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M-WASH ANDROID MOBILE APPLICATION (CASE STUDY : PT. YZO PUTRA SEJAHTERA)

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Abstract: The vehicle washing application using mobile is an application that aims to help users make it easier for users to order vehicle washing services online. This app was designed to make it easy for users to use and to allow them to send vehicle wash notifications whenever and wherever they want using a mobile device. Ordering Features: This application has several main features, namely Ordering Features: Users can order vehicle washing services easily through this application. They only need to choose the type of car they want, the services they want, and the time and place where they want to work. Integration Payment: This application is equipped with an online payment system, which allows easy and secure payments through the application. Feature Order Tracking: Users can monitor the status of their orders through the application, namely when the order will be picked up, the vehicle washing process, and when the order will be completed and will be completed. This application is equipped with a good and secure data management system, so that user data and orders can be accessed easily and protected from unwanted actions. Vehicle washing using mobile applications can provide many benefits for users, such as user convenience and satisfaction, time and cost efficiency, and ease of finding information. Because of this, app development must begin with a focus on the most important features that users require and end with a positive user experience.

Keywords: application; android; m-wash; mobile; vehiclewash.

Abstrak: Aplikasi cuci kendaraan menggunakan mobile merupakan aplikasi yang bertujuan untuk membantu pengguna dalam mempermudah pengguna dalam memesan jasa cuci kendaraan secara online. Aplikasi ini dirancang untuk memudahkan pengguna dalam menggunakan dan memungkinkan mereka mengirim notifikasi cuci kendaraan kapan pun dan di mana pun mereka mau menggunakan perangkat seluler. Fitur Pemesanan : Aplikasi ini memiliki beberapa fitur utama yaitu Fitur Pemesanan : Pengguna dapat memesan jasa cuci kendaraan dengan mudah melalui aplikasi ini. Mereka hanya perlu memilih jenis mobil yang diinginkan, layanan yang diinginkan, serta waktu dan tempat di mana mereka ingin bekerja. Pembayaran Integrasi: Aplikasi ini dilengkapi dengan sistem pembayaran online, yang memungkinkan pembayaran mudah dan aman melalui aplikasi. Fitur Order Tracking: Pengguna dapat memantau status pesanannya melalui aplikasi, yaitu kapan pesanan diambil, proses pencucian kendaraan, dan kapan pesanan selesai dan akan diselesaikan. Aplikasi ini dilengkapi dengan sistem pengelolaan data yang baik dan aman, sehingga data dan pesanan pengguna dapat diakses dengan mudah dan terlindungi dari tindakan yang tidak diinginkan. Pencucian kendaraan menggunakan aplikasi mobile dapat memberikan banyak manfaat bagi pengguna, seperti kenyamanan dan kepuasan pengguna, efisiensi waktu dan biaya, serta kemudahan dalam mencari informasi. Oleh karena itu, pengembangan aplikasi harus dimulai dengan fokus pada fitur paling penting yang dibutuhkan pengguna dan diakhiri dengan pengalaman pengguna yang positif.

Kata kunci: aplikasi; android; m-wash; mobile; cuci kendaraan.

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INTRODUCTION

With the advancement of technology nowadays, any information that we want to learn can be obtained quickly. Apart from making it easier to get information, technological developments also help us live our daily lives with the emergence of a wide selection of existing applications, be they desktop applications, online applications, and also mobile applications. [1]. Existing applications will help in various fields such as communication, finance, transportation, and others. Smartphones are one of the most popular ways for people to keep up with technological advancements and receive timely information. This is due to the nature of smartphones, which can be used at any time and in any location, as well as their small size and ability to be accessed at any time [2].

Android-based smartphones have evolved into a single open-source platform where users may create and deploy applications[3]. Applications on Android are only for entertainment. Nevertheless, not all applications are classified as mere entertainment; instead, applications might be classified as business strategies. Almost all business owners are now using apps to help them run their businesses, allowing them to work more efficiently and effectively[4]. To sell and buy products, you must have an internet connection. Due to the fact that manual sales processes are more likely to result in significant losses, it is necessary to develop software that may help with the sales process [5]. Android is the most widely used smartphone operating system in the general population, particularly in Indonesia[6]. One of the advantages of Android-based smartphones is the ability of the Android operating system to be updated or upgraded from time to time [7].

