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ANALYSIS AND DESIGN OF INFORMATION SYSTEM SALES REPORT PT. AKSES KOMUNIKASI INDONESIA WEB-BASED

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Abstract

The purpose of making this thesis is to provide solutions to the problems of PT. Access Komunikasi Indonesia for control and ensure product marketing activities can run according to the target and able to provide reports in real time as well as make it easier for employees to access them. The data collection method used to obtain user needs is the method of observation, interviews and literature study. The technology that we use for building this website is Laravel framework, Angular JS, and Database using MySQL. The development method used is SDLC Model. The conclusion of this thesis is that the existence of a web-based sales report system is expected to help PT. Akses Komunikasi Indonesia for getting product marketing reporting results easily, quickly, and accurately.

Keywords: task management, monitoring system

Introduction

An information system is an organized combination of people, hardware, software, or databases that collects, converts, and disseminates information in an organizational form. Each information system is thought out and built to meet a need (O'Brien, J. A., & Marakas, 2011). In building the information system, a System Development Life Cycle (SDLC) method is needed with several phases starting from the planning stage, system requirements analysis, design, implementation, and system support or maintenance (Satzinger, J., Jackson, R., & Burd, 2015).

To simplify and speed up the development of this website, a framework is needed which is a collection of code in the form of libraries and tools that are combined in such a way as to become a single framework (Raharjo, 2018). The type of framework used for this website development is Laravel which has been designed to improve software quality by reducing initial development costs and advanced maintenance costs also improving the working experience by providing a clear expressive syntax and a set of key functionalities that will save you hours of implementation time (McCool, 2012).

In addition, the AngularJS framework is also used to express user-generated application components clearly and concisely. AngularJS data binding and AngularJS dependency injection can simplify the coding process. And all of these processes happen in the browser, so AngularJS makes an ideal partner with server technologies (Green &

Seshadri, 2013). The application of the MVC concept to a web-based system is expected to produce a more structured website by separating the data (model), view, and how to process it (controller) (Cui, Huang, Liang, & Li, 2009).

Based on the existing situation, we innovate to provide ideas for creating a website-based sales report information system. So that later it can make it easier for marketing units to share and report daily targets in real time.

The remainder of this paper is structured as follows: Section 2 describes the structural design. Section 3 shows the sales portal website. Section 4 presents a test solution. Section 5 draws conclusions and suggestions for future study research.

The structural design of sales portal website

A. The system design of sales portal website

We will use an usecase diagrams to illustrate the website design. The use case diagram presents the interaction between the use case and the actor. Where actors can be people, equipment or other systems that interact with the system being built. Use cases describe the functionality of the system or the requirements that the system must meet from the perspective of (Setiawan & Khairuzzaman, 2017). There are 4 actor on the diagrams, which have their respective activities in the system. The Usecase diagram of sales portal website is shown in Figure 1.

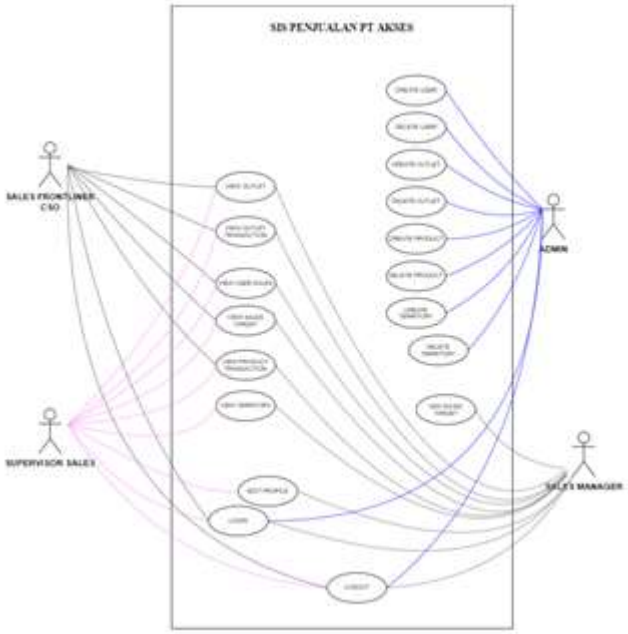

Figure 1. Usecase Diagram of Sales Portal Website

There are four actors on the diagram (sales frontliner CSO, supervisor sales, admin, sales manager). Sales frontliner CSO has main access for view outlet, view outlet transaction, view user sales, view sales target. this can make it easier for sales to see their respective targets and also report sales results.

The results of the sales report will be monitored by the supervisor and manager, therefore supervisors and managers have the same access to monitor the whole which can also be accessed by sales. the only difference is that the manager can add a sales target, which means the manager will share the target for sales.

