

Centralized E-Book Storage using Cloud

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Abstract

It is client side application which uses cloud. In this project we store e-books on cloud and develop browser based application through which client can access desired e-book. E-books stored on cloud are readable and downloadable. Home page of application will contain categories (such as computer engg, it engg. etc.). Each department is further categorized into subjects. E-books related to that particular subject will be displayed alphabetically. Functionality is provided i.e. uploading e-books by the user. The user who wants to upload e-book can send e-book to admin. Based on relevance that e-book will be uploaded by admin.

Keywords: Ubuntu cloud, LAMP, Books.

1. Introduction

American company SoftBook Press produced an e-reader called as SoftBook in the year 1998 the device was not popular because of fewer suppliers of e-books and e-readers. Amazon released the Kindle in 2007 and Apple's iPad in the year 2010 the e-book business began to expand, and digital content became a new technology in all fields of education. According to stats from Association of American Publishers the total quantity of e-book sales in the American market has exceeded physical books from January 2011. Along with the e-reader, digital content providers and network communication systems are necessary to strengthen the e-book market in order to shape an e-book generation.

In recent times the number of users accessing e-book services has expanded due to enhancement in the cloud computing technology. Due to storage limitations and computing ability inherent in mobile devices many companies store e-books in the infinite and low-priced space produced by cloud servers.

There are different cloud storage systems some have a very specific focus, like storing e-mail messages. Others are available to store all type of digital data. Some cloud systems are used for small operations whereas others are large that the physical equipment can fill up a warehouse. The facilities that domicile cloud storage systems are called **data centres**. Cloud Storage will allow users to store all kinds of files ranging from text to multimedia files. Users can share their file with other users. They upload, download, view the files from anywhere around the globe.

The purpose of this project is to design and build a web-application which access e-book stored in cloud using open-source resources of cloud computing technology.

2. Proposed Method

In this system the Librarian of the college will be the admin. Each student and staff member can login using their id and password. The application will also provide the facility of registration for those users who have not registered.

After the users have logged on, they can access any e-books which are categorized into different departments. The e-books are only readable.

2. Purpose

With this project we are trying to reduce the burden of issuing books. It is always hectic to manage books. It will help us to access e-books anytime, anywhere.

3. Objectives

- To develop a web application, configure a cloud and finally integrate web application with the cloud platform
- Also the burden of issuing books is eliminated.

4. System Design

This deals with data flow diagram, detailed flow graph, requirement analysis, and the design process of the

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front and back end design of the college department automation system.

5. Data Flow Diagram

A Data Flow Diagram (DFD) is a graphical illustration of the flow of Centralized E-book Storage System. Also be used for the visualization of Data Processing. DFD shows the relationship between the system and outside entities. This context-level DFD is then “nullified” to show more information of the system being modeled. A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as function that transforms the given input into required output. Movement of data through the different transformations or processes in the system is shown in Data Flow Diagram of Figures.

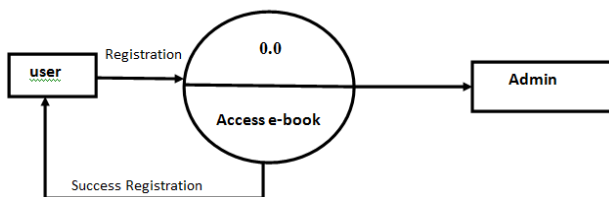


Fig.1 User Registration

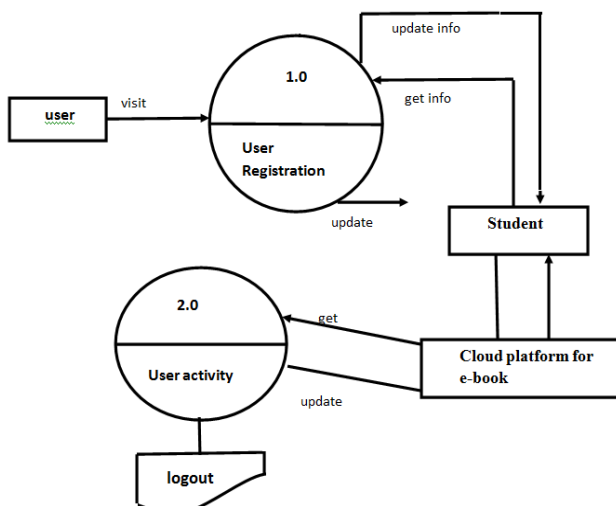


Fig.2 Accessing E-book

6. Workflow Diagram

A Workflow Diagram is a form of Flowchart mapping the Flow of tasks from one person or group to another. It typically contains set of symbols illustrating actions connected by arrows pointing the flow from one to another.

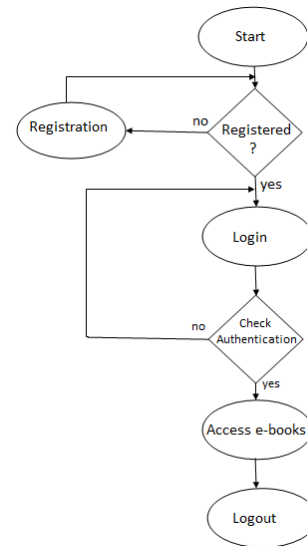


Fig. 3 Access E-books

7. Methodology

A. PHP

PHP is a server-side language modeled for web development and also used as a general-purpose programming language. Developed by Rasmus Lerdorf in 1994, the reference implementation of PHP (powered by the Zend Engine) is produced by The PHP Group. PHP originally stood for Personal Home Page, and now it stands for PHP: Hypertext Pre-processor.

PHP code can be embedding with HTML code, or it can be used in mixture with template engines and web frameworks. PHP code is processed by a PHP interpreter, which is usually implemented as a web server’s Gateway Interface (CGI) executable. After the PHP code is interpreted and executed, the web server sends output to its client in form of web page – for example, PHP code can generate a web page’s HTML code, an image, or other data. PHP has also evolved to include a command-line interface (CLI) and can be used in standalone graphical applications.

PHP has been mostly used and can be deployed on web servers on almost every operating system and platform, free of charge.

B. MYSQL

MySQL is the second mostly used open-source relational database management system (RDBMS). The SQL stands for Structured Query Language. MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack LAMP stands for Linux, Apache, MySQL, Perl/PHP/Python. MySQL is often used for those open source projects that require a full-featured database management system.

C. MaaS (Metal as a Service)

MaaS stands for "Metal as a Service". Its major function is to bring language of the cloud to physical servers. It makes it easy to set up the hardware on which services are deployed that needs to be scaled up and down dynamically. This feature is important in cloud since cloud requirement can fluctuate dynamically. Only with a simple web interface, we can add, commission, update and recycle servers at our will. As per requirements or needs change, we can respond rapidly, by adding new nodes and dynamically re-deploying them between services.

D. LAMP Server

LAMP is acronym for Linux, Apache, MySQL and PHP. The term LAMP first referred to four key components that work exceptionally well together for hosting powerful database driven websites.

E. APACHE Web Server

APACHE is the name of the most common web server used on the internet. It is the creation of the APACHE Software Foundation, a world-wide group of programmers. Few APACHE Servers are free. It works on an amazing array of different operating systems.

Conclusions

Cloud computing is an everlasting computing environment where data are delivered on-demand to authenticated devices in a secured manner. This project briefly explains the setup of a private cloud in cluster based environment using open source technologies like MaaS and OPENSTACK. We will create a web based application through which access of e-books will be possible for users anywhere, anytime.

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