ANALYSIS CUSTOMER PROFITABILITY USING APPROACH CUSTOMER RELATIONSHIP MANAGEMENT (CRM) IN PT.IFORBIT MADYAN PERSADA

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ABSTRACT

PT.Iforbit Madyan Persada is a company engaged in professional development and training services. Company parties often have difficulty in determining the price to customers because customers often complain in the price offer caused by an inappropriate budget. Consequently there is frequent negotiation between the customer and the company. This affects the revenue received by the company. These conditions make the company need to improve service to customers. So that customer acceptable delivery can improve long-term relationship with customers.

One solution of the problem is by doing the Customer Profitability Analysis with Customer Relationship Management approach. This system uses servqual method is a method of measuring services based on the gap value between customer expectations of service with the actual service customers receive. Servqual method is presented in the form of questionnaire. CRM approach uses dynamic CRM framework with phase ie relationship phase, dynamic relationship management and customer information type.

Black box testing results and beta testing has been done, it can be concluded that the system built user acceptable. Works well and has assisted the Manager in determining priorities for service improvements that do not meet customer expectations. The system also helps the Manager in determining the price according to customer needs so that it can provide convenience to the company to be able to measure the level of customer satisfaction of the training services that have been provided by the company.

Keywords: Customer Relationship Management, Dynamic CRM, Servqual.

1. INTRODUCTION

PT. Iforbit Madyan Persada is a company engaged in the field of professional development and training of engineering – mechanical, health, security, safety (K3), and the development of human resources (HR). PT. Iforbit founded in 2011, based on the spirit to participate in the development of HUMAN RESOURCES. The Office is located at JL. Setia Budi No. 105E Bandung, has handled more than 100 companies that cooperated in the training and development of HUMAN RESOURCES for ± 5 years travel bisninya. The more rapid development in the city of Bandung, it triggers a persaing increase in the service sector professional development and training.

Based on the results of the interview to Mr. Sahid Sahidin as Managers of the company, stated that in the promotion of the company done so far through various means such as go to customers directly or through electronic media and social media. The customer in this case i.e. the Individual Companies PT, CV, Non-Government Organitation NGO, State-owned enterprises SOES, the Government Agencies. Corporate parties in this case continues to strive to provide the ideal traning program to customers, training programs are given in the form of material quality, reliable instructor as well as a conducive training atmosphere. The company's efforts to provide the ideal service to customers and to influence the level of customer satisfaction. But on the other hand the party managers often have difficulty in determining the price to the customer. This is because customers often complained at the time price quote due to incompatible with the budget customers. As a result customers often negotiates with the company.

Negoisasi also became a factor constraints the party managers, because the company had to adjust as well as cost mempertimbangan program training. In this case the Manager must calculate the return cost incurred for the training agenda to suit customer demand. As for the factors that affect the cost of such training cost trainer, place, consumption and training accommodations.

Other facts in order to meet the target is minimal company maybe 5 times in 1 month agenda. At parakteknya PT Iforbit Persada Madyan as providing the services of professional development and training as in the transaction reports during the year 2016 target achievement often experience a ride down. Corporate parties in this case continue to provide maximum training service to all customers, but on the other hand the company's difficulty in handling complaints of service not in accordance with customer expectations. As a result of their impact to the company's revenue which lessened. The condition is considered need to improve services to match customer expectations. Based on the analysis and interviews of researchers to the Manager of PT

Inforbit, the company looked at the need for a means which could help and strengthen the long-term cooperation with customers to improve the profitability of the company as well as repair services can determine the training in order to improve the relationship of cooperation with the customers so that customers can make transactions again.

One of the ways that is done to resolve the problem by diterapkanya the concept of Customer Relationship Management (CRM), Customer Relationship management (CRM) is a type of management that discuss about the handling of the relationship between the companies with customers that can help companies in the process of management of customers, so companies have good value in the eyes of the customer. A company must have an ingenious strategy to defend its position. One of the Points that affect the sustainability of a company is how its market share remains sought after by customers [1]. As the description that has been explained earlier, therefore the author conducted a study with the title "Customer profitability analysis, re-purposed With Customer Relationship Management (CRM) at PT Iforbit Persada Madyan.

1.1. Basic Concept CRM

Customer Relationship Management is a practice-oriented or focused on business customers. For companies engaged in the field of information technology, the term CRM in use to describe a variety of software applications used to automate the functions of marketing, sales, and service.

At the core of understanding CRM is how a company or a business to know the behavior of customers, customer needs, and then build and implement a better business transactions to improve the acquisition of new customers and improve your ability to keep existing customers [2].