The admin team will be able to do everything, from creating, viewing, updating, and deleting data. This can greatly support sales work in reporting sales results, the features that can be accessed by the admin are: create user, delete user, create outlet, delete outlet, create product, delete product, create territory, and delete territory.

B. The database design of sales portal website

Entity Relationship Diagram will use to illustrate the website database design, indicating that information is created, stored, and used by business systems. An analyst can read the ERD to discover each piece of information in a system and how they are organized and related to each other (Dennis, Wixom, & Roth, 2008). There are 26 tables used in the design of data storage from this sales portal website.

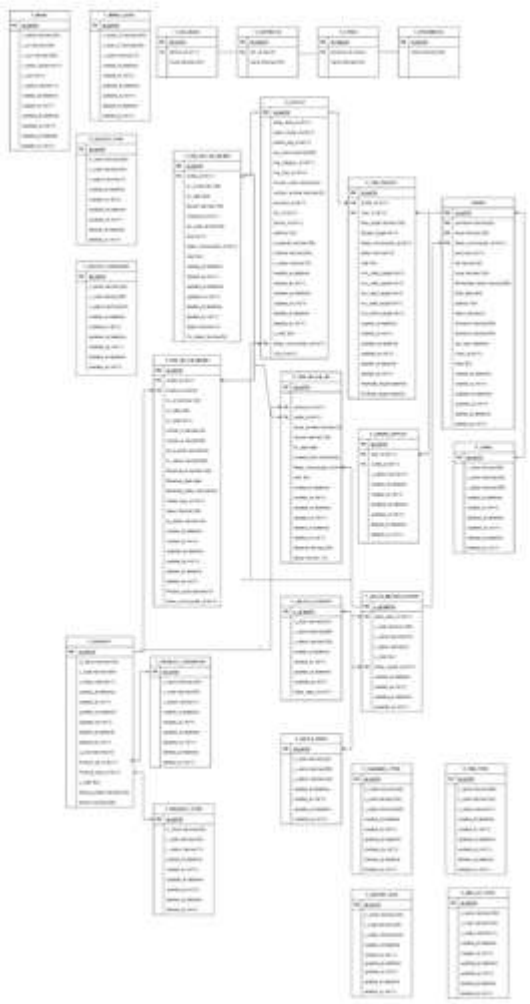

Figure 2. Entity Relationship Diagram of Sales Portal Website

Consists of 16 tables that have a relationship, and the rest are stand-alone tables. All the tables have a primary key but not every tables have a foreign key, which we know that Foreign Key is an attribute or a combination of attributes contained in a table that is used to create a relationship between two tables. So it can be concluded that a table that does not have a relation means does not have a foreign key.

The Display Of Sales Portal Website

In this section we will show the main page website of sales report PT. Akses Komunikasi Indonesia that was created use framework Laravel for the backend side and AngularJS for the frontend side.

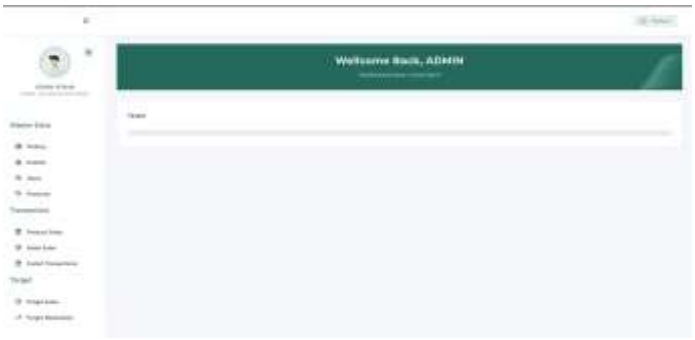

Figure 3. Dashboard Page of Sales Portal Website

There are 9 menu on the main page of the website, for the first is master data that has territory, outlets, users, and products menus. Second is transaction that has product sales, saldo sales, and outlet transactions menus. The last one is target that has target sales and target realization menus.

All of the menu will help users to more simplify for reporting, view the target, also updating the data. We will describe each of the menu to more specific.

C. Territory Menu

This menu included in master data because the data of territory will provide in this menu. Users who can access this is only admin, because admin able to add, update, and delete the territory data. For sales, supervisor, also manager is not able to access.

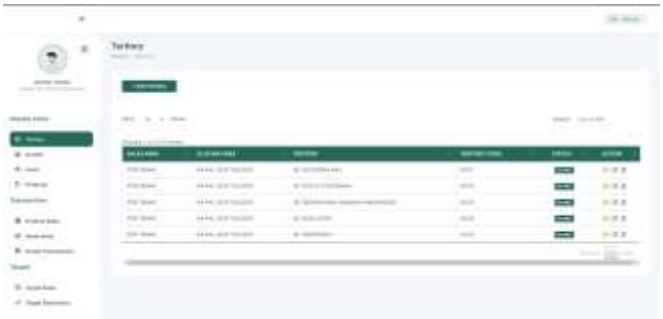

Figure. 4 Territory Menu

D. Outlets Menu

Same as before this menu included in master data and only admin who will be able to access. In this menu also has the same action buttons as before, the only difference is that the data in this menu is a data outlet.

