

Geographical information system counter position at PT. Web-based Millennium Plaza

Sri Hartini

Information Systems Study Program School of Informatics and Computer Management
(STMIK) Potensi Utama Medan

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ABSTRACT

The development of computer technology has a positive impact on all life, especially in the world of industry, education, government and small to medium businesses. Where with the existence of computer technology all work done manually can be done computerized. A well-designed information system will greatly assist organizations or companies in obtaining accurate, timely and relevant information in their presentation. PT. Millennium Plaza is one of the many companies engaged in counter rental services in the city of Medan. In this case the author designed an information system that supports company performance, namely "Geographical Information System Counter Position at PT. Web-based Millennium Plaza" which was developed using PHP and using the MySQL database processing application. This program allows users to be able to work more effectively and efficiently in terms of entering data, deleting data, changing data to printing data. And all the data has been stored in the database so it's easy to process it. The end result of designing a geographic information system for counter positions is expected to help search and present data more effectively and accurately.

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Corresponding Author:

Sri Hartini,
Information Systems Study Program,
Potensi Utama STMIK,
Jl. KL Yos Sudarso Km. 6.5 No. 3-A, Tanjung Mulia, 20241, Medan.
Email: srihartini@gmail.com

1. INTRODUCTION

Geographic Information System is a special information system that manages data that has spatial information (spatial referenced). (Hamdani & Utomo, 2021). Or in a narrower sense, is a computer system that has the ability to build, store, manage and display geographically referenced information, for example data identified by location, in a database. (Kahf & Sarjan, 2020).

PT. Millennium plaza Medan is a shopping center (plaza) located in Medan Helvetia sub-district, precisely on Jalan Captain Muslim in the city of Medan, Plaza Millenium is a plaza devoted to the sale of electronic equipment and computer devices. (Nufus et al., 2022). Even so, many daily necessities are sold in this plaza. Plaza Millenium is also often used as a venue for holding events (Mirza, 2019).

But with a large plaza in which there are many counters and many people who visit the plaza (AG, 2022). To find a counter location in a large plaza, maybe for you people around the plaza and often shop at the plaza already know the positions in the plaza, but for people who rarely go to the plaza and want to find something in the plaza they will definitely be confused. especially those of you who are from out of town, maybe you will spend hours finding the shop or counter you want to visit (Cholil, 2021).

The application of this gis-based information system will be very useful for those of you who want to find information about the Millennium Plaza, this information system will later provide information about what counters are in the Millennium Plaza and by clicking on one of the counter names you will get position information. the counter(Latief, 2019). Of course, it will make it easier for visitors to find out the position of the counter that you will visit(Wijaya, 2020).

In simple terms, a system can be interpreted as a collection or set of elements, components, or variables that are organized, interact with each other, are interdependent and integrated.(Wijaya, 2020). Systems theory says that every element forming an organization is important and must receive full attention so that managers can act more effectively(Khoiri, 2020). What is meant by elements or components forming an organization here are not only the parts that appear physically, but also things that may be abstract or conceptual in nature such as missions, jobs, activities, informal groups, and so on.(Naomi, 2019). In addition, a system cannot be separated from the surrounding environment, so feedback can come from the intended system environment(Amelia, 2021).

2. RESEARCH METHOD

Method is a systematic way or technique to work on a case. In completing this thesis the author uses 2 (two) study methods, namely:

2.1 Field Studies (Field Research)

Is a method that is carried out by conducting direct studies in the field to collect data, namely direct observation to PT. Millennium Plaza by collecting data such as counter position data contained in Millennium Plaza. As for the things that were done during the field study process were as follows: (a) Observation (observation), the author observed data information regarding counter position information, (b) Interview (interview), namely conducting interviews with the marketing department at the Millunium plaza management office , (c) Sample In the sampling process, the writer takes counter data and other additional information, such as counter photos.

2.2 Library Studies (Library Research)

The author studies the theory of GIS, map servers, the concept of digital maps as well as matters related to PHP and MySQL, which can be cited in the form of theory or opinions from several reading books or textbooks used during lectures. This is intended to provide a strong theoretical basis through books or literature available in the library, which is related to the writing of this thesis report.