1.2. STAGE IN CRM

Implementation of the concept of good CRM is CRM process organizing around customers and not only on the internal functions of the company. There are three stages in CRM, that is :

1. Acquire It is a stage of acquiring customers. Through this stage can provide an assessment to the company by assessing the first impression to the company. If the member has a good judgment against the company, then the transaction will be able to run well.
2. Enhance is a process where the company built a good relationship with the member. By listening to the complaints of member and receive suggestions from users is one of the effective ways in building relationships with the member.
3. Retain It is the stage where the company sought mampertahankan relations with members, in other words get a member and then maintain a relationship with them. In order to establish rapport by constantly and maintain relationships with the member, then the company should use the view using the member by providing the services and supporting applications.

1.3. Type And Level Of CRM

The following is the type and level of Customer Relationship Management.

1. Operational CRM with regards to the business functions of a company that includes the servicing of customers, management of orders, invoice or billing, management and sales otomatiosasi.
2. Analytical CRM is an activity which includes store, move, process, interpret and report the user or customer data, which may then analyze what they need..
3. Collaborative CRM is activities to combine all the necessary communication, coordination and collaboration between vendors and customer. Its main purpose is to provide added value and expand customer loyalty to other customers who still have not been on the level of customer loyalty. Collaborative CRM also includes understanding or awareness that a loyal customers can be a magnet for other customers.

1.4. Framework CRM

1. Front CRM

CRM is a front-end framework (Framework) to build computer systems to manage customer relationships (CRM) according to the perspective of the internal organization. Front-end CRM developed by Eko k. Budiardjo Wira and Perdana, was revealed to be the business processes that are present in every line of business. Organization, namely strategic planning, marketing (marketing), sales (sales) and service (service).

The biggest challenge is how the concept of CRM can be implemented in a company. The CRM concept is the problem, not merely a purely software installation, but more emphasis applied philosophy and customer-centric culture as a whole.

The application of CRM should begin at the level of business strategy, where at this level are change the Organization thoroughly possible. The agenda of change and then directed to the work process, and supported by information technology. This process can not run otherwise. In fact, the majority of the CRM implementation project was first focused upon this aspect of the technology rather than business strategy. This can be one of the factors cause the failure of CRM implementation.

Front-end CRM is intended to provide a framework for business process can recognize what happens in every area of management related to CRM, particularly on aspects of marketing, sales and service (departmental plans). The framework is structured on the basis of the activities of strategic planning, marketing, sales, and service of the company. Fourth activity this is the basic philosophy is to implement CRM.

2. Dynamic CRM

In the framework of dynamic CRM described that there were three types of customer information (Customer Information). Among other things:

1. Information about costumers (Of - the – Customer Information)
   Information on personal data and customer transaction data. The information in this category are often known as database marketing and target marketing..
2. Informasi for costumers (For - the – Customer Information)
   Information about products, services and company information are considered important by customers. This information could be channeled through various media of communication in the form of direct mail, auto response system, and the internet site.
3. Information costumers (By - the – Customer Information)
   Nontransaksional feedback information from customers that include complaints, proposals, claims, customer needs and others. This information is usually manifested in the form of an expanded customer data because this information is highly membantudalam customer interaction. In addition, because it contains complaints, needs and suggestions, information of this type can be applied to develop products.

Generally, Dynamic-CRM actually describes potentially experiencing unplanned phase should be done with an organization in achieving customer management that is in accordance with the company's main business. This framework can be considered a pattern or model of reference of an organization in the mengingkatkan maturity of management of their customers. In the framework there are several phases, among others:

a) Relationship Initiation

On stage initiasi relationships with customers, organizations do logging against customers, typically with membership registration. After record customers, organizations can infer information about the offer is right for the customer (for the customer). After a certain period the customer is satisfied with what the Organization has to offer, then the relationship with the customer can escalate into core customer. At this stage the organization can continue to the next phase, namely the CRM. On this phase occurs a two-way interaction between the customer and the organization. Customers will be told what is needed specifically (by the customer). Things like this opens up the opportunity for the Organization to offer new products or services to customers, improve business processes and to satisfy the core customer.

b) Relationship Value Analysis

In order to make CRM more effectively, we recommend every customer relationships are analyzed from both the point of view of either the customer or organization. There are two dimensions in determining the value of every relationship namely customer value from the point of view of sudutr and customer rights from the perspective of the organization. In this phase of the relation between customers psychologically with the organization. This usually happens with granting discounts to customers when making a purchase in large quantities, indirectly increasing customer loyalty.

c) Relationship Positioning

Build mutually beneficial relationships is very important to keep a long-term relationship between the customer and the organization. In the implementation of the strategy of building a mutually beneficial relationship, the Organization maximizes the right customers will automatically increase the value of customers. In addition to fair organisation should also evaluate the relationship with customers from the viewpoint of benefit obtained. If such a relationship continues between ustomer and organizations will form a strong commitment either tracsional or nontracsional and the relationship developed to the stage of relationship commitment.

