Communication Portal using XAMPP

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ABSTRACT

PHP is a widespread coding language that is used in web application. In this project, we have worked on enhancing the Hypertext Pre-Processor and usability in an advanced way. This paper consists of a very new concept of group talk initially as a beta version. It is developed in a more efficient and user-friendly environment for not just officials but for lay man scenarios. This Chat Box allows a more optimized and reliable source of communication between a group of people that are working simultaneously.

Keywords: Chat Box, PHP, XAMPP, FOSS

I.   INTRODUCTION

Hypertext Pre-Processor is a server scripting language, which is used for creating effective, interactive and efficient web pages and applications. One of the best things about PHP, which makes it widely used, is that it is Free and Open Source Software (FOSS). PHP code can also be embedded in HTML code or in a combination of different web templates managers, web content or management systems. An interpreter as a module in the web server executes the code. The web server then combines the resulted code. The codes may be of any data i.e. pictures, videos with the originated web page. PHP codes can be implemented as Command line Interface, Standalone Graphical Applications and Common Gateway Interface.

In computer networking, a localhost is the hostname of the computer. It defines *this computer.* The function of localhost is to access the networking services that are running on it through the loopback network interface. Loopback back is the flow of items back to their own source without any deliberate alteration. Usage of this interface bypasses the network hardware. This mechanism can be used independently while testing software during its initial development stages. The keyword *localhost* is a reserved name to avoid any misconception with the definition of hostname.

XAMPP is a free and open source software. It is a cross platform web server solution stack. It is widely used for PHP development. It consists of Apache HTTP server, MariaDB database for the scripts that are written in PHP and Perl. It is very user friendly which makes it very easy for the developers to create servers. Being a cross platform, it works well on all operating systems, namely, Mac, OS, Windows.

This paper includes a concept of group talk. Now in this group talk any number of users are connected through an online server. There is no limit to the number of users. The users can communicate to each other while working simultaneously. All the communication is stored in the database. The database administrator can monitor all the communication. Any user can upload a file and it would be available for all the other users to view and download it. The uploaded files are simultaneously stored in the database too so even if the files are removed from the download option they are still available to the database administrator.

The remaining paper is structured accordingly. Proposed algorithms are described in section II. Experimental results are propounded in section III. Section IV contains concluding remarks.

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II. PROPOSED ALGORITHM

2.1 Objective

• To ease communication between a group: While working with a group of people, a person usually tends to have a communication problem. They have to share their ideas and their work simultaneously but for that, people use 2-3 different portals. They will discuss the topics on one portal and then send their work on the other, which creates redundant hassles. The idea is to create a portal where the users can do both, interact and share their work, on the same portal. This would not only increase the speed of working but a single file would be available to all the other users when one uploads it on the portal.

• Developing a more efficient and user-friendly communication channel: To create a platform that is not just efficient for a professional worker but even for a nonprofessional. The platform should be as much user friendly that anyone can start the conversation by inviting people to the portal.

• To prevent obscenity: To develop a platform where there is a check on any kind of obscenity. Since all the chats and files would be stored in the database, so the database administrator can monitor everything. It would ensure that no one spreads any kind of unwanted information.

