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Library portal: A tool for the accessibility of subscribed e-resources

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Abstract

This paper describes the design and development of a prototype for e-resources search from Library web site by a single click. The growth of e-resources scenarios aided in designing key system requirements. A prototype was then developed using WAMP application. The utility of these e-resources will be limited in the absence of a functional website that facilitates the users to exploit these to the maximum extent. Web portals are the tools that enhance access to the e-resources by providing visibility to these. Patrons get help and can access easily. The purpose of this article is to give you a comprehensive overview of Portal design/development concepts that will ensure successful implementations.

Keywords: Library Portal, WAMP Server, My SQL, Apache, PHP, Open SSL, W3C

1. Introduction

Today in technical era there is a big challenge to manage the collection of E- Resources successfully for a library. Technology like e-mail, internet, World Wide Web (www) CD Rom networks etc have changed the society and provided opportunities to access and retrieve online electronic /digital information .So, this study will help to improve to access the E- Resources to the users.

2. What is Portal?

A portal is a central place for making all types of information accessible, where users locate relevant content and use the productive applications. Due to their ease in development, richness in functionality, flexible customization of interface and pluggable architecture, portals are gaining attention among administrators, content consumers, developers, etc. More interestingly, portals offer compelling basic benefits such as reduced operational costs, improved customer satisfaction, and streamlined business processes.

Portal is an information hub. It is an entry point to information resources. A density of resources and services on the network, a 'portfolio' of resources, potentially customized to specific role or individual interests. An aggregation or collection of resources organized to assist particular categories of users. How the library mediates the engagement of users and resources in a network environment.

3. Feature of a Library Portal

- A library portal is also a type of library website.
- Delivers customized information securely to users within and outside the library.
- A library portal is a launch pad to a host of web based services such as email; ask the librarian, news, WEB-OPAC and so on.
- Gives individual users control over the content and organization of information in their personal workspace.
- Allows sharing of information in a secure environment via e-mail messages, publication channels, and posting to a WebDAV repository.
- Design and Development of a Portal for Accessibility of E-Resources could help to patron for accessing journals in a single click.

4. Services from a Library Portal

A portal is a single-user interface for accessing wide variety of electronic resources, both within and outside the library. A library portal can be made up of three types of contents, viz.

- Information about the library-staff directory, floor plan, and library rules, etc.
- Electronic versions of the traditional library services: Alert services, electronic SDI, virtual reference service, online document delivery service, request for purchases etc., and

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- Access to library content: Online catalogue, full-text e-journals, e-books and other e-documents, institutional repositories, free accessible internet resources, etc.

Library portals are the websites which solve this problem by providing access to all relevant e-resources at one point.

5. Objectives

The main aim of the e-resource portal is to provide access the e-resource collection of a Library in a single user interface. It provide a 'one-stop knowledge shop' that is, a single point of access to the collection available in a Library.

- Know, what is available for you?
- Delivery context specific and role based service.
- Save the time of user.
- Avoid Duplication of Journal if consortia subscribed.
- Help in Inter library loan.
- Web scale Discovery service may implement.

5. Methodology

This study was taken to design and prototype for e-resource portal to a library, Initially the prototype portal designed by examining the requirements scenarios, which have been prepared accordingly and was designed to facilitate the mapping between the application and services then present how these can be mapped into the specification for the Portal scenarios to the available tools and middleware.

6. Scope and Limitation of the Study

The scope of the study is aimed to manage the collection of e-resources and provide accessibility easily to the user community. It also helps to reduce the barriers between users to accessing E-Resources. The Portal prototype has been design for subscribed e-resources of a library using MySQL database and PHP language in Window environment. This prototype is used as a basis of the preliminary design and suggested for next-generation portals.

7. Significance of the Study

The study will be useful /helpful for users, researchers and scholars to access the E-Resources and can get information easily. It saves the time of Patron. It can be accessible easily. Users can use according to their requirements easily as e-book, journals name wise, Publishers name wise etc.

