Web-Based Desktop Support Trouble Ticket System Design In PT. Mnc Mediacom Cable

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Abstract: In recent years the existence of web-based information systems in Indonesia has increasingly felt its presence in supporting daily activities, both economic and non-economic. Manually processing data certainly cannot keep up with the need for fast, precise, and accurate presentation of information. Currently, manual data processing is considered less effective for providing reports and information for companies that are developing and have diverse transactions. The importance of Trouble Ticket Desktop Support is to make equalization of workloads that are fair and balanced besides that it is also a tool for assessment on each a technician. So with this, the author tries to examine the application of web-based technology that can be applied to problems that exist in one activity so that it can integrate the activities concerned. Ticket Desktop Support as a process to collect data from various existing sources and Desktop Support is required to be active monitor and treat user needs. With Trouble Ticket Desktop Support that is well integrated so that accessing data on Desktop Support can be done easily and quickly in order to measure the level of problems and access reports by the Head of IT Operations, as well as problems can be handled well within the scope of problem boundaries that produce the right solution to manage resources the power available, with this application it will be clear what problems are faced by the customer.

Keywords: Web, Ticket, the customer, PHP, Trouble ticket

INTRODUCTION

In recent years the existence of web-based information systems in Indonesia has increasingly felt its presence in supporting daily activities, both economic and non-economic. Manually processing data certainly cannot keep up with the need for fast, precise, and accurate presentation of information. Currently, manual data processing is considered less effective for providing reports and information for companies that are developing and have diverse transactions.

The importance of Trouble Ticket Desktop Support is to make equalization of the workload that is fair and balanced besides that it is also a tool for assessment on each technician. So with this, the author tries to examine the application of web-based technology that can be applied to the problems that exist in one activity so that it can integrate the activities concerned.

Trouble Ticket Desktop Support as a process to collect data from various existing sources and Desktop Support is required to actively monitor and treat user needs.

During this time if there is interference on the customer's computer, the Desktop Support will be contacted by the customer concerned and will be guided by a member of Desktop Support about his complaints. Not all Desktop Support members participate in handling problems faced by every customer, making it difficult to monitor problem-solving. In addition, if there is an application system that regulates this matter, it will make it easier for Desktop Support to find out the previous damages that have occurred. Sometimes the problem faced by the customer is the difficulty of getting a technician's notice to make a visit to the customer.

From the above problems, it is needed Trouble Ticket Desktop Support that is well integrated so that accessing data on Desktop Support can be done easily and quickly in order to measure the level of difficulty and access the report by the Head of IT Operations, and the problem can be handled well within the scope of the problem boundary produce the right solution to manage existing resources, with this application it will be clear what problems are faced by the customer

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LITERATURE REVIEW

Information is data that is processed into a form that is more useful and more meaningful for those who receive it. The source of information is data. While the data is the reality that describes an event and real unity. An event is something that happens at a certain moment. The information provided for decision making is of course quality information. The quality or quality of information can be measured from accurate, timely, and relevant. (Andriansyah F,Suryani N,Anggraeni S,2018) Information systems can consist of components called building blocks, namely input blocks, model blocks, output blocks, technology blocks, database blocks, and control blocks. As a system, the six blocks interact with one another to form a unity to achieve their goals. There are five components of the information system namely hardware, programs, data, procedures, and people. (Ernatita, 2016)

Data is raw facts and then managed to produce information that is important for a company or organization. Data is a record of a collection of facts. Data is also a plural form of datum, derived from Latin which means "something given". In everyday use so data means a statement that is received as is. From this statement is the result of measurement or observation of a variable whose form can be in the form of numbers, words, or images. (Indrajani, 2015)

The database is a collection of data that is logically interconnected and designed to get the data needed by an organization. (Kotler Philip, Amstrong Gary, 2013)

Websites must be built to help customers, gather feedback from customers, and complete sales channels rather than selling their products directly. Websites must offer detailed information and other features that can answer questions, build customer relationships closer, and produce a company presence. (Nurwati,Diana A, 2012)

Helpdesk is assistance in the form of information and substitutes for information providers who handle troubleshooting related to computers or similar problems. In this case, the helpdesk system serves as a forum for users to accommodate problems in a variety of computers. (Qoyyimah, 2011)

Helpdesk as a Single Point of Contact (SPOC) becomes a communication facility between customers or users and the company's support team providing products or services. Customers and users usually submit complaints or questions via telephone or email (Romney, et all, 2015).

Ticketing is a distraction ticket (sometimes called a problem report) is a mechanism used in an organization to track the detection, reporting, and resolution of several types of problems. Trouble ticketing systems originate from manufacturing as a basis for paper reporting systems, now mostly web-based and related to environmental customer relationship management (CRM), such as call centers or e-business.(Kikin Sakinah Nur Safira dan Novita Puspasari,2017)

Attributes are object characteristics that have the same characteristics in a class level and contain the same values and types.(Satzinger J.W, et all. 2012)

Methods are behaviors or operations that describe the ability of an object and show the inheritance of a class. 3 types of methods found are (Vardiansyah, Dani, 2008):
1. Constructor methods.
2. Get data and data set methods.
3. Use case methods

UML stands for Unified modeling language, which is a tool in the development of object-oriented systems. UML provides a modeling language that is easy to understand and includes an effective mechanism to make system development well (B. Haqi, 2019)

Entities referred to as objects or objects in the real world are things that can distinguish them from other objects. Entities in the database as a collection of attributes, namely the account number attribute. This attribute forms acollection of entity attributes from the account number (A. W. W. & D. Kurnianingtyas, 2017)

Logical Relational Structure is the result of the Entity-Relationship Diagram (ERD) modeling with attributes, which are the relationships between existing entities. Logical Relational Structure (LRS) aims to determine cardinality, number of tables, and foreign keys.(A. Solichin,,2016)

MySQL (My Structured Query Language) is an open-source database creation. MySQL (My Structured Query Language) can run well on any OS (Operation System) with Windows or Linux platforms(Y. S. Kusno Harianto, Heny Pratiwi,2019)

HTML (Hypertext Markup Language) is a web programming language that contains the process of how to compile and present content on a web page. HTML (Hypertext Markup Language) is prepared using a simple language that can make it easier to implement web creation (M. N. Abdiansyah, 2018)

METHOD

Systems Development Method

The system development method used is the Rapid Application Development (RAD) method. The steps taken by researchers in the stages of system development with this method are as follows:
1. Requirement Planning

At this stage, researchers and prospective users (in this case PT.MNC employees) meet to discuss the purpose of the system to be made. After the goals made on this system are obtained, then the researcher or prospective user will determine what information is needed in the process of making this system based on the objectives obtained. In addition, the researcher also analyzed the current system at PT.MNC, where users will make phone calls if the user experiences problems, incoming calls cannot be directly recorded because they are queuing, so incoming calls must be recorded one by one . Then the incoming call will be recorded as a complaint report, which then the report will be submitted to the technician (engineer) in the form of a ticket. After that the engineer will go to the location where the problem was reported and then it can only be resolved. Furthermore, the technician (engineer) will report that the problem that occurred can be resolved by checking the ticket containing the complaint report before, whether it has been resolved all or not. At this stage the researcher also conducted interviews about the system that was running at PT.MNC, what information needs to be informed through the new system that will be created, and also who will use this system.

