DEVELOPMENT OF INFORMATION SYSTEMS SUPPLY CHAIN MANAGEMENT IN ZIDANE JEANS

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ABSTRACT

Zidane Jeans is a company engaged in the service sector convection, Zidane Jeans was established in 2014 by Mr. Entis Sutisna that berlokasikan in East Kp.Sukamaju RT001 / RW011 Pamekaran Village District of Soreang Bandung.Zidane Jeans in the procurement of raw materials to suppliers often have difficulty determine the number of purchases of raw materials because they use an estimate that would result in a surplus or a shortage of raw materials. Other problems mentioned in the shipping department several times experienced problems in the process of product delivery to the customer, because the product is empty so the demand is not met and the delivery process was delayed.
Supply chain strategy that is used is a push supply chain, since it determines the products manufactured prior to the existence of an order made to create a stock of products in the warehouse or can be called a make to stock. Forecasting methods used to estimate the amount of demand for the product is a method Single Exponential Smoothing. Prediction calculations availability of raw materials and products in the warehouse using the method of securing supplies (Safety Stock). Scheduled delivery of products tailored to the business rules of the company.

Based on the results of blackbox testing and final testing after application in the environment Zidane Jeans can be concluded that this system has helped Zidane Jeans in helping to estimate the number of ordering raw materials to be purchased to the supplier and assist in determining the delivery schedule and their vehicles are being used.
Keywords: Supply Chain Management, Single Exponential Smoothing, Push Supply Chain, Safety Stock

1. INTRODUCTION

Zidane Jeans is a company engaged in the service sector convection, Zidane Jeans was established in 2014 by Mr. Entis Sutisna that berlokasikan in East Kp.Sukamaju RT001 / RW011 Pamekaran Village District of Soreang Bandung. The products produced to date include jackets, shirts, dress and abayas. The company has a series of working system ranging from raw material purchases from suppliers, receiving raw materials from suppliers, processing raw materials into finished products, accept orders directly from customers and delivery of products to consumers who have ordered products. Ordering raw materials to suppliers are made via telephone or sometimes parts procurement in Zidane Jeans come directly to the supplier. Zidane Jeans has cooperated with eight suppliers among others Toko Sinar Mas Sinar Rahayu and others.

Based on the interview with Mr. Saepudin as head of procurement is known that the activities of the supply chain Management of contained upstream, namely ordering raw materials to suppliers, in determining the amount of raw material purchases are still experiencing difficulties due to the purchase of raw materials they use an estimate that would result in a surplus or a shortages of raw materials, if the excess raw materials will be the accumulation of raw materials in the warehouse and when ordering raw materials because few companies experiencing a shortage of raw materials made reservations to suppliers takes time to reach one day from start booking is made up of raw material received by Zidane Jeans.It is caused when the raw materials warehouse was empty at the production process of product manufacturing and delivery of the jacket will be hampered also would impact on Integration.

Based on the interview with Mr. Asep as the head of the shipping department, shipping products to customers will be made every business day in accordance with the request of the customer. The company has two cars suzuki carry box for shipment to customers. Delivery section several times experienced problems in

the process of shipping products to customers, because it occurs when the impact of the shortage of the product so that the upstream product demand is not met and the product delivery process often experience keterlambatan.karena parts procurement misjudged the purchase of raw materials and the impact on the production process to be blocked antaupun stalled which will result in delays in shipping products to customers jacket.

Based on the problems that were outlined, then Zidane Jeans need a tool that can manage the information that can monitor the inventory of raw materials and delivery processes, chosen Supply Chain Management which is a method or approach to the management of companies involved in supplying raw materials, produce goods and deliver it to end users why Supply Chain Management an option to deal with problems in Zidane Jeans for purpose company involved in Supply Chain Management is satisfactory kosumen to work together to create a product that is inexpensive, delivers on time and with good quality, making the Supply Chain Management the right choice for addressing problems in Zidane Jeans.

1.1 Formulation of the problem

Based on the background of issues raised, the problems that occur in Zidane Jeans is how to build an information system using the approach of Supply Chain Management at Zidane Jeans.

1.2 Purpose and objectives

The purpose of this study was to establish an information system by using the Management of Supply Chain (SCM) in Zidane Jeans.