- A large number of institutions are starting to implement institutional web site to facilitate the information to their staff, faculty, scholar and patrons.
- Design & Development of a Portal for accessibility of E-Resources serves scholar fully and other users community by enhancing the knowledge domain of the practicing researcher, users and information professional.
- Information professionals in designing, redesigning and developing and effective information retrieval system and rendering better service to the users.

8. Electronic Resource Management (ERM)

Electronic resource management (ERM) is the practices and software systems used by libraries to keep track of important information about electronic information resources, especially internet-based resources such as electronic journals, databases, and electronic books. The development of ERM became necessary in the early 2000s as it became clear that traditional library catalogues and integrated library systems were not designed to handle metadata for resources as mutable as many online products are as e journals is one of the electronic resource so above all data is also refer to for e-journals.

9. Types of E Resources

The e-resources are basically divided in two major types are:

1. Online e-resources, which may include:
 - E-journal (Full text & bibliographic)
 - E-books
 - On-line Databases
 - Web sites
 - ETD (Electronic Theses and Dissertation)
2. Other electronic resources may include:
 - CD ROM
 - Diskettes
 - Other portable computer databases

10. Design & Development of a Portal

The "portal" is an entry point or a gateway to enter a world of resources, designed to save the user time, to unite him or her with relevant resources, and to encourage Maximum use of acquired resources. It may be customized to personal or role interests. The major service issue facing libraries at the moment is how to develop a network presence, how to make services available to users at the point in their research or learning activity that makes sense. The current network presence is in early stages; limited utility of the flat alphabetic lists of electronic resources to the user.

10.1. System Requirement for a Portal

The following are the pre-requisite system and software to design portal.

CPU Speed	3.0 GHz Pentium 4, Dual Core 2.0 (or higher) or Athlon 64 X2 (or higher)
RAM	1 GB XP / 2 GB Vista & 7
OS	Windows 7 / Vista / XP / 2000/Linux
Video Card	Video card must be 128 MB or more and should be a DirectX 9-compatible with support for Pixel Shader 2.0b (ATI Radeon X800 or higher / NVIDIA GeForce 7600 or higher / Intel HD Graphics 2000 or higher).
Free Disk Space	At least 7.6 GB of Space
Others Software	Apache, MySQL, PHP, OpenSSL

10.2 Software Requirement for a Portal

Prototype for e-journal portal has been design using, powerful package that includes a web development environment. This environment works in Windows operating systems and contains the necessary components to develop web applications. WAMP Server includes MySQL to handle data bases, Apache as a web server and web programming software PHP5.

It also incorporates other tools for managing databases such as PHPmyadmin, combination of Apache, MySQL and PHP for Windows. All the components are well integrated together and its installation is highly automated. WAMP Server will enable the installation of web applications that will be accessible from your local network. Thus, it is not only a complete package, but installing and configuring its elements it is an extremely easy task. Its installer allows you to customize your server without having to modify the configuration files.

10.3 Wamp Server

WAMP Server refers to a software stack for the Microsoft Windows operating system, created by Romain Bourdon and consisting of the Apache web server, OpenSSL for SSL support, MySQL database and PHP programming language.

10.3.1 MYSQL

MySQL is a relational database management system (RDBMS), and ships with no GUI tools to administer MySQL databases or manage data contained within the databases. It named after co founder Michael Wideniu's daughter, My and SQL stands for Structured Query Language.

10.3.2 PHP

PHP stands for Personal Home Page but now It stands for PHP: Hypertext Pre-processor. It is a server side scripting language designed for web development. Its code is used to generate a web page's HTML code, an image or some other data. It is created by Rasmus Lerdorf in 1994.

10.3.3 HTML

HTML referred as Hyper Text Markup language is the standard markup language used to create Web Page.

It is written in the form of HTML elements consisting of *tags* enclosed in angle brackets (like <html>).

Web browsers can read HTML files and render them into visible or audible web pages. Browsers do not display the HTML tags and scripts, but use them to interpret the content of the page. HTML describes the structure of a website semantically along with cues for presentation, making it a markup language, rather than a programming language.

HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.