2. RAD Design Workshop.

At this stage, the researcher submits a design or prototype of the system to be made for the user, then responds to the user. After the design has been approved, the system will be proposed based on an approved design.

3. Implementation

At this stage the researcher does the coding, which is implementation into the programming language. The programming language used is using PHP and Database System software uses MySQL. In addition, after the system has been completed and perfected, the system will then be tested and introduced to prospective users, namely PT.MNC Mediacom Cable employees and then applied to the company.

RESULT AND DISCUSSIONS

Users are required to login first before entering the main menu of desktop trouble ticket support web, after logging in the user can see 3 main menus on the desktop trouble ticket support web that is an open ticket, ticket page, and popular issues. If the user wants to report a problem the user can enter the open ticket menu to report or ask for problems encountered by the user. After reporting a problem on the open ticket menu the user can wait for feedback from the IT technician on the ticket page menu. There is also a popular problem menu where users can find solutions to the problems they face without needing to ask an IT technician.

IT technicians before IT technicians give or solve problems faced by users, IT technicians are required to log in after logging in. IT technicians will check incoming tickets after checking in tickets. IT technicians will solve problems reported by users
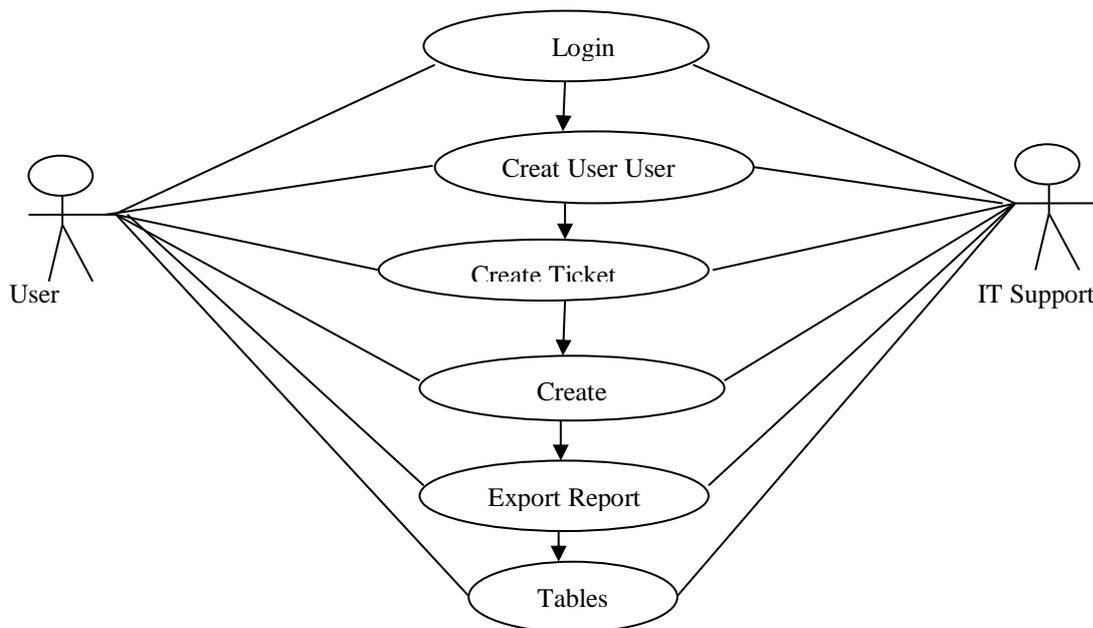
Figure 1 Use Case Diagram

The proposed system activity diagram starts from the user login then the user opens the ticket menu then the user fills in the report form, after that the IT technician will check the incoming ticket and provide a solution to the problem, if the solution given by the IT technician solves the user problem then the ticket will be saved, if the solution does not solve the user's problem then the IT technician will again provide another solution until the

