Bit-Tech

Ayam Gepuk Pak Gembus Web-Based Ordering Application Design With Codeigniter Framework

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Abstract

 The difficulty of finding the desired food and to buy it also one of the problems that almost everyone faces. This problem occurs because the desired item is only sold in a certain place or rare. We need a way to solve the problem. One of them is e-commerce, which mostly uses the internet network. By making a ordering program, customers can see a list of foods sold and can order food from far away and the transaction process becomes safer and easier. Therefore the author conducted a research in a place / business called Ayam Gepuk Pak Gembus Dasana Indah Branch, and the author found several problems in the place like a narrow place to eat, so most people ordered to take home, the storage of data is still manual (storing it in paper) and the owner want to expand their business. So, the author decided to make a booking application for Ayam Gepuk Pak Gembus Dasana Indah Branch to make it easier for customers to order food, and also make the admin page so that the owner can monitor the income from his business, stock items, and view reports. At least the author made the ordering application using the CodeIgniter framework. MVC (Model-View-Controller) CodeIgniter framework that makes coding is divided into three, namely Controller, Model, and Views so that the coding is easy to read by new programmers in the future and there are already codes so programmers don't bother to look for codes.

I. INTRODUCTION

These technological advances led to the term of e-commerce (Electronic Commerce) which makes it easy for humans to process transactions with the help of the internet. By e-commerce application, Buyers can directly access the internet and directly order the food they want. E-commerce comes from English, combining two words, namely the E which is an extension of Electronic and the word Commerce [1] which means any commercial activities, such as selling and buying activities done electronically, by the internet.

Therefore, an order application was made at the Ayam Gepuk Pak Gepuk Restaurant Dasana Indah Branch and the database was made so that the data management can be transferred directly from the application and also in making the application using a framework so that the programming structure is neat, both in terms of code and file structure and also easy to be futherly developed in the future because the CodeIgniter framework uses the MVC (Model-View-Controller) method. MVC method is a method used in developing an application that separates data (models) from the view / frontend (view) and logic of the application itself (controller) [2].

MVC separates the application development based on the main components that build an application such as data manipulation, user interfaces and controls in an application. It is also expected that the application created can provide benefits and overcome the problems that are the reason this application is made.

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II. Methods

CodeIgniter is a *"Framework web* for PHP programming language, was made by Rick Ellis in 2006, the founder of EllisLab. *CodeIgniter* is a toolkit for anyone who is intened to invent any web application in PHP programming language [3]."

CodeIgniter is a free and open-sourced *framework*. *CodeIgniter* has smaller size rather than othger framework. Aafter the installation process, *CodeIgniter framework* will be only, less or more, 2MB (without documentation or if the user-guide directory is deleted. *CodeIgniter* documentation is sized around 9MB, so that Application made by *CodeIgniter* will be sized around 9MB as well. *CodeIgniter* is using *Model-View-Controller* (MVC) design pattern. Therefore there will be too many code in a file. It makes the codes will be easier to be read, understood, and maintained in the future. *CodeIgniter* can be expanded as needed and documentated well. Information about class glossary and other functions provided by *CodeIgniter* can be obtained by dapat diperoleh melalui documentation included in the distribution package.

CodeIgniter explanation is "PHP *Framework* which using *Model View Controller system*. So in broad outline, there are 3 main components namely Model, View, and Controller [4]."

From the survey that has been conducted to respondents who want an application to help make food orders at Ayam Gepuk Pak Gembus, which may be updated in this application program, as follows:

TABLE I
ANALYSIS OF APPLICATION NEEDS

No	User need	status
1	Make it easy to know the availability of goods	✓
2	Makes it easy to find out sales profits	✓
3	Assist in the work for controlling the receipt of goods	✓
4	The system can help update stock items in real time	✓
5	The system can control and see real-time receipt updates at any time	✗
6	The system can help see the store's profit per day	✓
7	Display is easy to understand	✓
8	Displays the locations of these eateries	✗
9	Created a mobile version	✗
10	Displays information if the food is still available or has been used up	✓
11	The system is easily understood by ordinary people	✓
12	Can make payments from home	✓
13	A user friendly menu display	✓
14	Can order any chicken part as we want	✓
15	Has the report of what I have brought	✓
16	Easy payments	✓
17	Has an account fiture	✓
18	Payment can be done at the customer's place /COD	✗
19	Can choose the spicy level and chicken part	✓
20	The application is easy to be used	✓
21	Give the user's order history	✓
22	Can add any new items	✓
23	Has a fiture where the user has to be logged in	✓
24	Has payment system	✓
25	Display the goods stock	✓
26	Can be accessed by the phone	✓
27	Show the menus at the restaurants	✓
28	Can be operated in Androids	✓
29	Easy to be used and understood	✓

The explanation of Activity Diagrams is "Activity diagrams (Activity Diagrams) provided by UML complementing the use case that has been made before by giving a graphical representation of the flow of interactions in a specific scenario. Similar as flowcharts, an activity diagram uses a curved side box to describe certain functions that exist in a system / software that will be developed, while arrows describe the flow in the system / software, diamond form is used to describe branched decisions (each sign arrows emanating from diamonds are labeled), and thick horizontal lines indicate that parallel activities in the system / software are taking place [5]."
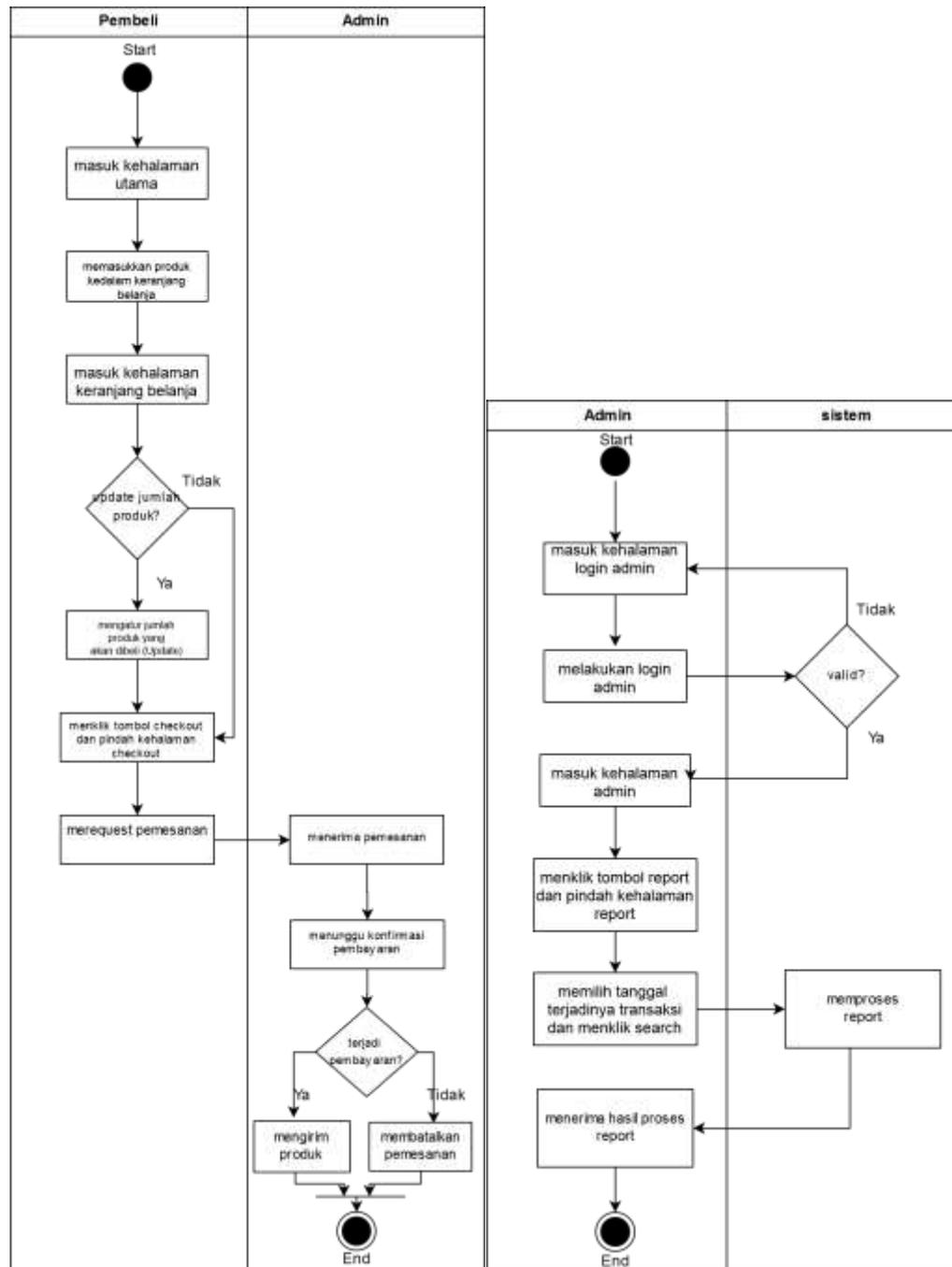
Fig. 1 Buyer makes an order and report