• To describe the power of PHP: PHP is a very efficient scripting language to create web based applications. It creates dynamic web pages and it remains robust for a good period of time. PHP scripts are easily debuggable. It creates web pages that are secure. The functionality of PHP is extremely easy which makes it user friendly for both developers, and clients.
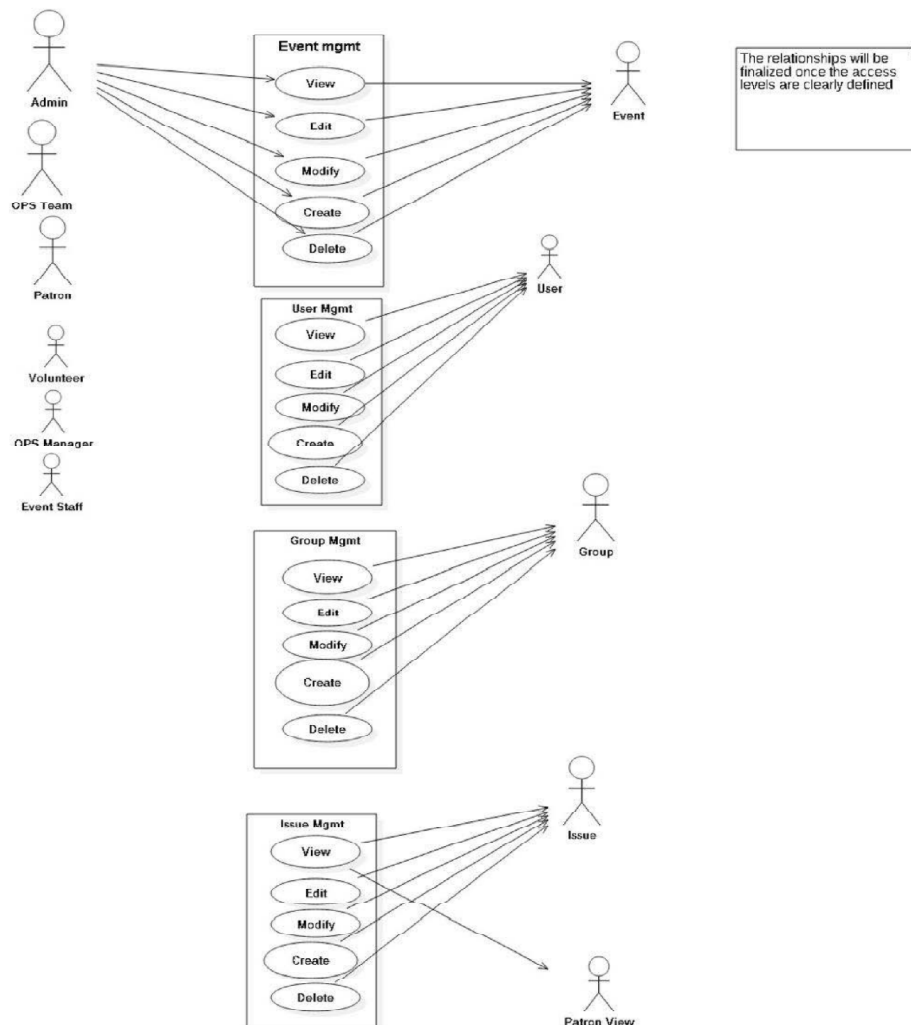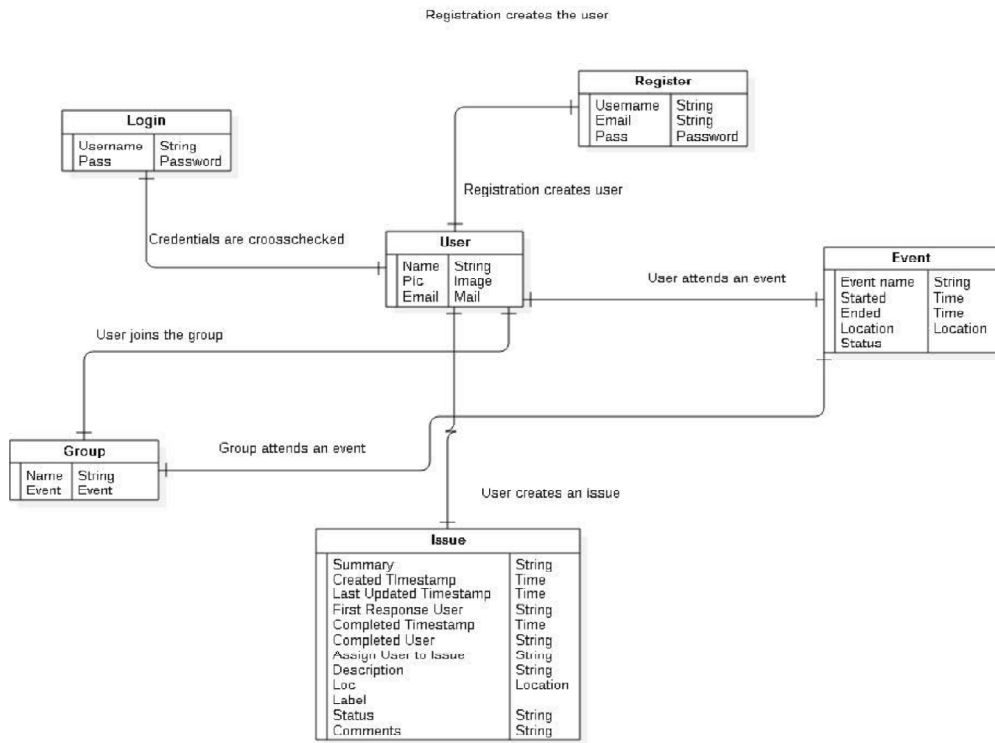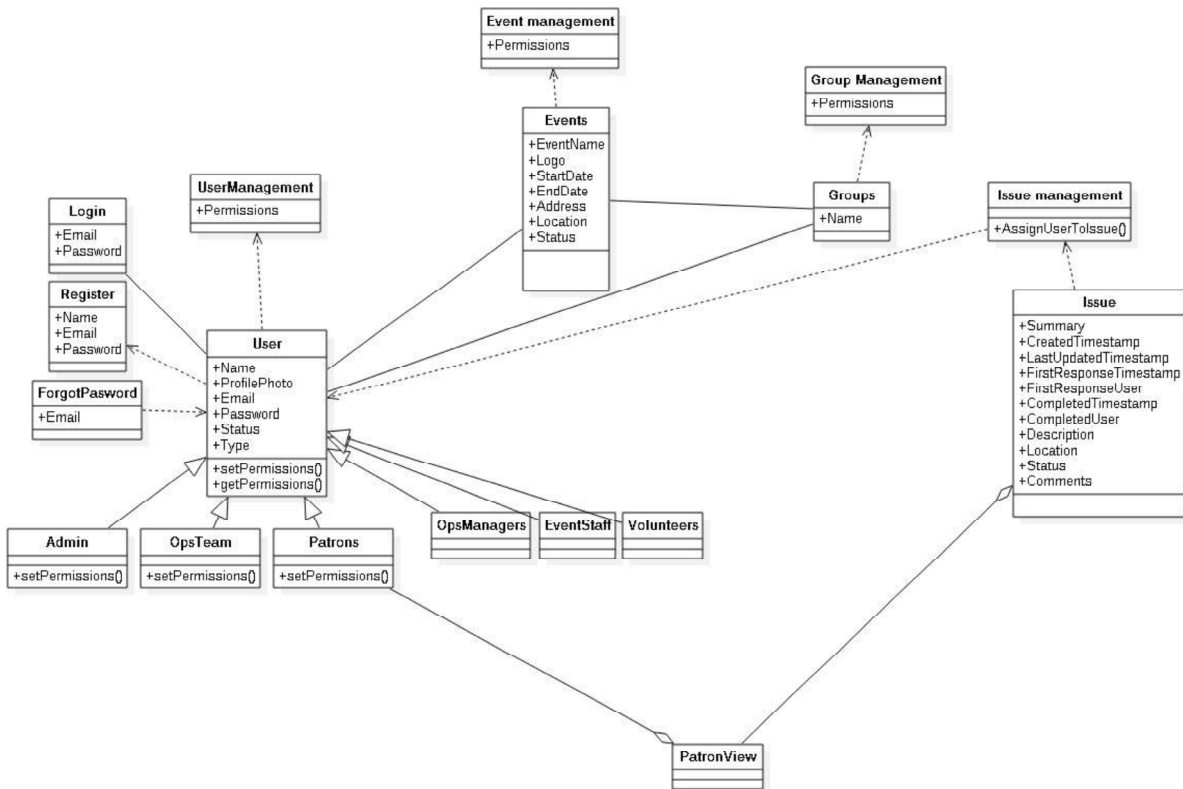