3. RESULTS AND DISCUSSIONS

3.1 Results Display

a. Main Menu Display

On the Main Menu Page of the Geographic Information System as the first page when this application is run, this page contains menus such as Home, About, and Administrator Login as shown in Figure 1.

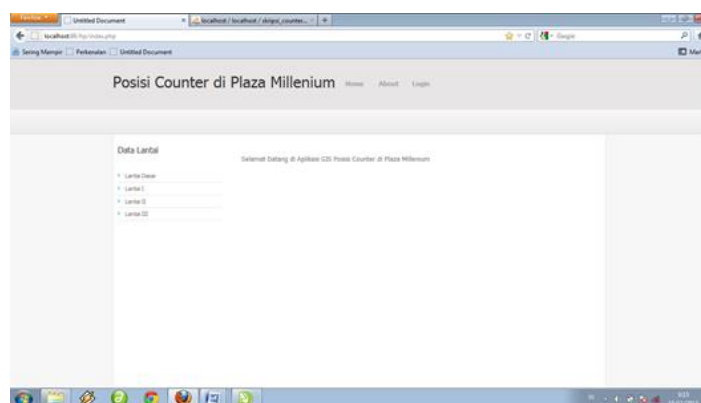


Figure 1.Main View of Geographic Information System

b. About view

The about page is a page that displays the designer's data from a geographic information system for the location of a handphone counter on the Millennium Plaza. The form of the about page display can be seen in Figure 2.

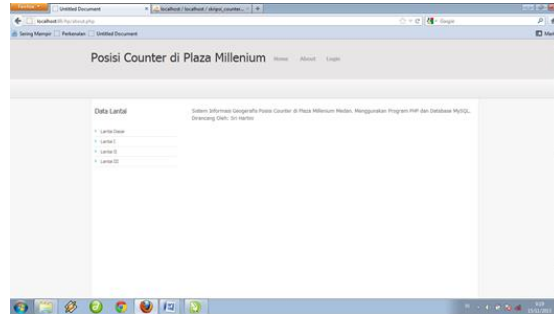


Figure 2.About page view

c. Admin Login Page

Administrator Login page is a page to enter the administrator user name and password. This Admin Login page can only be used by the Admin to input counter location information data. The form of the Admin Login page can be seen in Figure 3.

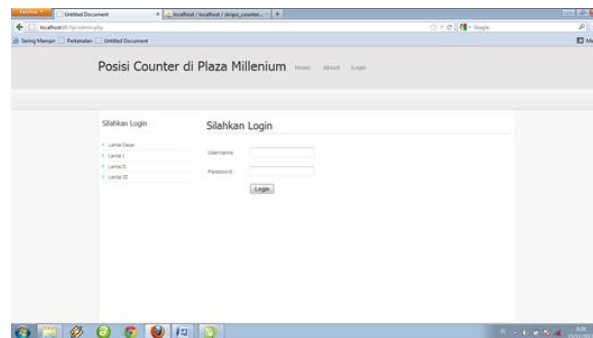


Figure 3.Admin Login view

d. Admin Menu page

The Admin Menu page is a page that can be accessed by the admin. On the admin page there are several menus, namely Home, Add location data, Map, Owner, Data, and Logout. The form of the Admin menu page can be seen in Figure 4.

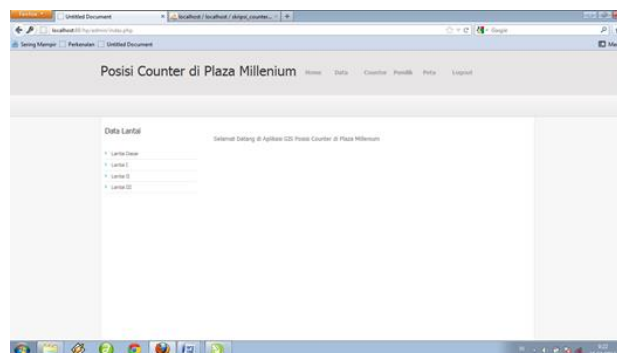


Figure 4.Administrator Menu Display

e. Add Mobile Counter Location Data Page

The information data page is a page for inputting cellphone counter location data at the Millennium Plaza. The form of the added data page can be seen in Figure 5.