Web browsers can also refer to Cascading Style Sheets (CSS) to define the look and layout of text and other material. The World Wide Web Consortium (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1999.

10.4 Prototype of E-Resources

Installation of Wamp Server

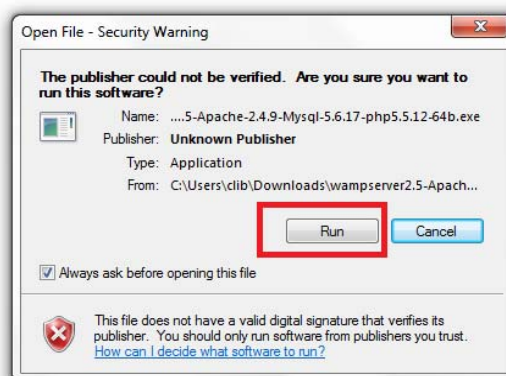
WAMP Server is a local server package for Windows, allowing you to install and host web applications that use Apache, PHP and MySQL. The WAMP Server can be downloaded from [http://www.wampserver.com/en/], Please select and download 32-bits or 64-bits version depending on what Windows you are running, here I have downloaded 64 bit for window operating system as my system is 64 bit window operating system.

The Process/Steps of Installation of Wamp Server are as Follow.



Step 1: Open downloaded folder

After downloading from the WAMP server site you will get this .exe file



Step 2: Run the exe file

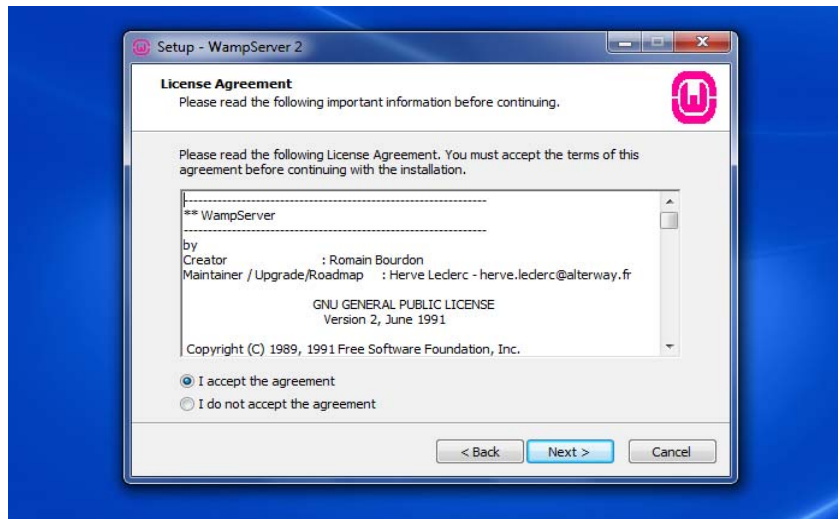
Please click on **Run** to install in your system, please note that to install you should have login as administrator account.



Step 3: Wizard setup

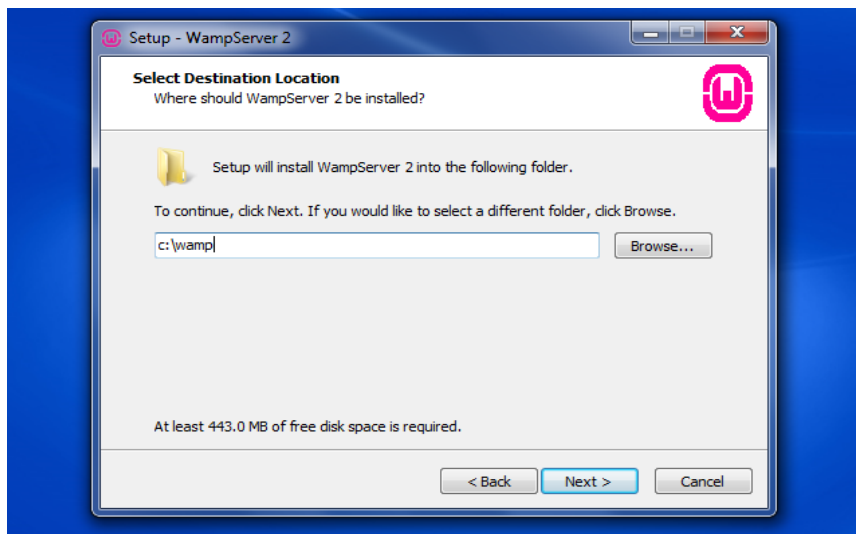
Please click **Next** button to proceed further installation.

