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Web Usage Mining Analysis in "OLX Autos" Online Sales Applications

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ABSTRACT

Olx Autos is an online car selling service that allows customers to sell their cars quickly/instantly to more than 2,000+ partners. OLX Autos has 100+ inspection locations in 7 major cities in Indonesia, namely Greater Jakarta, Bandung, Semarang, Yogyakarta, Surabaya, Bali and Medan. Restful web service is a standard for exchanging data between applications or systems. This research analyzes restful web services to integrate the OLX Autos system with suppliers and buyers. Thus, making it easier for OLX Autos to place car orders and making it easier for suppliers to receive car orders. This study uses descriptive qualitative research methods, the results of the study explain that the Restful Web Service method used can integrate the OLX Autos system with buyers and suppliers very easily.

1. Introduction

In this era of globalization, technology is developing very rapidly. With these technological advances, the processing of available data or information can take place quickly, effectively, and accurately. Developments in the field of technology at this time have opened up the widest opportunities for entrepreneurs engaged in various fields. In line with the development of the business world, technological advances are also widely used to support every business process contained within a company (Song, 2014). One of the technological advances used in the company is the existence of an information system. The information system can help the existing work in a company. This information system is important for every company to have in supporting existing business processes. Currently, companies can use a computerized system in carrying out their work quickly and precisely. This technological era changes the system of a company which was originally done manually to become computerized.

Before this technological era came, most companies did their work manually. Where, the frequent occurrence of errors in business processes due to human error factors Human Error (Poluakan. Et.all, 2019). Many companies still use the system manually in recording purchases, sales, inventories, and ordering goods, resulting in the work being not so effective such as not knowing the number of stock items, loss of data, manipulating data and others. The reordering system of goods is very important for a company, especially if the company is engaged in sales. The availability of goods in meeting consumer needs is very important.

OLX Autos is an official Honda motorcycle repair shop which is engaged in Honda motorcycle maintenance and after sales service in Indonesia, as well as serving the purchase of Honda motorcycle spare parts. OLX Autos provides a variety of original used cars for Honda motorcycles. In ordering used cars to suppliers for inventory purposes, OLX Autos still uses the manual method where employees have to search used car data manually which then input data via microsoft excel such as date input, input used car data to be ordered, and input amount order (Putra, 2020). After the data is complete, the excel file must then be sent to the supplier via email. This takes a long time so that the work becomes less effective. On the other hand, frequent errors in inputting order data and prone to errors in sending emails due to various human error factors. In this case, a used car ordering web service is needed that is integrated directly with the supplier (Wahono & Santoso, 2020).

Webservice is a software system to support interoperability and interaction between systems on a network. Web services provide communication standards between different applications, and can run on

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various platforms and frameworks. Web service is used as a facility provided by a web to provide services (in the form of information) to other systems, so that other systems can interact with the system through the services provided by a system that provides web services. One example of analysis from a web service is REST (Harismawan, 2017; Hamdana, 2020).

REST (Representational State Transfer) is a standard web-based communication architecture that uses the HTTP (Hyper Text Transfer Protocol) protocol for data exchange. In the REST architecture, the REST server provides resources or data, while the REST client accesses the resources and then displays or uses them (Saryanto, et.all, 2013; Galih. et.all, 2018). Web services based on the REST architecture are known as RESTful Web Services.

2. Research methodology

The research method uses descriptive qualitative research methods. According to Gunawan (2013) qualitative research methods can be interpreted as research methods based on the philosophy of postpositivism, used to examine the condition of natural objects where the researcher is the key instrument, sampling of data sources is done purposively, collection techniques are triangulation, analysis the data are inductive/qualitative, and the results of qualitative research emphasize meaning rather than generalizations. Descriptive is a method that serves to describe or provide an overview of the object under study through data or samples that have been collected as they are, without analyzing and making generally accepted conclusions (Nurdiani, 2014; Anggito & Setiawan, 2018).

3. Results and Discussion

The system design must be able to prepare a detailed design for each component of the system which includes data and information, data stores, methods, procedures, people, hardware, software and internal controls. The modeling used is DFD Design, ERD Design, Interface Design.