problem is solved. After the ticket is stored in the database then the website will display the most or most popular questions and answers on the website main page solution menu.
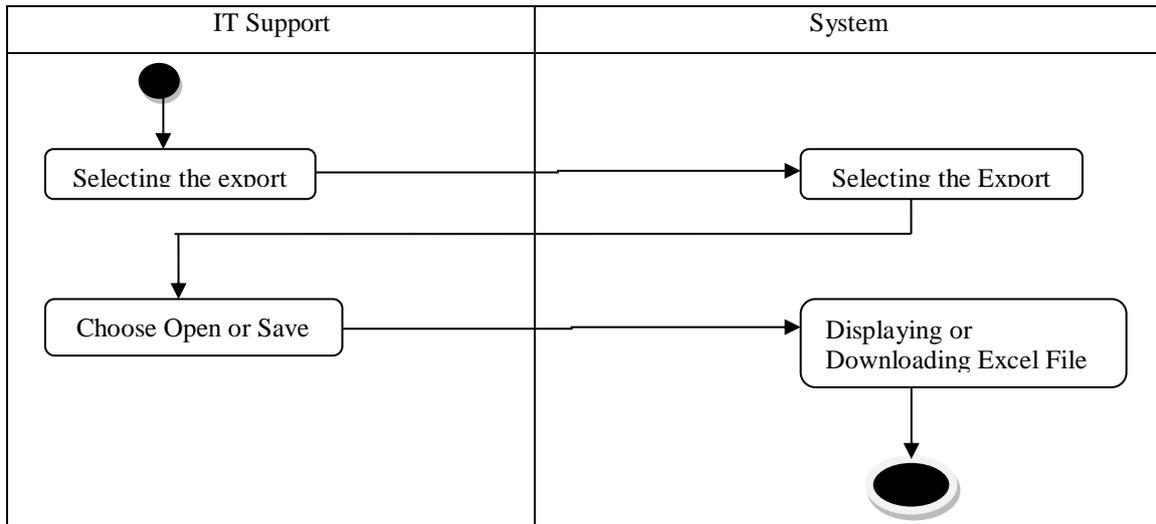
Figure 2. Activity Diagram Report
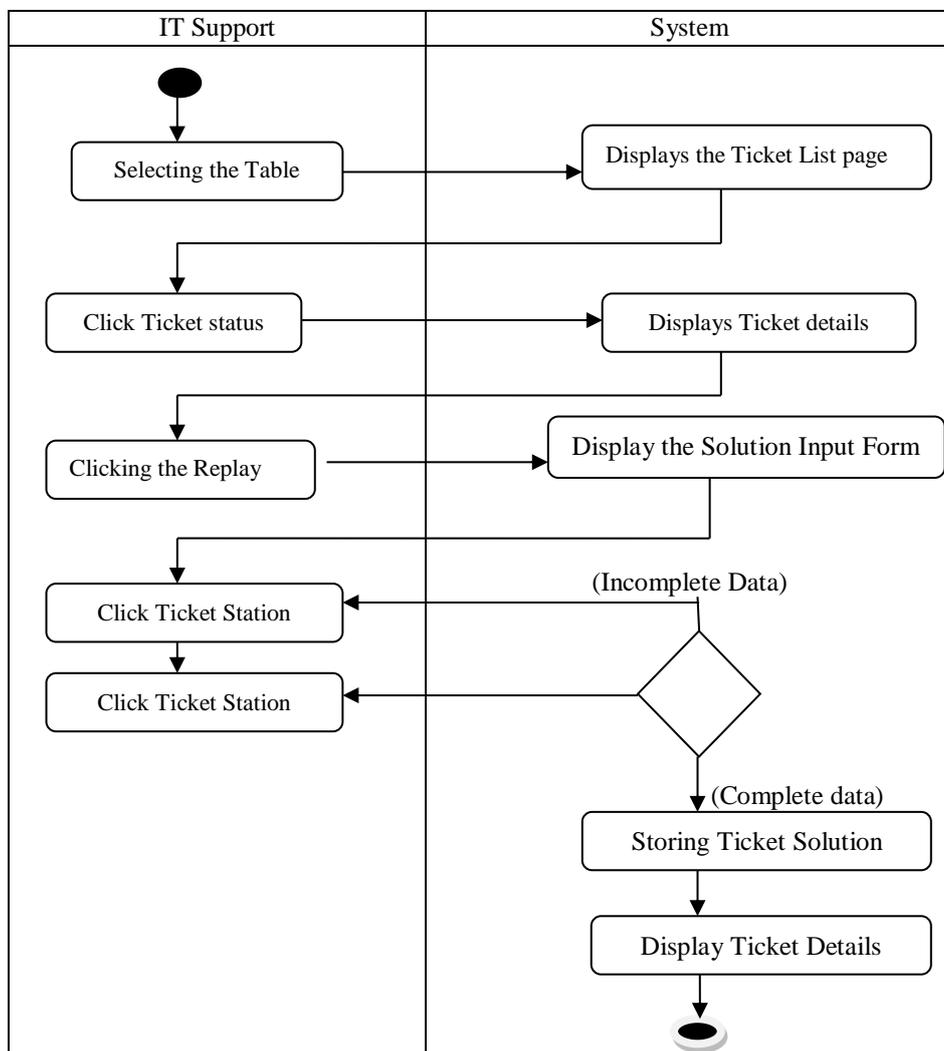
Figure 3 Activity Solution Input Diagram
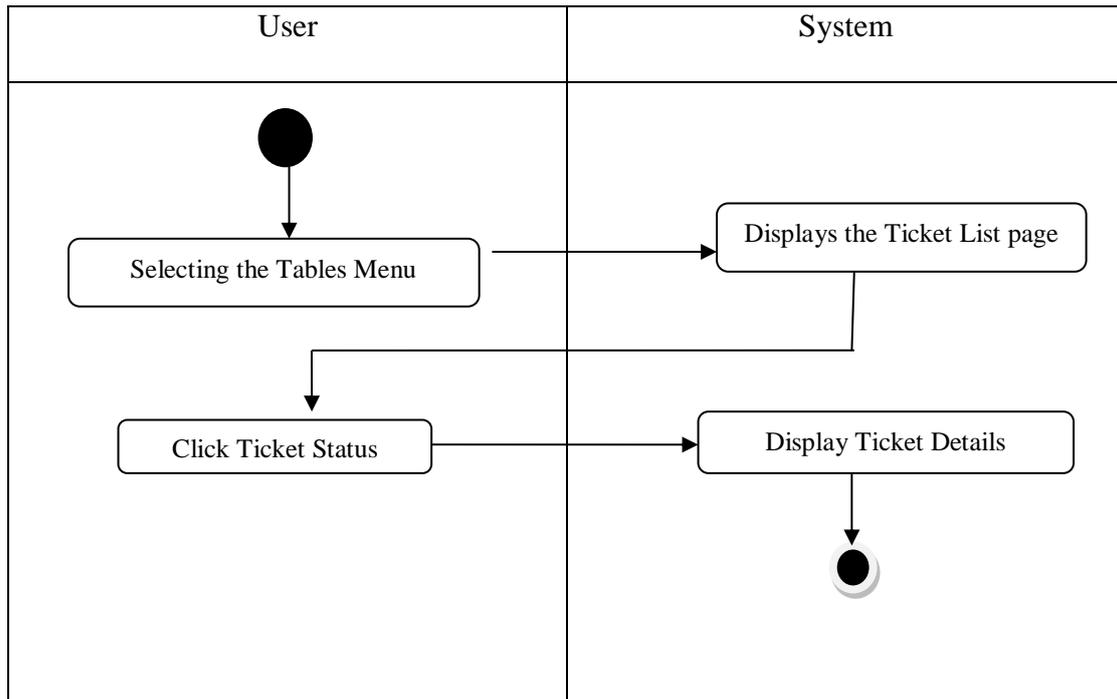
Figure 4. Activity Ticket Diagram
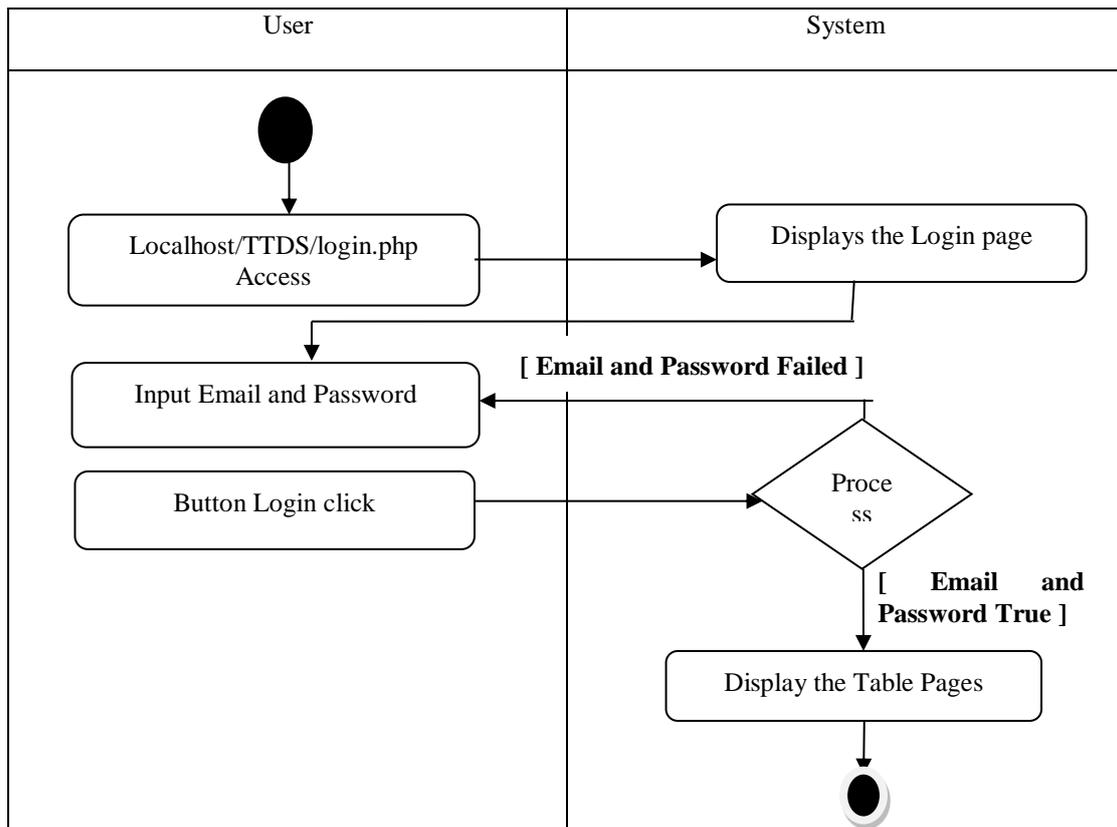
Figure 5 User Login Diagram Activity
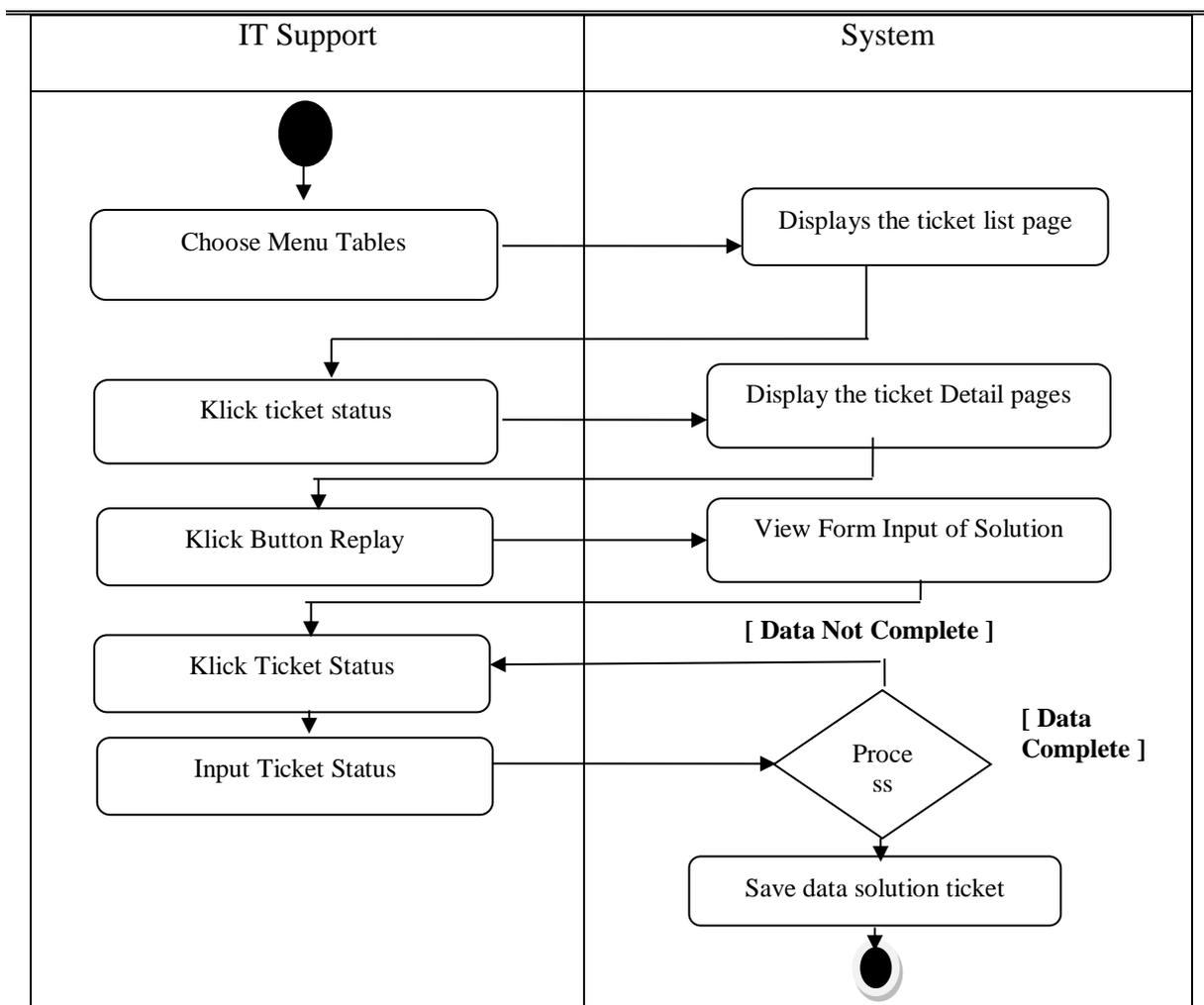
Figure 6 Activity Diagram Create Account

