

## BUILD AN INFORMATION SYSTEM TO SUPPORT LOCAL BUSINESS MANAGEMENT

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**Abstract:** This research aims to develop an Information System for local business management. This system includes stock monitoring, customer management, and sales transactions. This research was conducted to support the growth of local businesses and the regional economy, with the potential to advance the local economy and sustainability. This research involves system development stages, including user needs analysis, system design, implementation, and testing. The results of this research are expected to make a significant contribution to the development of local businesses and the regional economy. The information system developed can be an effective tool in overcoming various challenges faced by local businesses, so that they can continue to develop and provide greater benefits to the community and local economy. Thus, this research has positive implications in efforts to advance local businesses and maintain the sustainability of the local economy.

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### INTRODUCTION

Small and Medium Enterprises (SMEs) are business entities that operate in various business sectors, providing an impact on the interests of society (Hafsah, 2004; Jamaaluddin, 2021; Mariana, 2012; Pramana, 2013). SMEs are business initiatives that emerge based on opportunities seen in the environment. This is a type of productive business that generates income for the business people who run it (Hendrawan et al., 2020). Local business management is becoming increasingly important in the era of globalization and continuously developing information technology (Radović-Marković et al., 2019; Singh et al., 2010). Local businesses have a significant role in supporting a region's economy, maintaining local wisdom, and creating jobs for local communities. In this context, building an effective and efficient Information System to support local business management is very relevant and strategic. An Information System (Supiyandi et al., 2022) is a tool that can help local business owners, managers, and local governments in collecting, managing, and analyzing data related to local businesses. By having fast and accurate access to information, stakeholders can make better decisions, plan more precise strategies, and optimize existing resources. A good information system

can help local business owners optimize their operations, increase efficiency, and make more timely decisions.

This research aims to develop an Information System that is able to provide comprehensive support for local business management. This system is expected to facilitate various aspects of local business management, including stock monitoring, customer management and sales transactions.

Apart from that, this Information System is also expected to be able to integrate the latest technology, such as cloud-based technology and data analytics, to provide information that has more added value for users. This will help local businesses to be more competitive in an increasingly tight and dynamic market.

Through this research, we hope to make a significant contribution to the development of local businesses and the regional economy. It is hoped that the Information System that we are developing can be an effective tool in overcoming various challenges faced by local businesses, so that they can continue to develop and provide greater benefits to the community and local economy.

## RESEARCH METHODS

The method used in system development is the RAD (Rapid Application Development) Model approach.

### RAD Model

The method used in system development is the RAD (Rapid Application Development) Model approach (Egeonu, 2022; Model RAD, 2018). The RAD model aims to produce software applications quickly while still meeting user needs (Garg et al., 2022; Nalendra, 2021).

### Rapid Application Development (RAD)

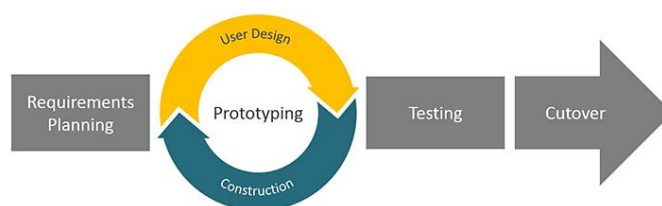


Figure 1. Stages of RAD methodology (Salleh et al., 2011)

The Rapid Application Development (RAD) methodology is an agile software development approach that focuses on rapid prototyping and quick feedback cycles (Salleh et al., 2011). It typically consists of several stages that are designed to facilitate the rapid development of software applications. The stages of RAD methodology include:

1. Requirements Planning:
  - In this initial phase, the project team defines the overarching project scope, objectives, and prerequisites.
  - Specific attributes and functionalities to be integrated into the application are delineated.
  - The establishment of project objectives and constraints and the delineation of the preliminary prototype's scope occur.
2. User Design:
  - Throughout this stage, active participation of end-users and stakeholders is integral to system design.
  - Prototyping tools are harnessed to forge a preliminary rendition of the software.
  - Users supply feedback and introduce refinements to the prototype.
3. Construction:
  - The substantive development of the software unfolds in this phase.
  - Developers employ expeditious development tools and methodologies to create the application, grounded in the endorsed prototype.
  - Ongoing testing and component integration pervade this stage.
4. Cutover:
  - The cutover phase concentrates on preparing the system for deployment.
  - Duties encompass data migration, conclusive testing, and quality assurance assessments.
  - The system is readied for actual utilization by end-users.
5. Feedback and Evaluation:
  - Subsequent to the initial deployment, users and stakeholders contribute feedback on the operational system.
  - Guided by this feedback, the software undergoes refinement and further development.

- This iterative feedback process can give rise to multiple developmental cycles, with enhancements occurring after each iteration.

#### 6. Implementation:

- The refined version of the software is deployed.
- Users are trained to proficiently operate the system.
- The system transitions into full-fledged production, accompanied by sustained support and maintenance.

It's important to note that RAD methodology emphasizes flexibility and responsiveness to user feedback (Wibowo & Azimah, 2016). The iterative nature of the process allows for continuous refinement and improvement, making it well-suited for projects where requirements are not fully understood upfront or are subject to change.

Additionally, RAD may involve overlapping stages and iterations (Larman & Basili, 2003), and the specific phases and their order can vary depending on the project and the chosen RAD framework or approach. The goal is to develop high-quality software quickly by involving end-users throughout the development process and adapting the system to their evolving needs and preferences (Lalband & Kavitha, 2019).

### **Requirements Analysis**

Requirements analysis for a website-based management system for a small store (warung) involves identifying and documenting the specific needs and functionalities of the system (**Guida & Lamperti, 2000**). System requirements analysis as follows:

1. The system must be able to record, monitor and manage stock of goods well. This includes adding new items, updating stock, and removing out-of-stock items.
2. Inventory tracking for various products and categories.
3. Ability to add, update, and remove products.
4. Real-time stock level updates.
5. The system must allow the stall owner to record all financial transactions, including sales, purchases of goods, and other costs.
6. The system must have a customer database that can be used to track customer contact information and purchase history.
7. Point of sale (POS) functionality for in-store transactions.
8. Generating receipts or invoices for customers.

- 9. Sales reports and transaction history.
- 10. Recording transaction details, including items purchased, quantity, price, and time of transaction.

## RESULTS AND DISCUSSION

The information system built is a website-based program. This system is used to manage sales data for small businesses such as stalls and other small businesses.

On the website, users can manage customer data, stock data, add or update stock data, record sales transactions, and view sales transaction information.