The purpose of this research is:

1. Facilitate the procurement in determining the amount of raw materials to be purchased so that the production process continues and running smoothly.
2. Facilitate the delivery in the process of product delivery to the customer premises in order not to be late due to shortages of products in the warehouse.

2. CONTENTS OF RESEARCH

2.1 Basis Theory

The theoretical basis is a collection of definitions and concepts from various sources. The cornerstone of this theory as a strong foundation dalah a study, then some theoretical basis described is the theoretical basis that support for the development of information systems by using supply chain management approach in Zidane Jeans.

2.2.1 Information Systems

The information system can be defined as a set of components that are interconnected and work together to collect, process, store and distribute relevant information to support the decision-making process, coordination and control contained. The purpose of the system is to provide information and mensistemastikkan information from all events or activities that are necessary to control the operation of an organization. [1]

2.1.2 BPMN (the Business Process Modeling Notation)

BPMN is the ability to model the flow of messages. Diagram of the traditional process is able to model business process flows sequentially, from the initial event to the final outcome. In the e-commerce environment, of course, people send messages to one another as part of the process flow.[2]

2.1.3 Supply Chain Management (SCM)

*Supply Chain Management*is a method or an integrative approach to managing the flow of products, information, and money in an integrated manner involving parties from upstream to downstream. An important principle in SCM is transparency of information and collaboration between the company's internal functions as well as with the parties in the company along the supply chain.

Supply chain there are usually three kinds of streams that must be managed. Three kinds of streams that must be managed pad supply chain is as follows: [3]

1. The first is the flow of goods flowing from upstream (upstream) to downstream (downstream).
2. The second is the flow of money and the like flowing from downstream to upstream.
3. The third is the flow of information that can occur from upstream to downstream or vice versa. [3]

2.1.4 Inventory (Inventory)

Inventories are a number of materials, parts and materials supplied dala contained in the company's process to the production process, and finished goods or products provided to meet the demand of the consumer or retail all the time. [4]

2.1.5 Forecasting Theory (Forecasting)

A forecasting many have meaning, then forecasting needs to be planned and scheduled so would have required a time period of at least the period of time needed to make a wisdom and set a few things that affect these policies.

Forecasting is very diverse in forecasting time horizon, factors that determine the actual results, the type of pattern and various other aspects. To deal with such widespread use, several techniques have been developed. [4]

2.1.5.1 Forecasting Techniques

In smoothing historical values, the random error in the averaged to produce a forecast "smooth" which seems to work well under certain circumstances. So the forecast value at time t + 1 depends on the weighted value of the observation time t, the weighting and the predictive value when t is 1-1 / N value between 0 and 1. By replacing the 1 / N = a. It can be calculated by equation (2.7). [8]

$$Ft + 1 = Axt + (1-) Ft\alpha \quad (2.7)$$

Information :

Ft + 1 = Result forecast for period t + 1
α = Constant smoothing
xt = Actual demand data for the period t
Ft = Forecast in period t

In the exponential smoothing method α value can be determined freely, meaning there is no sure way to get the optimal value of α. Then selecting the value of α is done by trial and error. The amount of α lies between 0 and 1

2.1.6 Method of Inventory Control (Inventory)

Planning raw material inventory has been calculated yet often inventories of raw materials is not sufficient because often meloncatnya supplies production companies or supplies were damaged and did not meet the standards to meet consumer demand.

Safety Stock = Consumption Average Period Previous x Lead Time

Where :

Lead Time = The waiting time [5]

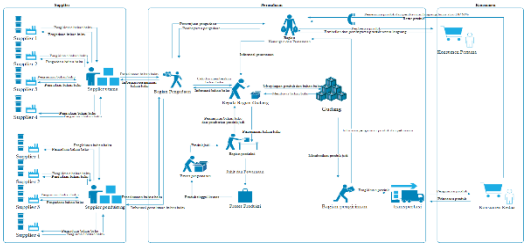
2.1.7 Transport Management and Distribution

Traveling Salesman Problem method is a method used to minimize distribution costs by finding the distance and the shortest route, the fastest time and costs are minimal. [6]