Before the compliance user starts creating tickets or the IT support user provides the feedback ticket that he is working on, all users must have an account in this application, where the one who can create an account is the head of the IT Support user with the conditions and steps that I will explain. User compliance or IT support must register by completing the requirements according to the applicable SOP, after the requirements have been met, the IT support head performs the data input process for potential users on the system by selecting the created account menu, a new page will appear that shows a list of existing user data. Once registered, on that page there is also a form that must be filled in to register a prospective user on the system, complete the form fields correctly according to the document provided by the user by the existing SOP provisions, after inputting the next process is validation, validation. from the user by making sure the data entered is correct or data validation from the system side, where the system will see the data inputted is by the data type and the applicable provisions after the IT support user presses the save button, if the data is not yet then the system will notify the part which of the tariffs in the form are still not by those in ha fixed by the system, so that it can be repaired immediately by the IT support user so that it can be saved and good on the system, after the input process is completed by the IT support user, the user who has been registered can independently access the system with the username and password that has been provided by the head of IT Support
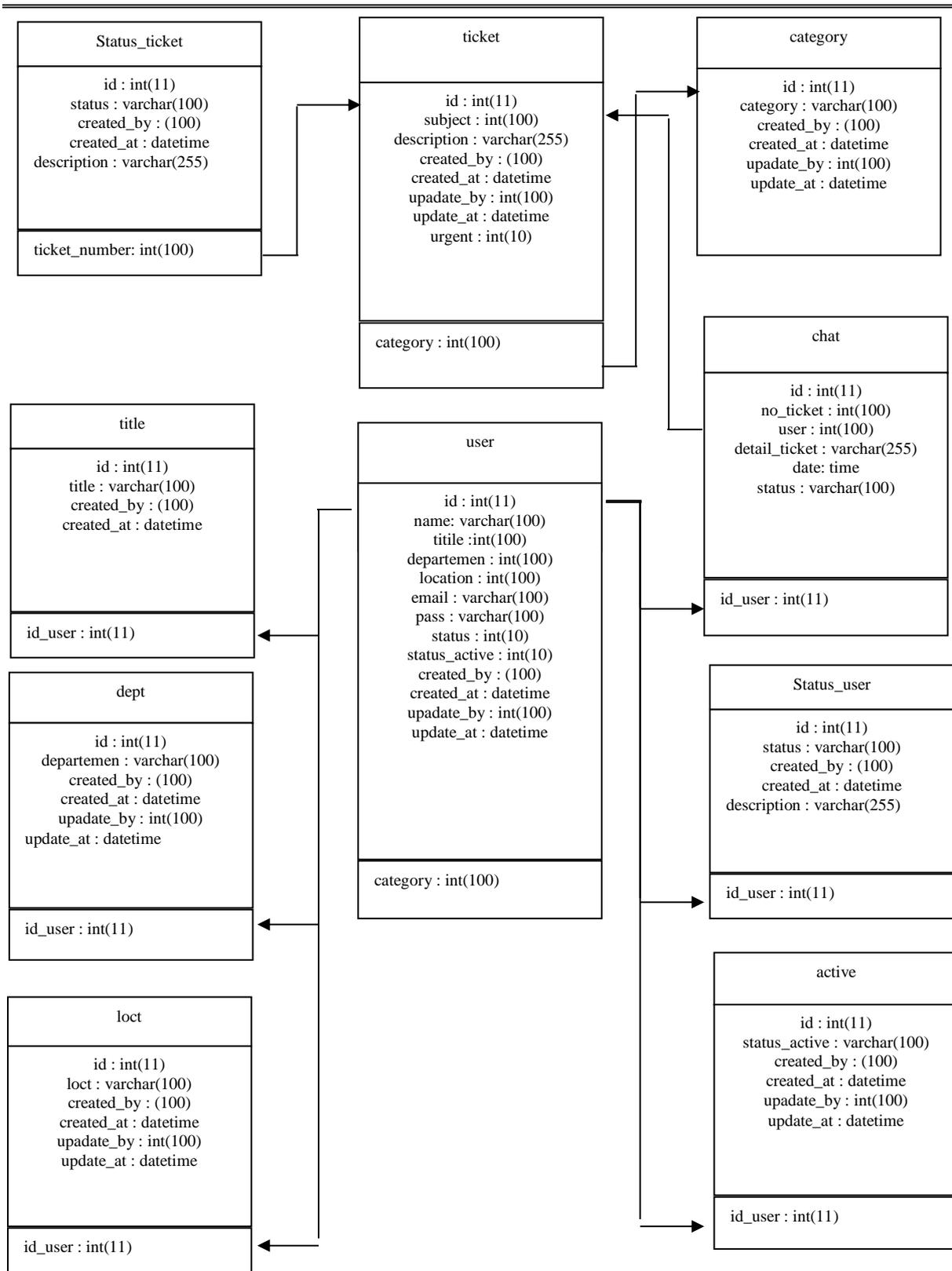
Figure 7 Class Diagram Trouble Ticket Desktop Support Application
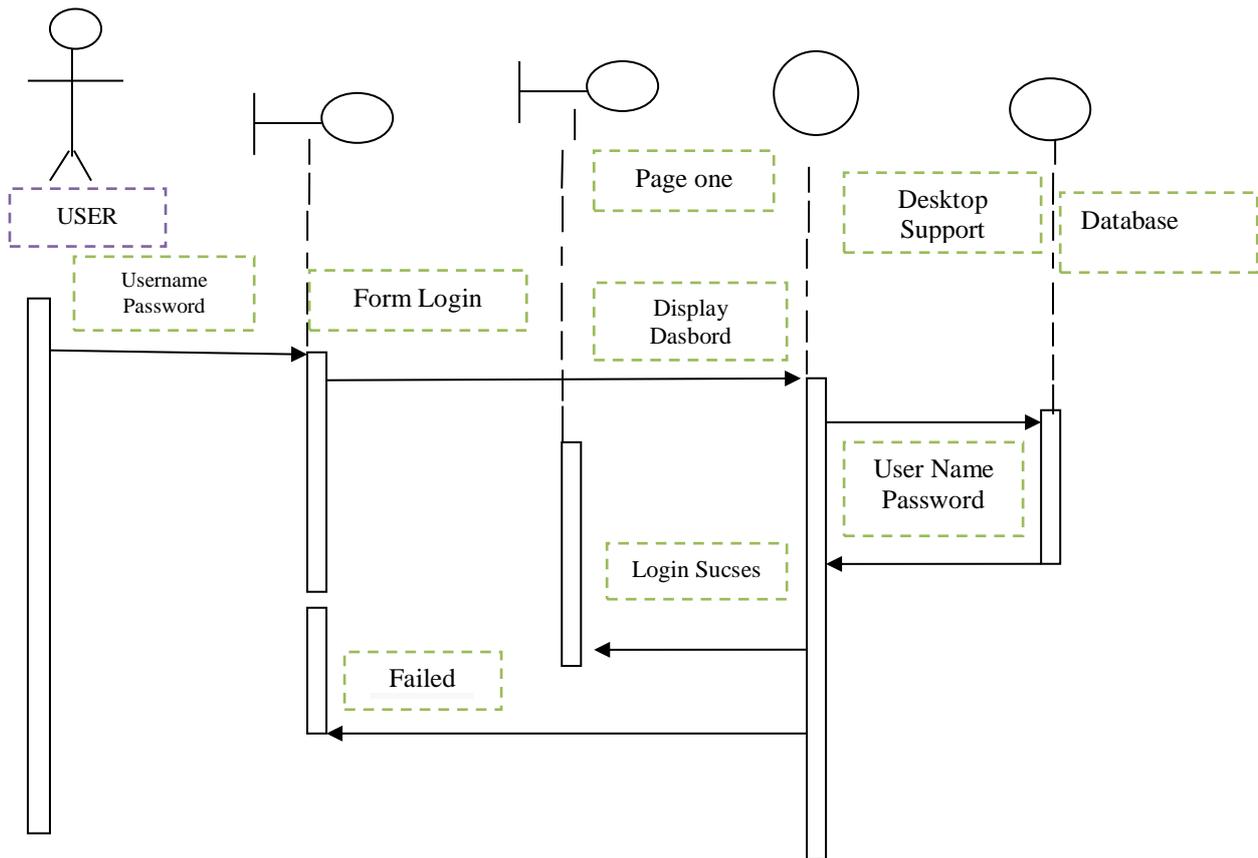
Figure 8 Sequence Diagram User Login