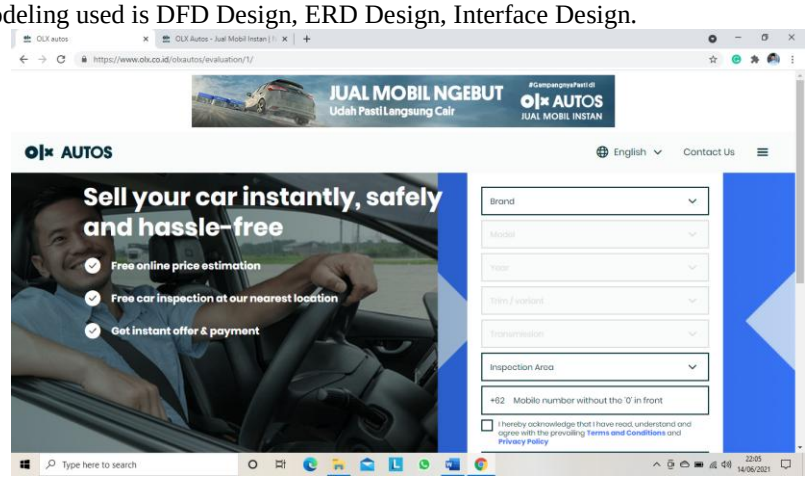

Fig 1. Initial View of the Website

The context diagram describes the overall system flow of each user involved in the used car ordering information system. There are 3 users, namely the admin, the head of the workshop, and the supplier. In the admin user, the user provides data on goods that can be ordered on the information system, provides data on orders that will be made by the company, provides user data that can access the information system for ordering goods. The system will be able to display data on items that can be ordered, order data that have been ordered and display user data that can access the information system for ordering goods. Then the head of the workshop must first confirm the order that has been made by the admin or employee before the order is sent to the supplier. To fully explain the process, a level 1 DFD is needed.

Database design is not just compiling the files needed to be stored as a database, but also includes how to organize the database so that the user can use it optimally to meet their data needs (Lee & Kim, 2015). Database system development includes developing database files, software, hardware and preparing personnel who will be involved in using the database system so that it can be used properly and correctly. The structured tables in this database are as follows:

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3.1 Activity Diagram Question

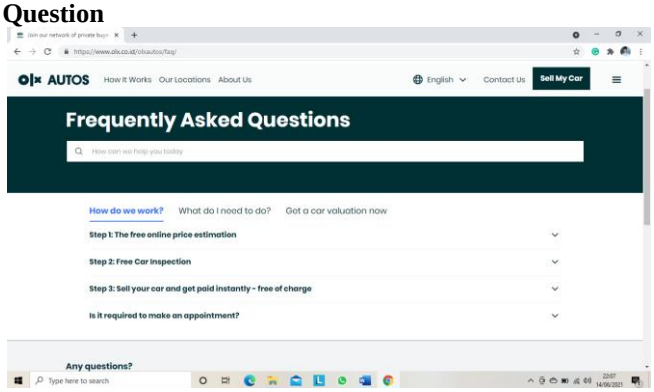

Fig 2. Activity Diagram Question

In Fig 2 the login activity diagram above, explains the activities of the login activity diagram carried out by the admin user, the head of the workshop and the supplier. In the process of logging in, the user opens a web-based used car booking application at OLX Autos. The system will display the login page. Then, the user can enter the username and password according to their respective levels. If the entered username and password do not match, the system will display an error message. Then, if the correct username and password are entered, the system will display the homepage.