Buyers can place an order by simply entering the ordering website by entering the product in the shopping basket, entering the shopping basket page, if selecting order updates then can adjust the number of products to be purchased if not selecting the order update then the order will be in accordance with the initial order and then checkout then the system admin will accept the order, waiting for confirmation of payment, if you have already made the payment then the meal will be sent if the order has not been canceled in accordance with the specified time. When a customer makes an order, the system will immediately save transaction data into the database.

The employee logs in to enter the admin page, then clicks the report button on the admin menu and selects the date on which the transaction occurred. After that, the report can be printed.

III. RESULTS

The following is an ERD design based on a database that has been created to design an application.
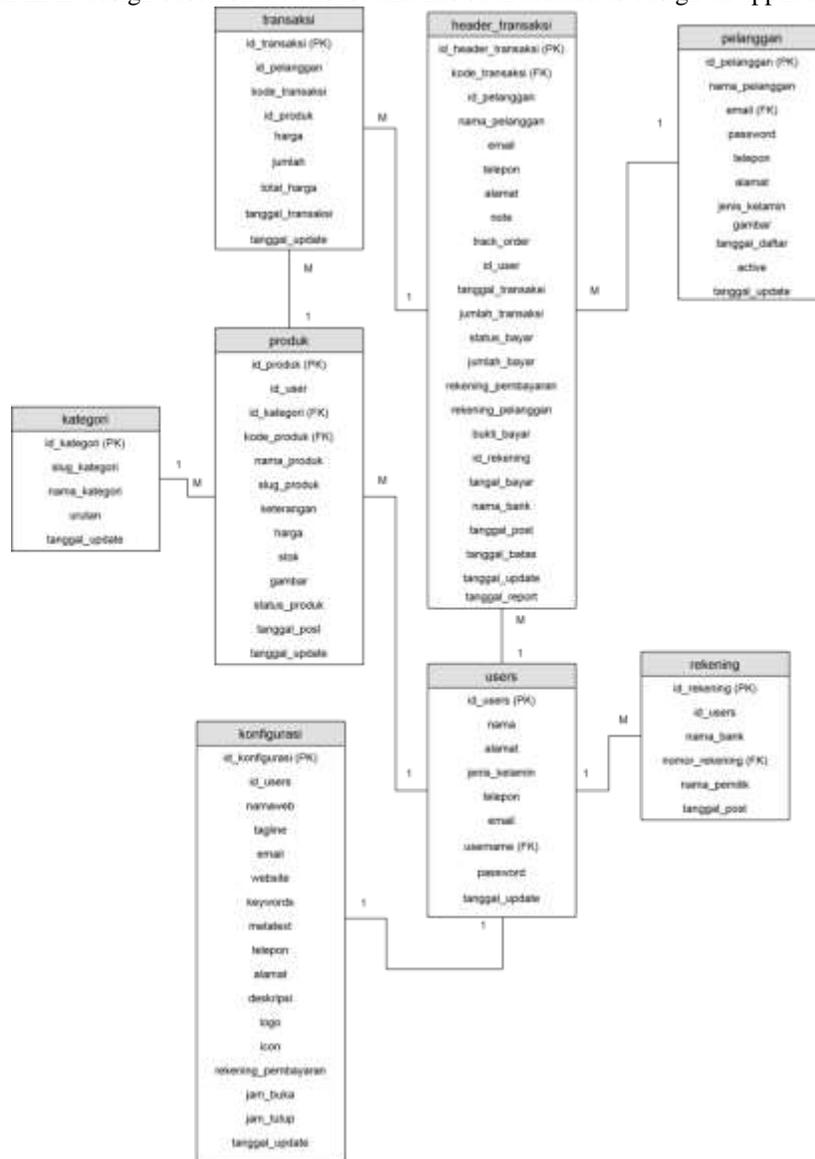

