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Design and Build Termin Information System at PT Delta Sinergi Prima to Optimize Term Management Using the Method Software Development Life cycle

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ABSTRACT
The information system brings together various data from every business process carried out by the organization, processes and presents it in the form of reports which can later be used as the basis for decision making and even strategic planning in an organization. PT Delta Sinergi Prima is a service organization engaged in the field ofconsulting. In assisting its business processes, PT Delta Sinergi Prima has several information systems that have been utilized. However, there are problems in managing the terms of each project carried out by the organization. As a result, term management cannot run optimally for the organization. For this reason, it is necessary to have a system that can optimize term management in the organization. The term information system is a system that facilitates the management of terms for PT Delta Sinergi Prima. This system can manage term data and present it in the form of a report that is equipped with milestones to show the progress of term payments. The development of the system itself is developed by the method of Software Development Life Cycle so that system development can be carried out properly. It is hoped that with the term information system built, term management can be carried out more optimally.

Keywords: *Information system, Term, SLDC, Milestone.*

1. INTRODUCTION

Information systems unite various data from every business process carried out by the organization, process and present it in the form of reports which can later be used as a reference for decision making and organizational strategy design [1]. Referring to this statement, it is important to have the right cooperation between humans and the system to be able to achieve certain goals. Where, information systems have a significant role in supporting business processes and services of an organization. With the information system, a business process or service can be run more effectively and efficiently. With more effective and efficient performance, the organization will be easier to achieve its goals.

Law No. 8/1997 on company documents has also explained that every company must create and keep every type of document to ensure legal certainty and protect the interests of the parties in legal relations. From this we can conclude that it is important for organizations to manage their archives because archives are a very important asset in supporting management activities, especially in company administration where document archives are a source of information about all company activities. So it is important to ensure that document archives are stored and managed properly.

Departing from the above background, it is necessary to design a billing archive information system (Termin) at PT Delta Sinergi Prima in order to optimize access to information while managing and protecting information assets in this case is the invoice archive of PT Delta Sinergi Prima. In this study, I will use the SLDC method to develop a billing archive information system at PT Delta Sinergi Prima. The information system will be created using PHP, a web server using XAMPP and using MySQL as database management. It is hoped that with this Term information system, PT Delta Sinergi Prima can access termin information optimally, manage and

protect term information more effectively and efficiently so that business processes and services can be run better.

2. METHODS

The method will describe how the term information system is developed according to the needs of the organization.

2.1. Software Development Life Cycle

Software Development Life Cycle or SLDC is a framework that is usually used to build a system or application from initial analysis to system maintenance later. SLDC itself has several main stages of system development. As can be seen from the image below:

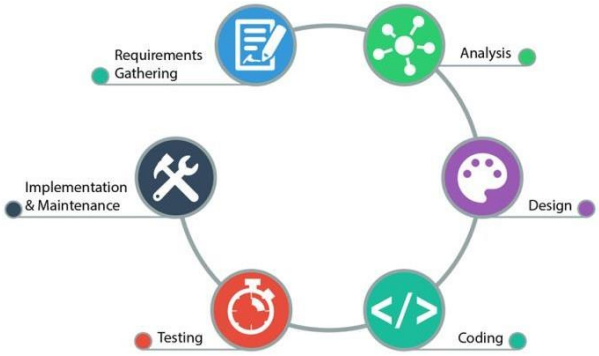

Figure 1 SDLC.
Source: Google.com

Seen from the picture above. That is ,System Development Life Cycle has 6 main phases of system or application development.

2.1.1. Requirements Gathering

Requirements Gathering required for improvements before launching system. Stages collect whatever needs that must be contained in the system according to the problems that have been found. A system must have cope according to user needs and relate with the problem to be solved. At this stage, analysis of system requirements and analysis of problems that occur at PT Delta Sinergi Prima is carried out. The problems found are problems regarding term management which is still done manually and the availability of information is not real time because it is still done with manual bookkeeping. Furthermore, it will be determined who will need access or management of this term information system later and whats cope contained in each access right.

2.1.2. Analysis

This stage serves to carry out the system planning phase about how to execute the system according to user needs. At this stage, it will also determine what methods will be applied in system development so that it can be done more effectively and efficiently. At the analysis stage, system planning is carried out according to the problems and user needs that have been found in the previous stage. The term information system of PT Delta Sinergi Prima will have 3 access rights, including admin, finance and leadership. With each role that has been distinguished according to their needs.

2.1.3. Design

At this stage, there are planned system design development activities. The development of the Termin Information System design at PT Delta Sinergi Prima was carried out by build Data Flow Diagrams level 0 to level 1. Furthermore, the system design will be realized by building a database and system interface in accordance with the planning which has been done.

