

**MINI PROJECT – II
(2020-2021)**

**REPORT ON
SayIt- A Social Networking Website**

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Declaration

I hereby declare that the work which is being presented in the *Mini project -II* “*SayIt – A Social Networking Website*”, in partial fulfillment of the requirements for Mini Project-II viva voce, is an authentic record of my own work carried under the supervision of **Md. Farhan, Technical Trainer, GLAU**.

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Course: B.Tech. (CSE)

Year: III

Semester: VI

CERTIFICATE

This is to certify that the mini project report **entitled "SayIt – A Social Networking Website"** submitted by Palak Maheshwari(181500442) and Rajat Khanna(181500546) has been carried out under the guidance of Md. Farhan Sir, Technical Trainer, Department of Computer Engineering & Applications, GLA University, Mathura.

Signature:

**Palak,
Rajat**

Date:

**20-04-
2021**

ACKNOWLEDGEMENT

The project work in this report is an outcome of continuous work over a period and drew intellectual support from various sources. We would like to articulate our profound gratitude to all those people who extended their wholehearted co-operation and have helped us in completing this project successfully.

We are thankful to Md. Farhan Sir for teaching and assisting us in making the project successful.

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ABSTRACT

The computer has brought revolution in every sphere of human life, whether it is business, education field, governance, medical science etc. The computer has reduced the human work load, businesses are going global and everything is available at the click of mouse.

The objective of the project is to design a Social Networking Site which enables the users to connect to one another. They can see each other's posts and can send messages to each other.

We have used php for backend development and MySQL/phpMyAdmin for database connectivity. Our motivation for the project came from my enthusiasm and strong urge to learn full stack development which is one of the fastest growing technologies in today's world.

We have used several database tables and queries to develop our project. We have used some templates for the development of our project and JS also.

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Chapter 01

Introduction

1.1 Overview

The computer has brought revolution in every sphere of human life, whether it is business, education field, governance, medical science etc. The computer has reduced the human work load, businesses are going global and everything is available at the click of mouse.

Social media helps you humanize a brand and build genuine relationships with your community. It shortens the distance from your audience, especially when you address them from personal accounts. Social media is a buzz system. The group members know php basics so by making this project, we want to enhance our skills and master php in a well oriented manner. Social Networking website is the best basic project anyone can start with, so we selected this topic, to study the algorithms involved in social networking.

1.2 Objective

The main objective of the project are as follows:

- To help the people to connect with their friends.
- To manage the details of all the users registered on the site along with the details about their posts, the people they follow and all other aspects.
- To help the business-minded people in their business. The people can post about their domains and then can connected globally with other peoples.
- To reduce the manual work of managing the details of the people who use this particular site.

Chapter 02

Software Development Tools

2.1 Operating System

The programming work was carried out on one computer which ran the window 10 system. The PHP website was tested on two computers which ran window 10 and Ubuntu and it was tested on chrome and Firefox

2.2 XAMPP

XAMPP is an abbreviation where *X stands for Cross-Platform*, *A stands for Apache*, *M stands for MySQL*, and the *Ps stand for PHP and Perl*, respectively. It is an open-source package of web solutions that includes Apache distribution for many servers and command-line executables along with modules such as Apache server, MariaDB, PHP, and Perl.

XAMPP consists of the two main things that you need to know when starting Web development. They are:

1. Apache Web Server
2. MySQL/phpMyAdmin)

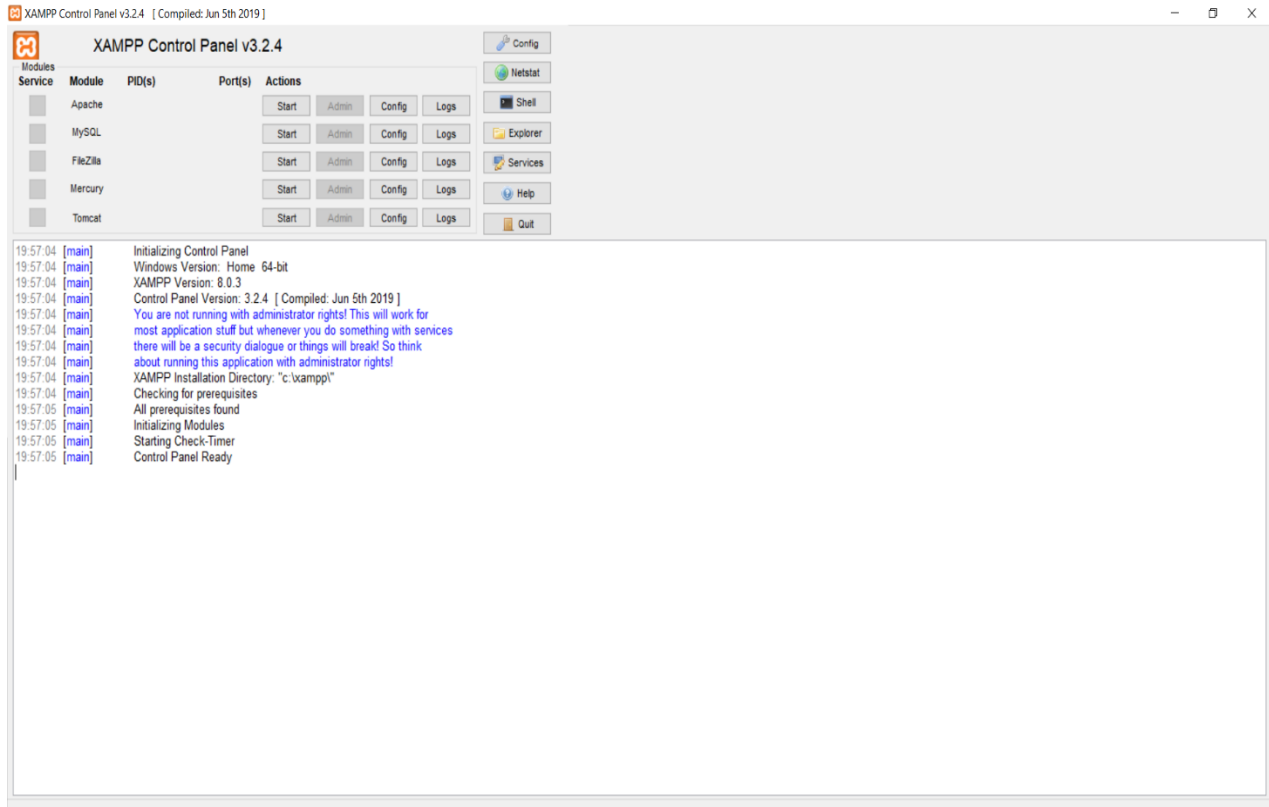
- Apache Web Server:

It is a web server that allows you to host your websites or any other content for that matter. It is free of charge.

- PhpMyAdmin

The database management tool used in this project was phpMyAdmin. It is an open source tool written in PHP. It realizes the web database management instead of the traditional system implementation.

SayIt – A social Networking Site



2.3 MySQL database (phpMyAdmin)

MySQL is an open- source relational database management system (RDBMS). We have used phpMyAdmin for storing the various details of the users. We have created various tables and used them to perform the functionality as per requirements. We have connected to the database using Php PDO.