3.2 Activity Diagram View Item Data

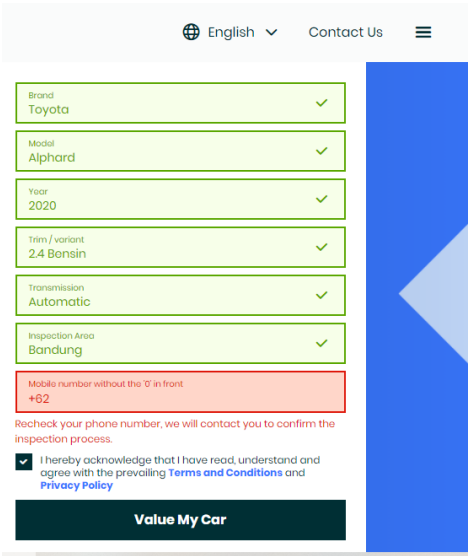

Fig 3. Activity Diagram Viewing Data Items

In Fig 3 the activity diagram sees the item data above, explaining the activity from the activity diagram seeing the item data carried out by the admin user. In the process of viewing goods data, the user opens a web-based used car ordering application at OLX Autos. The system will display the login page. Then, the admin user can enter the username and password according to the admin level. If the entered username and password do not match, the system will display an error message. Then, if the correct username and password are entered, the system will display the homepage. After the login process is successful, the admin can select the item data menu then the system will display the item data on the used car ordering system.

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3.3 Activity Diagram Add Item Data

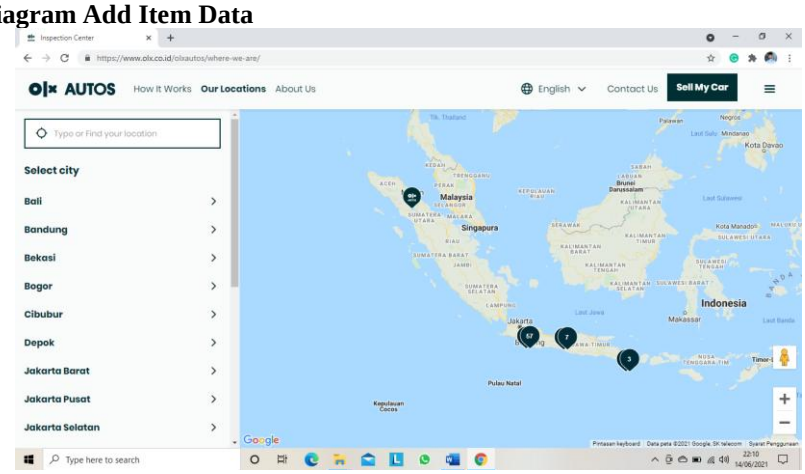

Fig 4. Activity Diagram Add Item Data

In Fig 4 the activity diagram for adding data items above, explains the activities of the activity diagram for adding data items carried out by the admin user. In the process of adding goods data, the user opens a web-based used car ordering application at OLX Autos. The system will display the login page. Then, the admin user can enter the username and password according to the admin level. If the entered username and password do not match, the system will display an error message. Then, if the correct username and password are entered, the system will display the homepage. After the login process is successful, the admin can select the item data menu then the system will display the item data on the used car ordering system. Select the menu add item data, the user must input the code, name and price of the item. Then, click add if the item data is correct. The system will display new item data.

Activity diagrams add user data above, explain the activities of the activity diagram plus user data carried out by the admin user. In the process of adding user data, the user opens a web-based used car ordering application at OLX Autos. The system will display the login page. Then, the admin user can enter the username and password according to the admin level. If the entered username and password do not match, the system will display an error message. Then, if the correct username and password are entered, the system will display the homepage. After the login process is successful, the admin can select the user data menu then the system will display the item data on the used car ordering system. Select the menu add user data, the user must input the name, username and password. Then select the user role, then click add if the user data is correct. The system will display the new user data.

Activity diagrams ordering goods above, explains the activities of the activity diagram of ordering goods made by the admin user. In the process of ordering goods, the user opens a web-based used car ordering application at OLX Autos. The system will display the login page. Then, the admin user can enter the username and password according to the admin level. If the entered username and password do not match, the system will display an error message. Then, if the correct username and password are entered, the system will display the homepage. After the login process is successful, the admin can select the item order form menu, then the system will display the item order form on the used car ordering system. The user must input the order date, code and quantity of goods. Click add and then click submit order if the order is appropriate. The system will display the order recapitulation report.

