



Design of Marketing Digital for SMES Amplang Samarinda Based on Android Mobile Application.

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Abstract— The utilization of a Digital Marketing application (E-Amplang) for Micro, Small, and Medium Enterprises (MSMEs) aims to enhance operational efficiency and streamline processes. The creation of this application utilized MySQL as the chosen database management system and CodeIgniter (CI) as the development framework. This study aims to develop a technological solution or application that can assist small and medium enterprises (SMEs) in Samarinda, namely those involved in the production of Amplang, in promoting their products. The mobile application for sales facilitates access to catalogs containing information on various products and their corresponding prices. Sellers possess the capability to ascertain the daily sales they generate.

Keywords— Mobile application; Sale; MySQL; CI;

I. INTRODUCTION

The proliferation of smartphones, which have transformed into compact computing devices, is expected to drive the ongoing expansion of sales mobile applications. The development of Marketing Mobile Application was undertaken with the aim of enhancing user convenience and meeting their specific requirements. Beginning with various lifestyle requirements, such as security, health, and recreational pursuits, among others. It is not uncommon to encounter instances where multiple programs provide comparable functionalities, hence necessitating developers to exert considerable effort in order to create applications that attract consumers by providing greater features and distinguishing characteristics from their counterparts. The advancement of mobile computer technologies has experienced significant acceleration [1]. The growth in sales of mobile applications is characterized by the progressively expanding range of functions available on these devices [2]. The Marketing Mobile Application is a technological tool that facilitates the dissemination of information pertaining to sales through the utilization of a specific device [3]. Certain online marketing functionalities, such as the ability to generate sales reports for printing purposes, are not accessible on social media platforms. Consequently, micro, small, and medium-sized enterprise (MSME) owners are compelled to manually compile and summarize their sales reports [4]. With the continuous advancement of technology, business owners are increasingly faced with the necessity of incurring more resources in order to market their business through the utilization of a Marketing Mobile Application [5]. Typically, when an entrepreneur seeks to enhance the visibility of their business by utilizing a Marketing Mobile Application, they are subject to an administration fee imposed by the application provider.

The imposition of administrative charges on sellers results in an escalation of the selling price of goods on the marketplace mobile application. The more the administration fee imposed on the vendor, the higher the price of the products being sold. For entrepreneurs with a large turnover value, administrative fees do not provide a significant challenge. However, for middle and lower middle-class entrepreneurs, the administrative costs associated with selling mobile applications can be highly harmful. Hence, the objective of this study is to develop a digital mobile application for Amplang SME owners in East Kalimantan, with a specific focus on the city of Samarinda. This study primarily aims to assist small and medium-sized enterprise (SME) owners in effectively promoting their products to a broader audience. This program has been developed to eliminate administrative costs, hence alleviating the need for merchants to raise the selling price of their products. The architecture of this application is intentionally simplified to ensure ease of use for both buyers and sellers, minimizing any potential challenges during transaction processes.

II. LITERATURE REVIEW

A. Mobile application

The term "mobile application" is derived from the combination of the word's "application" and "mobile" [6]. In the context of software development, ready-made programs refer to pre-existing software applications that are specifically created to execute certain functions for users or other applications. These programs are intended to be utilized by their intended users, and the term "mobile" can be understood as the act of transitioning or relocating from one location to another [7]. The term "mobile" refers to the act of movement, hence, mobile applications are specifically designed to operate on mobile devices [8].

B. Marketing

Marketing is a complex procedure in which the seller endeavors to fulfil the many requirements and preferences of the buyer, with the ultimate goal of generating advantageous outcomes for both parties involved. This mutually beneficial arrangement aims to ensure the long-term viability and profitability of the seller, while simultaneously fostering sustainability in the business relationship [9]. Marketing can be understood as the outcome obtained in exchange for services rendered through commercial interactions [10].

C. Marketing Mobile Application.

Through the utilization of a mobile-based marketing application, entrepreneurs have the capability to efficiently and cost-effectively advertise their merchandise to potential customers. Digital marketing encompasses all marketing initiatives that utilize technology or the internet ([11]). In order to actively interact with existing and prospective clientele, enterprises employ digital platforms such as search engines, social media platforms, electronic mail, and their own websites. Alternative words for this concept include 'online marketing,' 'internet marketing,' or 'web marketing.' The phrase "digital marketing" refers to the strategic implementation of various digital tactics and channels in order to effectively engage with clients in the online spaces where they frequently reside. [12].

D. E-Amplang

The E-amplang application is a mobile-based platform that has been specifically developed for the owners of Amplang MSMEs (Micro, Small, and Medium Enterprises) in Samarinda. The E-amplang application serves as a sales platform for the widespread distribution of products. The development of this application aimed to assist micro, small, and medium enterprise (MSME) owners in expanding the promotion of their products outside their local territory.

III. RESEARCH METHOD

The authors employed various research methodologies in the development of this online sales application, including an initial survey, system design and manufacture, trials, deployment, and evaluation. The framework is visually represented in the graphic provided below.