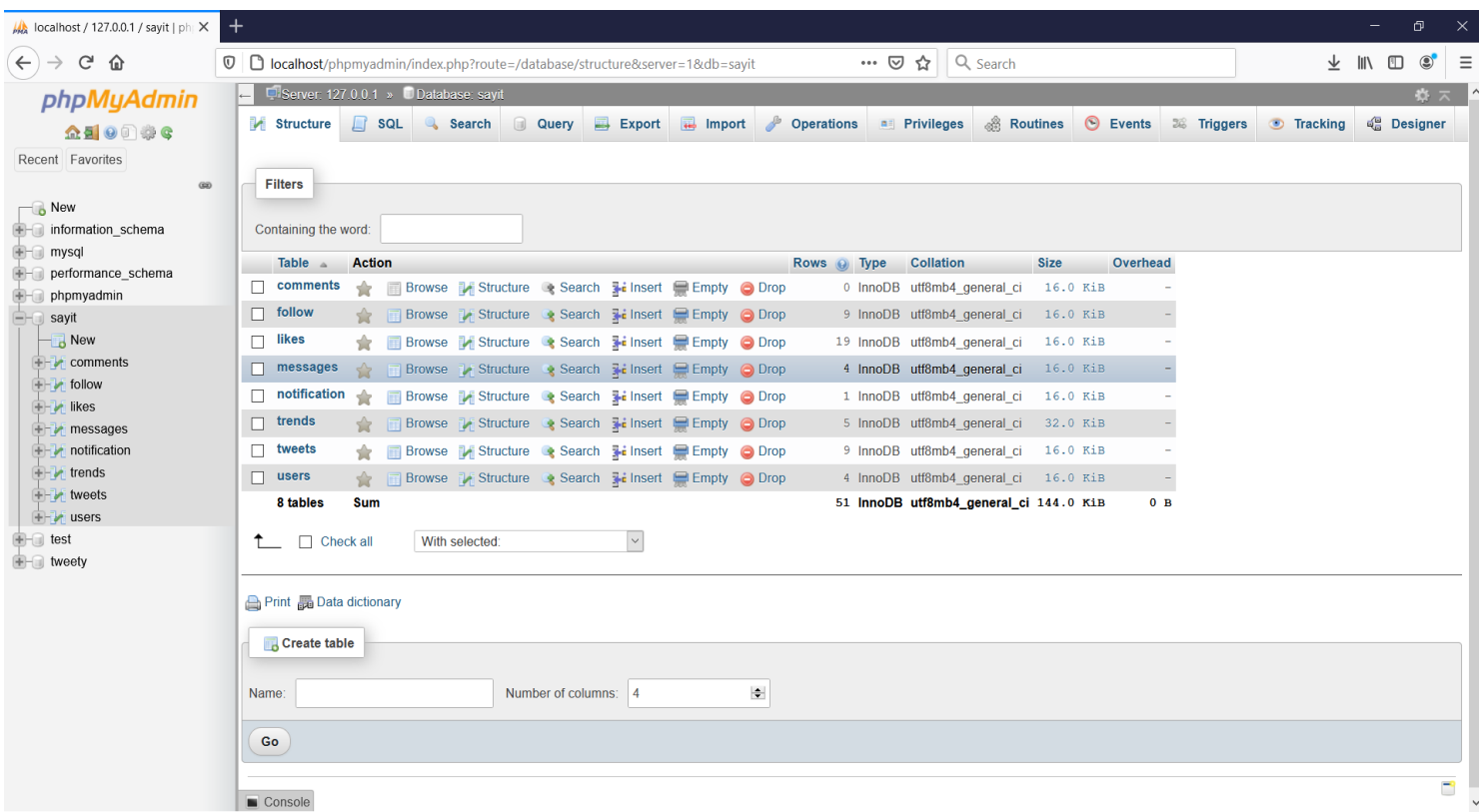
PDO refers to **PHP Data Object**, which is a PHP extension that defines a lightweight and consistent interface for accessing a database in PHP. It is a set of PHP extensions which provide a core PDO class and database-specific driver. Each database driver can expose database-specific features as a regular extension function that implements the PDO interface.

```
$dsn = 'mysql:host=localhost; dbname=SayIt';
```

```
$user = 'root';
```

```
$password = '';
```

```
$BASE_URL = 'http://localhost/php projects/SayIt/';
```