Fig. 2 Buyer Makes an Order and Report

This application uses 1 database with 6 master tables in the database. Which consists of 1 transaction table and its details and 6 master tables. For the transaction table, there is a transaction and header_transaction for the master table, there is a category, configuration, users, accounts, products and customers table.

Fig. 3 Admin Dasboard Page

The page that appears after the admin has successfully logged in, there is an income chart that shows income every transaction date and time. The menu is a sidebar in which there are dashboard buttons, transactions, products, account data, reports, users and configurations.

Fig. 4 Admin Transaction Page

The page that appears when the admin clicks on the menu button in the menu, there is a transaction data table and the admin can see transaction details, print transactions, download pdfs, and change the transaction status

Fig. 5 Admin Transaction Details Page

The page that appears when the admin clicks the details button on the transaction page, this page displays the specific transaction data in detail.
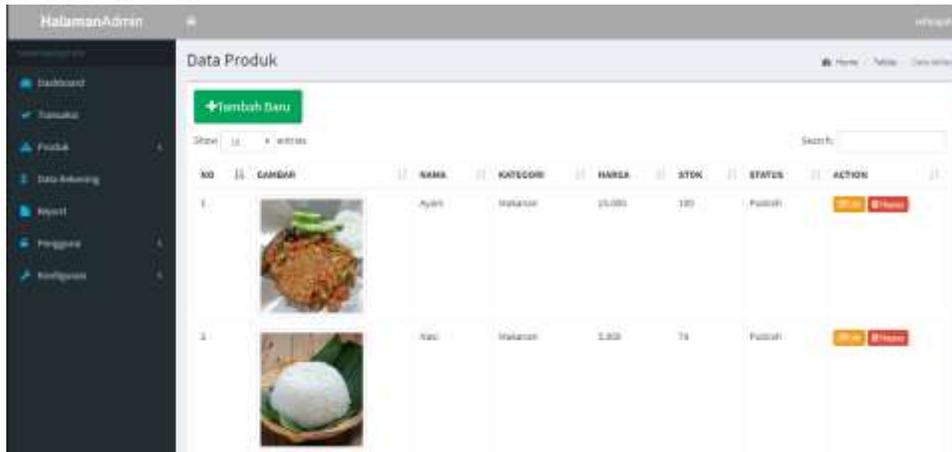

Fig. 6 Admin Product Data Page

The page that appears when the admin clicks on the product button and displays a table containing the product data stored in the database. Admins can search product data, add new product data and take action to change and delete product data
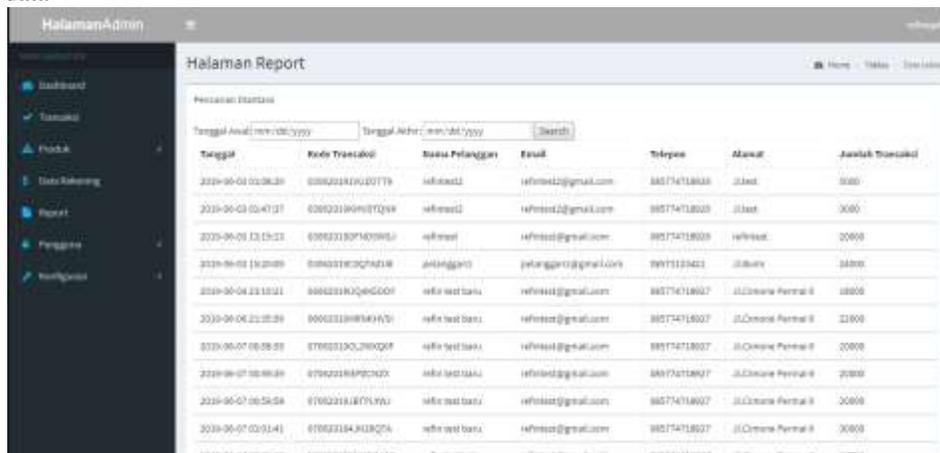

Fig. 7 Admin Data Report Page

The page that appears when the admin clicks on the report button. Admin sees transactions that occur and can search data between dates.

