# ANALYSIS OF SALES INFORMATION SYSTEM (CASE STUDY: MR. TOKEN)

[1]AGNES FRIDAWATI, [2]WIWIET, [3]ARIEF

[1]Informatics Engineering Study Program, Faculty of Engineering

Bhayangkara University – Surabaya

e-mail: agnesfridawati5@gmail.com, wiwiet@ubhara.ac.id, arif@ubhara.ac.id

ABSTRACT

*At present the marketing that is in Mr. The token is done manually which is come directly to Mr.Token to offer the products offered. The purpose of this study the authors analyze and design a sales information system Mr. Tokens to increase sales. Appropriate title taken is the analysis of sales information systems on Mr. Token. With the occurrence of these constraints, the author tries to analyze the database by observing the database design. The purpose of this thesis is the researcher wants to be able to analyze the database in the company Mr. Token. And from the results of this study the results achieved are saving time of 12.6% and increasing turnover of 19.2%*

**Keywords**:I*nformation Systems, Mr. Token Sales, Analysis.*

## 1. INTRODUCTION

Mr. Tokens are the most complete and up-to-date family playground tool in Indonesia. Mr. Token was founded in 2004 and now has 14 outlets spread across Indonesia. The segmentation of the society to which Mr. Tokens are various groups, namely toddlers, children, adolescents, adults, until the elderly will find the games they like and enjoy doing. Creating play facilities that can be enjoyed by the whole family.

The application of information technology is very good contribution in the smooth running of business activities. The use of appropriate information technology can help in making decisions where data storage has been supported by one important component of information technology that is the database (database). The database is defined as a collection of data that is integrated and arranged so that the data can be manipulated, retrieved, and searched quickly. Besides containing data, the database also contains metadata. Collection and analysis of requirements (Requirement Collection and Analysis) is the process of gathering and analyzing information about the organization that will be supported by database applications and using that information to identify user needs for new systems. Database design (database design) is the process of making designs that will support the operations and objectives of the company. Utilization of the database makes it possible to save data or make changes and display it again quickly and easily.

The database system is a basic component of information systems of large companies, the database development cycle system is inherently linked to the information system life cycle. It is important to recognize that the stages of database cycle development do not have to be sequential but rather involve some number of repetitions of the previous stages through a feedback loop. One of the difficult aspects of database design is the fact that designers, programmers and end users tend to view data in different ways. The design methodology is a structured approach that uses procedures, techniques, tools, and documentation to support and facilitate the design process. The design methodology consists of several phases where each phase contains several steps that will guide the designer in using appropriate techniques at each stage in the project so that it helps the designer to plan, manage, organize and evaluate the development of the database project.

## 2. BASIC THEORY

### 2.1 Mr Token

Mr. Tokens are the most complete and up-to-date family playground tool in Indonesia. Mr. Token was founded in 2004 and now has 14 outlets spread across Indonesia. The segmentation of the society to which Mr. Tokens are various groups, namely toddlers, children, adolescents, adults, until the elderly will find the games they like and enjoy doing. Creating play facilities that can be enjoyed by the whole family.

### 2.2 Database Concept

The definition of database is stated by Sutanta [1] as follows "Database or database is an interlated data that is stored together on a media, it does not need a duplicate data (if there is, then the duplicate data must be as minimal as possible and controlled), data is stored in certain ways so that it is easy to use or display again, and can be used by one or more optimal application programs, data is stored without experiencing dependence on the program that will use it, data is stored in such a way that the process of adding, retrieving and Data modification can be done easily and controlled.

### 2.3 Understanding of Sales

Transaction of sales of goods or services, on credit or in cash ". Meanwhile According to Soemarso. S.R, Sales is the Amount charged to the buyer for the merchandise delivered is the income of the company concerned [2]. Based on the two statements above, it can be concluded that the sale, especially the sale of goods is an activity of selling goods that are produced by themselves or bought from other parties to be resold to consumers on credit or cash. So in general sales basically consist of two types, namely cash sales and credit. Cash sales occur if the delivery of goods or services is immediately followed by payment from the purchase, whereas credit sales have a grace period between when the goods or services are delivered in receipt of the purchase. The advantage of cash sales is that the results of these sales are realized directly in the form of cash that the company needs to maintain its liquidity. Meanwhile, in order to increase sales volume, companies generally sell their products on credit. Credit sales do not immediately generate cash income, but then generate receivables. Losses from credit sales are the costs of administration of receivables and losses due to uncollectible accounts.

## 3. SYSTEM ANALYSIS AND DISCUSSION DESIGN

### 3.1 Problem Analysis

Sales information system on Mr. The current token is used to support the sales function of Mr. Token. Mr Token's Sales System still applies a manual system. The manual input system indirectly takes a relatively long time and is prone to input errors.