You can here notice the details version of the application software i.e. Apache-2.4.9, MySQL-5.6.17



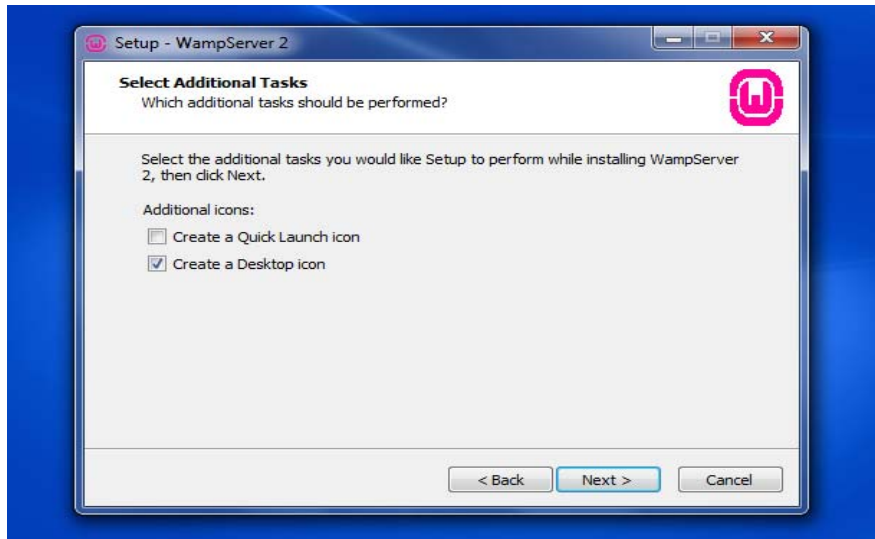
Step 4: License agreement

Accept the agreement and select **Next** button to proceed for further installation



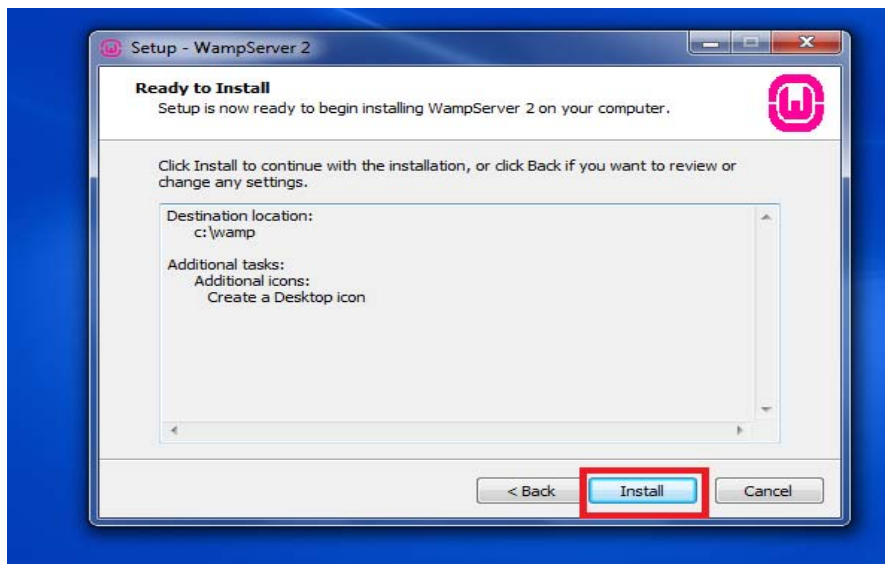
Step 5: Select destination location

Please Select the system drive path to be installed in your PC/Server and select **Next** button to proceed for further installation