2. CONTENT OF RESEARCH

2.1. Analysis Customer Relationship Management in PT. Iforbit Madyan Persada

On the basis of the Analysis Framework of Dynamic CRM features that can then be built in accordance with the Analytical Framework of Dynamic CRM can be seen in figure1.

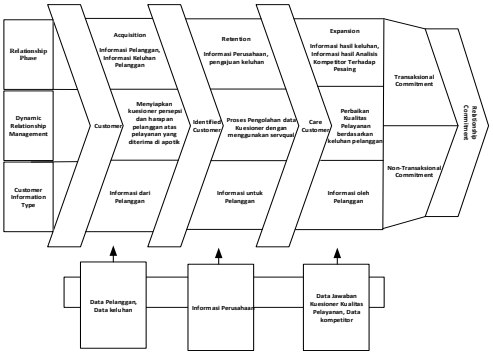


Figure 1. Framework of Dynamic CRM

1. Relationship Phase

This stage is the stage of determination of the price of the training based on the level of satisfaction, to determine the price of training based on the level of satisfaction the existence of questionnaires filling done customers who've done dealings. A measure of satisfaction to determine the price of the training that will be chosen next was with the test results. Testing is done by looking at the results of a questionnaire which had been charging. From the results of a questionnaire that calculation has been performed, then the level of satisfaction related to the determination of the price of the training can be seen in table 1.

Table 1 The Results Of The Questionnaire

No	Question	Percentage	Decision
1	The conditions used for training.	85,33	Strongly Agree
2	Completeness of training venue facilities.	81,33	Strongly Agree
3	Hygiene and safety training places.	81,33	Strongly Agree
4	The material provided is in compliance.	76	Agree
5	The ability of the instructor in delivering the material.	76,66	Agree
6	The attitude of the instructor in delivering the material.	84,66	Strongly Agree
7	Meals and drinks are given.	74,66	Agree
8	The cleanliness of food and drinks.	80,66	Agree
9	Training equipment needs.	80,66	Agree
10	Ease of information available with either	80	Agree
11	Completeness of training is in compliance with the needs of the participants of the training.	82,66	Strongly Agree
12	The prices applied is in compliance with the quality of training.	76	Agree
13	The price offered by PT Iforbit Persada Madyan.	78,66	Agree

Further results from the questionnaire, the price will be determined next training as the best price here:

Table 2 Details Of Training Needs

No	Details Of The Training	Price
1	Place	1.500.000
2	Instructor	2.000.000
3	Consumtion	1.000.000
4	Promotion	500.000
5	Supples of Training	500.000
6	Documentation	450.000
Total		5. 950.000
Company Profit		30%
Total Cost		8.500.000

2. Dynamic Relationship Management

Analysis of the strategy of the Ministry with the servqual PT. Iforbit Madyan was first presented in the form of a questionnaire. The questionnaires will be filled by the participants of the training so as to produce an information that can help Managers in determining strategies to improve service training, the following is a table of questions.

Table 3 Training Questionnaire Questions

No	Question	Dimension
1	Training held planned carefully. Management of training goes according to good use. Material sesuia with the needs of the participants. The precision of the method of delivery of the instructor in delivering the material.	Reliability
2	Timeliness afforded the team trainer in managing training. Team trainer capable of serving the needs of the participants quickly. Alacrity team trainer in problem resolution.	Responsiveness
3	The attitude of trainers providing services and the supervision to participants.	Assurance

No	Question	Dimension
	Team trainer can help participants. The attitude of the trainer in accepting criticism and suggestions.	
4	Team trainers were able to understand the needs of the participants. Team trainer capable of responding to complaints of participants with either.	Empathy
5	On-site training as expected. Comfort and hygiene training. Equipment training is available in full.	Tengible

The results of these questions then do the test validation and Reliability means indicating measuring instrument used to obtain that data is valid and can be used to measure what it should be in the following table results measurement test validity

