

# Web-Based SME Online Marketing System (E-Commerce)

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**Abstract:** The objectives of this research are; 1) To find out the Web-based SME Online Marketing System (E-Commerce), and 2) To design a web-based SME Online Marketing System (E-Commerce). Data Flow Diagram (DFD) is used to design the application, while the application design stage uses the Rapid Application Development (RAD) method. Based on the results of the research the author can draw a conclusion which includes the following; 1) The use of an online marketing system for SMEs (e-Commerce) based on the Web is expected to help create accurate and effective Sales Information data, 2) The information system provides convenience for SMEs because it speeds up information in general and reduces errors, 3) System Sales Information on SMEs which the author designed uses various web-based programming languages consisting of; HTML, CSS, JQuery, JavaScript, JSON PHP, and for database processing the Structure Query Language (SQLi) is used. The supporting software used is XAMPP version 5.6 (Support MySQLi), NotePad ++, and Google Chrome Browser, and 4) Sales Information System for SMEs which the author designed also uses several APIs such as; WhatsApp Auto-Order link, GMAIL SMTP, Raja Ongkir Courier API which is a third party as a supporter of this sales application.

**Index Terms:** System; Online Marketing; SMEs; Web; E-Commerce.

## 1. Introduction

The terms Information and Communication Technology (ICT) and the internet have penetrated various fields of life, including business and trade [1,2,3]. With the internet and ICT, marketing and sales processes can be carried out at any time without being bound by space and time [4,5,6]. With the ability of the web/internet that can transmit various forms of data such as text, graphics, images, sound, animation, or even video, many businesses take advantage of this technology by creating a homepage to promote their business [5,7]. Now almost all levels of society (especially in developed countries) are very familiar with this web because almost all kinds of information can be obtained [8,9]. One application of ICT and the internet in the field of business and trade is electronic commerce (e-Commerce). E-Commerce can be defined as the application and application of e-business (e-business) related to commercial transactions, such as transfer of funds electronically, SCM (supply chain management), e-marketing (e-marketing), or online marketing, online transaction processing (online transaction processing), electronic data interchange (EDI), product promotion, and others [10,11,12]. The benefits and advantages of using e-Commerce are for media promotion in order to increase sales volume, both for online and conventional sales [13,14]. In addition to these advantages, it turns out that the results of several studies show that the effectiveness of the use of e-commerce in increasing sales volume and promoting industrial products is quite high [15,16]. Small and medium enterprises (SMEs) are one of the fields that make a significant contribution to spurring Indonesia's economic growth. This is because the absorption of SMEs into the workforce is very large and close to the small people [17,18,19].

The main problem faced by SMEs is marketing. Marketing with conventional methods requires high costs, for example opening new branches, participating in exhibitions, making and distributing brochures, and so on [20,21]. The development of the internet has become an efficient means to open new marketing channels for SME products. In addition to the relatively low cost, by utilizing the internet the dissemination of information will be faster and the reach wider. The objectives of this research are; 1) To find out the Web-based SME Online Marketing System (E-Commerce), and 2) To design a web-based SME Online Marketing System (E-Commerce).

## 2. Research Method

The design of web-based sales and ordering information system software in SMEs that the author designed consists of several stages, namely input design, output design, process design, control design, labor design, and cost design. This

design later the author hopes to make it easier for every user, especially the SME sales department. This input design consists of several program files, namely; 1) Category Data Entry Program, 2) Product Data Entry Program, 3) Buyer Information Data Entry Program, 4) Purchase Transaction Data Entry Program, 5) Slider Data Entry Program, 6) Brands Data Entry Program, 7) Blog Data Entry Program, 8) User Data Entry Program, 9) Message Data Entry Program, and 10) Payment Receipt Upload Data Entry Program. Output Design of Web-Based Product Ordering and Sales System And Sms Gateway At SME Stores, consists of several program outputs, namely; 1) Category Recap, 2) Product Recap, 3) Customer Recap, 4) Whats Up Message Delivery, 5) Email Message Delivery, 6) SMS Message Delivery, 7) Transaction Report, 8) Transaction Detail Report, 9) Goods Transaction Report, 10) List of Brands, 11) List of Sliders, 12) List of Blogs/ News, 13) List of Users, 14) Broadcast WA, SMS and Mail. Data Flow Diagram (DFD) is used to design applications and is a graphical representation of a system, where DFD is chosen to describe the components of a system, data flows between these components, origin, destination and storage of the data [22, 23]. At the application design stage using the Rapid Application Development (RAD) method, where the life cycle strategy is aimed at providing much faster development and getting results with better quality than the results achieved through the traditional cycle [24,25,26].

