

Color Inspection Label Checking System for Aimar Printer Model at PT. Indonesia Epson Industry (IEI)

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ABSTRACT

Four main psychological factors influence consumer purchases: motivation, perception, learning, and beliefs and attitudes. The desire or motivation of consumers to make purchases according to specific needs and times. So that the perception of a motivated consumer will be ready to act to make a purchase, and usually, consumers will be motivated based on the influence of perception on a particular situation. Here the company wants to increase consumer or buyer satisfaction, and the label is a part of the product in the Form of a description of pictures and words, which is a source of product and seller information. Titles generally contain product names or brands, raw materials, composition additives, nutritional information, expiration dates, product contents, and legality information. Performance achievement of company targets. This study aims to help understand quality control issues for the assembly process, especially printers, for types of defects at the printing stage as well as provide references for people who need quality labels and Color Inspection Label Checking Systems and as additional input for quality reporting performance analysis for companies.

Keywords: Services, Consumers, Printers, Customer Satisfaction

Introduction

Telecommunication and computerization technology is urgently needed to see the digital technology boom. The supporting industries are also experiencing considerable development, including the printer industry, which involves many big company names [1]. Using a printer is inevitable because it is an integral part of the completeness of the needs and convenience of PC (Personal Computer) users. Quality and technology in the printer industry are required to continue to compete to face competition and maintain the trust given by consumers [2].

Consumer behavior makes purchasing decisions based on purchase intentions. Purchase intention is influenced by perceived benefits, risks, and trust in the store [3]. Consumers will be more likely to engage in purchases via the Internet when perceived risk is low, perceived benefits are high, and when trust is high (direct effect), consumers' confidence in sellers will also increase their intention to purchase indirectly [4] [5]. With this digital technology, competition in the industry is also experiencing rapid progress. This progress led to a lot of competition that had to be faced not only among domestic companies but also by companies from abroad [6]. As a result, company management is demanded to be more proficient and always ready for changes in the industrial world, especially in terms of quality which is the biggest challenge that every industry player must face [7]. The aim is for companies to strive to meet quality standards that consumers want to compete in the market [8]. Quality, comfort, convenience, and timeliness in fulfilling consumer demands must also be considered through quality control and continuous improvement, creating new products, high technology, and affordable prices. Accessible to consumers [9][10].

System Information Management is a system that can store and provide the information users need [11]. In management information systems, the term Sales Force Automation (SFA) is known as one of the categories of information system management. SFA is an automation program for business activities, including inventory control, transaction processing, customer data search, and sales performance analysis [12].

Meanwhile, according to Pratama, the information system combines four main parts. The four main sections include software, hardware, infrastructure, and trained human resources. These four interrelated parts create a plan to process data into useful information [13].

Currently, consumer behavior can be seen in the purchasing decision-making process, which must also be based on purchase intention. Purchase intention is influenced by perceived benefits, risks, and trust in the store [14].

Service quality affects sales volume. The service quality of a company is tested on every competitor's service. If consumers feel bored or unable to answer straightforward questions while consumers are waiting, they will think twice about doing business again with the seller [15]. The company's database is based on the arrangement of complete operational data from an organization/company that is organized/managed and stored in an integrated manner using specific methods using computers to provide optimal information the user needs. [16]. Increasing company sales is very important for the sustainability of a business. Progress and decline of the industry can be seen from the increase in sales online or offline [17].

PT. Indonesia Epson Industry (IEI), as a company engaged in the printer industry, knows the importance of the meaning of quality of a product. This can be seen in one of the company's philosophies, namely providing customer satisfaction, which means the company knows customers will not tolerate the slightest defect [18][19]. Therefore, IEI made its quality control department, namely CSQA (Customer Satisfaction Quality Assurance), separate from its production department so that the company can directly control quality for deviations that occur both before the product is produced, during production, until the product is ready to be launched on the market. The goal is that the fewer defective products the customer receives so that the company gets fewer customer complaints, the more customer loyalty to the product will increase, which means the company's profit margin will also increase [20].

Quality is the most important thing for a company. Hence, quality control is a priority because, through quality control, it can be known what things can make a good company image in the eyes of the public. Domestic marketing is only 2% of production and started targeting the Singapore market in early 2005 with the SFP (Single Function Printer) model. Because printing is a type of inspection that has a direct impact on customers, and the most significant kind of defect is caused by mecha, the company sets a 700ppm standard as the maximum defect limit in mecha inspection to meet customer needs by minimizing the number of defects so as not to approach the 700ppm bar.