Table 4 Validity of the test results

No	Score ES	Score PS	R table	Description
1	0,504	0,434	0,361	Valid
2	0,803	0,491	0,361	Valid
3	0,175	0,807	0,361	Invalid
4	0,603	0,756	0,361	Valid
5	0,432	0,825	0,361	Valid
6	0,691	0,337	0,361	Valid
7	0,560	0,827	0,361	Valid
8	0,551	0,388	0,361	Valid
9	0,085	0,485	0,361	Valid
10	0,621	0,665	0,361	Valid
11	0,877	0,636	0,361	Valid
12	0,694	0,633	0,361	Valid
13	0,781	0,868	0,361	Valid
14	0,642	0,351	0,361	Invalid
15	0,738	0,587	0,361	Valid

Further processing of data carried out a questionnaire that is calculating the average value of each grain of kesioner questions about expectations and service as well as doing the calculation the value of servqualnya.

A. The calculation of the average questionnaire

Calculation of the median – median is intended for questions about hope refers to the following equation.

$$\overline{X}\ \text{ES} = \frac{\sum_{i-1}^{n} \text{Ei}}{n}$$

Where :

$\overline{X}$ ES = The average rating for questions about expectations

EI = the value of any of the respondents to the question about expectations to-i

n = number of respondents

The average value of the questions surrounding the expectations

$$\overline{X}\ \text{ES} = \frac{124}{30} = 4{,}13$$

The calculation of average values for questions regarding services received refer to the equation.

$$\overline{X}\ \text{PS} = \frac{\sum_{i-1}^{n} \text{Pi}}{n}$$

Where :

$\overline{X}$ PS = The average value for the question regarding the services received

PI = the value of any of the respondents to the question regarding the services received to-i

n = number of respondents

The average value of the questions surrounding the expectations

$$\overline{X}\ \text{PS} = \frac{110}{30} = 3{,}66$$

Below is a table of calculating the average value of the questionnaire for any questions regarding the expectations of customers and the services received..

Table 5 The calculation of the average questionnaire

No	Calculating the average value of Hope	Calculating the average value of the Services Received
1	$\overline{X}$ ES = $\frac{124}{30}$ = 4,13	$\overline{X}$ PS = $\frac{110}{30}$ = 3,67
2	$\overline{X}$ ES = $\frac{128}{30}$ = 4,27	$\overline{X}$ PS = $\frac{102}{30}$ = 3,40
3	$\overline{X}$ ES = $\frac{126}{30}$ = 4,20	$\overline{X}$ PS = $\frac{125}{30}$ = 4,17

4	$\overline{X}_{ES} = \frac{125}{30} =$ 4,17	$\overline{X}_{PS} = \frac{130}{30} =$ 4,33
5	$\overline{X}_{ES} = \frac{131}{30} =$ 4,37	$\overline{X}_{PS} = \frac{112}{30} =$ 3,73
6	$\overline{X}_{ES} = \frac{128}{30} =$ 4,27	$\overline{X}_{PS} = \frac{114}{30} =$ 3,80
7	$\overline{X}_{ES} = \frac{129}{30} =$ 4,30	$\overline{X}_{PS} = \frac{104}{30} =$ 3,47
8	$\overline{X}_{ES} = \frac{126}{30} =$ 4,20	$\overline{X}_{PS} = \frac{109}{30} =$ 3,63
9	$\overline{X}_{ES} = \frac{125}{30} =$ 4,17	$\overline{X}_{PS} = \frac{118}{30} =$ 3,93
10	$\overline{X}_{ES} = \frac{130}{30} =$ 4,33	$\overline{X}_{PS} = \frac{118}{30} =$ 3,47
11	$\overline{X}_{ES} = \frac{129}{30} =$ 4,30	$\overline{X}_{PS} = \frac{114}{30} =$ 3,80
12	$\overline{X}_{ES} = \frac{130}{30} =$ 4,33	$\overline{X}_{PS} = \frac{127}{30} =$ 4,23
13	$\overline{X}_{ES} = \frac{127}{30} =$ 4,23	$\overline{X}_{PS} = \frac{128}{30} =$ 4,27

After a median value calculation – further align done counting the value of the servqual to see quality maids customers (Q) with questions about expectations given the label (E) and about the services received are labeled (P).

$$Q = P - E$$

Where :

Q = Quality

E = Expectation /

P = Perceived

The following is a table of the values of service quality of any questions about the service

.