### 3.2 System Design

Sales Information System Token that will be made before the process of making the sales system Token, the system design process is carried out. This is done with the aim that the information system that is made can function properly in accordance with what is expected, which is able to assist in the sales process Token. Sales information system design This token is made with a display that is easy for users to use. The stages in the design carried out are Flowchart, DFD, System Design.

### 3.3 System Flowchart

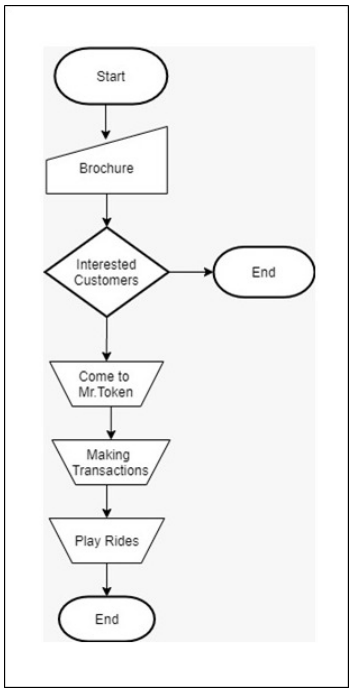


*Figure 3.1 Old System Flowchart*

A flowchart is a graphical depiction of the steps and sequences of procedures of a program. Flowcharts help analysis and programmers to solve problems into smaller segments and help in analyzing other alternatives in operation, flowcharts usually facilitate the resolution of a problem, especially problems that need to be studied further evaluated.