The login activity starts by filling in the username and password then IT Desktop Support will verify that the username and password match the database, if appropriate then the login is successful and displays the main page of the IT Desktop Support application, if it fails then IT Desktop Support will ask to refill the username and password
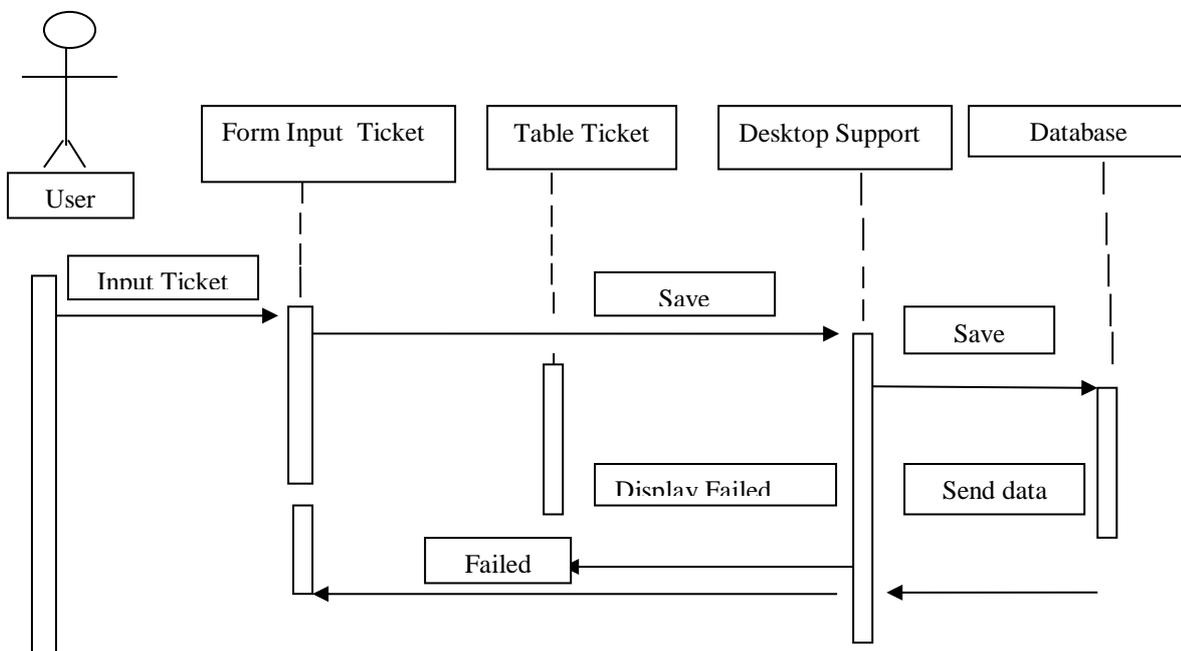
Figure 9. Ticket Input Sequence Diagram