2.2 Analysis System

Analysis of the system is a step that contains the decomposition of the system under study is Supply Chain Management at Zidane Jeans. It is intended to identify and evaluate the problems-permasalan faced and the necessary requirements so you can find the solution overview

2.2.1 Supply Chain Model in Jeans Zidane



Picture 1 Supply chain Zidane Model in Jeans

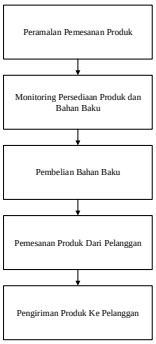
Description perpetrators Supply Chain contained in Figure 2. Model of Supply Chain Management at Zidane Jeans are as follows:

Zidane Jeans have two categories of suppliers of raw materials for their production activities and two categories of consumers. Adappun two categories of suppliers and consumers, among others:

a. Main Raw Material Suppliers
   Suppliers of clothes fabric is Toko Sinar Mas, Sinar Rahayu Stores, Fabric Stores 21 Stores Princess Amirah.
b. Raw Material Supplier Support
   Raw material suppliers is supporting Yarn Shop 66, BolaBolaBenang, Sunda Shop 105, Nk Store Jaya.
c. consumers First
   Consumers who come directly to the company to place an order products.
d. Both consumers
   Consumers who order products by telephone.

2.2.2 Stages of Supply Chain Management in Zidane Jeans

Supply chain analysis conducted to describe the process of supply chain management which will be built in Zidane Jeans based supply chain in Figure 2



Picture 2 Stages Supply Chain Management in Zidane Jeans

Zidane Jeans uses a strategy make-to-stock the production process tends to be influenced by their raw material inventory in the warehouse and Zidane Jeans determine those products manufactured prior to the existence of an order

made to create a stock of products in the warehouse. In Information Systems Supply Chain Management strategy in Zidane Jeans to be built, implemented the stages as follows:

1. Stages of Production Forecasting Product
   Forecasting calculations require data pemesasan product prior periods. The data will be used as an example of a product with most of Sales between March-July 2017 that is the type of product L. recapitulation Jacket size L size jacket product ordering period March-July 2017 described in Table 1

Table 1 Summary of Product Ordering Jacket Size L period from March to June 2017

No.	Period	size L
1	March	106
2	April	285
3	May	225
4	June	279
5	July	156

Based on the data that has been described produces a chart to determine the pattern of product ordering data. It aims to find methods that will be used in accordance with the pattern of the resulting data. Product ordering data graph can be seen in Figure 3



Picture 3 Product Ordering chart Jacket Size L period from March to July 2017

Based on the data from the data pattern jacket product order, the forecasting method that will be used to predict product inventory in Zidane Jeans is a Single Exponential Smoothing method for showing movement patterns fluctuate in irregular patterns. Forecasting is done after knowing the pattern shape of the data presented in Jeans Zidane has the following stages:

Setting up the booking data from the previous period to be processed as input data. The data were sampled ie booking data from March-July 2017.

Calculating the value of forecasting the ordering data by using a method or technique Single Exponential Smoothing forecasting.

Finding the value of MSE (Mean Square Error) of forecasting techniques to determine the smallest result.

Comparing the smallest value of MSE calculation result of alpha 0.1 to 0.9.

Forecasting results of forecasting techniques with the smallest MSE.

Suppose done for product forecasting jacket size m in August, then at least entered data is data in July 2017. Forecasting is done by taking the jacket product ordering data in March and July 2017.

Value forecasting can be found using the method Single Exponential Smoothing and for the value of alpha (α) to be used is the value of the range of zero to one that is alpha = 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8 and 0.9 as a comparison.

The first thing to do is to determine the value of the constant alpha = 0.1 and forecast the demand for the 2nd time. The values of the variables in the input to the formula (2.10) it will get the following calculation:

Examples of the prediction for α = 0.1 for product jacket:

Based jacket ordering data in Table 3.2 will be calculated forecasting booking for jackets in August 2017.