Research Methods

This research prioritizes using the waterfall method because a systematic and sequential approach is needed in building the system. Cascading flow is that the system is written sequentially. The resulting system produces excellent quality because the implementation is gradual and not focused on a particular phase [21][22].

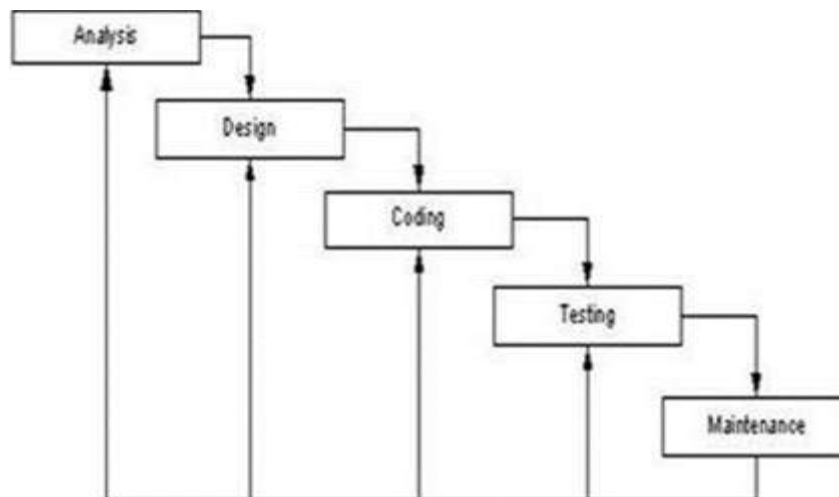


Figure 1 Waterfall method

This method is systematic at the stage of developing a system, and the series in the software design system are carried out sequentially. The waterfall method or also called the waterfall method is a method that is often used to update the application system that is currently running [23][24][25]. This method has several stages: application analysis, application design, application implementation, application testing, and maintenance [2]. At this stage, coding is done using a programming language. The programming language used for this research is HTML, CSS, PHP, and MYSQL as a database [3][13]. Running System Analysis. The system that is running at this time still uses a manual system, the following are use cases and activity diagrams that are running, and this stage also produces a system display design, data structure, and software architecture

Results and Discussion

To make it easier to read the application, the system model used to make this application is a UML Diagram, an Activity Diagram that explains the flow of the working system. In this study, the activity diagram starts with the operator or admin as a user who can control the system, and we can see the flow in Figure 2.