The user opens a new ticket by inputting the ticket data, after that Desktop Support will store the ticket in the database, if successful the user ticket will be displayed on the ticket list menu if it fails then Desktop Support will ask the user to refill the ticket form.
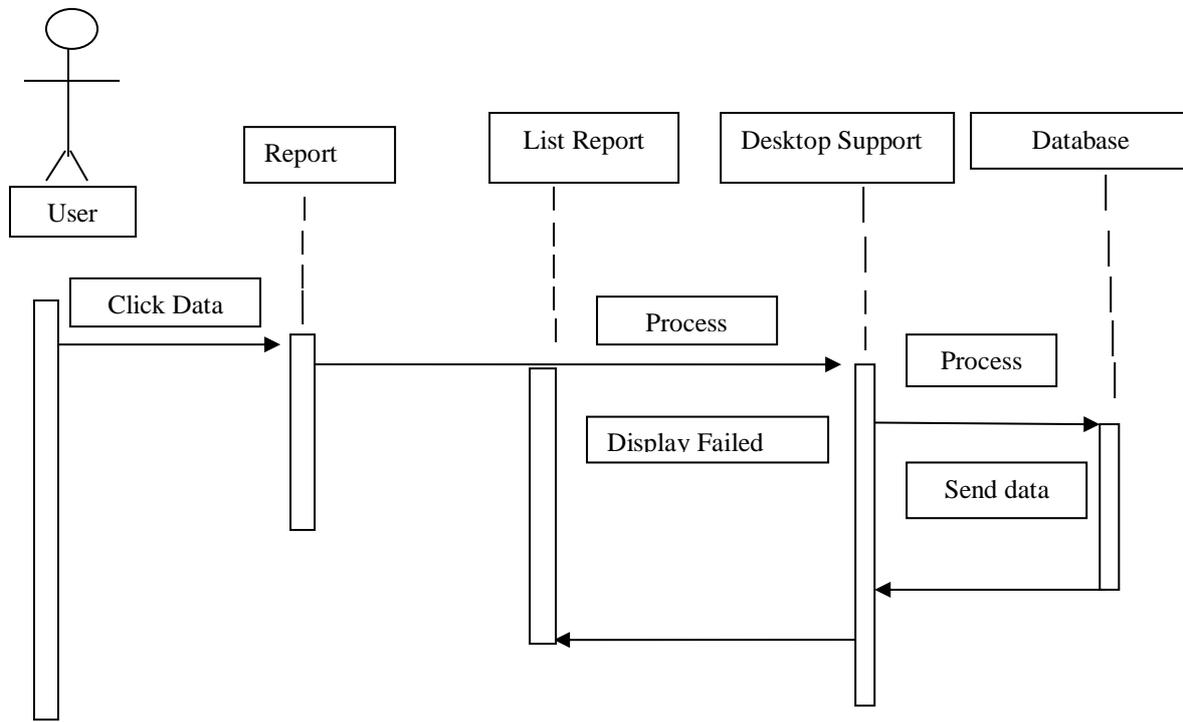
Figure 10. Report Sequence Diagram