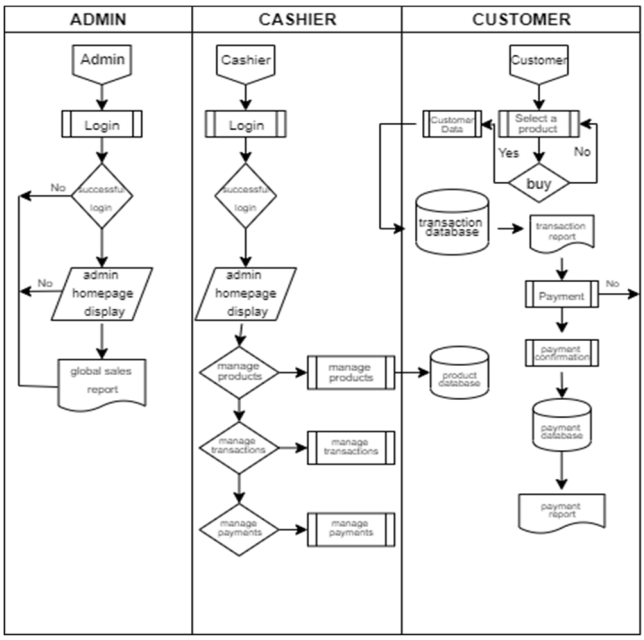


*Figure 3.2 New System Flowchart*

**3.4 DFD LEVEL 0**

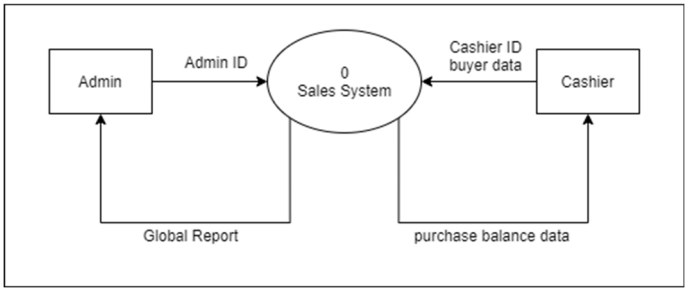


*Figure 3.3 DFD Level 0*

**3.3 DFD LEVEL 1**

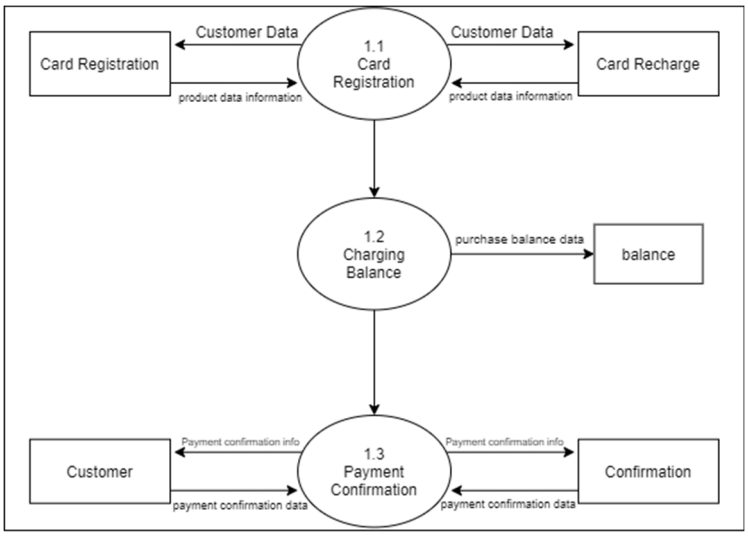


*Figure 3.4 DFD Level 1 Purchase*

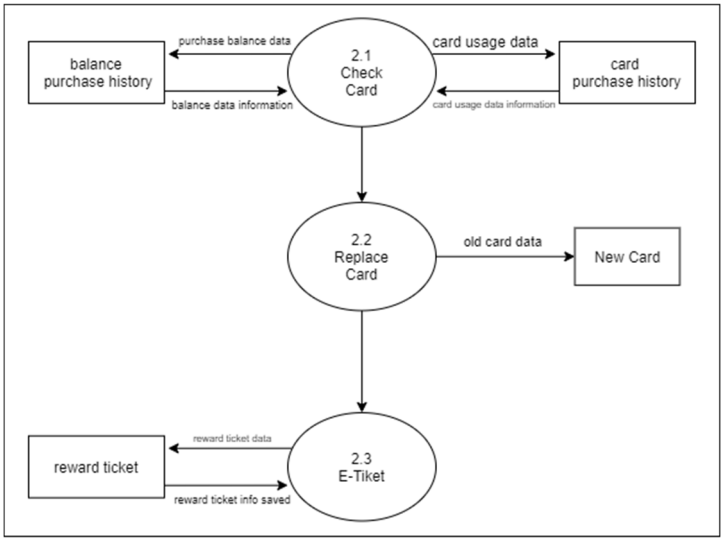


*Figure 3.5 DFD Level 1 Card*

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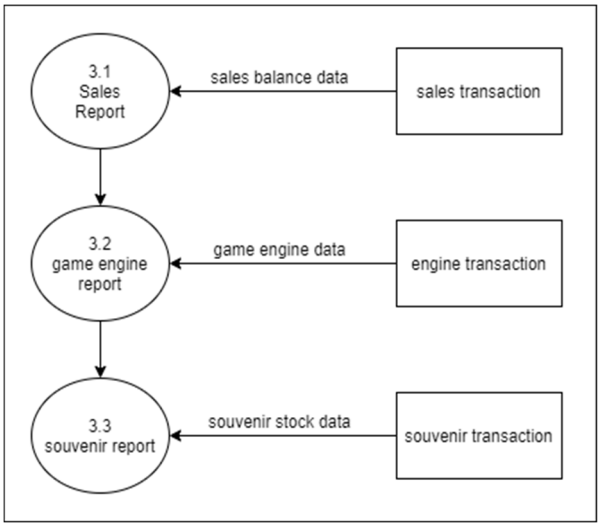


*Figure 3.6 DFD Level 1 Report*

## 4. SYSTEM IMPLEMENTATION

The minimum hardware specifications needed to build applications are as follows: Processor: Intel Core i3 RAM Memory: 2 GB Hard Disk Memory: 500 GB Mouse, Keyboard, and Printer as supporting hardware. The minimum software specifications needed to build applications are as follows: Programming Languages: PHP and MySQl.

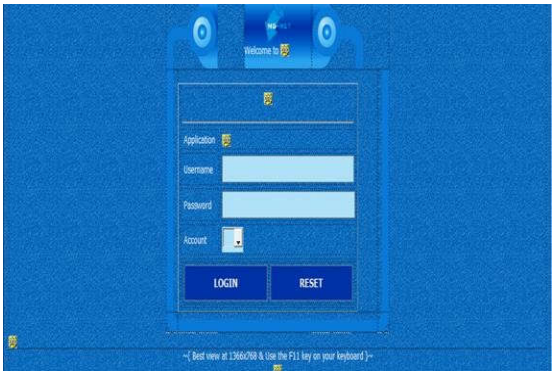


*Figure 4.1 Interface Implementation*

## 5. TESTING AND RESULTS

### 5.1 System Testing ( Black Box )

Black box testing is a test that is only carried out observing the results of execution through test data and functional checking of the software. So analogous as we see a black box, we can only see the outside appearance, without knowing what's behind the black wrapper. Just like testing a black box, evaluating only from the outside appearance (interface) and functionality. without knowing what really happened in the detail process (only knowing the input and output).

