



Application Design Website- Library in Indonesia using Java PHP and MYSQL

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ABSTRACT

The creation of an online library website, with this website it is hoped that it can help library visitors to more easily find books to borrow before going to the library, so that library visitors do not need to waste time looking for books. And also visitors who have registered as members can have an account to check their loan history. The research method used is the System Development Life Cycle (SDLC). The stages in the SDLC method are planning, analysis, design, implementation and system testing. The creation of this website uses php myadmin and MySQL as a database. Based on the trials that have been carried out on the library website, it can be concluded that this website was created to make it easier for visitors to find books and library members can check their book borrowing history from the library.

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1. INTRODUCTION

In the current era of globalization, developments are accelerating. Technology has impacted society and the surrounding environment. Technology has provided assistance in various fields. Humans are inevitably forced to adapt to today's technologically driven world, and many people greatly enjoy these simple and practical developments. According to the Big Indonesian Dictionary (KBBI), the word "technology" means a scientific method for achieving practical goals, applied science, or the overall means of providing goods necessary for the continuity and comfort of human life.

With its sophistication, technology has dominated various aspects of the world. Almost everyone around the world uses technology-based systems. One form of technology is computers and smartphones. Initially, computer technology was limited to arrangements of vacuum tubes and large machines with limited capacity and relatively slow speed. However, over time, computer technology has been designed to be portable and offer significant performance. One function of technology is to facilitate the sharing of information. One way to share information is through websites. Websites can be accessed on any device, anywhere, as long as they are connected to the internet. Websites can be used for a variety of purposes, including providing online buying and selling facilities, creating blogs, searching for information on Google, and even online registration.

These days, all activities, from work to school, are online, including libraries. To save time, improve efficiency, and ensure data security, this research is entitled "Website-Based Library Application Using PHP and MySQL."

2. METHODS

The method used to design and create the website is the SDLC (System Development Life Cycle) waterfall method, as follows:

1. Planning

This initial stage involves planning the creation of a library registration website, which includes visitor registration through the admin. Afterward, visitors will receive a member ID and be able to print their own card.

2. Analysis

Analyze the technology and information used in creating the website by searching for the necessary information, such as the programming language used and the required data.

3. Design

The design includes designing the navigation structure, database design, and website appearance.

3. RESULTS AND DISCUSSION

3.1. Results

The current library registration system generally still uses the old method, where visitors write their names on books provided by the library, which is prone to loss or damage. Therefore, a website for registering library members is designed.

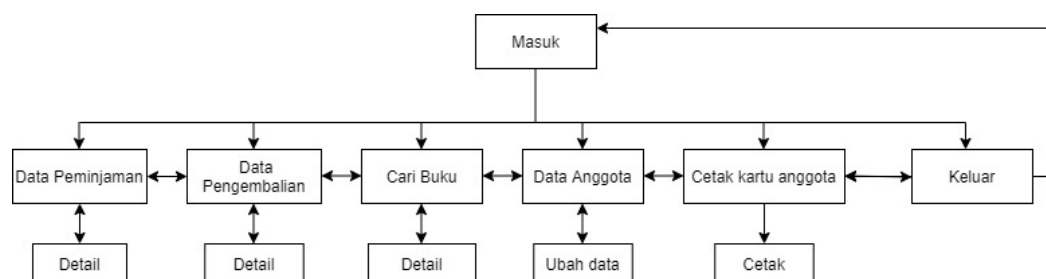
Upon opening the website, the first page displayed is the main page, which contains the login for existing members. For library membership applications, the registration process is first completed online by the admin on the website. After that, the website can be accessed anytime, anywhere, by both members and staff.

Prospective members must first contact the admin to complete their personal information. Members with existing accounts can access the website directly, anytime, anywhere.

Members who are logged into their shared library account can search for books by clicking the "Search for books" menu and then selecting the desired book when checking out. Once they have found the book they want, they can come directly to the library to check it out and fill out the borrowing information for the admin.

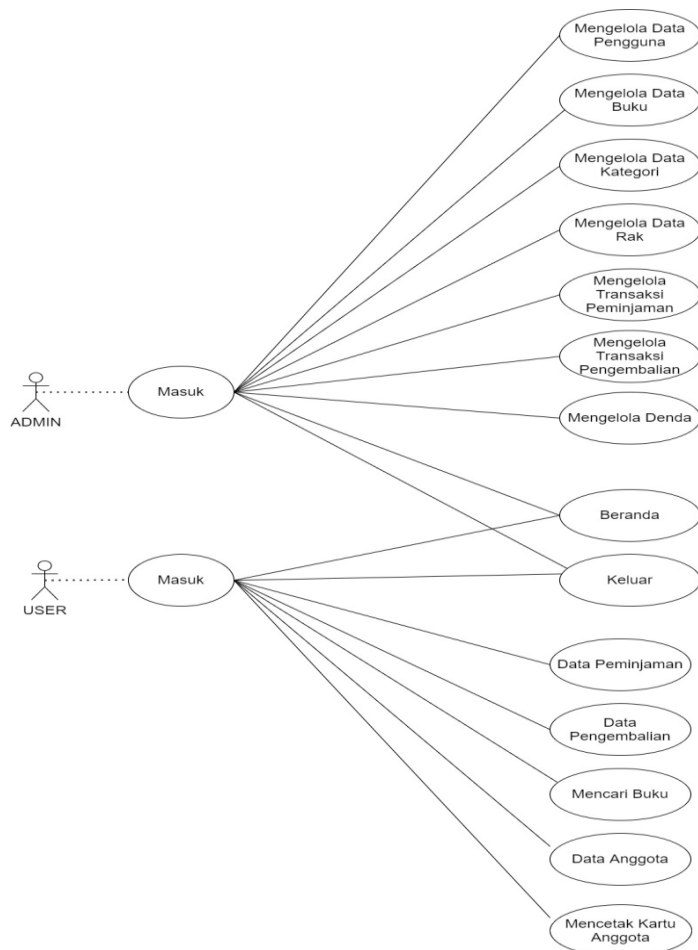
Navigation Structure Design

The role of navigation structure is crucial in a website. This shared library website uses a mixed navigation structure for both admin and user pages.