Admin opens the report then Desktop Support will process the report in the database, then the report is displayed in the report list menu. In the Report Sequence

Diagram process begins with the user selecting the report menu in the program, after selecting the next page will come out, namely the list page of the report that will be taken and processed by the admin in the existing system, then the user selects the print button on the data report.

The results will be displayed, the system will display a preview of the data, the report has been selected by the admin before the print results are presented as decision-making materials by the head of IT support, then the results issued in this report must be re-validated, if not, please verify again the data is given to compliance users and IT Support users, but if they are sure they are correct, then press the print button

With this reporting menu, compliance and IT support users can see the status of the ticket they make so that with the problems in the form problem solving can be done, users can easily track the results of the solutions carried out by the technician / IT support team on the problems at hand. report and how long it took the IT support team to work on the problem, and can also see the results of communication between compliance users and IT support users so that it can be used as steps that must be taken either Long-term or short-term steps so that things that need special handling can be detected and inaction from the start before increasing the problem at a later date.

With this reporting menu, we can also validate the SLA immediately required from each IT compliance to solve user compliance so that we can have SLA standards for each category of problems that arise in the company
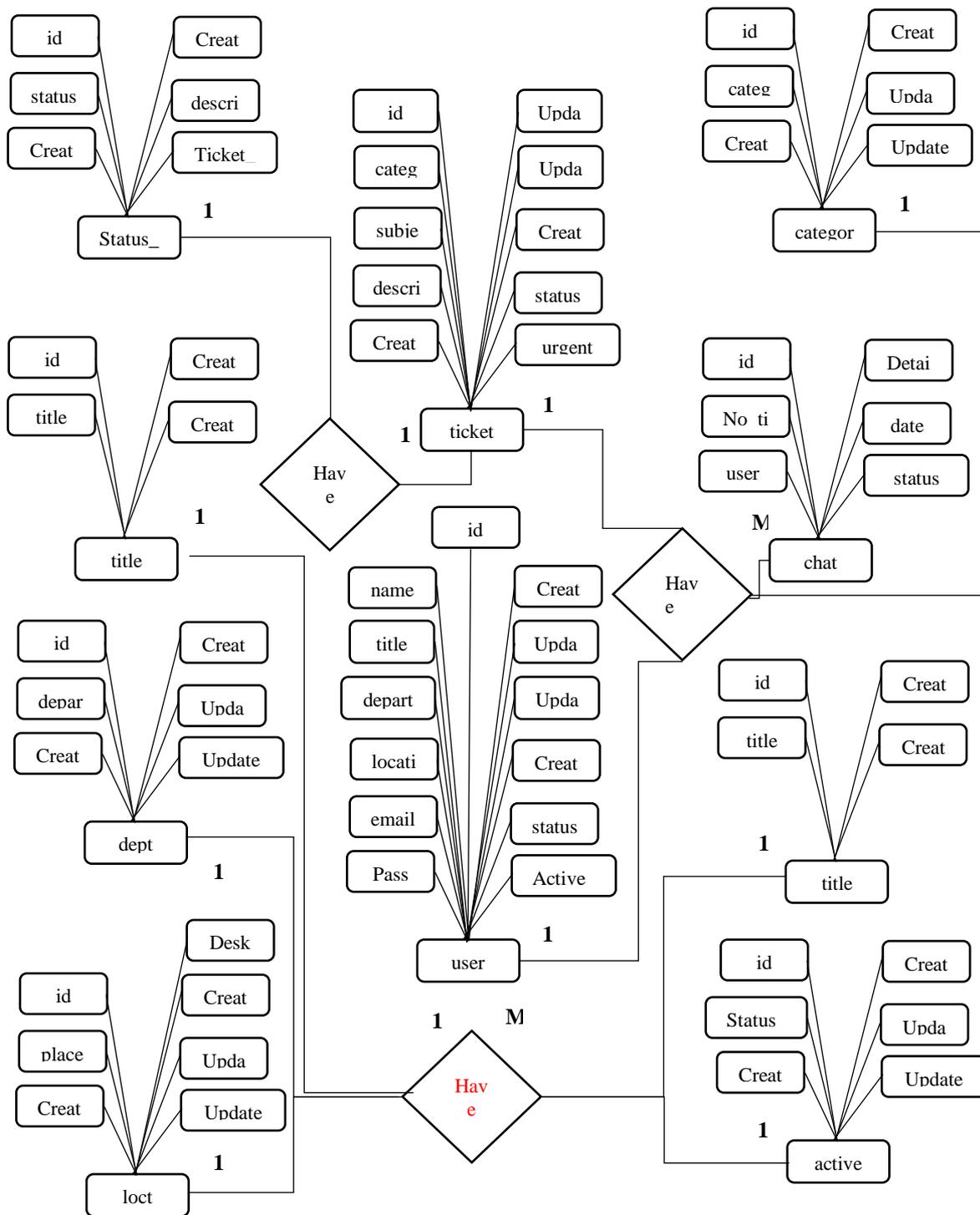
Figure 11. ERD

A. User Interface Page
TTDS application users, users, and IT Support are required to login first.
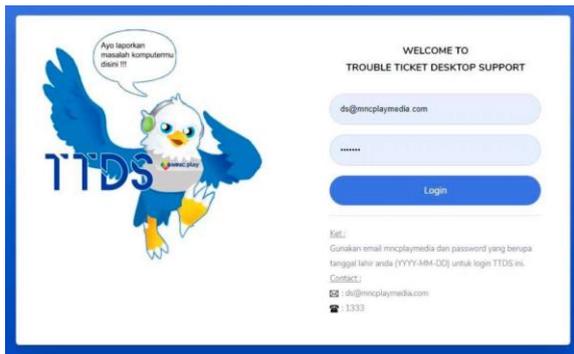
Figure 12 User Interface Page
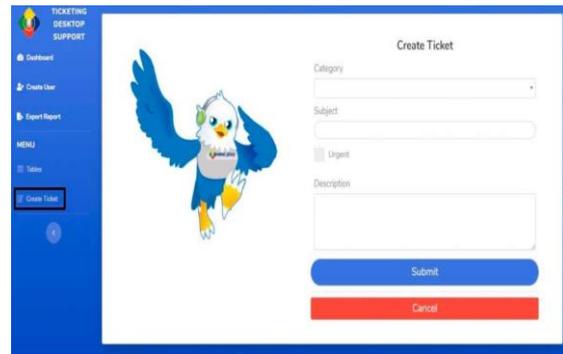
Figure 13 User Home page

This display is the start page, the user has 2 menus on the page.