Black box test is a test of what is done by the system, especially behavior (behavior) and business problems. Black Box tests are carried out to identify bugs found in the results, processing and behavior of the system. Black box test is usually done by a tester.

Black-box testing or also called Functional Testing focuses on the external behavior of a piece of software or its various components while looking at the object being tested as a black box (black box) so as to prevent the tester from seeing the contents inside. Black - box testing verifies the correct handling of external functions provided by the software or whether the observed behavior meets user expectations or product specifications (2005p 35) Tian (2005p 25) argues that the simplest form of Black - Bok Test (BBT) is to start running the software and make observations with the hope that it is easy to distinguish which results are expected and which are not. This form is also called "ad hoc testing". After repeated testing and determined that the problems occur because of software and not because of hardware, then the information is conveyed to the party responsible for fixing the problems. Another form of BBT is the use of specific checklists that contain a list of what external functions should be and some information about expected performance or input-output pairs.

**5.2 Test Result**

The above experiment uses test data in the form of testing the accuracy of the formula / formula used (validity testing) and testing the readiness of the system to anticipate negligence carried out (error handling testing), the following results of testing the above experiment.

**5.3 Handling Problems ( error handling )**

This error handling aims to provide information about errors that occur during the process of using the system. The following are the results of testing from Mr.token's sales information system.

*Table 6.2 Handling errors in the system*

| No. | Testing Name | Testing Conditions | Test Result |
|---|---|---|---|
| 1 | Time | If before the table has not been relations the user takes a long time | Table after the relation of the time required is faster and more efficient |
| 2 | Employee | If before the table has not been relations employees are still manual and sometimes make mistakes | Now employees are more helped after the table has been relations |
| 3 | Admin | If before the table has not been linked admin is difficult to do checking | Now the admin is more helped in checking. |

**5.4 Validity Testing**

Validity testing aims to provide information about correct or incorrect calculations in the system, the following are the results of testing the table before the relation and after the relationship. Table before relation

Process efficiency calculation using the formula:

a. Calculate subtotals
   Subtotal = ((total 1 old functions + total 2 old functions) + (total 1 new functions + total 2 new functions))
b. Count totals
   Total = (total number of old system functions + number of new system function subtotals)
c. Calculate the average

$$\text{Average} = \frac{(\text{total number of old functions}) + (\text{total number of new functions})}{\text{number of tests}}$$

d. Calculating Efficiency

$$\text{Efficiency} = \frac{(\text{average long function} - \text{average new function}) \times 100\%}{\text{average old function}}$$

Process efficiency calculation using the formula:

e. Calculate subtotals

Subtotal = ((total 1 old functions + total 2 old functions) + (total 1 new functions + total 2 new functions))

f. Count totals
Total = (total number of old system functions + number of new system function subtotals)

g. Calculate the average

$$\text{Average} = \frac{(\text{total number of old functions}) + (\text{total number of new functions})}{\text{number of tests}}$$

h. Calculating Efficiency

$$\text{Efficiency} = \frac{(\text{average long function} - \text{average new function})}{\text{average old function}} \text{ X } 100\%$$

## 6. CONCLUSION

The conclusions from the test results obtained from the sample test cases above are as follows:

1. The results of 30 tests before the table in relation require 510.9 minutes and the table after 446.7 minutes correlation. Then the efficiency of the time obtained after the 12.6% correlation.
2. The results of 30 tests before the table is correlated to generate a turnover of Rp. 35,415,000 and after the table is related, it generates a turnover of Rp. 42,225,000. Then the turnover efficiency obtained after 19.2% correlation.
3. The results of 30 tests before the table in relation have an average of 17.03 minutes and the tables after the relation have an average of 14.89 minutes. Then the efficiency of 16.1556606 minutes = 12.6%.
4. Results from 30 tests before the table in relation have an average turnover of Rp. 1,180,500 and the table after the correlation has an average of Rp. 1,407,500. Then the efficiency of Rp.1,180,499 = 19.2%.

## REFERENCES

[1] E. Sutanta, *Sistem Basis Data*, 1 ed., vol. 1. Jogjakarta: Graha Ilmu, 2009.
[2] Soemarso S.R, *American Accounting Association*. 2009.
[3] Murni Marbun, "Implementasi Sistem Informasi Penjualan Mobil Dengan Metode Feature Driven Development (Fdd) Pada Pt.Capella Medan," *J. Mantik Penusa*, vol. 2, Des 2015.
[4] A. Rora, "Analisis Perancangan Sistem Basis Data Manajemen Kepegawaian Pada Kantor Subdivre 3.1 Kertapati Palembang," *J. Mhs. Tek. Inform.*, 2014.