Table 6 Servqual value

Variable Question	E	P	Q
Q1	4,13	3,67	-0,46
Q2	4,27	3,40	-0,87
Q3	4,20	4,17	-0,03
Q4	4,17	4,33	0,16
Q5	4,37	3,73	-0,64
Q6	4,27	3,80	-0,47
Q7	4,30	3,47	-0,83
Q8	4,20	3,63	-0,57
Q9	4,17	3,93	-0,24
Q10	4,33	3,47	-0,86
Q11	4,30	3,80	-0,50
Q12	4,33	4,23	-0,10
Q13	4,23	4,27	0,04

To monitor services provided result service are displayed in the form of the graph correspond to the dimensions of the servqual in respect of it is compiled using a bar chart in order to make it easier for managers in measuring service to the participants of the training. The graph is a calculation of the total value of ES and PS servqual dimensions on each is presented in the following table

Tabel 7 Dimensions Servqual

Dimensions	**Variable Question**	**ES**	**PS**
Reliabilty	Q1+Q2+Q3	12,60	11,23
Responsiveness	Q4+Q5+Q6	12,80	11,87
Assurace	Q7+Q8+Q9	12,67	11,03
Empaty	Q10+Q11	8,63	7,27
Tengibel	Q12+Q13	8,57	8,50

Following the results of the calculation of the dimensions of the servqual in the form of graphs.

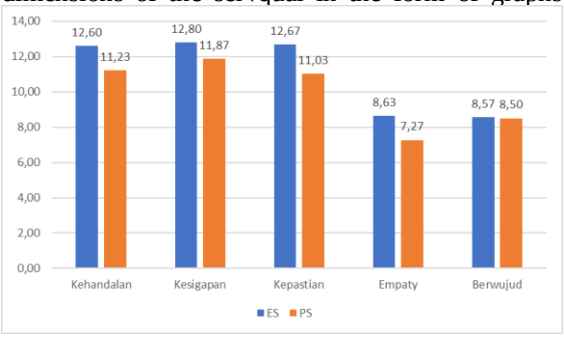


Figure 2. Gambar grafik pelayanan

Conclusion on the graph of the above service address:

a. Dimension of reliability, the value of the services (PS) < hope (ES), then the quality of reliability is bad, need to do repairs.
b. Dimensions of promptness, the value of the services (PS) < hope (ES), then the quality of alacrity is bad, need to do repairs.
c. Dimensions of certainty, the value of the services (PS) < hope (ES), then quality assurance is bad, need to do repairs.
d. Dimensions of empathy, the value of the services (PS) < hope (ES), then the quality of empathy is bad, need to do repairs.
e. Intangible Dimension, the value of the services (PS) < hope (ES), then takes the quality is bad, need to do repairs.

3. Customer Information Type

On the Customer Information Type there is a stage of the facilities provided, namely:

a) Information Of Customer

Information Of the Customer i.e. the information from customers concerning the customer's data and transaction data that later the data processed by the company.

b) Information for Customer

Information for the Customer that is information for customers regarding company, promotions and discounts, schedule training or information considered important by customers. Part of this information can be viewed directly on the website www.Iforbit.co.id.

c) Information by Customer

Information by Customer that is Information that includes complaints, proposals, and other customer needs – another. In this section the customer can do so via email at PT. Iforbit Madyan Persada or can come into the Office.

2.2. Use Case Diagram

In the system there are four users namely admin, administrative, operations and public part & Manager. The task of the four actor can be seen in the following image Diagram Use Case.

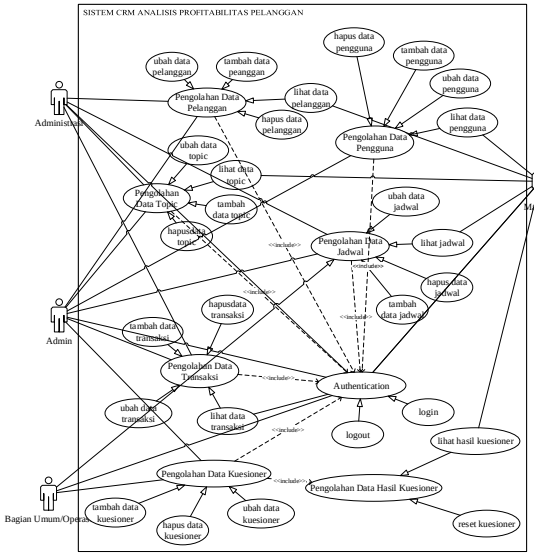


Figure 3. Use Case Diagram

2.3. Class Diagram

There are three types of classes in the system, i.e. the class Boundary, classroom Control, and class Entity. The class Boundary is the class that is used to build a display interface system. The Control class is the class that is used as the scene of the whole process that exists in the system and also the validator that checks incoming data validation.