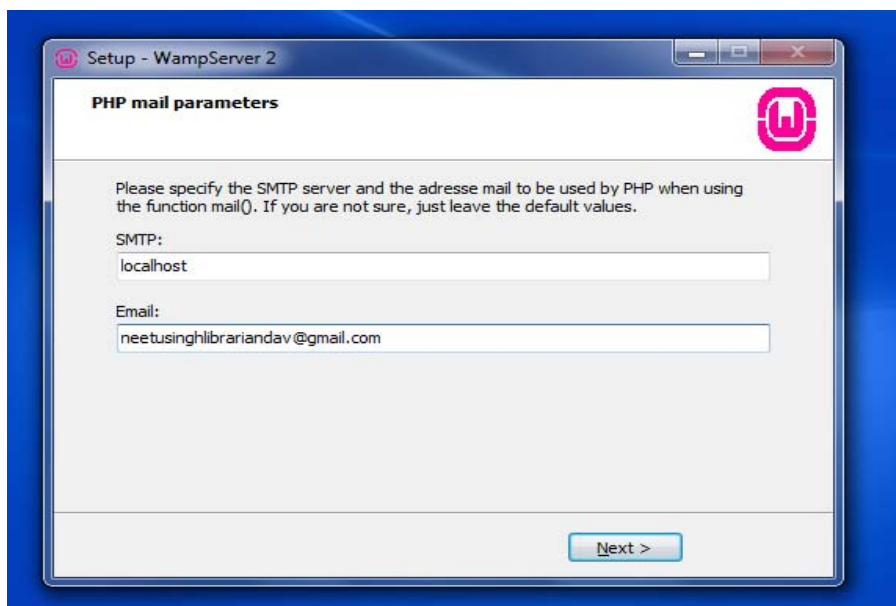
Step 6: Select additional tasks

Select either create Desktop button or Create quick launch button or both (optional) and select **Next** button to proceed for further installation.



