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Implementation of MVC in Food Ordering Application on Android Operating System Platform Case Study of RZ Rumah Barokah

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Abstract

In the era of advancing technology, computer devices and their applications have become an integral part of daily life. Mobile computing, such as Tablet PCs and Smartphones, is increasingly dominant, with Android being one of the primary platforms chosen for application development due to its ease of use and flexibility. Android has penetrated various sectors, including the culinary industry, contributing significantly to business development and marketing. The food business in Indonesia continues to thrive with increasing consumer demand, yet faces challenges with intensifying competition. Amidst these challenges, business owners must actively seek strategies to expand market reach and consider external and internal factors affecting business development. RZ Rumah Barokah, as one of the home-based food businesses in Kota Prabumulih, is also confronted with these challenges. The business produces specialty foods as regional souvenirs but faces constraints in reaching a wider market. To address this issue, the development of an online sales system using information technology becomes a solution. By leveraging a website-based application, it is hoped that RZ Rumah Barokah can expand its marketing and promotional reach. The development method using Model View Controller (MVC) is expected to help separate logic, presentation, and processes efficiently in system development.

Keywords: *Website, Food Ordering Application, Model View Controller (MVC)*

1. Introduction

The development of information systems today has caused various changes that have quite an influence on decision-making patterns in an organization. The development of presentation in this information system has also made changes from various groups who act as information seekers to obtain precise and accurate information so that it can be used [1]. Food business opportunities in Indonesia are increasing from year to year. The increase in food and beverage businesses is a reaction to high consumer demand. This phenomenon shows increasingly tight competition among existing businesses. In the midst of competition with dozens of other food businesses in the surrounding area, it requires the owner to continue to look for special strategies for developing their business by looking at external and internal factors in order to survive and even advance and develop.

Android in the form of a smartphone is a solution that can provide answers to the shortcomings of the existing system. This application in the form of a smartphone has several advantages in its use and does not take up time. By using this application, it is hoped that it can help customers to choose or order an item at RZ Rumah Barokah [2]. RZ Rumah Barokah is one of the home businesses in the food sector in Prabumulih City developing special food processing for souvenirs typical of Prabumulih City. Currently, RZ Rumah Barokah serves customers who want to buy souvenirs typical of Prabumulih City by buying and ordering directly to the store or via WhatsApp, SMS or telephone.

The problem currently being experienced is that it has not been able to reach the wider community. Marketing is still limited to local only. This certainly hinders the development of the store in the future, so it is necessary to develop an online sales system using information technology which is now very developed. This will certainly reach a very wide marketing and promotion by building a website-based application. To build a website, one of the concept methods that can be applied is MVC, which is one of the architectures in creating a

web-based application. This concept uses 3 components, namely Model, View and Controller, with the aim of making it easier to develop a program [3].

2. Research Methods

The method used is a descriptive method, namely a method that explains the data that has been obtained so as to get a clear picture of the problems in designing a website[4].

2.1. Research Flow

The methodology flow uses problem identification, problem formulation, literature study, MVC system development, implementation, testing.

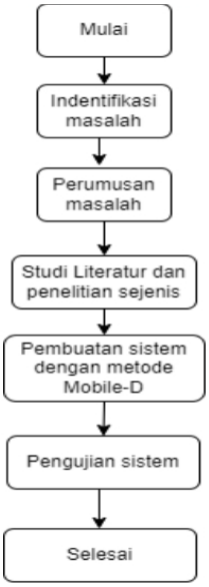

Fig. 1: Research Flow

2.2. System Development Methods

Model View Controller (MVC) is a method for creating an application by separating data (model) from the display (view) and how to process it (Controller). MVC separates application development based on the main components that build an application such as data manipulation, user interface and the part that becomes the application controller. In relation. The Code Igniter framework is built using the Model View Controller (MVC) concept.