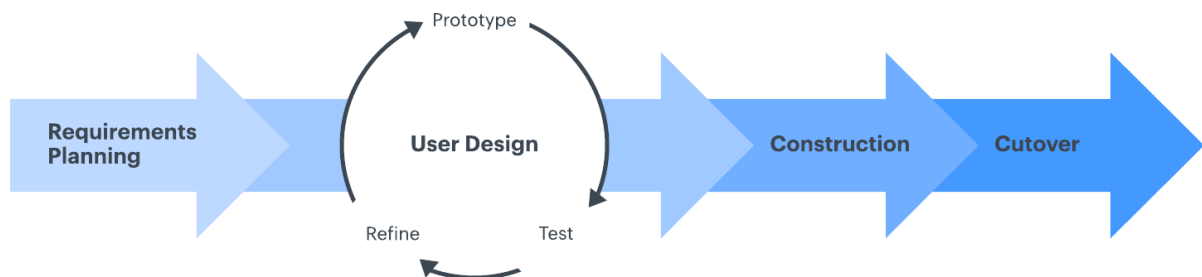
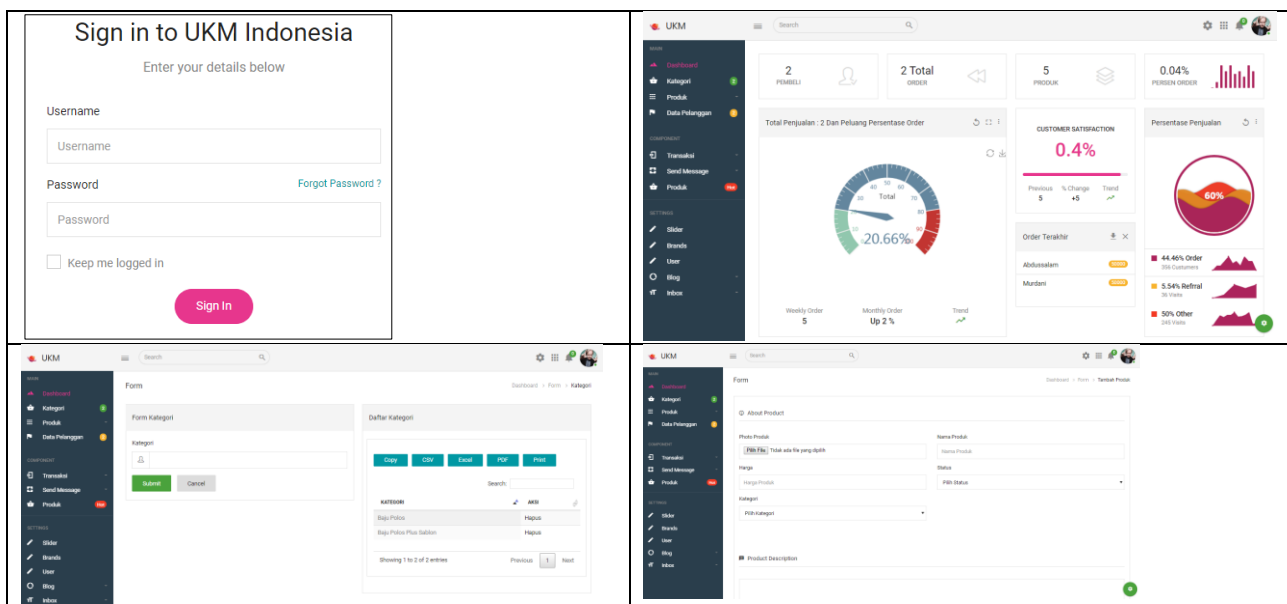


Fig 1. Stages of Rapid Application Development Model

### 3. Result and Discussion

The use of a web-based product sales and ordering system and SMS Gateway in SME Stores, seen from the design of the application into the form of an application display. The results are applications consisting of login pages, main menus, categories, products, customers, transactions, invoices, sliders, brands, users, blogs, inboxes, messages via whatsapp, messages via SMS gateway, messages via email, public pages, and purchases.