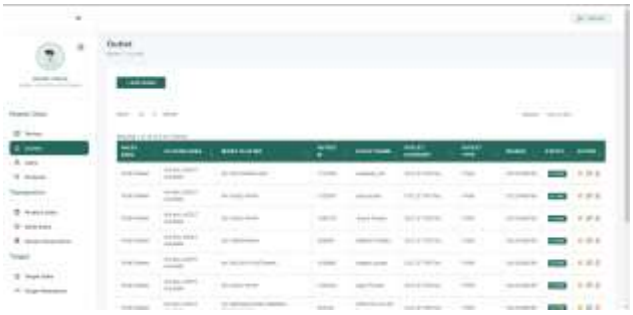

Figure 5. Outlets Menu

E. Products Menu

This menu is included in master data because provide data of products that can only access by admin. Action button add, update, and delete is able to used in this page.

Figure 6. Products Menu

F. Product Sales Menu

Users able to search product sales transactions and update also delete the data if want to do that. In addition, users can also bulk import product sales data by fill the template then upload it.

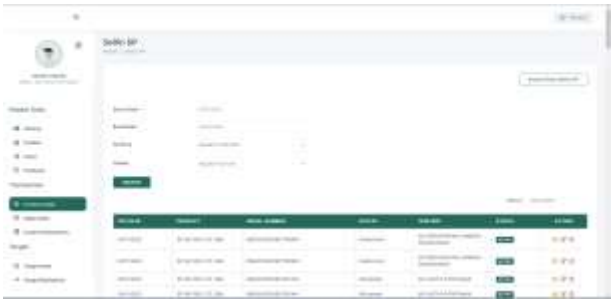

Figure 7. Product Sales Menu

G. Saldo Sales Menu

This menu is included in transactions because provide detail data of saldo sales transaction. Users who can be able to access this page is only admin. This menu to facilitate user to search saldo sales transactions, update, and delete the data. In addition, users can also add bulk import saldo sales data by fill the template.

Figure 8. Saldo Sales Menu

H. Outlet Transactions Menu

Same as before, in this menu has same action to search detail data of outlet transactions, update and delete. Other than that user who can be able to access this page also can add bulk data of outlet transaction by fill the template.

Figure 9. Outlet Transactions Menu

I. Target Sales Menu

This menu provide detail data of target sales, that included to target. Users who can access this page can search data of target sales also see the detail. Other than that, the data can be updated and deleted by the user. The last one is able to single add the data and bulk add the data of target sales.

Figure 10. Target Sales Menu

J. Target Realization Menu

The last one is target realization menu that provide the detail data of target realization. User only able to search and see the detail data. Because, the function of this page is only view result target of what sales have done.

Figure 11. Target Realization Menu

Testing Solution

To make sure this website is running well, we will testing functionality of the website. Before that, we know that testing is an important part of implementation and deployment activities, although the type of testing carried out is different for each core process. Testing is the process of testing a component, sub-system, or system to ascertain its operational characteristics and whether there are defects in the system (Sukamto, R. A., & Salahuddin, 2015).

For testing sales portal website, we will use black box method. Black box testing is testing design and program code. Testing is intended to determine whether the functions, inputs, and outputs of the software are in accordance with the required specifications.

Conclusion

Based on the results of the system development process starting from data collection and analysis, system design and application display, implementation, development, and evaluation, the following conclusions are obtained: 1). This website can make it easier for supervisors to make sales targets each month in real time. 2). This website can assist sales in adding detailed sales results reports in real-time. 3). This website can assist sales in viewing details of target distribution, updating sales status, and

deleting sales targets in real-time. 4). This website can assist supervisors in monitoring sales status and checking detailed reports from sales. 5). This website can help all users in knowing the sales performance graph of sales. 6). This website can help make it easier for admins to group sales areas in real-time. 7). This website can help admins in viewing and adding product details. 8). This website can assist admins in viewing transaction details, updating status and also deleting transactions in real-time

For future research based on the results of the analysis of the sales report information system, this system still has shortcomings and limitations. The following suggestions can be made for future research to continue the development of this research. Some of these suggestions include: 1). Develop a reminder feature to telegram field sales workers to be more aware of their targets. 2). Develop the photo upload feature as a supporting document for sales visitors. 3). Can be developed into a mobile application so that it can be accessed easily via employees' smartphones

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