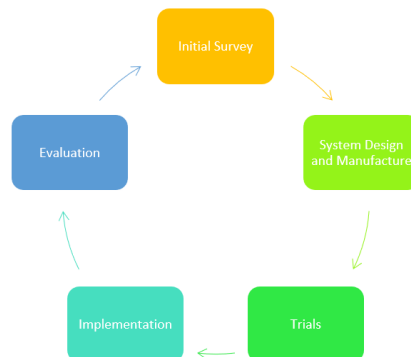


Fig 1. Framework

A. Initial Survey

The purpose of the survey was to ascertain the preferences of partners or owners of small and medium-sized enterprises (SMEs) in order to tailor sales apps to the specific requirements of these business owners.

B. System Design and Manufacture

The operations of system design and manufacture involve the development and production of mobile sales applications, with guidance and input from the business owner.

C. Trials

Trials are conducted as a means of testing the functionality and effectiveness of an application subsequent to its development. A trial application is conducted to ascertain the presence of errors or potential enhancements inside the application.

D. Implementation

Implementation refers to the process of executing or carrying out the development of an application that has been previously designed or created. The ongoing monitoring and subsequent evaluation of the implementation of this application will be conducted.

E. Evaluation

Evaluation refers to the process of assessing and enhancing the effectiveness of activities, which involves the examination and interpretation of outcomes derived from these activities.

Research Method

The application was developed utilizing the Hypertext Preprocessor (PHP) programming language, namely version 7.4, and a MySQL database was employed. The programming architectural structure involves the implementation of a framework that incorporates an architectural pattern for the purpose of segregating database management operations (Models), controlling the execution of the application (Controllers), and managing the presentation layer (Views). The primary objective of this framework is to enhance performance in a more expeditious and effective manner, while also facilitating the identification of issues that arise during the development process, particularly in the production phase. One example of a framework is CodeIgniter (CI). The E-minat application utilizes the CodeIgniter (CI) Framework's structural pattern version 4 [13].

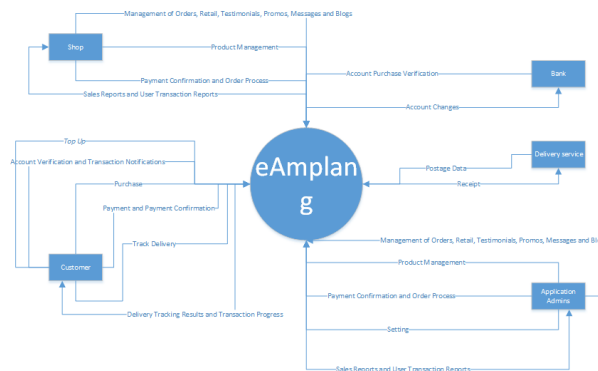


Fig 2. Use Case Diagram

Within this operational framework, both the store and application administrators possess the capacity to oversee the management of products and orders. However, it is important to note that the application administrator assumes an additional responsibility in the form of configuring and regulating the operational parameters of the programs. The act of purchasing by purchasers will inherently encompass the inclusion of shipping expenses, receipts, and bank transfers.

IV. RESULT AND DISCUSSION

The present study aimed to develop the E-minat application for digital marketing specifically designed for the promotion of Amplang crackers. The programmed comprises of:

A. The Eminat sales application in perspective

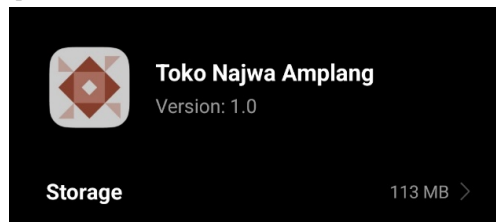


Fig 3. E-Amplang Marketing Mobile Application

This is an exhibition of the E-minat marketing application, which possesses a file size of 113 megabytes. The application can be acquired by using the provided hyperlink. https://web.cloudstorage.co.id/public/hc9MXr_M6HpLHM7Tgo09UCME

B. Home Page

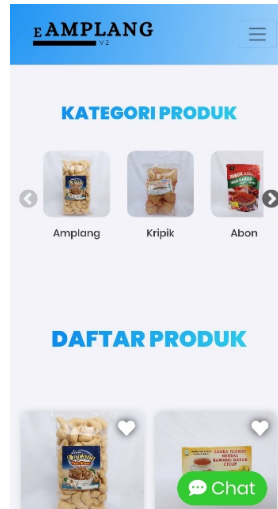


Fig 4. Home Page

Upon launching this application, the initial display presented to the user is depicted in the aforementioned image. Upon accessing the site, the buyer may navigate to a menu icon located in the top corner. By clicking on this icon, the buyer will be presented with a range of alternatives within the application, as visually depicted in the accompanying image.

C. Home Page Menu



Fig 5. Home Page Menu

The homepage features three distinct menu options, including a product list, a blog, and an information menu. Prior to completing a purchase, it is important for the buyer to complete the registration process. The image below depicts the registration display.