Example Calculation for α = 0.1

Noted that:

Ordering products jacket size L in the month of March 2017 is 106 pcs ((Xt) = 106) and forecasting results in March (Ft) = 106, because the month of March 2017 can not be calculated so directly calculate for the next month of April by taking the booking data and forecasting in March. The result of the calculation is as follows:

$$F_{t+1} = aX_t + (1 - a)\,F_t$$

Information :

Ft + 1 = Result for the period Forecasting + 1

a = Constant smoothing

xt = Data Request

F_t = Peramalaan the previous period

Results:

FApril = (0.1 * 106) + (1 to 0.1) * 106
= (10.6) + (95.4)
= 106 pcs

For the calculation of the next month is the month of May seen from the number of bookings in the previous month in April (Xt) = 285 and forecasting in April obtained (Ft) = 106, so that the obtained sample was calculated as follows:

$$F_{t+1} = aX_t + (1 - a)\,F_t$$

Information :

Ft + 1 = Result for the period Forecasting + 1

a = Constant smoothing
xt = Data Request
Ft = Peramalaan the previous period
Results:
FMei = (0.1 * 285) + (1 to 0.1) * 106
= (28.5) + (95.4)
= 123.9 pcs
= 124 pcs

For the calculation of the next month of June be seen from the number of bookings in the previous month downy mildew in May (Xt) = 225 and forecasting in May obtained (Ft) = 124 so that the obtained sample was calculated as follows:

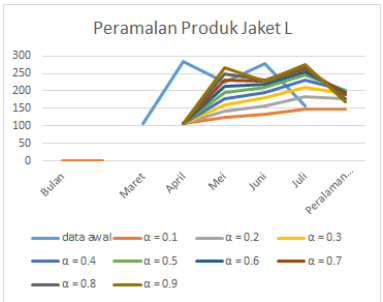
Ft + 1 = Axt + (1-a) Ft
Information :
Ft + 1 = Result for the period Forecasting + 1
a = Constant smoothing
xt = Data Request
Ft = Peramalaan the previous period
Results:
FJuni = (0.1 * 225) + (1 to 0.1) * 124
= (22.5) + (111.6)
= 134.1 pcs
= 134 pcs

The result of product demand forecasting jacket with alpha value 0.1 0.9 Sampa described in Table 2

Table 2 Results Forecasting Product Demand Jacket Size L

Bulan	Permintaan	Nilai Alpha								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Maret	106									
April	285	106	106	106	106	106	106	106	106	106
Mei	225	123.9	141.8	159.7	177.6	195.5	213.4	231.3	249.2	267.1
Juni	279	134.01	158.44	179.29	196.56	210.25	220.36	226.89	229.84	229.21
Juli	156	148.509	182.552	209.203	229.536	244.625	255.544	263.367	269.168	274.021
Peralaman Agustus		149.2581	177.2416	193.2421	200.1216	200.3125	195.8176	188.2101	178.6336	167.8021

After calculating the alpha value α = 0.1 and α = 0.9, will produce a graph of the results of forecasting for products jacket that is in Figure 4



Picture 4 Forecasting results for Jackets chart Size L

After all calculations of α = 0.1 and α = 0.9 to do the next step can specify the forecasting results which can be used is to calculate the value of the smallest error of prediction because the smaller the value of the prediction error then less and less misses. Error value calculation using the MSE (Mean Squared Error) by Equation (2.12) is described in chapter 2. The MSE calculation example for α = 0.1 are as follows:

$$MSE = (X_t - F_t)^2$$

Information :
xt = Data request
Ft = Peramalaan the previous period
Results:
MSE = (X_{April} - FApril) 2
= (285-106) 2
= (179) 2
= 32041

The results of MSE for the month of April 2017 is 32041, which is derived from the demand in April as many as 285 minus the result of forecasting in April that 106 and get 179 results, then squared end result is 32041.