2.1.4. Coding

Stage coding is the stage to build the system either on the frontend referring to the system interface design or the backend system which refers to the DFD that has been made and the database design that has been planned. The term information system is built based onwebsite in order to facilitate access to data from anywhere and at any time so that the availability of information and management of term information can also be carried out more optimally.

2.1.5. Testing

Stages testing is the stage of testing the system that has been built. At this stage, it focuses on detecting bugs or errors that may occur. In addition, there will appear several case which will be used as a reference f improvements before launching system. Stages or future system testing itself for the PT Delta Sinergi Prima term information system is carried out using the blackbox testing method which is carried out by the owner of direct access rights. The results are used as a reference for system improvement.

2.1.6. Implementation and Maintenance

Implementation and maintenance is the stage of launching and maintaining the system. After the term information system is built and has been tested by interested parties, the system is ready to be used by the company. The bugs that will occur in the future will enter the system maintenance phase.

2.2. Needs Analysis

The term information system of PT Delta Sinergi Prima is divided into 3 user needs according to their respective access rights. The access rights of each user include:

1. Admin
   a. Manage project or contract data

b. Manage partner or client data
c. Manage term data
d. Manage payment term data
e. Manage access rights data
f. Send bill or bill notification
g. Send invoice
h. Manage reports

2. Finance department
   a. Access data terminals or bills
   b. Approval of payment term data
3. Leader
   a. Project data access
   b. Access project progress data in the form of milestones
   c. Access term reports

2.3. Data Flow Diagrams

The following is a context diagram or level 0 DFD:

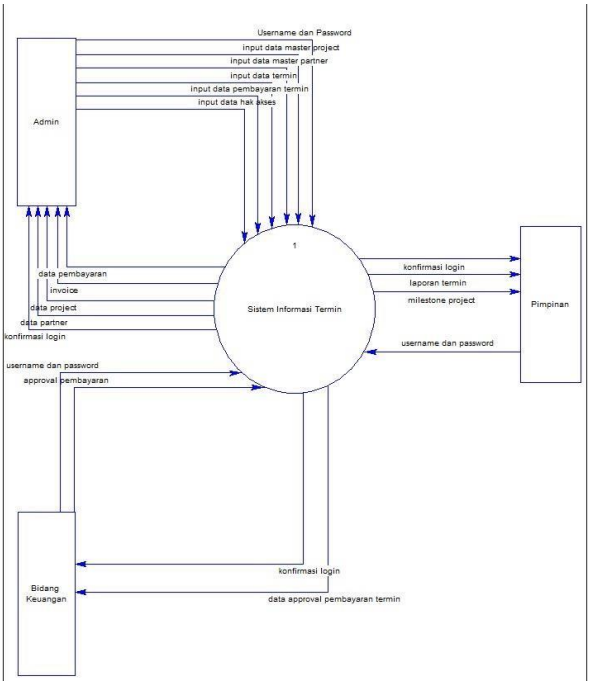

Figure 2 Context diagram.

In the DFD above, it can be seen what transactions are carried out by users into the PT Delta Sinergi Prima term information system in accordance with their respective access rights.

The Figure 3 is a DFD level 1 information system termin PT Delta Sinergi Prima.

At DFD level 1 above, it can be seen what activities the user does in each process flow. This section is the result of a breakdown of the DFD level 0 or the previous context diagram.

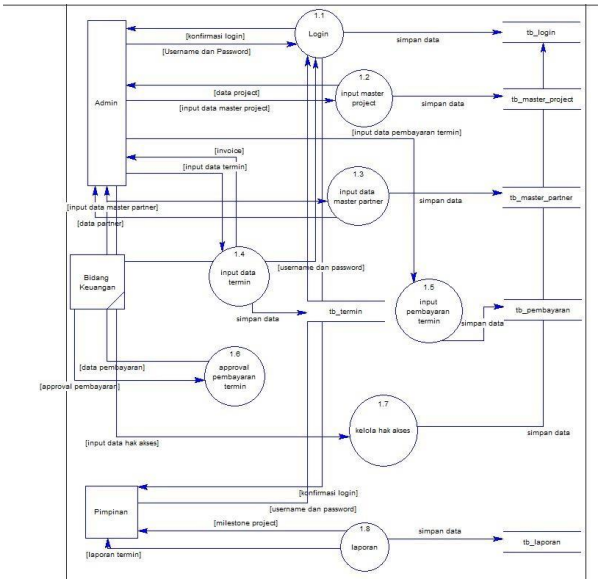

Figure 3 DFD level 1.

2.4. Type of Terms

Table 1 Type of termination.