Fig. 8 Main Page

Buyers can do the Login, Registration, Checkout, View Cart and Add to Cart.

Fig. 9 Buyer Login Page

The page that appears when the buyer clicks the login button.

Fig. 10 Products Page

The page that appears when a customer clicks the product button on the menu. Customers can see a list of products according to the desired category.
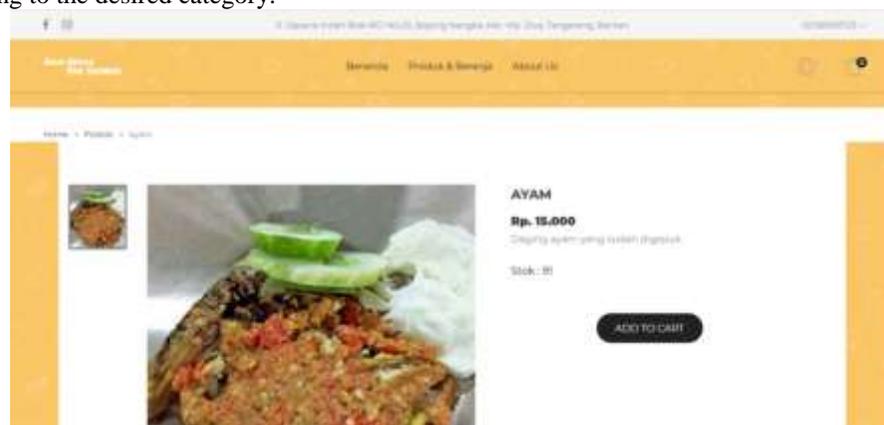

Fig. 21 Product Detail Page

The page that appears when a customer clicks on the product name on the menu. This page shows the details of the product that was clicked. Customers can see product information and can put it in a basket.

IV. DISCUSSION

Black box testing is done by testing the functionality of an application or software. The purpose of this test is to find errors in the application, including:
1. Incorrect or missing functions
2. Interface errors, which can cause users to be confused
3. Error in data structure, which can produce unwanted output

TABLE II
Analyze Application Requirements

No	Testing Scene	Scenario	Desired output	Test Report
1	Buyer's account registration	User clicks 'Registrasi'	Move to registration page	Valid
2	Personal data input	User fulfill a personal data's form	User data is stored in the database	Valid
3	Enter personal data registration account	User fulfill a wrong personal data's form	Alerts fail	Valid
4	Login user	Users enter their email and password for the correct login	Successfully logged in and moved to the user dashboard	Valid

V. CONCLUSIONS

The conclusion that can be generated from this research, with this application the customer does not need to come to the place to place an order, just open the browser and enter the booking website Ayam Gepuk Pak Gembus Restaurant Dasana Indah Branch and place an order from home. Information on the products displayed is always right because the application is managed directly by the employees of the business, the created application can help the owner of Ayam Gepuk Pak Gembus Restaurant Dasana Indah Branch top develop their business by the way the application displays revenue in every date and time of the transaction, displays the best-selling products and can generate transaction order reports. *C*odeIgniter is very helpful in designing the ordering application because the coding process becomes easier and there are several coded examples in it so that it helps the writer save time in designing the application, the process of storing the data becomes safer, previously saving the data manually by writing it in a paper and then collecting it into one . Now with this application, when customers place an order from the application, the data is directly stored in the database. The process of making the reports is easier as well, previously employees had to enter the data manually into the computer by typing them one by one, now the Owner only needs to click on the report button on the admin menu and choose the date of the transaction then the report will immediately be made and can be printed

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