Queuing is a phenomenon that occurs in everyday life and occurs in public service facilities. A queue will occur if the number of customers who are served exceeds the capacity of the available services. Queues are often found in other public facilities, including car washes. Increased two-wheeled and four-wheeled vehicles results in increased demand for mobile or motor service. This alone has the potential to improve business performance by improving customer service, allowing customers to spend less time waiting and having more flexibility in the process of moving their belongings [8]. Competition in car wash services is currently very competitive due to the large number or proliferation of motorized vehicle users in Indonesia. Because of this, every business must provide a better information system to the public, particularly in the case of mobile washing queues. Yet, many businesses that provide queuing information rely on manual or word-to-mouth transmission [9]. To prevent a business from failing, it is necessary to conduct research. The recipe is to continue to do and increase sales turnover or number of customers because the goal can be achieved only by increasing sales turnover or number of customers. Increased sales turnover will, in turn, increase the profit of the company. Increasing profits is important for businesses that want to continue operating and expanding in orders to improve their lives. The profit that is desired must be consistent with the goals that have been established at each time [10]. Point of Sale (POS) is a sales-oriented activity and a system that helps transactions. The use of

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POS has increased productivity by allowing for faster processing of client orders, faster data entry, and faster transaction processing [11]. Manual-processing systems frequently experience problems with data capture and storage[12]. Making reports that are complicated because they have to be made by recapitulating the data in the transaction book, the transaction process is long because transactions must be calculated manually[13].

The following are the symptoms of a vehicle wash queue: long waiting time: When there are a lot of people who want to know what's going on, the waiting time might get quite long. This can result in better health for those who need to rest in a hot environment. Inability to handle large volumes: If a car wash business does not have adequate staff or facilities to handle large volumes, the car wash queues will be long. This might result in a loss of customers and a higher rate of pay. Operational issues: If there are operational issues, such as a faulty vehicle engine or a slow-moving staff, this might slow down the vehicle process and lengthen the time it takes. Queue management: If a business does not have an effective queue management system, such as prioritizing customers who pay on time or using a queue number system, the car wash queue may become stale and difficult to manage. To address this issue, the mobile washing business can expand its capabilities and staff by utilizing technology to increase queues and increase staff training to improve the efficiency of the mobile washing process.

Based on the above problems, the author wishes to provide a solution by leveraging the advancement of smartphone technology. The M-Wash application can make it easier for consumers (especially for new people who have just joined a community) to find and find vehicle washes around them, especially those at PT. Apart from that, the M-Wash app has a feature that allows users to perform vehicle cleaning services from anywhere, including their homes. And consumers can choose the processing time and price attached to it. Furthermore, for those who provide vehicle wash services, this application may help to increase profits while also making it easier to be recognized by the public and businesses.

To continue this research, several previous studies have been carried out, using various methods and platforms to create an application called M-Wash which is used as a comparison tool, starting from the severity of excess to the type of platform used as a comparison. references and references to do previous research. Website-Based Mobile Laundry Queuing System Using CRM and Apriade UML Implementation[9], Mobile Web-Based Abc Car Wash Application[8], Information System Design Of Car And Motor Wash Services [14], Impact of Service Quality on Customer Loyalty in Mobile Laundry [10].

Image 1. Car Wash[8]

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E-Order App That Uses Firebase and Knuth Morris Pratt's Android Algorithm[15], CRM Service Air Conditioner Service Jaya Service Android Application[16], Android App for Laundry Service Management (E-Laundry)[17], Application for Computer Repair Hallo Services[18], Tiga Saudara Restaurant Mobile Browser-Based Online Food and Beverage Application[19] and Application for ordering gallon water online with gallon delivery features for Android[20]

Due to the existence of ongoing research, the primary goal of this research is to develop effective and efficient applications for vehicle wash, as well as features that are required in vehicle wash applications to assist users in using safe and efficient vehicle wash services.

The primary goal of developing a vehicle wash application is to make it easier for users to manage their vehicles in a more efficient and practical manner. Some other goals of the vehicle wash application include: Speed up ordering - With the vehicle wash application, customers can order vehicle washing services online without having to come directly to the laundry, Vehicle washing applications can provide a wide selection of vehicle washing services to suit customer needs, such as car washing, motorcycle washing, and others, Increase service quality - By utilizing application technology, users may provide feedback and information about service quality, allowing business owners to make informed decisions about how to improve service quality, and The vehicle wash application can assist business owners in optimizing the management of available time and resources, such as setting vehicle wash schedules, cleaning stock management, and more. Improve business efficiency - By using the app, business owners can monitor real-time business performance, i.e. financial reports, number of customers, etc., which will improve overall business efficiency.

METHOD

The Image 2 depicts the process of conducting research when conducting research.

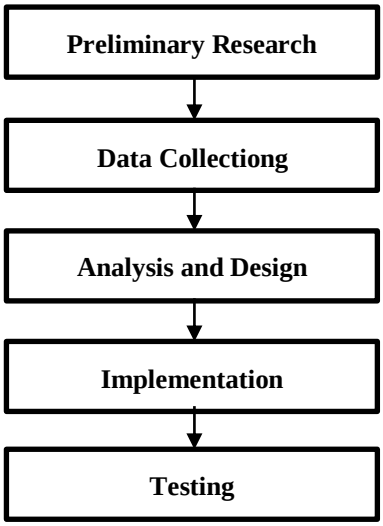

Image 2. Research Methods Framework[9]

Preliminary Research

At this stage, conducting a literature study, which is the process of collecting references from various journals and books related to the topics discussed in this study, the author uses the Mendeley application.

