitor has scanned the entrance to the location or tourist vehicle, but before that, the admin must log in first.

**B. Product Functional**

The functional requirements contained in this system are as follows

Table 1. Functional Requirements

Code	Description	Actor	Dependencies
FR001	The system can register an account	User	
FR002	The system can login	User	FR001
FR003	The system can display a list of tourist tickets and rides	User	FR002
FR004	The system can add tickets to the cart	User	FR002
FR005	The system can display a list of tickets in the cart	User	FR004
FR006	The system can update the amount in the cart	User	FR004
FR007	The system can delete the ticket on the cart	User	FR004
FR008	The system can make ticket payments	User	FR004
FR009	The system can display tourist tickets and rides	User	FR008
FR010	The system can log out	User	FR002

**C. Method of Testing**

System testing aims to see whether the system that has been made is in accordance with the initial purpose of making it and is feasible to use. Testing on the system uses the Black Box method and API

testing with the Postman method.[15]The aim is to find out that the parts in the application system have correctly displayed error messages if an error occurs in data input[3]. Black Box Testing itself is a test that is carried out only by observing the results of execution through test data and checking the functionality of the software. This black box test focuses on system functions

The advantages of using the Blackbox testing method are: (1) The examiner does not need to have knowledge of a particular programming language; (2) Testing is done from the user's point of view, this helps to reveal any ambiguity or inconsistency in the requirements specification; (3) Programmer and tester both depend on each other. The disadvantages of the blackbox testing method are: (1) Test cases are difficult to design without clear specifications; (2) Possibility of having repeated tests already done by the programmer; (3) Some parts of the back end were not tested at all[16].

#### D. Implementation

In this implementation, the functional and source code describe the connection from a web-based system to a mobile-based system.

##### 1) Interface Splash and sign up

The splash page interface is the display that first appears when the user accesses the application. Implementation can be seen in Fig 2.



Fig. 2. Main page and Sign Up Page Interface

##### 2) Dashboard Page Interface

The user dashboard page interface is the initial page that is accessed after logging in. This page contains a menu of available activity options. The implementation can be seen in Fig 3

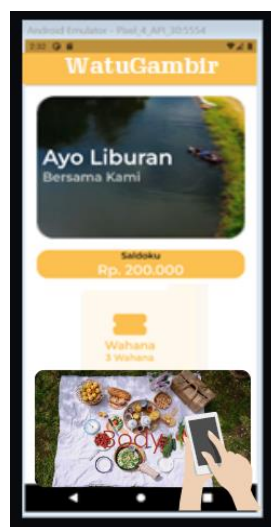


Fig. 3. User Dashboard Page Interface

### 3) Place List Page Interface

The tourist attractions list page interface is a page that appears when the user accesses the rides. This page contains a list of available tourist villages. The ticket list page interface is a page containing a list of tourist tickets and rides from the selected tourist village. For the implementation can be seen in Fig 4.

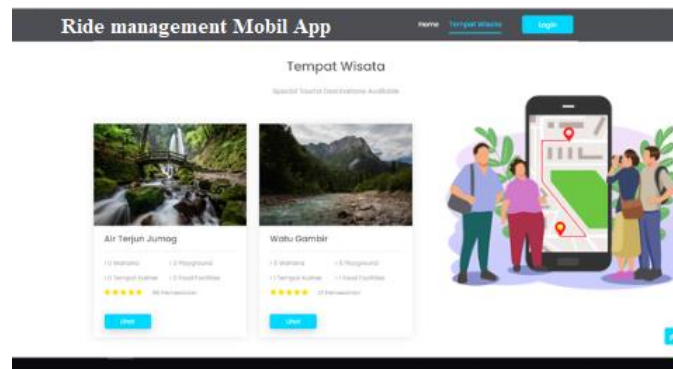


Fig. 4. Place List Page Interface

Based on testing conducted on users that the existence of a mobile-based digital application in the field of tourism, especially in the field of rides management, is very interesting and helps the public to find out which rides are in a tourist spot, especially given digital booking facilities, it is very suitable for the needs and lifestyles of the people in the era of society. 5.0. The survey results can be seen in Figure 5.

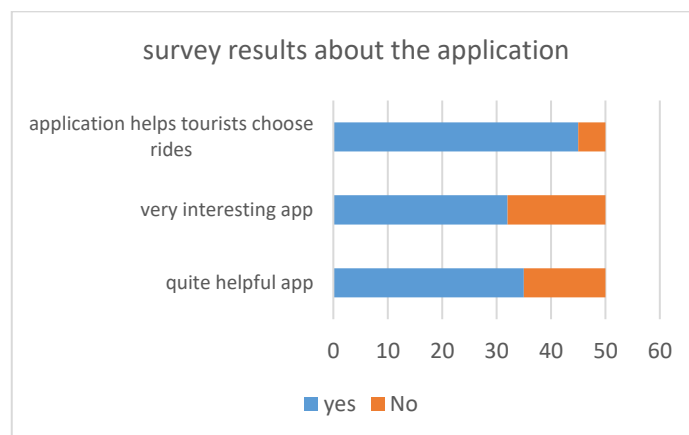


Fig. 5. Survey result about application

## IV. Conclusion

The conclusion of this research is that the implementation of a Mobile-based Tourism Village Information System for Management of Rides using Flutter as a framework has been successfully developed. this application as a digital-based promotional media and marketing media in the era of society 5.0.

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