No.	Terms		
	Type term	Term Description	Total Term
1	Package Term 1	Package term 1 is a package term with value projects > RP.100,000,000,.	4 times term with magnitude in accordance with the listed on contract
2	Package term 2	Package term 1 is a package term with value projects < RP.100,000,000,.	5 times Term with payment in accordance with the listed on contract
3	Package Term 3	Package term 3 is a package special terms that usually there agreement clause addition between client with PM about quantity projects and benefits project for PT Delta Prime Synergy	At least there is3 times term with magnitude in accordance deal which has been made

3. RESULTS AND DISCUSSION

PT Delta Sinergi Prima Termin Information System is a term management information system based on website which was built using the method System development Life Cycle which is expected to help

optimize the arrangement or term management at the PT Delta Sinergi Prima company so that business processes and decision making can later be carried out more quickly and precisely.

3.1. Login page

The login page is the first door of the system where user must enter login data in the form of username and password which valid. The access rights are divided into 3, namely admin, finance, and leadership, respectively role according to their respective needs and responsibilities.

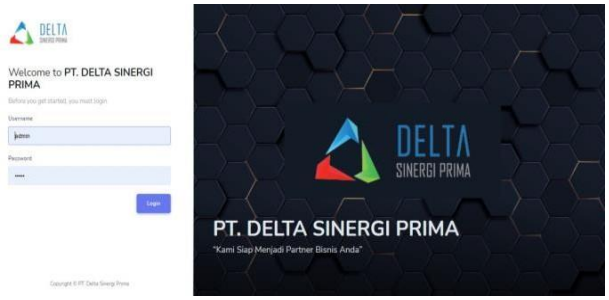

Figure 4 Login page.

3.2. Dashboard Page

The dashboard displays menus according to their respective access rights. Where on each menu there are transactions that must be fulfilled by the owner of access rights in accordance with their obligations and obligations role each access right.

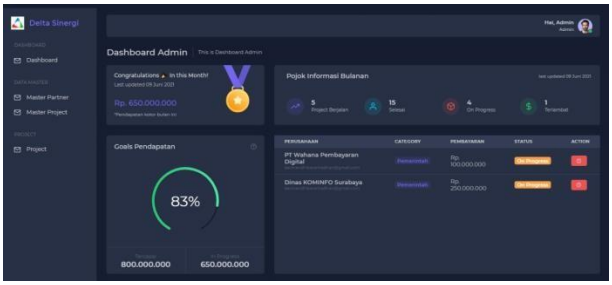

Figure 5 Dashboard page.

3.3. Master Partner

On the partner master page, the admin is responsible for managing partner data by entering data on the partner master page and filling in partner data according to the fields provided. The picture above is part of the master partner where the company's partners have managed by the previous admin and partner details can be seen as in the Figure 6.

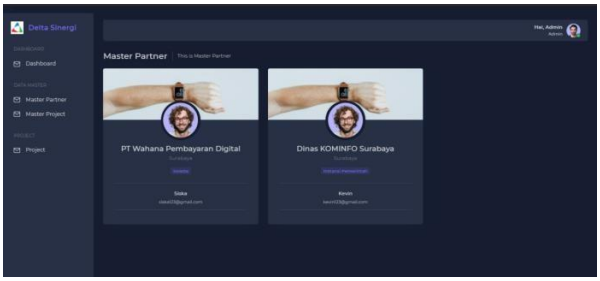

Figure 6 Master partner.

3.4. Master Project

The project master page serves to enter project data handled by the company. Admin responsible for managing project data by entering it into the system to be recorded and processed into project information which can later be used as a reference for making the final report.

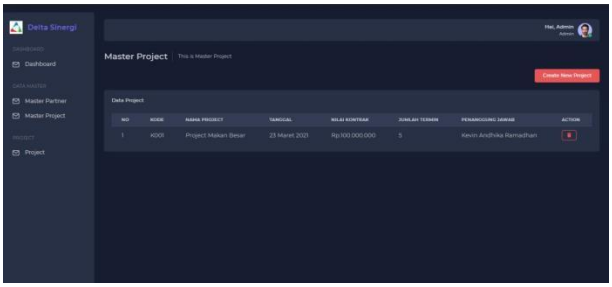

Figure 7 Master project.

3.5. Project Data

This page contains detailed project data that has been inputted by the previous admin. So that the admin can control which data has entered the system and check project data details correctly.

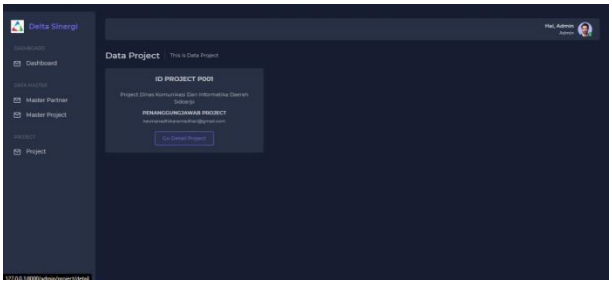

Figure 8 Data project.