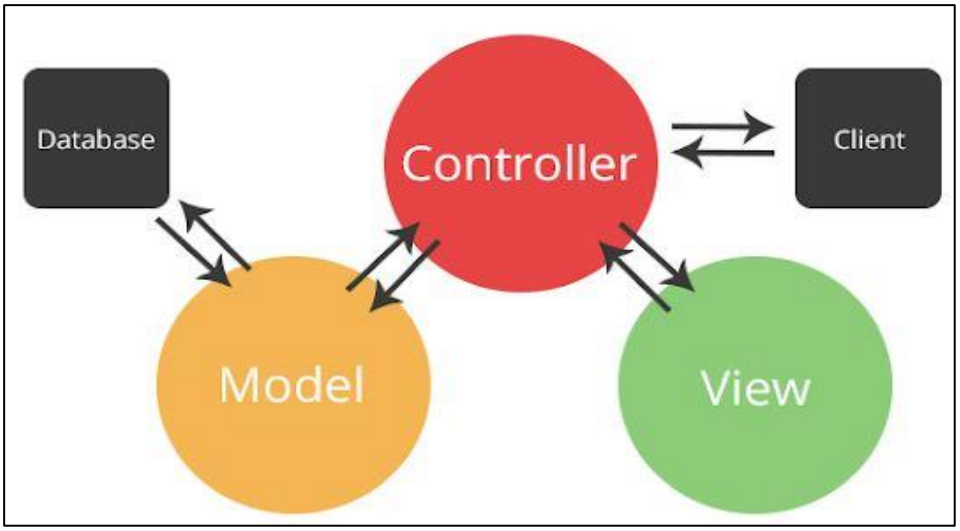

Fig. 2: Model MVC

The implementation of the interface is done by creating an interface on this website. Each page that will be created will be formed into a file with a php extension. These files can then be accessed and will be a link between the admin, buyers and this system, in the implementation of the main page interface is the central link with other interfaces.

3. Implementation

3.1. Home Page

Fig. 3: Main Page

This page displays the main page of the system. On this page, several menus are displayed to go to the intended page. The menus include: products, shopping cart, list and login.

3.2. Customer User List Page

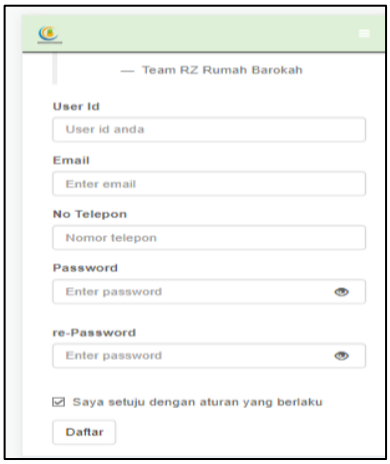

Fig. 4: User List Page

This page displays the register page that functions to register as a user to be able to access the main page to make transactions. For the data entered, namely user id, email, telephone number, password, full name.

3.3. Login Page

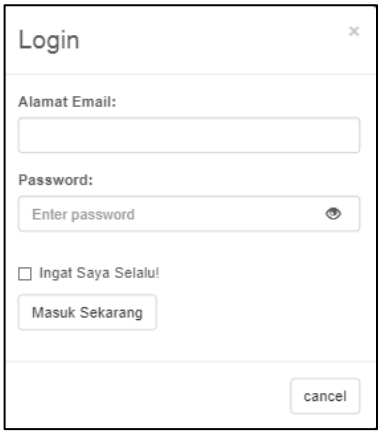

Fig. 5: Login Page

This page displays the login page that functions to enter the intended system. The data entered is email and password.

3.4. Shopping Cart Page

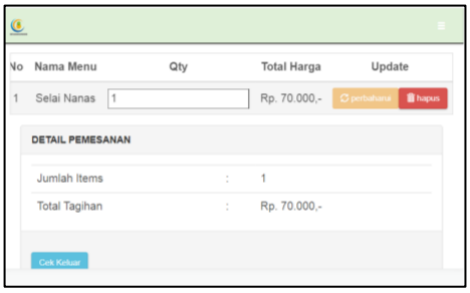

Fig. 6: Cart Page

This page displays the shopping cart page which functions to display order details. The data displayed are name, quantity, total price, and total bill.

3.5. Order Billing Page

Fig. 7: Billing Page

On this page will display the order receipt. The information obtained is: bill number, name, full address, postal code, order date, pick-up date, payment method, pick-up method and order details.

3.6. Order History Page

Fig. 8: Order Page

This page will display detailed information regarding the customer's order history.