The activity diagram sees the recapitulation report above, explaining the activity from the activity diagram seeing the recapitulation report carried out by the admin user. In the process of viewing the recapitulation report, the user opens a web-based used car ordering application at OLX Autos. The system will display the login page. Then, the admin user can enter the username and password according to the admin level. If the entered username and password do not match, the system will display an error message (Zeng & Fang, 2019). Then, if the correct username and password are entered, the system will display the homepage. After the login process is successful, the admin can select the order data menu, then the system will display a report on the recapitulation of orders that have been made

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a. User Login Interface

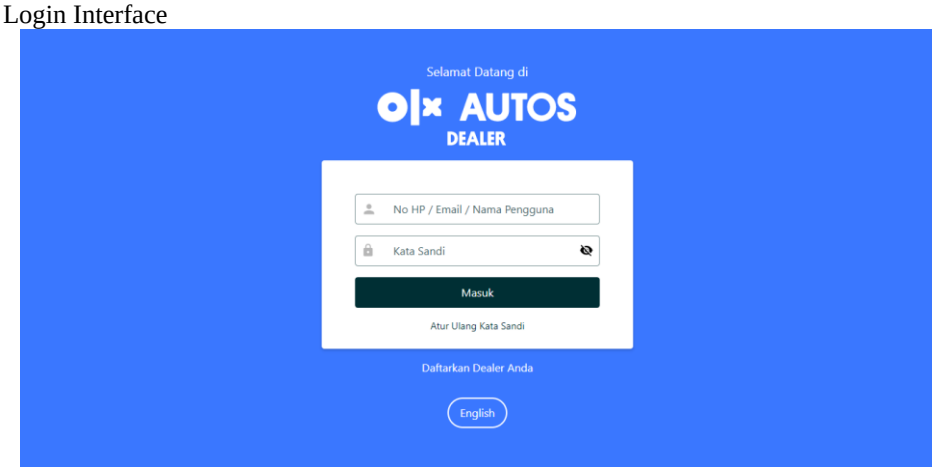

Fig 5. User Login Interface

In Fig 5 the user login interface above, the login page is the process for accessing the web-based used car ordering application at OLX Autos by entering a username and password. The login page is used to enter the homepage or the main page of the used car booking application.

b. Goods Order Form Interface

Fig 6. Goods Order Form Interface

In Fig 6 the interface of the goods order form above, this menu is used to place an order for a used car to a supplier. In the item ordering menu there are several forms that must be filled out before placing an order including the date, name or code of the item, and the number of items.

c. Admin Item Ordering List Interface

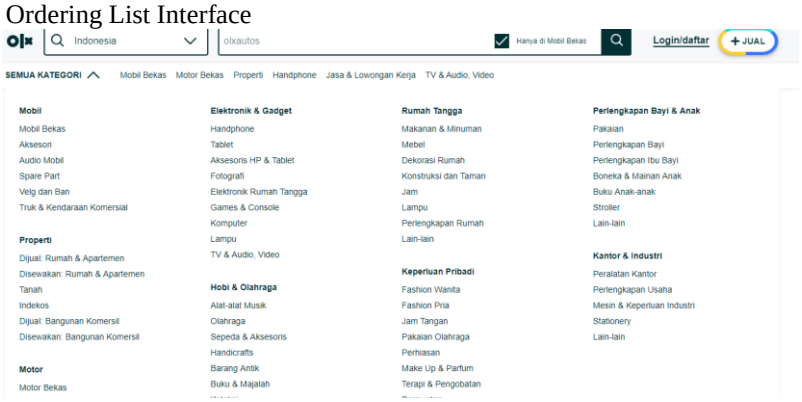

Fig 7. Admin Item Ordering List Interface

In Fig 7 the admin item ordering list interface above, there is used car information that has been inputted and then submitted an order to the supplier.