Perform the same calculation as an example of the above until the 5th period. After calculating the MSE until the 5th period, the next step sum of the MSE of the period of the 2nd through 5th period. Then obtained the following results:

$$MSE = \frac{(\sum|F_t - Y|^2)}{n}$$

= 32041 + 10221.21 + 21022.1001 + 56.115081 + 22277.98042 / 5
= 85618.405601 / 5
= 17123.68112

The results from the sum of the periods 1 through 5 are 85618.405601 then divided by 5 is the whole period, the results obtained 17123,68112adalah result of the overall error of the period for alpha = 0.1. Make MSE calculation as above of α = 0.1 to 0.9. based on the calculation of MSE for α = 0.1 to 0.9 overall value calculation results obtained MSE in Table3

Table 3 Value Overall MSE jacket size L

MSE								
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
32041	32041	32041	32041	32041	32041	32041	32041	32041
10221.21	6922.24	4264.09	2246.76	870.25	134.56	39.69	585.64	1772.41
21022.1001	14534.7136	9942.0841	6796.3536	4726.5625	3438.6496	2715.4521	2416.706	2479.0441
56.115081	705.008704	2830.559209	5407.543296	7854.390625	9909.007936	11527.67269	12807	13928.95644
22277.98042	31414.58477	37342.50921	40048.65479	40125.09766	38344.53247	35423.04174	31909.96	28157.54476
Nilai Keseluruhan MSE								
17123.68112	17123.50941	17284.0485	17308.06234	17123.46016	16773.55	16349.37131	15952.06	15675.79106

Based on the comparison results in the calculation of Forecast Error α using MSE, it can be concluded that α with a value of 0.9 produces the smallest error. The most minor error indicates that the accuracy of forecasting results is high. Results forecasting product ordering jacket size L for the next period with a value of α = 0.9 then Zidane Jeans recommended procuring raw materials to the jacket in the next period the month of August 2017 with the number of 274.021. Obtained from the calculation:

$$F_{t+1} = aX_t + (1 - a)\,F_t$$

Information :
Ft + 1 = Result for the period Forecasting + 1
a = Constant smoothing

xt = Data Request
Ft = Peramalaan the previous period
Results:
Fagustus = (0.9 * 156) + (1 to 0.9) * 274.021
= (140.4) + (27.4021)
= 167.8021 pcs
= 168 pcs

After calculation, it is known that estimates of product orders jacket size L in August 2017 as many as 168 pcs and forecasting results will be used in the subsequent calculation process is the procurement of raw materials. Forecasting error in the measurement methods used MSE (Mean Square Error). This method is a way of measuring and evaluating errors in forecasting tenkik

2. Raw Material Inventory Monitoring

Demand products jacket size L as many as 168 pcs, head of the warehouse to check inventory aimed at avoiding emptiness or running out of products and raw materials. Inventory control requires an indicator to determine how safe limit of products and raw materials must be available in the warehouse by using safety stock. Is the product inventory and raw material thinning, made reservations back to the supplier. The product BOM Ldapat jacket size is presented in Table 4.

Table 4 Product BOM Jacket Size L (1 pcs)

No.	Raw material	Total Requirements
1	Fabric	1.9 meters
2	yarn Obras	2.1 meters
3	button	5 pcs
4	zipper	0.65 meters
5	Sewing thread	11 meters

After doing the calculations ukutan L jacket product forecasting as many as 168 pieces and knowing the BOM (Bill Of Materials) for 1 pcs jacket size L, so that the results obtained in Table 5.

Table 5 The amount of raw materials needed

jacket size	Forecasting Results	Name of Raw Materials	The amount of Raw Material needed
size L	168 pcs	Fabric	319 meters
		yarn Obras	352 meters
		button	840 pcs
		zipper	109 meters
		Sewing thread	1848 meters

Examples of product safety stock calculations jacket size L for the month of August 2017 was as follows:
Total forecasting in August 2017 = 168 pcs
Jumkah days in August 2017 = 31 days
Lead time procurement to suppliers = 1 day
completion:

safety stock Fabrics for raw materials = X (1) ($\frac{168}{31}$)
= 5.4 pcs
= 5 pcs

Based on the calculation above safety stock, then Zidane Jeans should provide a safety stock for raw materials in accordance with the safety stock products ukutan L jacket that is a number 5 pcs for each raw material. Safety stock for each of the raw materials can be seen in Table 6

Table 6 Raw Material Safety Stock Jacket Size L (1 pcs)

jacket size	safety Stock	Name of Raw Materials	The amount of Raw Material needed
size L	5 pcs	Fabric	9.5 meters
		yarn Obras	10.5 meters
		button	25 pcs
		zipper	3 meters
		Sewing thread	55 meters

Based on Table 3.6, the number of safety stock of raw materials at the warehouse was as much as 9.5 meters of raw materials Fabrics, Yarn Obras 10.5 meters, 25 pcs Buttons, Zippers Sewing Thread 3 meters and 55 meters.