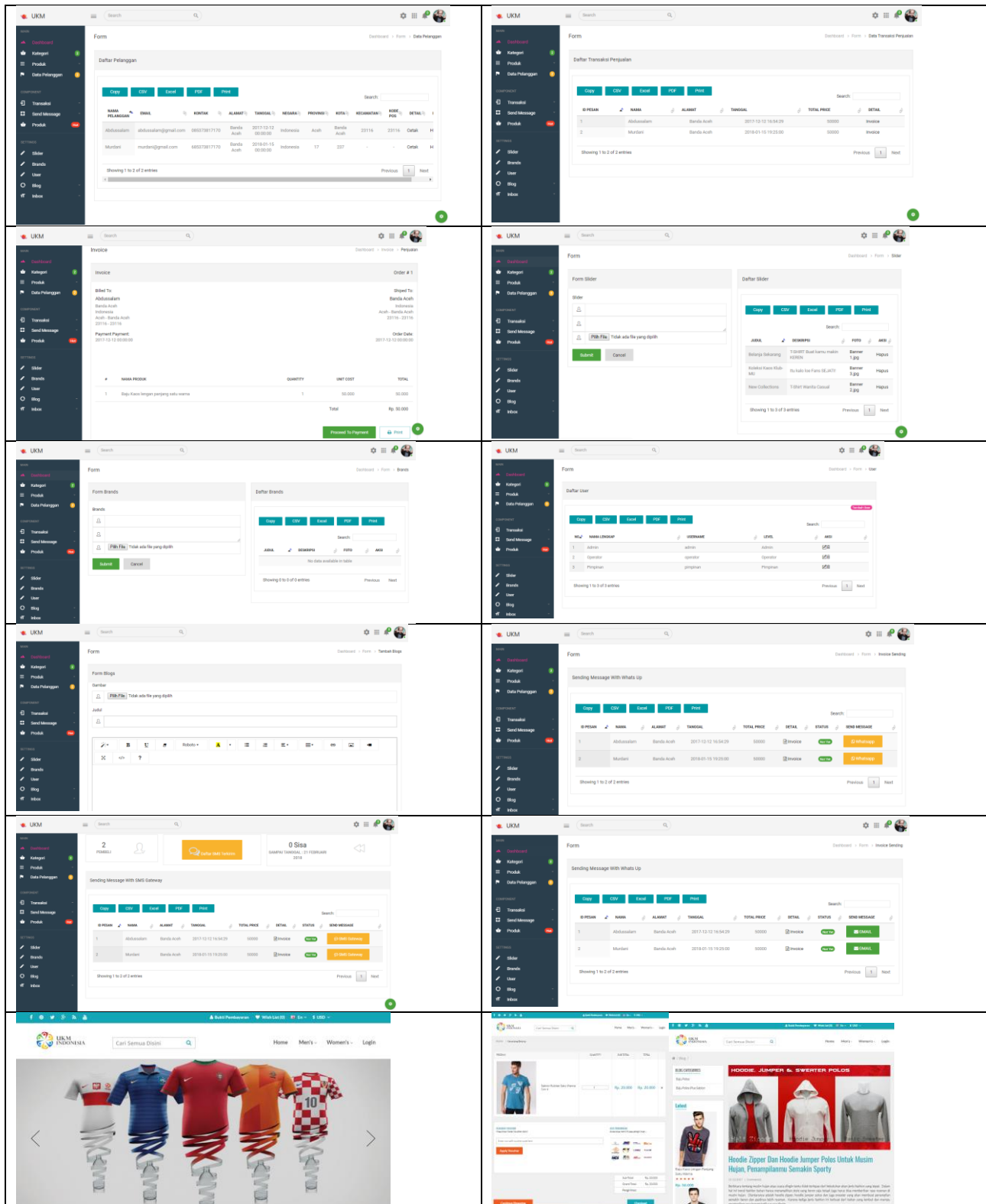


Fig 2. Application Design Results

#### 4. Conclusion

Based on the results of the research the author can draw a conclusion which include the following; 1) The use of an online marketing system for SMEs (e-Commerce) based on Web is expected to help create accurate and effective Sales Information data, 2) The information system provides convenience for SMEs because it speeds up information in general and reduces errors, 3) System Sales Information on SMEs which the author designed uses various web-based

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