Figure 1: Algorithm

Registration creates the user

Register

Username	String
Email	String
Pass	Password

Login

| Username | String |
| Pass | Password |

Registration creates user

Credentials are croosschecked

User

Name	String
Pic	Image
Email	Mail

User attends an event

Event

Event name	String
Started	Time
Ended	Time
Location	Location
Status	

User joins the group

Group

| Name | String |
| Event | Event |

Group attends an event

User creates an issue

Issue

Summary	String
Created Timestamp	Time
Last Updated Timestamp	Time
First Response User	String
Completed Timestamp	Time
Completed User	String
Assign User to Issue	String
Description	String
Loc	Location
Label	
Status	String
Comments	String

Figure 2: Algorithm

Event management

+Permissions

Group Management

+Permissions

Events

+EventName
+Logo
+StartDate
+EndDate
+Address
+Location
+Status

Groups

+Name

Issue management

+AssignUserToIssue()

UserManagement

+Permissions

Login

+Email
+Password

Register

+Name
+Email
+Password

ForgotPassword

+Email

User

+Name
+ProfilePhoto
+Email
+Password
+Status
+Type

+setPermissions()
+getPermissions()

Issue

+Summary
+CreatedTimestamp
+LastUpdatedTimestamp
+FirstResponseTimestamp
+FirstResponseUser
+CompletedTimestamp
+CompletedUser
+Description
+Location
+Status
+Comments

OpsManagers **EventStaff** **Volunteers**

Admin

+setPermissions()

OpsTeam

+setPermissions()

Patrons

+setPermissions()

PatronView

Figure 3: Algorithm

2.2 Methodology

• Setting up XAMPP and Localhost:

XAMPP - **cross**-platform, **A**pache, **M**ySQL, **P**HP and **P**erl.

Step 1: The download link for XAMPP was downloaded from *https://apachefriends.org/download.html*.

Step 2: "Save" was clicked when prompted for the download.

Step 3: Antivirus was disabled as it causes XAMPP components to behave capriciously

Step 4: User Access Control was disabled as it limits write permissions to XAMPP's default installation directory

Step 5: Once downloaded, the downloaded file was run on the computer.

Step 6: Initial installation was completed and default settings were saved and accepted.

Step 7: A folder was chosen so as to install XAMPP and saved in drive.

Step 8: After the completion of installation, the command window was exited.

Step 9: Post that, XAMPP Control Panel was started.

Step 10: Apache and SQL components were started.

Step 11: Apache install was then verified by clicking on 'Admin' link in the control panel.

Step 12: SQL install was verified by clicking on 'Admin' link in the control panel.

Step 13: In the browser, 'localhost' was typed and checked

Step 14: The link redirected to a page which said "XAMPP was successfully installed".

Step 15: As a result, localhost/phpmyadmin was opened.

Step 16: A language was chosen in the splash screen

Step 17: To test whether PHP was installed correctly in XAMPP, a small code was written and saved as test.php

Step 18: To access this document on localhost, localhost/test.php was typed and tested.

2.3. Security Constraints

While working on the project we went through many security options rectifying various errors such as:

1. Phishing scams: They are typically corrupt email messages appearing to come from legitimate ventures. These messages usually direct you to a spoofed website or otherwise get you to disclose private information. Through this, the scammer can easily retrieve the data to misuse it and the perpetrators then use this private information to commit identity theft. An example of this is a job offer, or a lucky winner contest etc.

2. Rootkit: It is a collection of tools/programs that enable administrator level access to a computer or computer network. It is possible that the malware could render undetected even by an anti- virus software.

3. Trojans: These applications gain entry into user's device by creating a false identity or by posing as some other person, like free screensavers. Once they gain the access to the system, they can manipulate the user data and even stop the other applications from running, especially the security softwares.

4. Browser hijackers: It is a malware program that changes the browser settings of a user and always opens a certain web page by default on start, or alter the user's homepage, or not allow any other webpage to open, mainly the antivirus sites. It is difficult to uninstall or delete these files, as some part of the malware is loaded into the memory when the system boots.

5. Keylogging: It refers to the use of software to record the sequence of keys pressed by the user usually a report of the keystrokes are passed on to the spyware controller on the Internet. The keystrokes of special interest are passwords or usernames and online banking details and thieves know how to access these passwords.

6. Spyware: They are designed to use or collect the data of the user without his/her knowledge or approval. Spywares are installed mainly by the people who have physical access to the user's phone. Spywares in the mobile feed on call history, pictures, emails and messages. Mostly these are not used maliciously.

7. Malwares: They take complete control of the victim's phone. They are designed to engage in malicious activities such as financial frauds and theft as they can send pictures, mails, messages without the victim's knowledge by stealing the personal and financial data.