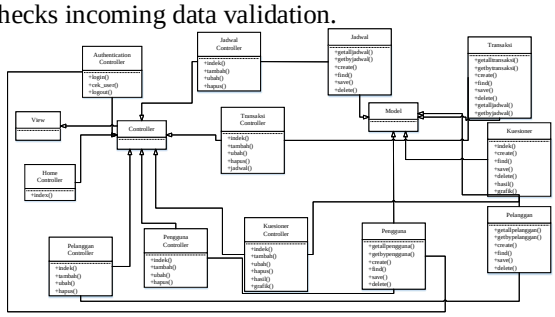


Figure 4. Class Diagram

2.4. Scheme Relation

Scheme relation describes the interrelated data between multiple data and limit.

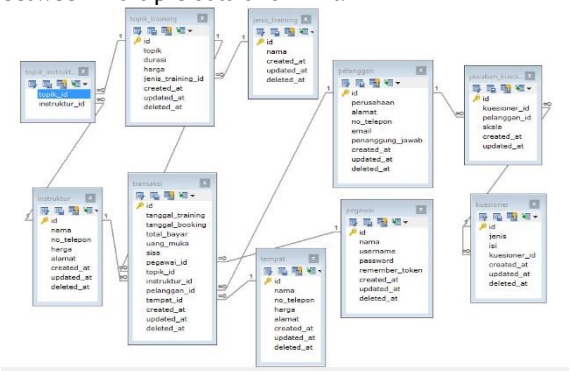


Figure 5. Scheme Relation

2.5. The design of the menu structure

The design of the structure of the menu is designed to provide the functions that will be used in information systems will be built.

2.5.1 The Admin Menu Structure

The admin menu structure is the structure of the menu which has a primary function as the provider of the Information Customer Relationship Management. The admin menu structure itself can be seen in the followingfigure

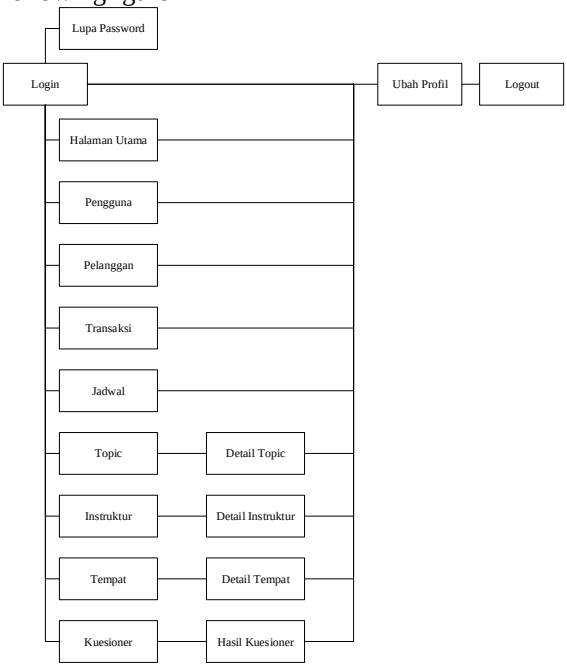


Figure 6. Admin Menu Structure

2.5.2 Manager Menu Structure

The structure of the menu Manager is the menu structure has a function as a watchdog of every activity conducted on information systems Customer Relationship Management. The structure of the menu manager himself can be seen in the following image.

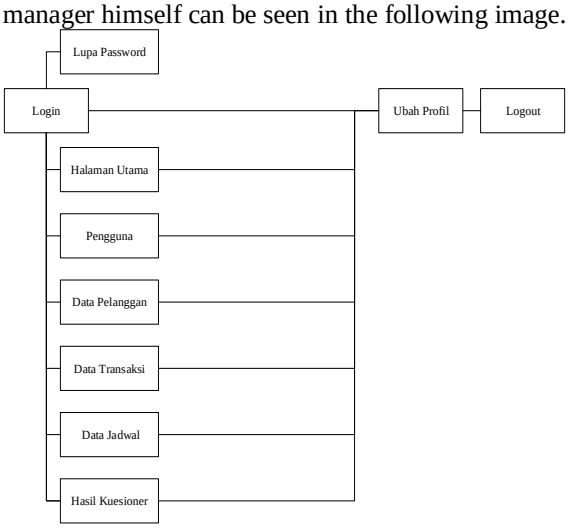


Figure 7. Manager Menu Structure

2.5.3 Administration Menu Structure

Menu structure menu structure is the Administration which has a function as an activity that is associated with the customer in the Customer Relationship Management information system. The Administration's own menu structure can be seen in the following image.