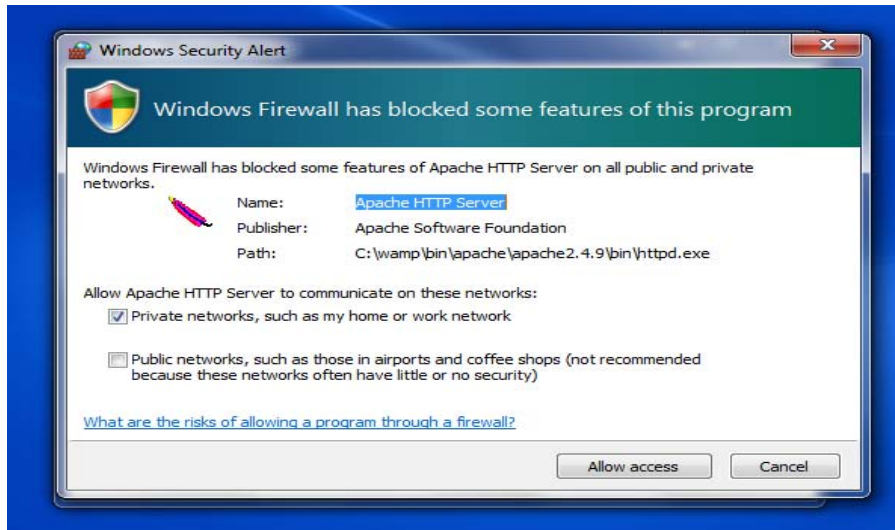
Step 7: Ready to install

Select **Install** button for final installation



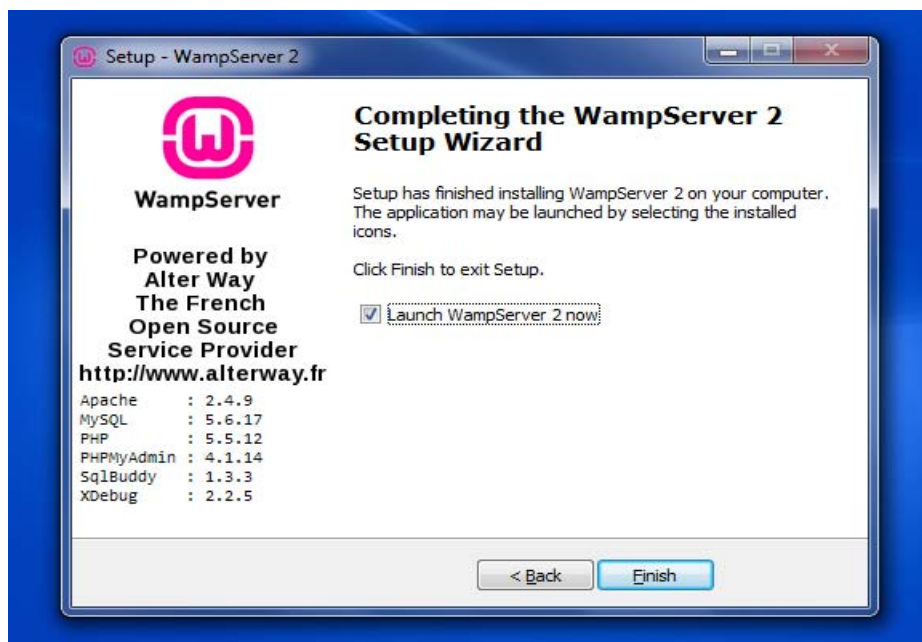
Step 8: PHP mail parameters

Please put your mail server IP address and your e-mail address then click the **Next** button.



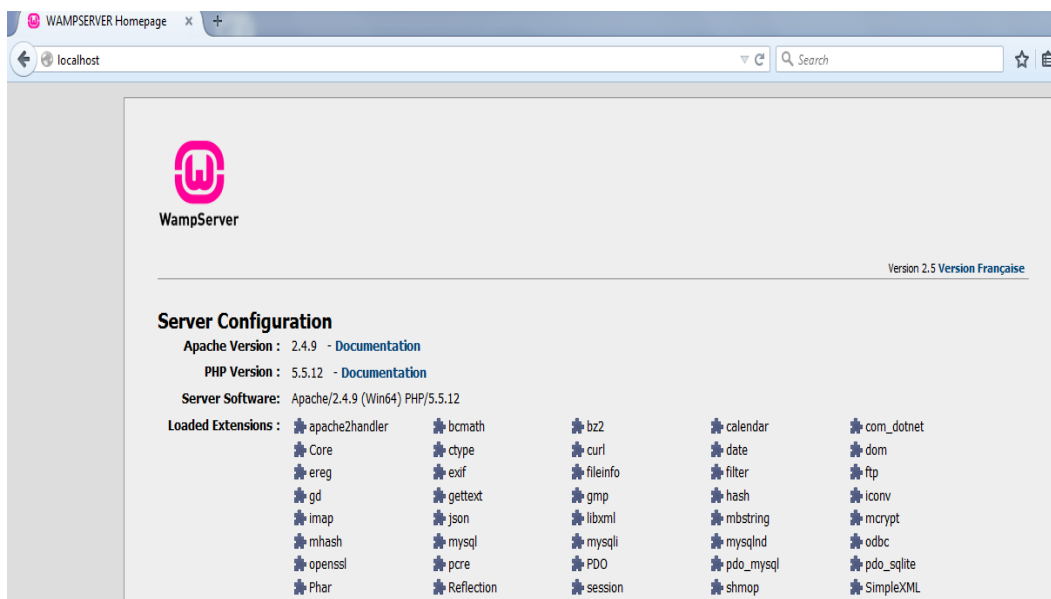
Step 9: Allow to apache HTTP server

Click on Allow access button for access to local network or public network.