Figure 5Design of Add HP Counter Location Data Page On Plaza Millennium Ground Floor

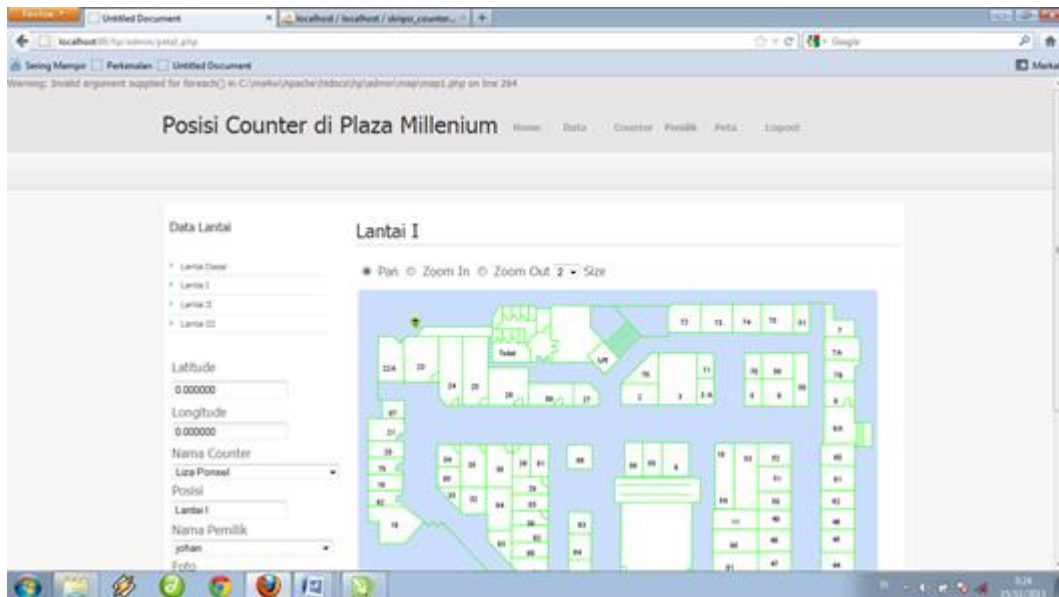


Figure 6.Design of Add HP Counter Location Data Page On Millennium Plaza 1st Floor