Monitoring inventory of products will be presented in tabular form, which will be sorted based on the difference between the rest of the stock is the value of safety stock. For example the presentation of monitoring where the value of safety stock for products jacket L size is 5 pcs, while the rest of the stock for the jacket size L is 18 pcs then declared safe inventory status. Penyahhhjian monitoring product inventory can be seen in Table7

Table 7 Monitoring Inventory Items

jacket size	**Forecasting Results**	**The rest of the existing Stock**	**safety Stock**	**Status**
size L	168 pcs	18 pcs	5 pcs	Secure
	168 pcs	4 pcs	5 pcs	Not safe

After monitoring product inventory then will do the monitoring process inventories of raw materials will be presented in tabular form, which will be sorted based on the difference between the amount of stock to the value of safety stock. For example the presentation of monitoring will use raw materials which the value of safety stock fabrics to fabric is 9.5

meters, while the remaining stock of fabric is 15 meters, the status of secure supply. Presentation of monitoring inventories of raw materials shown in Table 8

Table 8 Raw Material Inventory Monitoring

Raw material name	The amount of Raw Material needed	Remaining Stock What is there	safety Stock	Status
Fabric	319 meters	15	9.5 meters	Secure
yarn Obras	352 meters	10	10.5 meters	Not safe
button	840 pcs	26	25 pcs	Secure
zipper	109 meters	5	3 meters	Secure
Sewing thread	1848 meters	50	55 meters	Not safe

3. Raw Material Purchase Stages

The head of the procurement will calculate the procurement of raw materials obtained from the data forecasting, safety stock and the number of existing stock.

Based on the monitoring inventories of raw materials in Table 4, when the stocks of raw materials jackets have inventory status is not enough, then Zidane Jeans should be ordered raw material with raw material amount booked in added safety stock and deducting the remaining stock. The amount of raw materials ordered can be seen in Table 9.

Table 9 Amount of raw materials ordered

Name of Raw Materials	Forecasting Results	safety Stock	Stock	Total Raw Reserved
Fabric	319 meters	9.5 meters	15 meters	313 meters
yarn Obras	352 meters	10.5 meters	10 meters	352 meters
button	840 pcs	25 pcs	26 pcs	839 pcs
zipper	109 meters	3 meters	5 meters	107 meters
Sewing thread	1848 meters	55 meters	50 meters	1853 meters

4. Stages Product Order From Customers

Section reservations will receive product orders from customers and the amount, type and address customer requested which will continue into the product delivery process.

5. Stages Shipping Products to Customers

The head of delivery will make product delivery schedules and determine the use of carry box delivery on 29 April 2017 can be seen in Table 10

Table 10 Delivery On Date 29 April 2017

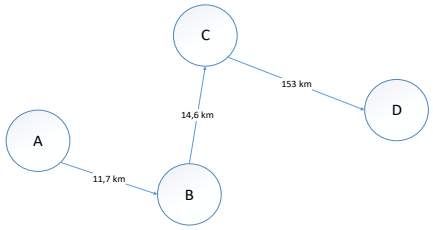
Tanggal Pemesanan	Nama Pelanggan	Alamat	Total Pesanan	Total Jarak Tempuh	Status Pembayaran
29 April 2017	Bu Tiara	Jl. Raya Pangalengan Banjaran	48 kg	11,7 km	DP 50% Rp 1.800.000
	Garsel	Jl. Cibaduyut Lama Bandung	149 kg	13,5 km	DP 50% Rp 4.748.750
	Azzura	Jl.Kebon Kacang raya Jakarta	70 kg	162 km	DP 50% Rp 3.732.500
		Total	267 kg	187,2 km	

From the table above reservations, the company will use one car suzuki carry box with no police D 8277 DD for total order is 267 kg or less than the capacity of the car is 300kg and will be determined using the method of service delivery with TSP (Traveling Salesman Problem.