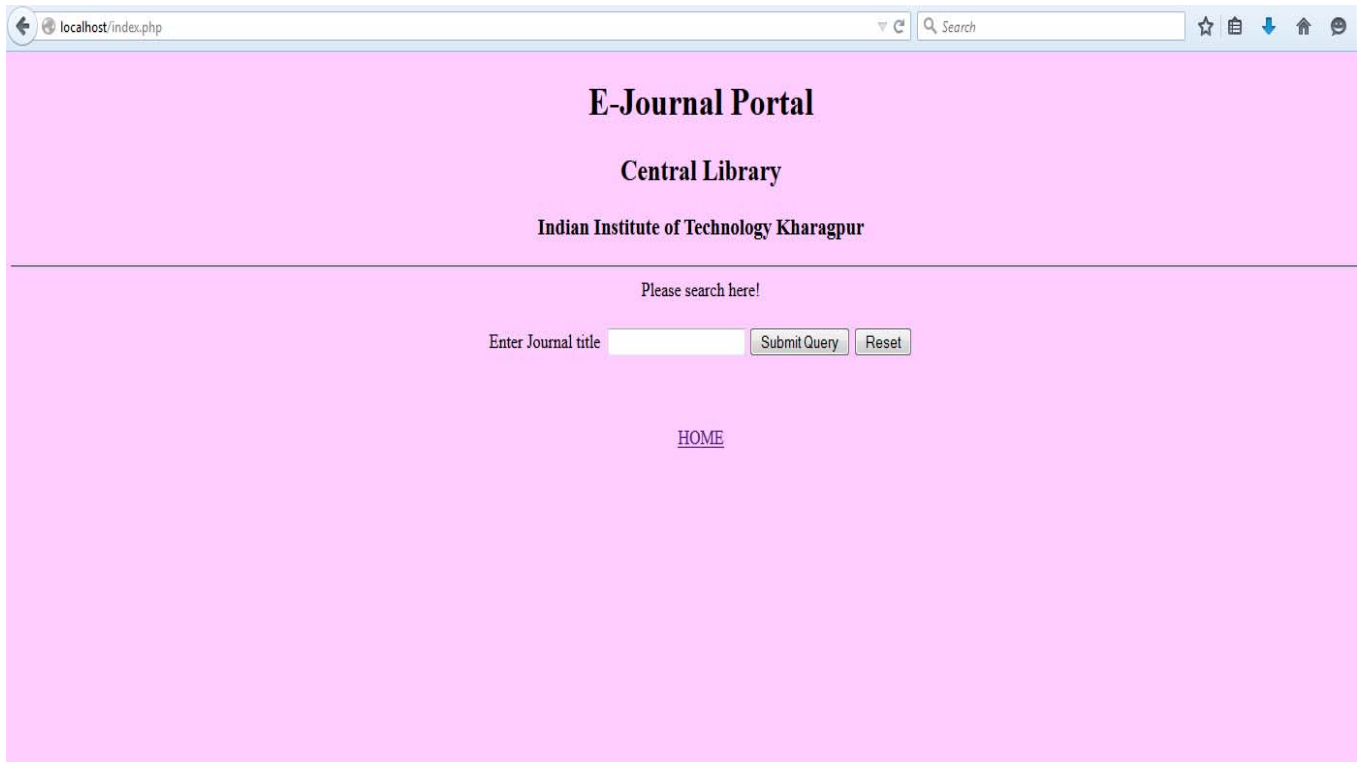
Step 10: Completing of WAMP installation

Click on Finish Button to complete the installation. Congratulation!!!! You have successfully installed the WAMP Server.



Step 11: Open local host

This is default installation of WAMP server access through local host



Step 12: Final web portal

Customized e-resources portal of a Library

11. Conclusion

E-resources as one of the most important information carriers are useful resources for libraries and information centers. Librarians are responsible for information organization and retrieval and they must cooperate in designing search engines and portal to offer subscribed e-journal searchable for users. Portals are one of the tools that can be used for accessibility e-journals to users. Portals as website are windows and World Wide Web and often have a search engine, links to useful pages, news and their services.

Portal source and deliver bespoke service solutions on research and education. The result is a simplified, low risk and cost effective approach. At Portal we think service. More importantly, the various users who access the different applications with different roles may prefer to have a single access point to all of them over the Internet. They almost prefer to personalize the applications and furthermore, to have the coupled applications coordinated. All these would be achieved through portals.

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