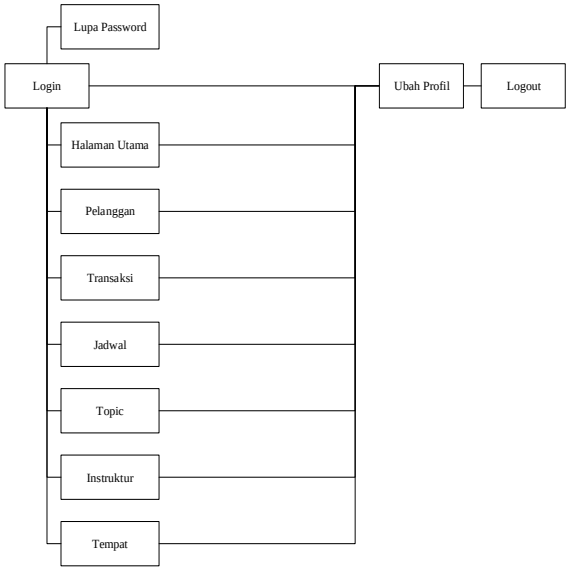


Figure 8. Administration Menu Structure

2.5.3 General Section Menu Structure

Menu structure menu structure is a general section that has a function as a controller and management service to customers. Menu structure to the various General himself can be seen in the following image

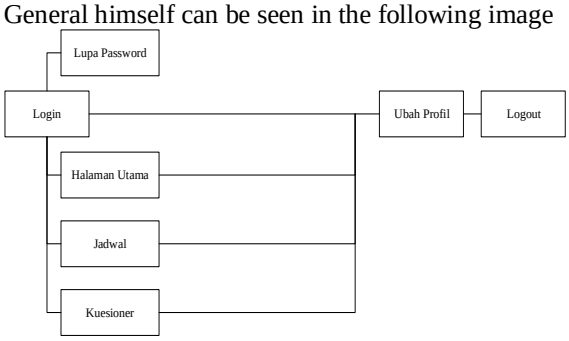


Figure 9. General Section Menu Structure

2.6 Implementation of interface

Interface implementation is done based on the display of any CRM system built with a the coding in the form of program files. The look of the interface implementation built divided into four, namely Admin, Manager, administration, and the General section.

2.6.1. Admin Implementation Interface

Implementation of the interface of the software intended for admin can be seen in the table below.

Table 8. Admin Implementation Interface

No.	Menu	Description	Name File
1	Login	The page that is used to login to the system	login.php
2	The Admin Main Page	The main admin page when successfully logged in	beranda.php
3	Types Of Training	Pages that are used to manage the data of this type of training.	jenis_training.php

No.	Menu	Description	Name File
4	Instructor	The page used to manage data instructor.	instruktur.php
5	Training topics	Pages that are used to manage the data topik_training	topik_training. php
6	Costumers	The page that is used to view customer data	pelanggan.php
7	user	Pages that are used to manage user data	pengguna.php
8	Schedule	Pages that are used to manage the data fixtures	jadwal.php
9	Transaction	The page used to manage transaction data	transaksi.php
10	data questionnair e	Pages that are used to manage the data questionnaire	data_kuesioner .php
11	the results of the questionnair e	Pages that are used to manage the data of questionnaire results	hasil_kuesione r.php
12	Logout	The page used when going out of the Admin page	logout.php

2.6.2. Manager Implementation Interface

Implementation of the interface of the software intended for Managers can be seen in the table below.

Table 9. Manager Implementation Interface

No.	Menu	Description	Name File
1	Login	The page that is used to login to the system	login.php
2	The Admin Main Page	The main admin page when successfully logged in	beranda.php
3	user	Pages that are used to manage user data	pengguna.php
4	Costumers	The page that is used to view customer data	pelanggan.php
5	Transaction	Halaman yang digunakan untuk melihat data transaksi	transaksi.php
6	Transaction	The page used to manage transaction data	jadwal.php
7	the results of the questionnaire	Pages that are used to manage the data of questionnaire results	hasil_kuesioner.php
14	Logout	The page used when going out of the Admin page	logout.php

2.6.3. Administration Implementation Interface

Implementation of the interface of the software intended for Administration can be seen in the table below