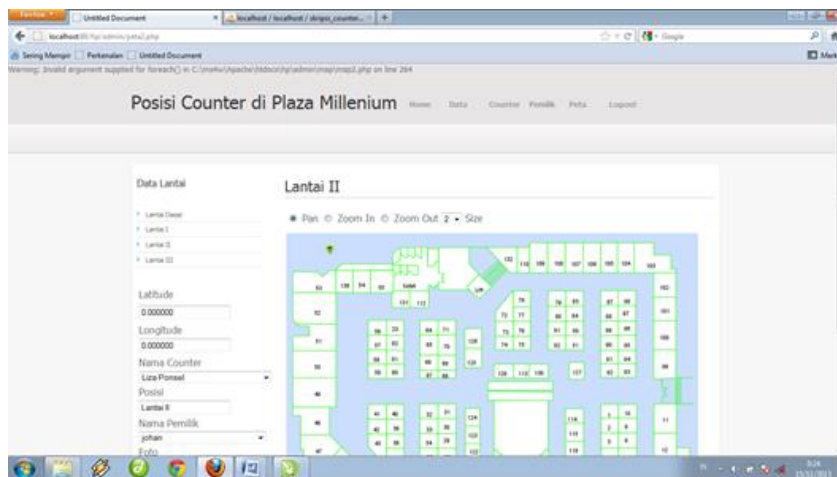


Figure 7.Design of Add HP Counter Location Data Page On

Plaza Millennium 2nd Floor

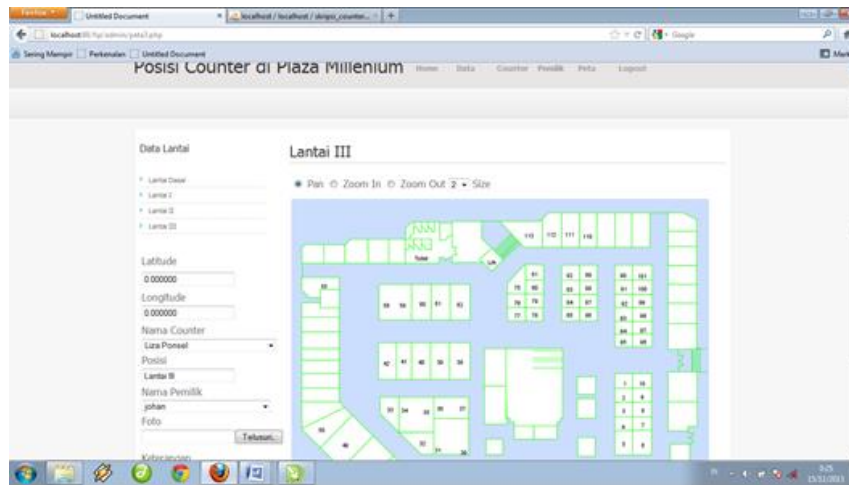


Figure 8. Design of Add HP Counter Location Data Page On

f. Counter Location Data Information Page

The counter location data information page is a page to display a list of cellphone counter locations at the Millennium Plaza. Form Page Counter location information data page can be seen in Figure 9.

Nama Counter	Latitude	Longitude	Lantai	Nama Penyewa	No./Nomor	Retorangan	Abit
SUPER	403.46134	694.53882	Lantai 1	SOPHIA	72	DAK	ERK I Papua
OPAN	361.75634	941.12031	Lantai 1	KAN HO	75	DAK BELIUP	ERK I Papua
SUPER	405.44478	427.17794	Lantai 1	DAKHO	7A	BROBBERY	ERK I Papua

Figure 9. Data Counter Information Page

g. Owner Data Information Page

This page displays information about mobile counter tenants at Millennium Plaza. The form of the owner data information page can be seen in Figure 10.

No.	Nama Penyewa	No. Hp/Phone	Alamat	Abit
1	SUSANTO	081370894277		ERK I Papua
2	SOPHIA	08136135408		ERK I Papua
3	KAN HO	0888771404		ERK I Papua
4	DOLY PALUDMAN HAKANAP	08126150408		ERK I Papua
5	MARALELA WADI	081370894277		ERK I Papua
6	TOPY	081360131434		ERK I Papua
7	RUDI TASLIM RUSLI	081370894277		ERK I Papua
8	ERIC YOUNG	081360124466		ERK I Papua
9	YEN PEN	08126134408		ERK I Papua
10	DYACH AZELYN HAKANAP	08126150408		ERK I Papua
11	SHAWATI	081370894277		ERK I Papua

Figure 10. Data Counter Information Page

h. Clear Counter Location Data page

The page for deleting counter location data is a page for deleting counter location data. If the admin selects the delete menu on the counter location information data page, a delete data

page will appear according to the admin's choice of which data to delete. The form of the counter location data delete page can be seen in Figure 11.

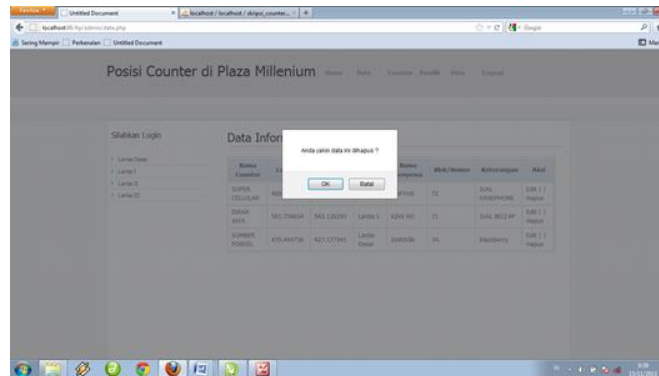


Figure 11.Clear Counter Location Data page

i. Data Edit Page

The edit data page is a page for changing data carried out by the admin according to the new data. The form of the data edit page can be seen in Figure 12.