3.6. Invoice

The invoice page is a page that contains a billing sheet that can be printed by the admin for later admin sent to the client when the term has fallen tempo. The amount of the invoice and the due date have previously been processed by the system according to the project input data and the term by the admin.

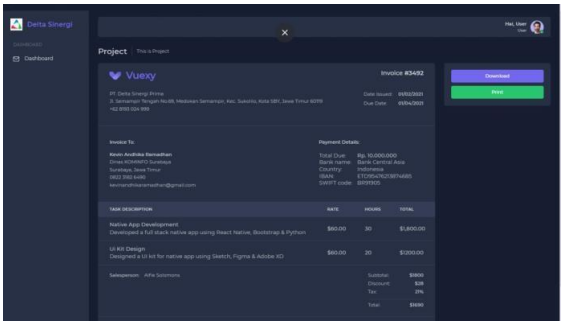

Figure 9 Invoice.

3.7. Payment Approval

The payment approval page is entered into the role of the financial sector. The finance sector has the responsibility to check and verify the payments made by the client. The finance department only needs to login and access the payment approval menu, a number of payment data will appear that need to be approved and the finance department only needs to check payment details and proof of payment and can take action to approve or reject payment data if it is deemed invalid.

Figure 10 Payment approval.

3.8. Termin Progress Data

Term progress data is data that contains progress term information from each client. This page contains information on the terms of each client to make it easier for the company to monitor the finances and data of the terms of each client.

Figure 11 Data progress termin.

3.9. Project Detail Report

This page appears on the leadership role where the leader can find out information about the extent to which the term has been paid and can also be used as a financial reference for the company which can later be used as the basis for making decisions and designing future corporate strategies.

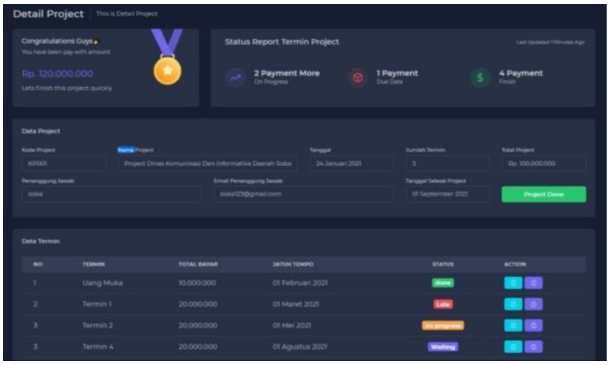

Figure 12 Term detail report.

3.10. Milestone Report

This page contains the final report of the payment terms from each client where every detail is described using milestones and is equipped with detailed data beside it which makes it easier for the leadership to check and control the management of the terms of this term information system.

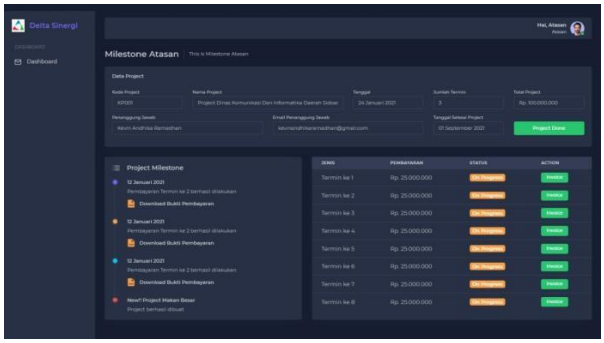

Figure 13 Milestone report.

4. CONCLUSION

PT Delta Sinergi Prima is a company engaged in the field of consulting where in carrying out every business process has been assisted by the existence of a system or application. However, the term management is still carried out with semi-system transactions in the sense that the bookkeeping is carried out with the help of Microsoft Office. This is certainly less effective and efficient because the management of term data is completed within a certain time span and access to information cannot be done in real time, of course this is considered less than optimal for the company.

For this reason, a term information system was created, namely a website-based information system that is used to assist companies in conducting term management and term report management so that it is expected to support the company's business processes so

that they can be carried out more optimally. This information system facilitates term management from project management, partners, term calculation, payment terms, to term reports as a reference for decision making. The information system was developed using the method System Development Life Cycle starting from requirements gathering, planning and analysis, system design, coding, testing, and implementation and maintenance.

This system is still very simple, has a scope with a limited scope of term management. It is hoped that this system can continue to be developed with more scope and can solve more company problems. There should be improvements such as the integration of the term information system with the company's financial information system so that financial management in the company can be managed more effectively and efficiently.

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