S + B + C + D + S

0 + 11.7 + 14.6 + 153 + 162 = 341.3 km

From the above calculation results obtained shortest path is S + B + C + D + S with a total distance traveled of 341.3 km will be depicted in Figure 5.

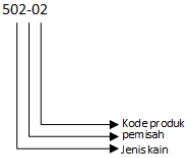


Picture 5 Delivery service

2.3 Analysis of Encoding

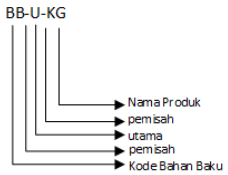
The code is a form of presentation of data by classifying the data that is in the process of data entry (input) into the system. Usually the code used to classify the data, so the code carries the message or have a different meaning, a symbol of the code used in almost all the processes that have to do with the data. In this infirmasi contained coding system that will be primarily used, among other things:

a. 502-02: It is a product code, which is the type of fabric Grantek.



Picture 6 Encoding To Product 502-02

b. BB-U-KG: It is the raw material code, which indicates the raw material with jenisya untama and his name Cain grantex.



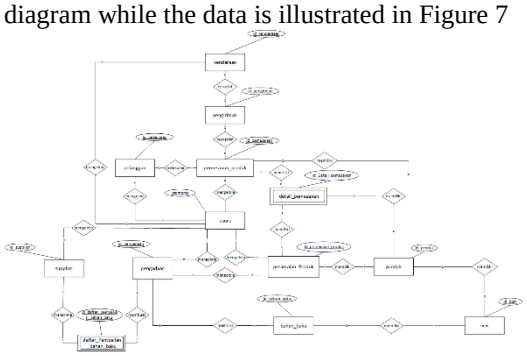
Picture 7 Encoding for Raw Materials Fabrics

2.4 Functional Needs Analysis

Analysis of functional requirements is functionally analasis to the needs of both the flow of data and information. Analysis of functional requirements described in the structured analysis that will be discussed as follows:

2.4.1 Analysis Database

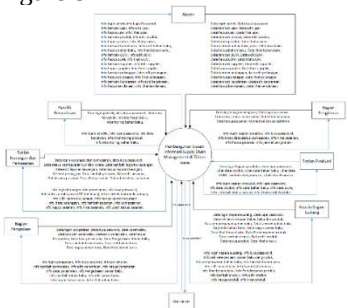
Analysis of the database on the system to be built using the ERD, ERD is a data model that uses some notation to describe the data in the context of the entities and relationships described by the diagram while the data is illustrated in Figure 7



Picture 8 ERD Zidane Information Systems in Jeans

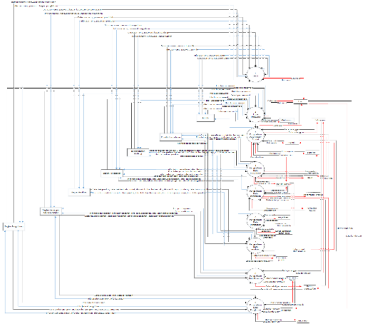
2.4.2 Context Diagram

Context diagram is a model for the global explains how data is used and transformed to describe the process or data flow into and out of the system. Diagram context of the system can be seen in Figure 8



Picture 9 diagram Context

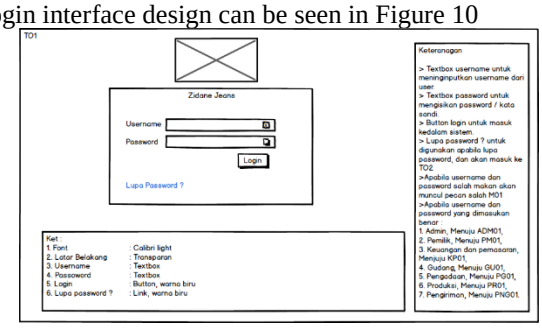
Data flow diagrams show how the flow of data and outlines the processes that occur in the system until the process in more detail. The process that occurs in the system until the process in more detail. In the context of the information system diagram as Figure 9 can be broken down into several DFD, DFD will be explained begin DFD Level 1.