D. Login Menu

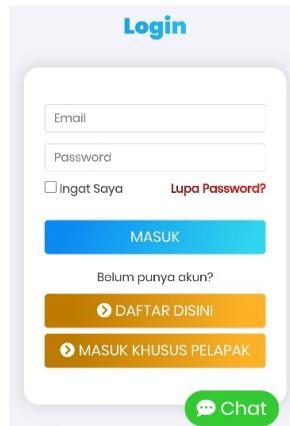


Fig 6. Customer Login Menu

When accessing the platform as a buyer, the login or registration menu will be displayed as seen above. However, upon accessing the system as an administrator or shop owner, the login menu interface will be presented in the manner depicted in the image provided below:

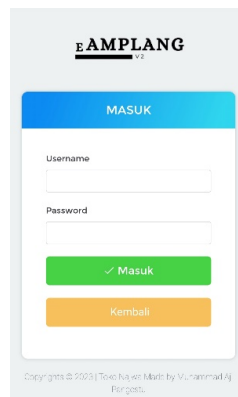


Fig 7. Administrator Login Menu

Upon successful registration, the application menu will undergo a corresponding modification in its display.

E. Customer Menu



Fig 8. Customer Menu

Additional menus are made available to customers upon successful login. The "order" menu serves the purpose of providing a platform to access and monitor ongoing orders, whilst the "account" menu is designed to offer comprehensive details pertaining to the account owner. In contrast to the menu available to customers, the administrator is provided with a distinct menu. The

disparity in the number of admin menus compared to customer menus can be attributed to the inclusion of additional functionality inside the former, specifically designed to facilitate product management and control.

F. Administrator Menu

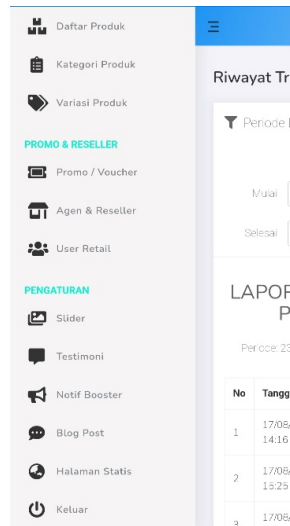


Fig 9. Administrator Menu

The product list located under the admin menu serves as a platform for the addition and modification of products. Product categories serve as a designated framework for organizing and classifying various products, such as different sorts of food and beverages. Product variations refer to the utilization of menus to incorporate different sizes of a product, such as medium, small, or large sizes.

G. Customer Catalog

The presentation of the product menu to the customer is as follows.

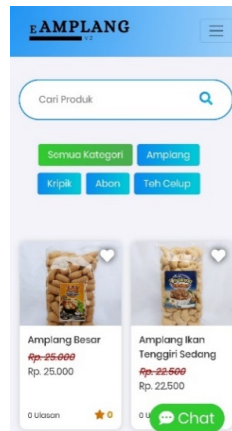


Fig 10. Catalog Product

The application's product catalogue showcases the whole range of items offered by business owners. Additionally, consumers may access detailed information about the desired products through the catalogue. If a buyer has completed a purchase, the order will be displayed on the application's order menu, as depicted below:

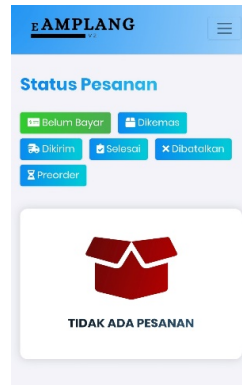


Fig 11. Order Menu

The purchaser has the ability to ascertain the status of their order, whether it has been dispatched or not, by accessing the order menu. Additionally, for buyers residing outside the local area, tracking services are available for dispatched orders.

H. Dashboard

Within the administrator menu, there exists a sales menu that encompasses the cumulative transactions taking place on a daily basis.



Fig 12. Dashboard Administrator

Once the purchase transaction has been successfully executed and positively acknowledged by the purchaser, it will be recorded in the sales list accessible through the administrator dashboard. The application allows administrators to generate printed records of transactions that have been executed.

No	Tanggal	ID Transaksi
1	17/08/2023 14:16	TRX20230817140818
2	17/08/2023 15:25	TRX20230817152423

Fig 13. Sales Report

The present sales transaction report encompasses all recorded transactions and ensures the integrity of the report's outcomes, hence preventing any form of manipulation.

The development of this marketing application was undertaken with the intention of assisting small and medium enterprises (SMEs) in amplifying their ability to effectively market and promote their products. Furthermore, it aids customers in the process of making acquisitions.

V. CONCLUSION

The utilization of digital marketing in the context of e-commerce plays a pivotal role in facilitating product sales, hence enhancing the profitability of small and medium-sized enterprises. The benefits of this application encompass enhanced efficiency and ease of use for clients in the process of placing goods orders. As a consequence of the research conducted on the development of e-commerce design applications for numerous shops, customers will be presented with a diverse range of products to choose from.

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