Data Collection

The author analyzes the problems that occur in the field, as well as analyzes the information needed to find solutions to help track existing problems. Many methods of data collection are used by researchers to analyze existing problems,

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such as interviews.

a. Seeking problems

The author conducts an analysis of the problems that are occurring in the surrounding area or among the local population.

b. Interview

Conducting interviews directly to PT. Yzo Putra Sejahtera, where the results of interviews can be used to obtain information or data needed for the design and development of applications that will be made later.

Analysis and Design

Based on the identification of the issue at hand, further data analysis is required. This is done to ensure that the problem is solved, rather than simply becoming a new one.

The system that will be implemented will provide a timely solution to the problems that have been identified. UML is one of the most widely used tools in the development of object-oriented systems. This is due to UML's provision of modeling tools, which enable developers to create effective systems for communicating one set of data with another.

Implementasi

System implementation is the process of modifying a system so that it can function properly. Implementation to confirm designing modes so that users may provide feedback to system developers.

In addition, it will be transformed into a design representation that will be used on a variety of lunar-themed programs and anti-virus applications.

RESULTS AND ANALYSIS

Design Plan

Splash screen display, which is a splash screen design display, is a display that usually appears when you open the application for the first time, as can be seen in Image 5

Image 5. Aplication M-Wash

in Image 5 there is a logo display, as well as a login menu, and sign up which is useful in ordering vehicle wash services at PT. Yzo Putra Sejahtera.

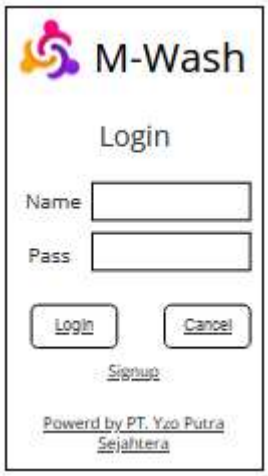

Image 6. Login Page

The search bar at the bottom of this page will be used by users to enter relevant information (username and password) so that they may continue with

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their activities after entering the app.

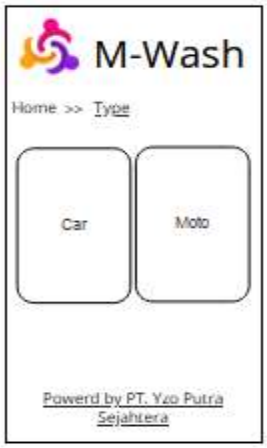

Image 7. Type M-Wash Page

The menu of any app usually has a list of options for users to choose from to use the app's features. Menus in applications are often located in the upper or lower half of the screen and may be accessed by selecting the appropriate button or icon. Menu display types commonly used in applications, among others.

- Horizontal menu: This menu is often seen on the left side of the screen and has horizontal options. This type of menu is commonly used in desktop and web applications.
- Vertical menu: this menu is located on the side of the screen and displays vertical options. This type of menu is frequently used in mobile applications.
- Drop-down menu: This menu appears when the user clicks or moves the cursor to the desired option and displays a list of related options.
- Context menu: This menu appears when a user clicks on a specific object, such as a picture or a piece of text, and it displays options related to that object.
- Aside from that, the menu on the app may be customized to match the theme or visual style used by the app in order to provide a more enjoyable and simple user experience.

Image 8. Service M-Wash Page

In the design view of category and service pages, this page is used by consumers to select the type of category consisting of normal and express and to choose the type of service they want. This category and service page functions to determine the price that will be charged for the last transaction.

CONCLUSION

The vehicle wash application needs to be made easy for the user to operate. By concentrating on a straightforward and user-friendly design, this might be achieved.

The primary function of apps must be to schedule car wash services and provide detailed information about the services offered. This could increase user satisfaction and program confidence.In order for users to simply and securely make payments, our application has to be

integrated with online payment systems.The application needs to provide information about when an order is placed, how long it takes to wash the car, and when it is finished in order to track order status. The user's comfort and confidence may rise as a result.

To make user information and orders easily available and safe from illegal actions, the application has to have a reliable and secure data management system in place. When creating a vehicle wash application, a number of issues must be taken into consideration, including ease of use, focus on essential features, payment integration, the capacity to track order status, and a reliable and secure data management system. It is hoped that by attending to these particulars, the vehicle wash application will provide a satisfying user experience and foster user confidence in the system.

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