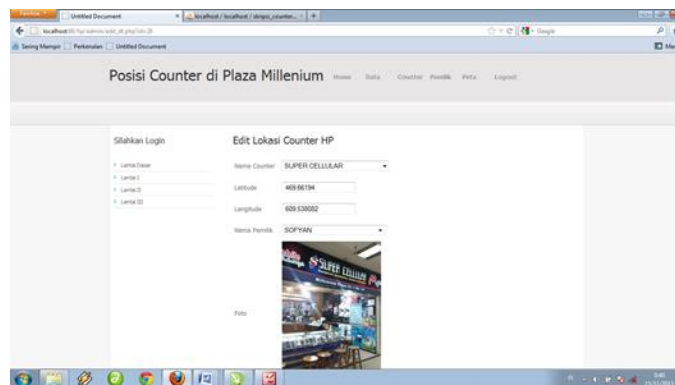


Figure 12.Counter Location Data Edit Page

j. Map Data Page

The map data page is a page for adding maps to be displayed on a geographic information system. The form of the added map page can be seen in Figure 13.

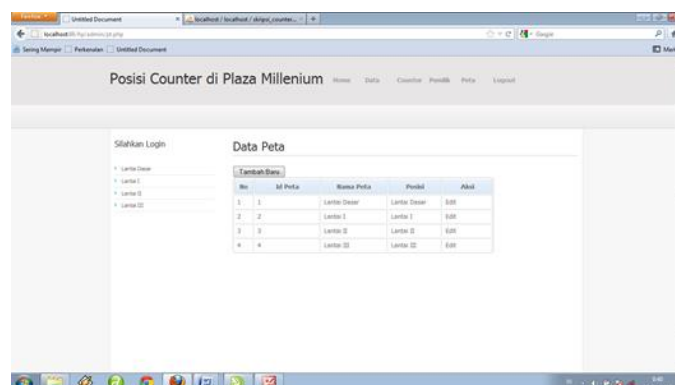


Figure 13.Map Data View

k. Owner Menu page

The owner's page displays a list of the Millennium Counter Plaza tenants. The form of the owner's page can be seen in Figure 14.

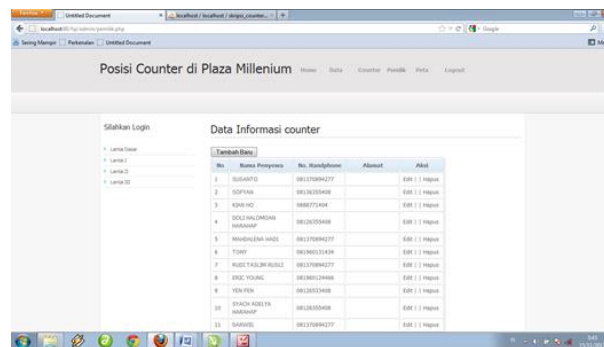


Figure 14.Owner Menu Display

3.2 Trials

After the program has been created, the next stage is to test the program that has been designed, the testing is carried out using the Black Box testing method. Black box testing is a method of designing test data based on software specifications, namely by trying in detail arbitrary data that represents test data for each form on the application page displayed by the GIS so that the program is expected to work and function for the user.

4 CONCLUSION

Based on the design and implementation of the geographic information system program for counter locations at Millennium Plaza, the following conclusions can be drawn: The geographic information system for counter locations at Millennium Plaza can help people who want to buy mobile phones find the desired counter at Millennium Plaza quickly and precisely. The geographic information system for the counter location at Millennium Plaza also provides convenience to building management in processing counter location data at Millennium Plaza. The geographic information system for the location of counters in the millennium plaza is dynamic so that the data can be changed as needed.

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