Some examples of the above threats and vulnerabilities are:

1. Heart bleed bug: it lets the hackers extract passwords from thousands of websites

2. Shellshock: it is found in software called bash that like windows lets you control the PC using text commands rather than desktop .bash is a Unix shell used by Linux and apple OSX. It goes beyond websites and home devices and could affect power plants, hospitals, etc. called the critical national infrastructure.

3. Simplocker: It is a virus that sneaks into devices by hiding in malicious applications to breach the data.

III. EXPERIMENT AND RESULT

As you enter the website you'll be asked to enter your name in order to log in to the website. You can enter your name in the space given. When you enter your name, this name is stored in the database. Next you are redirected to another web page where at one side you can see the users that are online at that time and in the center, the chat box is opened. You can start talking to everyone at that time. All this communication is stored in the database. The database stores each and every message. It is so particular that it can separate out all the communication done by a single person with the respective time of each message. Besides this, links to particular websites are also given in the web page that might come in handy for the users present to increase the efficiency in their working. There is a log out button given on the page in case you wish to leave the chat. But logging out doesn't make you lose your data. When you log in next time all the chats and communication is still present so you don't have to start fresh again. Another option is given on the web page with the name Upload/Download. As you click on this, another webpage opens up. This webpage is built with the purpose so that users don't have to use some other portal for sharing their work. Here they can upload the files and it would be available to all the users that are included in the group talk. The advantage of this creates a secure platform for all the users. Only the users that invited to the group talk would be able to see the files so as there is no leak of information. You can upload any kind of file, an image or a word document etc. As soon as you upload them it is available to everyone concerned. You can even see the previous files that have been uploaded by other users. Now when a file has been uploaded it is available to download. All the files that are uploaded are also stored in the database so even if it gets removed from the list of files there is always a copy in the database. Hence the data is never lost. But this is not just for professional/working class anyone can join this. People can talk to their friends on this and share files such as a song or a video etc. One advantage that it has over its predecessor that not only it is small in size but there is no limit to the number of users making is more efficient and wider by reaching more people.