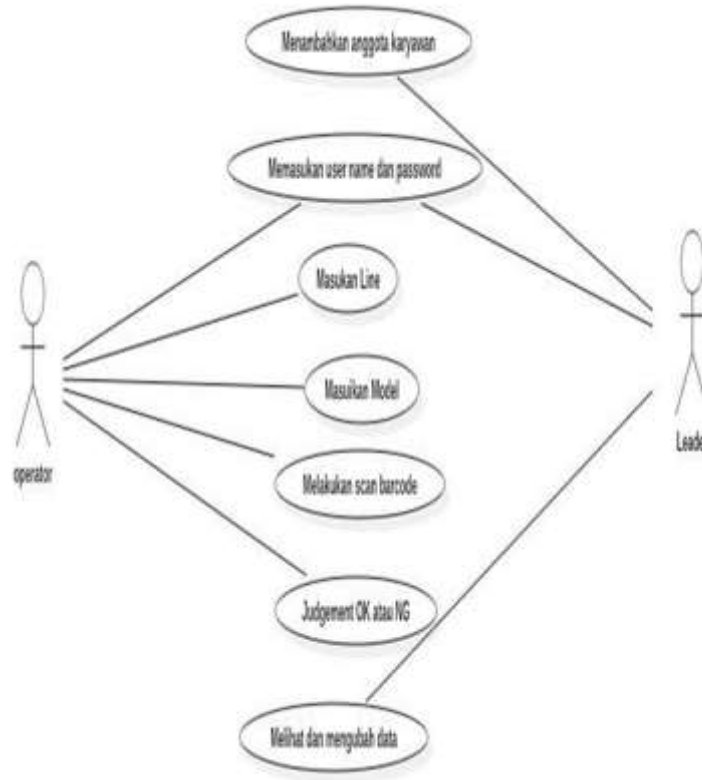


Figure 2 Use Case diagrams

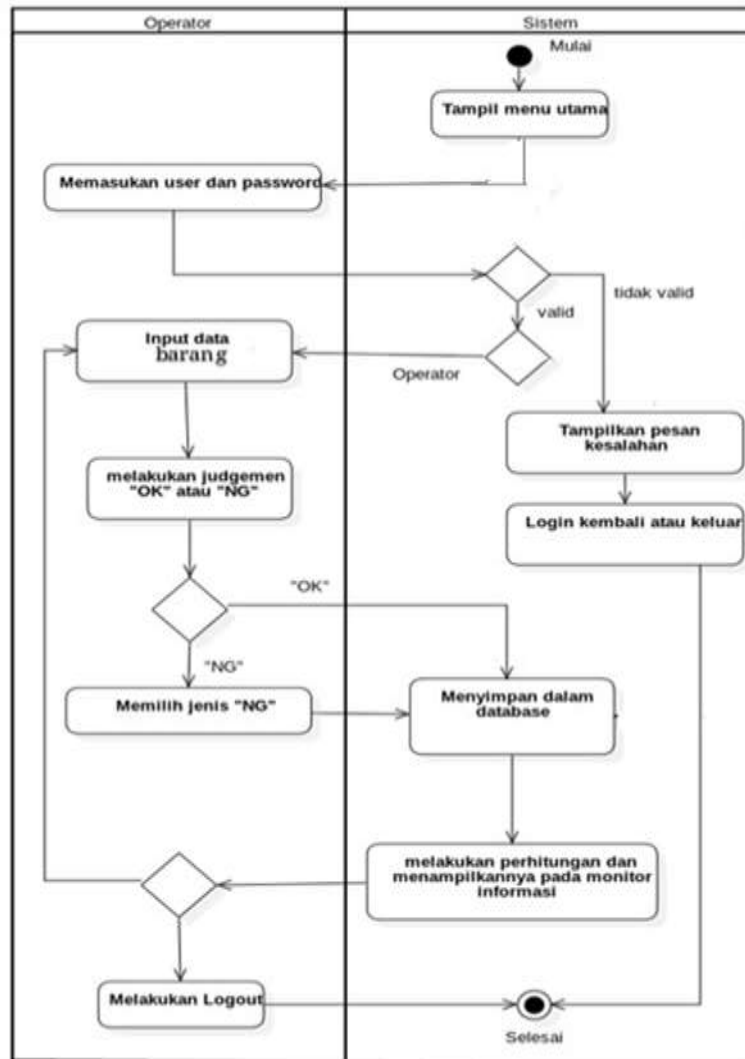


Figure 3. Activity Diagrams

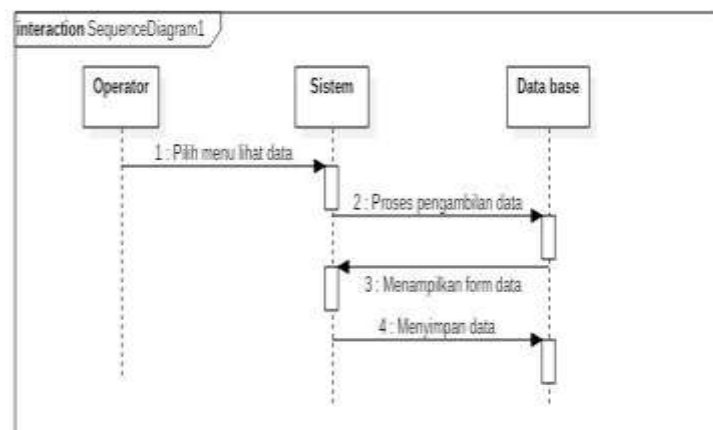


Figure 4 Sequence Diagram login

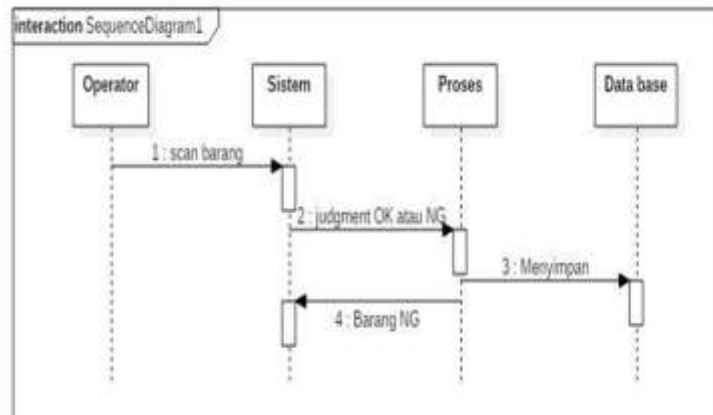


Figure 5 Sequence Diagram looking at the data

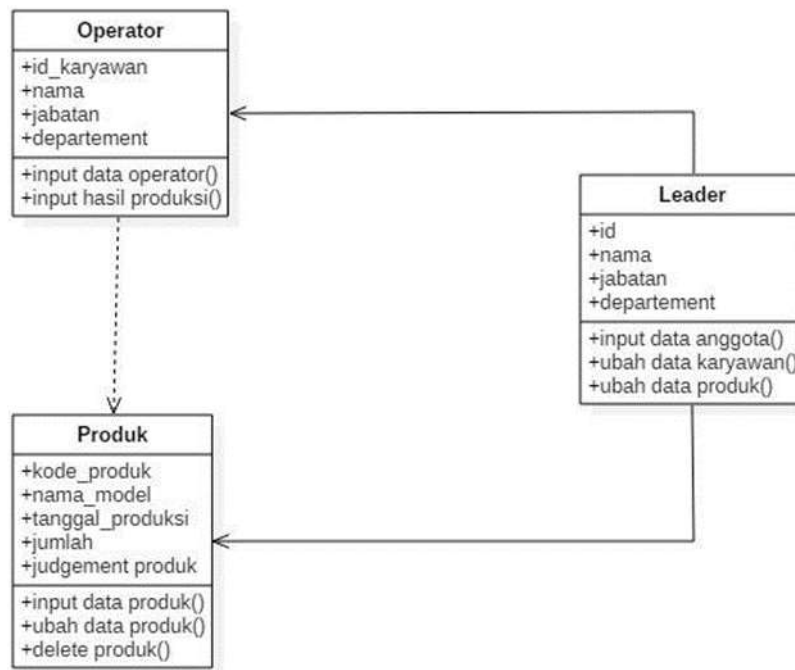


Figure 6 Class Diagrams

The menu display is shown in Figure 7 to Figure 9

LOGIN MENU

User Name

Password

Registrasi Login

Figure 7 Login menu screen