Picture 10 DFD level 1 Construction Supply Chain Management, in Zidane Jeans

2.5 Design Interfaces Login

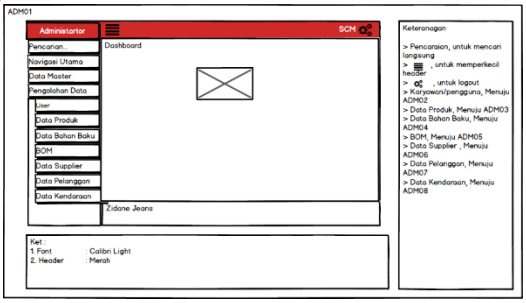
Login interface design used by administrators, business, finance department / booking, the head of the warehouse, parts procurement, production, delivery section at the time will be entered into the system, employees login interface design can be seen in Figure 10



Picture 11 interface login

2.6 Design Admin Interface

Perancagnan Admin interface is shown in Figure 11

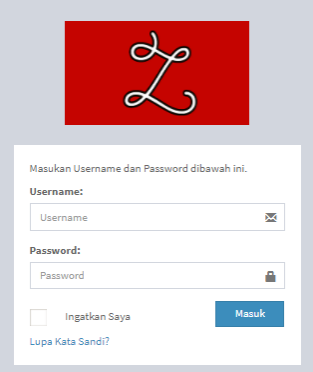


Picture 12 Admin interface

2.7 implementation has Interface Login

Impelmentasi login interface used by administrators, owners, financial / ordering, production, parts procurement, the head of the warehouse, the shipping department at the time of entry into the supply chain management

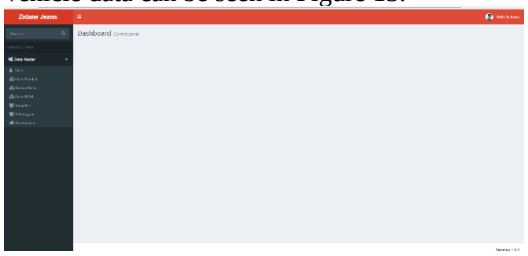
information system in Zidane Jeans, implementation of user login interface can be seen in Figure 12.



Picture 13 Implementation Interface Login

Impelentasi 2.8 Interface Admin Guide

Impelentasi antarmukaadmin used by employees who have the right level as an administrator whose job is to manage the master data is user data, product data, raw material data, BOM data, supplier data, customer data and vehicle data can be seen in Figure 13.



Picture 14 Admin Interface Implementation

2.9 Black Box Testing Plan

Plan black box testing is used to describe the testing of a system. This plan describes the sequence and things that will be tested on supply chain management information system in Zidane Jeans.

2:10 Beta Testing

Based on the test results in test cases that have been done it can be concluded that in general the supply chain management information system in Zidane Jeans can be run in accordance with the expected output.

2.10.1 Conclusion Results Interviews

Based on the results of interviews conducted with parts consisting of parts procurement and delivery section states that the supply chain management information system built on the calculation of purchasing raw materials is quite correct and in accordance with what is needed. To pengirman product is enough to help in the manufacture of the product delivery schedule to customers.

3. CLOSING

This chapter describes the conclusions that contains the results obtained after the analysis, design, and implementation of the software design was built and has been developed as well as suggestions that will provide important records and possible improvements that need to be done to software development earlier ,

3.1 Conclusion

Based on the results of blackbox testing and testing of the end-user pernerimaan after Zidane Jeans applied it can be concluded as follows:

1. 1.Supply chain management information system in this Jeans Zidane can assist in determining the amount of procurement of raw materials to be purchased in order to continue production activities and running smoothly. And facilitate the data input of raw materials should be in a message to the supplier than before their supply chain management information system must enter the data manually.
2. With the supply chain management information system in Zidane Jeans, facilitate the delivery part in the delivery process by scheduling the product to the customer premises. And make it easier to manage the data delivery and not have to ask anymore than the customer's name and address before their supply chain management information system should inquire first.

3.2 advice

Suggestions for the development of information systems are some suggestions that can be done, among others:

1. Future studies are expected to do a combination of supply chain management information system with cutomer relationship management information system to manage relationships with customers.
2. Make pages for customers, such as e-commerce in marketing their products so that customers can purchase products or transactions via the Internet only need internet access and their interfaces using a web browser.

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