This concept can be applied almost everywhere. For instance, in an office where are group of people work on a same project it would be efficient for them work at the same portal. Suppose a head of Department in an office wants to send his subordinates some new details of a project so instead of mailing them he can just upload it on the portal and it would available to everyone who is working under him. This would decrease the redundancy and time. Despite professional area any other person can use this. If someone wants to talk to his/her friends they can just invite them to website and interact with them. They can share images or videos of their latest vacations, or anything that is important to them with the people they want to share these memories with. Currently, this is based on a University level.
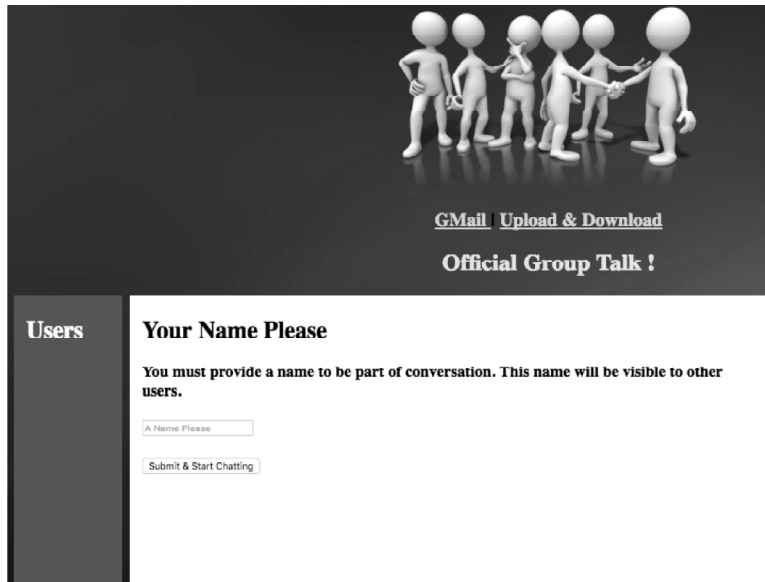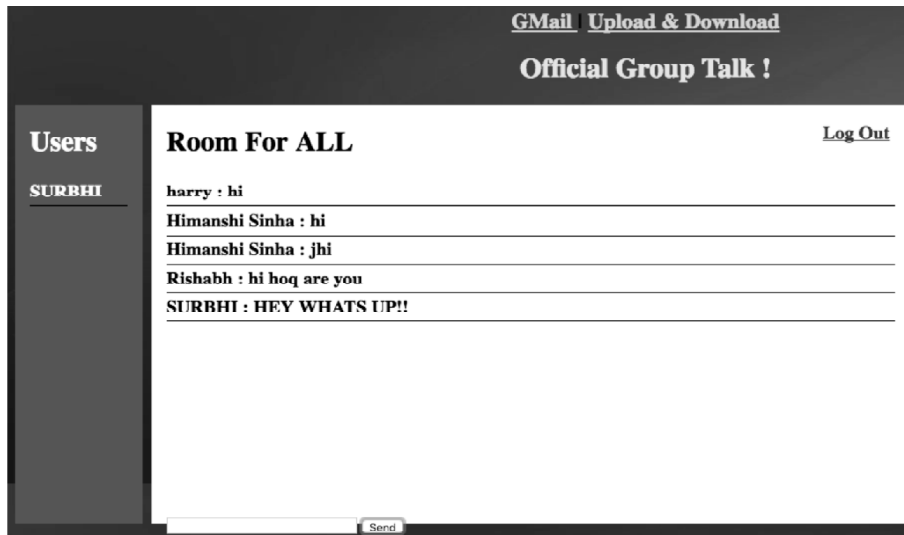
Figure 4: Login Page
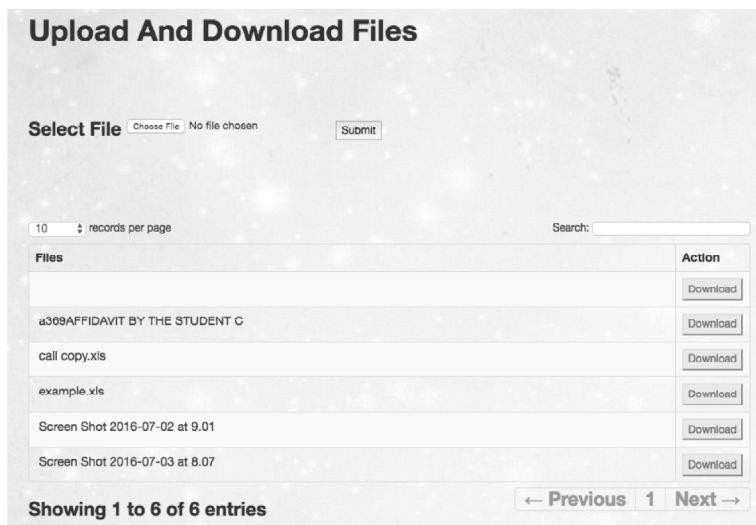

Figure 5: Communication Portal

Figure 6: Upload and Download Page

IV. CONCLUSION AND FUTURE WORK

By this project, we made a portal that allows user to interact in a more efficient manner. They can communicate and share files at the same time with multiple different users. This portal can, not only be used by one section of people but by everyone. Since everything is stored in the database, obscenity is kept to check by the database administrator. At last, by this we enhanced the power of PHP in a more advanced manner. Hence, it should be considered as the master place for group talk and group sharing of files.

The limitations of this project are:

1. Security issues

2. More cost

3. No filters

As per the discussions above, we have seen various efforts that are being made in developing a generalized group chat. PHP is a widespread coding language that is used in web application. In this project, we have worked on enhancing the Hypertext Pre-Processor and usability in an advanced way. This paper consists of a very new concept of group talk initially as a beta version. It has been developed in a more efficient and user-friendly environment for not just officials but for lay man scenarios. This Chat Box allows a more optimised and reliable source of communication between a group of people that are working simultaneously.

Furthermore, we will add security measures that will be completely end-to-end encrypted with most efficient measures with highly defined encryptor concept. More filters will be added so that a user can chose their specific groups, can get the authentication done, can send and receive data as per the requirements. They can also update their authentication as per there requirements. Our next focus is to make the upload and downloads of the files in unlimited amount and these files will be encrypted end to end with the database being the only source of documented proof.

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