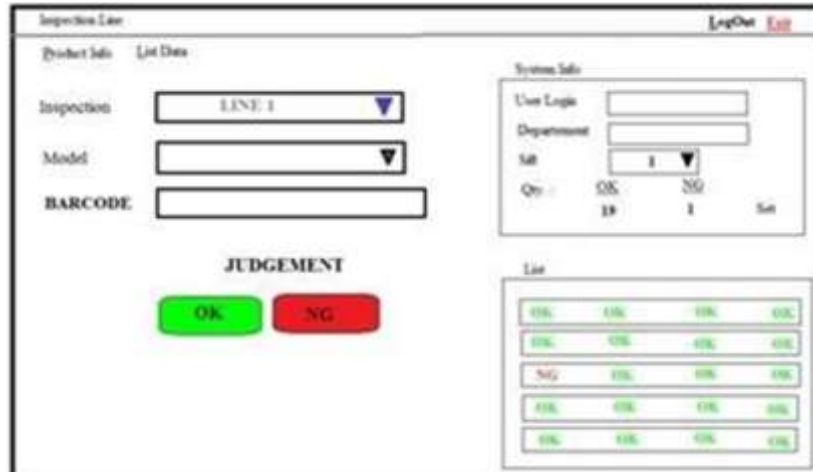


Figure 8 Main menu screen display

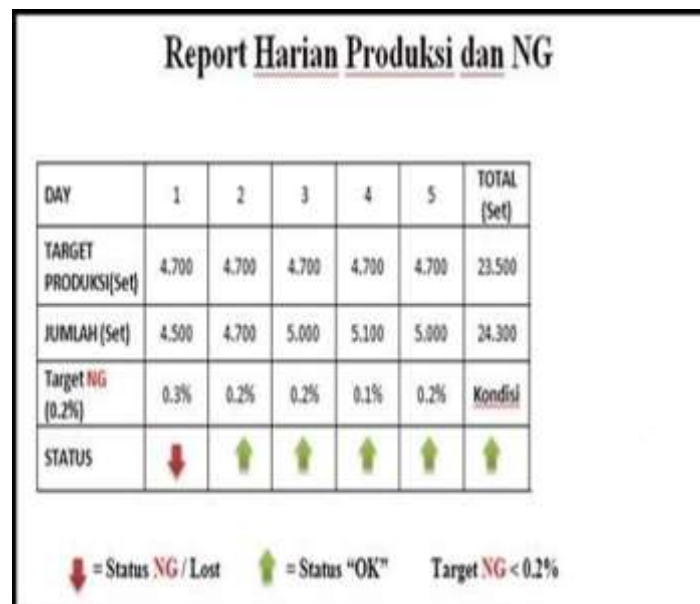


Figure 9 Screen display of production condition report

Conclusion

1. This system has a sensor check to avoid missing labels.
2. This system can help deal with the problem of errors in data input in the final inspection section at PT. Indonesia Epson Industry.
3. This system can speed up work in checking goods.

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