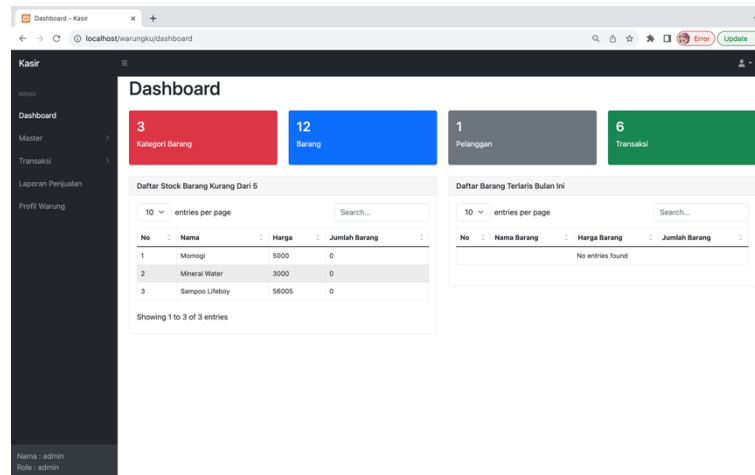


Figure 2. Website Admin Dashboard

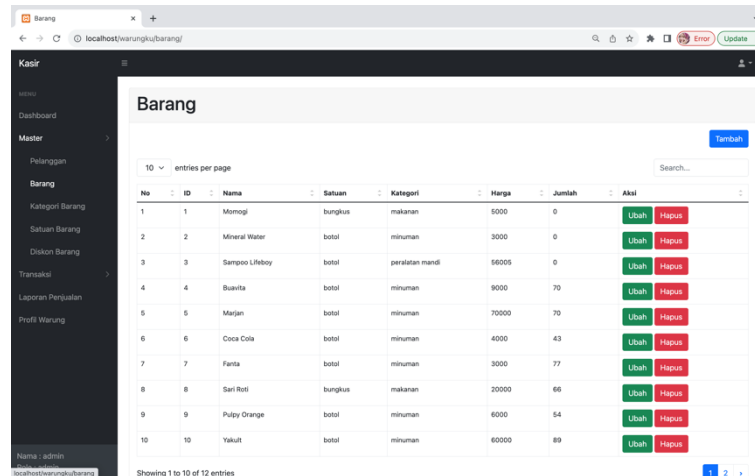


Figure 3. Item Data

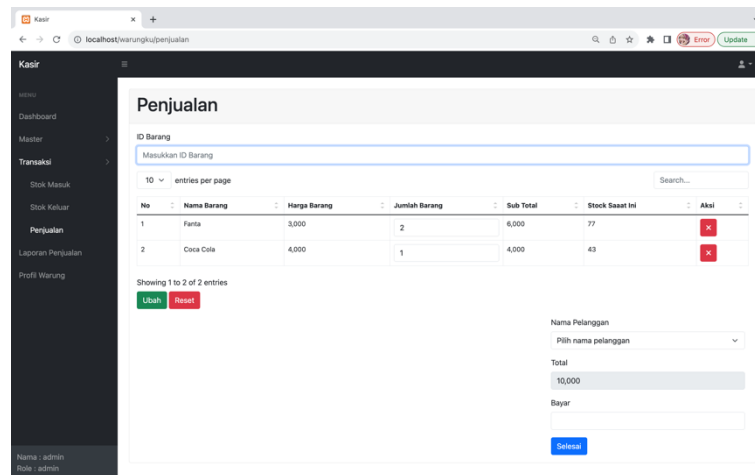


Figure 4. Input Form for Sales Transactions

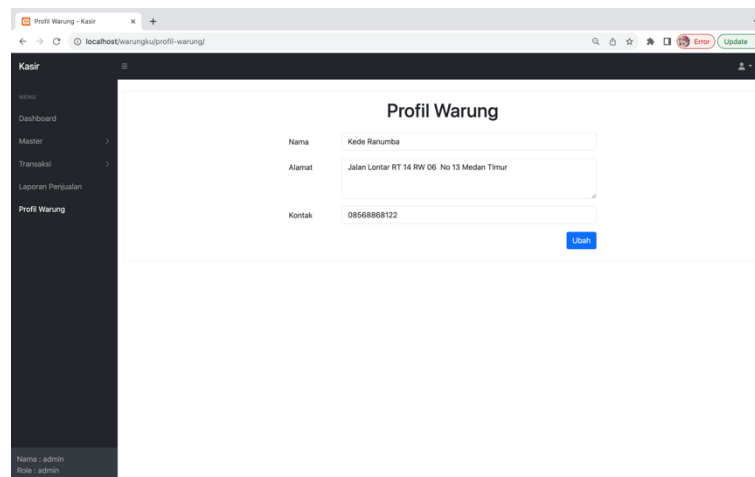


Figure 5. Business Profile Information

**CONCLUSION**

The results of this research have the potential to make a positive contribution to local economic growth. By supporting local businesses, this Information System can help create jobs, increase income and advance the regional economy.

In developing this Information System, user involvement is highly emphasized. This ensures that the Information System built is more in line with the needs and expectations of stakeholders.

Overall, this research produces an Information System which is expected to help improve the efficiency and effectiveness of local business management. Thus, this research has the potential to have a positive impact on the development of local businesses and the regional economy.

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