Use Case Diagram

Use case diagrams are used to illustrate the activities performed by members and staff. The following is a design for a user use case diagram and an admin use case diagram, which are used to illustrate the activities performed by admins and users.



Database Structure Design

The database structure design for this website consists of seven tables: a login table, a borrowing table, a shelf table, a category table, a book table, a fine table, and a fine table.

Borrowing Data Page Design (User)

On this loan data page there is a number column as a sequence number, a loan number column that is filled in automatically and sequentially for each member who borrows a book, a member ID column is taken from a special code that will be obtained when the member or officer registers, a name column is the name of the book borrower, a borrow column that will automatically be filled in with the date on the day of borrowing, a return column, a status

column as a characteristic of whether the book has been returned or not, then a fine column for books that are borrowed if they exceed the loan period will be subject to a fine that has been previously set and finally there is an action column, namely to see more details of the borrowing data.

Perpus Bersama		Selamat Datang, IKA NURAINI (Anggota)		Keluar					
foto IKA NURAINI Anggota (online)	Data Pinjam Buku			Beranda > Data Pinjam Buku					
	Show entries		Search:						
Data Peminjaman	No	No Pinjam	ID Anggota	Nama	Pinjam	Balik	Status	Denda	Aksi
Data Pengembalian									Detail Peminjaman
Cari Buku									
Data Anggota									
Cetak Kartu Anggota									
Showing 1 to 1 of 1 entries									
Previous 1 Next									

Return Data Page Design (User)

On the return data page, users can see whether they have returned any books, and view the history of fines that users have incurred. In this return data, there are 10 columns listed, namely no, borrowing number which will be automatically filled in according to the order of which user borrowed the book, then there is a member ID, name, borrowing for when the loan was borrowed, return for when the book was returned, status, fines and actions can view details of the book return data.

Perpus Bersama		Selamat Datang, IKA NURAINI (Anggota)		Keluar						
foto IKA NURAINI Anggota (online)	Data Pengembalian Buku			Beranda > Data Pinjam Buku						
	Show entries		Search:							
Data Peminjaman	No	No Pinjam	ID Anggota	Nama	Pinjam	Balik	Status	Kembali	Denda	Aksi
Data Pengembalian										Detail Peminjaman
Cari Buku										
Data Anggota										
Cetak Kartu Anggota										
Showing 1 to 1 of 1 entries										
Previous 1 Next										

Book Search Page Design (User)

On this book search page, there is a no column, for the book sequence number, then there is a cover column to see the book cover, then there is an ISBN column if the book has an ISBN, if not, it can be filled with a dash (-), then there is a title column, which is the name of the book, there is a publisher column to write the name of the publisher if there is one, but if there is none, it can be filled with a dash (-), then there is a book year column to fill in the book year,

there is a borrowed column, which is to find out how many times the book has been borrowed, then there is a book entry date column and finally there is an action column to see more details.

Perpus Bersama		Selamat Datang, IKA NURAINI (Anggota)		Keluar				
foto IKA NURAINI Anggota (online) Data Peminjaman Data Pengembalian Cari Buku Data Anggota Cetak Kartu Anggota	Data Buku Beranda > Data Buku							
	Show entries		Search:					
	No	Sampul	ISBN	Title	Penerbit	Tahun Buku	Tanggal Masuk	Aksi
								Detail
Showing 1 to 1 of 1 entries								Previous 1 Next

Member Data Page Design (User)

This member data page can edit personal identity if necessary. There are several buttons on the member data menu, namely there is a username if you want to re-edit it can be filled in the button section, then there is a place of birth, date of birth can be edited if necessary, then the username and password used when logging in can be edited, then the level cannot be changed because only the admin can change the level, then gender can be edited if necessary, then there is a telephone and email. There is a select file button if you want to change the photo and there is an address if it changes then the address can be replaced with a new address.

Perpus Bersama		Selamat Datang, IKA NURAINI (Anggota)		Keluar
Foto IKA NURAINI Anggota (online) Data Peminjaman Data Pengembalian Cari Buku Data Anggota Cetak Kartu Anggota	Ubah - (IKA NURAINI) Beranda > Ubah - (IKA NURAINI)			
	Nama Pengguna		Telepon	
	Tempat Lahir		E-mail	
	Tanggal Lahir		Pas Foto Pilih File FOTO	
Username		Alamat		
Password (optional)				
Level				
Jenis Kelamin * Laki-Laki * Perempuan				
		Ubah Data Kembali		

4. CONCLUSION

Based on the results of the library application design, it can be concluded that the library website design has been successfully created and is ready for use. Using this website makes the member registration process more secure, easy, and efficient because the registered member's data is automatically entered into the admin panel under the user data menu. The library website application design still has shortcomings. To improve and develop the system, it is recommended to add other features, such as allowing members to register directly without having to go through the admin first. Furthermore, a feature to add library locations is needed to make it easier for visitors who don't know the library's location to search directly on the library website, and a live chat feature.

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