Table 10. Administration Implementation Interface

No.	Menu	Deskripsi	Nama File
1	Login	The page that is used to login to the system	login.php
2	The Admin Main Page	The main admin page when successfully logged in	beranda.php
3	Costumers	The page that is used to view customer data	pelanggan.php
4	Transaction	The page used to manage transaction data	transaksi.php
5	Schedule	Pages that are used to manage the data fixtures	jadwal.php
6	Training topics	Pages that are used to manage the data topik_training	transaksi.php
7	Types Of Training	Pages that are used to manage the data of this type of training.	jenis_training.php
8	Instructor	The page used to manage data instructor.	instruktur.php
10	Logout	The page used when going out of the Admin page	logout.php

2.7. Testing System

System testing is the most important thing that aims to find any errors or omissions in the information system tested. Testing the system in question to know the performance of information systems that have been made in accordance with the objectives of the design of information systems. Testing the system using black box testing and beta.

2.7.1. Testing Black Box

Black box testing focuses on the functional requirements for software.

Table 11. Scenario Testing black box

Bahan Uji	Detail Pengujian	Jenis Pengujian
Login	Login verification	Black box
Forgote Password	Forgot password verification	Black box
User Management	1. Add a user data 2. change user data 3. remove user data	Black box Black box Black box
Customer Management	1. Add customer data 2. change customer data 3. Remove customers	Black box Black box Black box
The Management Of This Type Of Training	1. Add a data type of training 2. change the data types of training 3. remove the data types of training.	Black box Black box Black box

Management training topics	1. Add a data topics 2. change the data topics 3. remove the data topics	Black box Black box Black box
Instructor management	1. Add a data instructor 2. change the data instructor 3. remove data instructor	Black box Black box
Management of transactions	1. Add the transaction data 2. change the transaction data 3. change the transaction status	Black box Black box Black box
Management schedule	1. change the data fixtures	Black box Black box Black box
The Management Questionnaire	1. Add data kusioner 2. change the data questionnaire	Black box Black box
The management of the results of the questionnaire	1. results of the questionnaire data Resert	Black box

2.7.2. Testing Beta

Beta testing is testing the direct surroundings. The user to make assessment of the system using the method of interview about the systems that have been built. From the results of these interviews can be drawn the conclusion whether the system built as expected or not. This interview conducted using unstructured interviews, where the process of implementation is only based on the outline or the purpose of the existing problems in the current studyTable 12. Table Question

No	Question	Answers
1	What is the CRM application, according to Mr. already can help determine the cost so it meets the level of customer satisfaction?	According to Mr. Gingin, CRM applications have been quite helpful in determining the cost of training.
2	Whether this CRM application, according to Mr. can already determine the cost of training in accordance with customer conditions given?	According to Mr. Gingin, CRM applications have been helpful in determining the cost of training in accordance with the conditions of the customer.
3	Whether this CRM application, according to Mr. can more easily know the needs of participants for training?	According to Mr. Gingin, CRM applications with this questionnaire, the company knows the demand for training participants
4	If according to the father of this CRM application functionality is easy to use?	According to Mr. Gingin, CRM application is easy to use.
5	If according to the father of this CRM application functionality easy to learn?	According to Mr. Gingin, CRM applications is easy to learn and go according to their functions
6	What is the CRM application, according to Mr. is interesting in how it looks?	According to Mr. Gingin CRM applications, the display is still lacking, should be more interesting again for tampilanya.
7	Whether this CRM application, according to Mr. enough already overcome problems that occur in the company?	According to Mr. Gingin, CRM applications have been quite able to overcome the problems that exist in the company.
8	What is CRM application, according to Mr. it is enough help in monitoring the prices of training?	According to Mr. Gingin, CRM applications is not enough help in monitoring the prices of training are asked by customers.

3. CONCLUTION

3.1. Conclution

Based on the results of the testing and discussion has been made then the obtained conclusions as following

a. Profitability analysis approach to CRM can assist Managers in determining the costs of negotiating the price to customers
b. Profitability analysis approach to CRM can help a Manager in memperbaikan services to customers in an effort to boost the company's profit.

3.2. Suggestions

Advice that can be given to development of the CRM approach to profitability analysis has been made for further system development as follows:

a) Profitability analysis approach to CRM can be developed by performing the process of negotiating the price without changing the variable place of and instructor.
b) Profitability analysis approach to CRM can be developed with menginputkan participants for training data of any registered customers.
c) Profitability analysis approach to CRM can be developed by calculating the overall company profit periodically

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