B. Create Ticket page
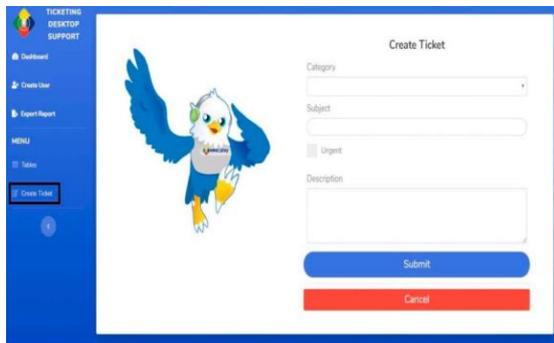
Figure 14 Create Ticket page
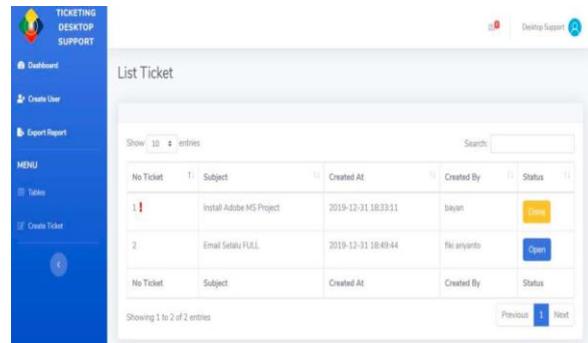
Figure 15: Dashboard page

This display is the user who wants to make a trouble report, Select the Create ticket menu to make a No Ticket (report number) on the home page. Then fill out the form provided according to complaints experienced after being filled, click submit

The display below is a ticket detail made by the user, as the admin can respond by clicking Reply, if the response status has been given, it will change to On Progress which means the problem is being handled by the IT Support team.

Input Design Specifications

The input form is a design to provide an overview of what data will be input (Input) to produce the desired output (output). In making this program design the input process is as follows:
Form Name : Ticket Form
Function : As Proof of Submitting a Ticket
Source : User
Purpose : Submitting a ticket/customer
Frequency : Every time there is a submission

Output Design Specifications

The output form of this program design is all forms of output documents produced from the processing of input data, which can be in the form of reports on paper. The form of output documents (Output) as follows:
Output name : Process Ticket
Function : to find out the ticket status
Source : Engineering.
Purpose : monitor the ticket processing
Media : Web HTML
Frequency : at any time

CONCLUSION

Based on the design of the TTDS application, many conclusions were obtained, namely that TTDS can help IT Support to monitor reports, users can be noted and should not be missed. The TTDS application helps IT Support in providing solutions from user reports. The TTDS application can make it easier for users to make reports, users no longer need to meet directly with technicians to make reports in the field, with the TTDS application it is expected to help users solve these problems without the need to create new and old tickets, efficiently.

REFERENCES

A.Solichin, *Pemrograman Web dengan PHP dan MySQL*. Jakarta: Budi Luhur, 2016.

A. W. W. & D. Kurnianingtyas, *Sistem Basis Data*. 2017.

Andriansyah F,Suryani N,Anggraeni S, 2018, Analisa Kepuasan Pengguna Terhadap Kualitas Aplikasi Ticket Monitoring PT. Infrastruktur Telekomunikasi Dengan Metode Webqual", Jurnal Ilmu Pengetahuan Dan Teknologi Komputer Vol.4, No. 1 Agustus 2018 E-ISSN: 2527-4864, Karawang

B.Haqi, *Aplikasi SPK Pemilihan Dosen Terbaik Metode Simple Additive Weighting (SAW) dengan Java*. Yogyakarta: Deepublish, 2019.

Ernatita, 2016, Analisa dan Perancangan Sistem Informasi Perpustakaan,Jurnal Sistem Informasi (JSI), Vol.8, No.1, April 2016, ISSN Print: 2085-1588 ISSN Online : 2355-4614,

Indrajani, 2015, Database Design, Jakarta : PTElexMediaKomputindo

Kikin Sakinah Nur Safira dan Novita Puspasari, Salemba Empat, Jakarta

Kotler Philip, Amstrong Gary, 2013, Prinsip-Prinsip Pemasaran, Edisi ke-12, Penerbit Erlangga

Nurwati,Diana A, 2012, Rancangan Aplikasi Untuk Helpdesk Untuk Layanan Mahasiswa FTI Universitas Budi Luhur,Jurnal Sistem Informasi (JSI) BIT Vol 9,No.2 September 2012 ISSN : 1693- 9166, Jakarta,

Qoyyimah, 2011, "Rancang Bangun Helpdesk Ticketing System Studi Kasus:PT.Primus Indojaya", Jakarta

Romney, Marshall B. dan Steinbart, (2015), Sistem Informasi Akuntansi, Edisi 13, Alihbahasa

Rosa, A. S. (2013). *Rekayasa Perangkat Lunak*. Bandung: Informatika.

Satzinger J.W., Jackson R.B. & Burd S.D. 2012. System Analysis and Design in a Changing World Seventh Edition. Cengage Learning. ISBN 978-1-305-11720-4.

Vardiansyah, Dani. Filsafat Ilmu Komunikasi: Suatu Pengantar, Indeks, Jakarta 2008.Hal 3

Y. S. Kusno Harianto, Heny Pratiwi, *sistem Monitoring Lulusan Perguruan Tinggi Dalam Memasuki Dunia Kerja Menggunakan TRACER STUDY*. Surabaya: Media Sahabat Cendekia, 2019.

M. N. Abdiansyah, *Manajemen Hosting Berbasis WHM/cPnael*. Excellent Publishing, 2018.