3.7. Add Product Page

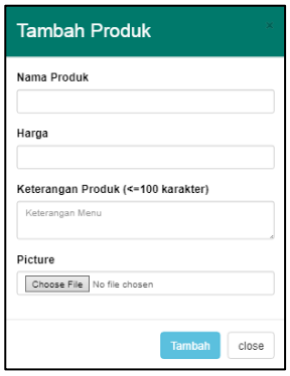

Fig. 9: Add Product Page

On this page will display the added product data. The data required are: Product Name, Price, Product Description and Product Image.

3.8. Payment History Page

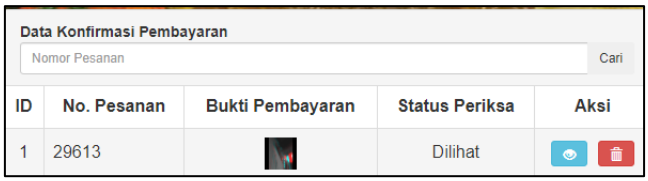

Fig. 10: Payment Page

This page displays the payment history page which functions to display payment confirmation data. The information displayed is order number, proof of payment, check status and action. The buttons used are the view and delete buttons.

3.9. Sales Data Page

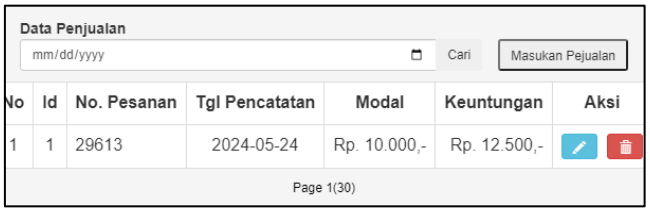

Fig. 11: Sales Data Page

On this page will display sales data. The information obtained is: Order No., Order Date, Capital and profit and actions involving the edit button and delete button.

4. Conclusion

From this research, it was concluded that:

1. The application to be developed has been in accordance with the needs of information on ordering and selling souvenir products for the wider community using Android.
2. The application development created is an online ordering and sales website through the application menu that can save time and with a better and more precise process.

References

[1] F. S. P. Ariansyah, Fajriyah, "Alumni Pada Stie Prabumulih Berbasis Website," *Informatics Bus. Inst. Darmajaya*, vol. 17, no. 1, p. 10, 2017, [Online]. Available: https://jurnal.darmajaya.ac.id/index.php/JurnalInformatika/article/download/972/pdf

[2] L. Septi and S. Wellia Shinta, "Perancangan Aplikasi Mobile E-Commerce Berbasis Android Pada Violet Fashion Jepara," *Sist. Inf.*, no. 5, p. 2, 2015, [Online]. Available: http://eprints.dinus.ac.id/14995/

[3] R. Akbar and A. Azis, "Implementasi Model View Controller Untuk Proses Pencatatan dan Monitoring Pelanggaran Siswa Pada SMK Satria," *J. Komput. Antart.*, vol. 2, pp. 1–8, 2024, [Online]. Available: https://ejournal.mediaantartika.id/index.php/jka

[4] [P. A. Sunarya, E. Febriyanto, and J. Januarini, "Aplikasi Mobile Absensi Karyawan Dan Pengajuan Cuti Berbasis GPS," *CCIT J.*, vol. 12, no. 2, pp. 241–247, 2019, doi: 10.33050/ccit.v12i2.695.

[5] Usman Gumanti, A M H Pardede, and Husnul Khair, "Superencryption of BASE 64 Algorithm and ELGAMAL Algorithm on Android Based Image Security", *j. of artif. intell. and eng. appl.*, vol. 2, no. 3, pp. 129–134, Jun. 2023.

[6] I. Yunita, Suendri, and A. M. Harahap, "Android Based Outdoor Equipment Rental Information System", *j. of artif. intell. and eng. appl.*, vol. 3, no. 3, pp. 734–739, Jun. 2024.

[7] Y. Yusfrizal, Andrian Syahputra, Yahya Tanjung, and Safrizal, "Analysis of Markov Blanket Based Feature Ranking for Android Malware Detection", *j. of artif. intell. and eng. appl.*, vol. 3, no. 3, pp. 740–745, Jun. 2024.

[8] E. D. Mada, M. L. L. Usman, and M. A. Gustalika, "Android Based Serayu Larangan Village Tourism Application", *j. of artif. intell. and eng. appl.*, vol. 3, no. 3, pp. 796–801, Jun. 2024.