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d. Admin Item Details Interface

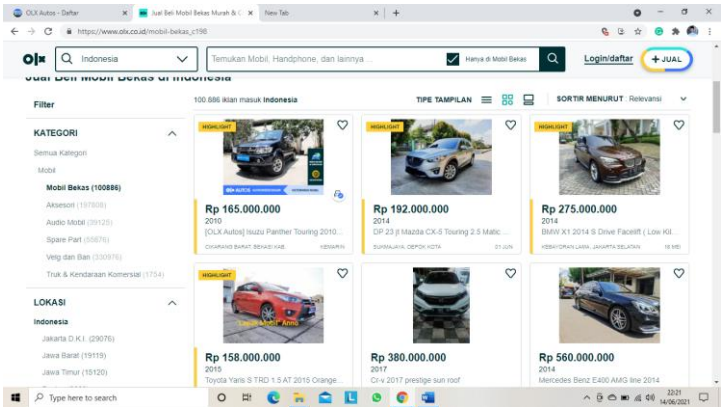

Fig 8. Admin Item Details Interface

In Fig 8 the admin item details interface above, there is information on used cars that have been ordered to suppliers.

e. Interface Add User Data

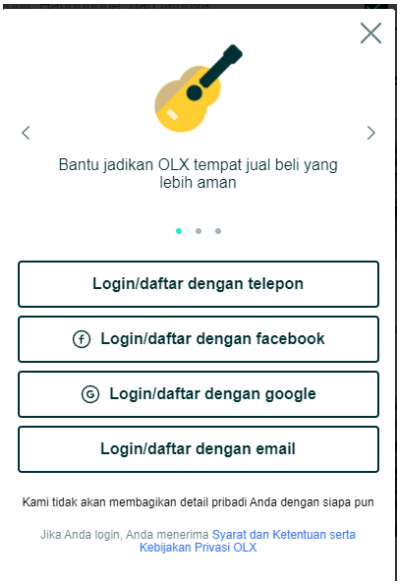

Fig 9. Interface Add User Data

In Fig 9 the interface for adding user data above, this menu is used to add a new user. There is a form that must be filled out before adding a new user including full name, username, password, and choosing a user role.

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f. Interface View Item Admin

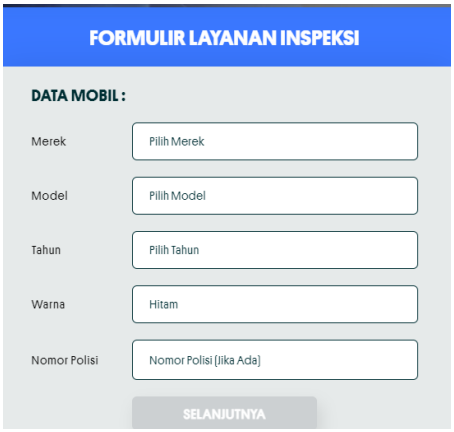

Fig 10. Interface View Admin Items

In Fig 10, see the admin item interface above, this menu is used to view the results of the used car recapitulation report that has been ordered to the supplier.

g. Regional Search Interface

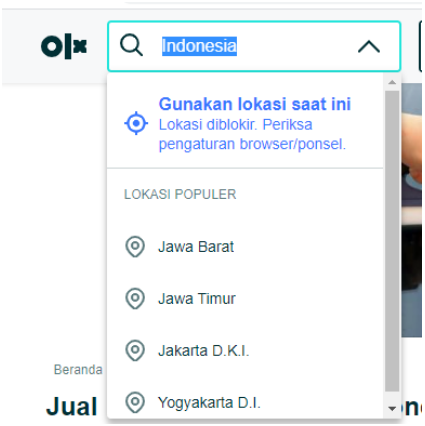

Fig 11. Regional Search Interface

In Fig 11 the add admin interface above, this menu is used to add new used car data. In this menu, there is a form that must be filled in before adding new item data including item code and item name.

4. Conclusions

Analysis of the Restful Web Service on the web-based used car ordering application at OLX Autos, it can be concluded that the web-based used car ordering application made can speed up and simplify the used car ordering process and minimize the possibility of mistakes being made. The Restful Web Service method used can integrate the OLX Autos system with the supplier system in the used car ordering process.

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