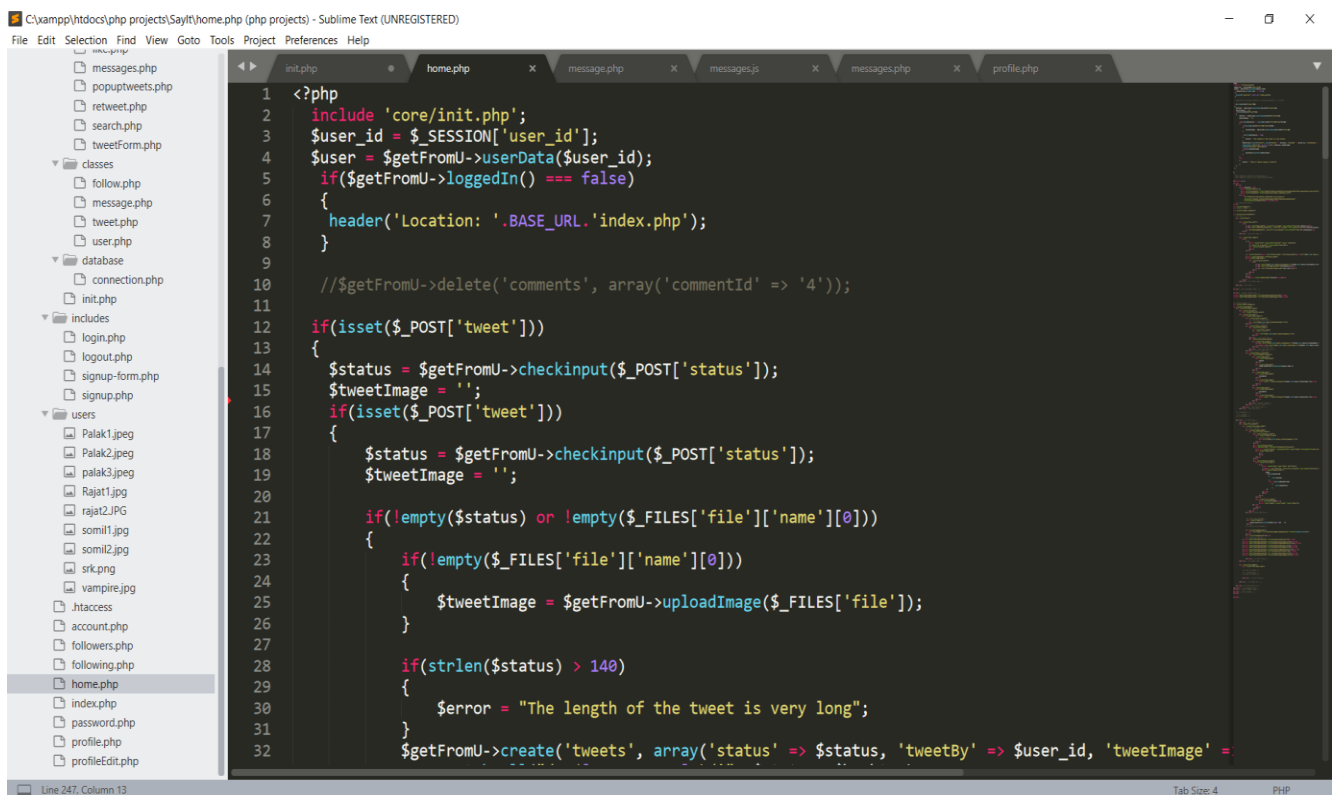


2.4 Sublime Text Editor

Sublime Text is a shareware cross-platform source code editor with a python API. It natively supports many programming languages and markup languages and functions can be added by users with plugins, typically community-built and maintained under free software licenses.

The following is a list of features of Sublime Text:

- "Goto Anything," quick navigation to files, symbols, or lines
- "Command palette" uses adaptive matching for quick keyboard invocation of arbitrary commands
- Simultaneous Editing: simultaneously make the same interactive changes to multiple selected areas
- Python-based plugin API
- Project-specific preferences
- Extensive customizability via JSON settings files, including project-specific and platform-specific settings
- Cross-platform (Windows, macOS and Linux) and Supportive Plugins for cross-platform



CHAPTER 03

INTRODUCTION TO PHP (SCRIPTING LANGUAGE)

3.1 INTRODUCTION

PHP (recursive acronym for PHP: Hypertext Pre-processor) is a widely-used open source general-purpose scripting language that is especially suited for web development. It can also be embedded with HTML. The developer could use PHP and HTML to generate the homepage. Once a visitor accesses the index page, the server will execute the PHP command and send the outcomes of implementation to the visitor's browser, however, the difference is that PHP is open source and supports most of the popular platforms and it can be run on a Windows platform and multiple versions of UNIX. [4] PHP does not require any pre-processing before rapid feedback; it does not need mod_perl to adjust the memory image of server. PHP consumes few resources, as a part of the IIS server, PHP does not need to call an external binary code and the server does not bear any additional burden. In addition to operating the page, PHP can cooperate with HTTP. The cookie and digital signatures management can be modified in the settings, and it provides a good connectivity to the database. There is no need to have a very special development environment with PHP, the block starts and ends with the tags . Certainly, PHP could be configured with tags and even in ASP format and it would deal with everything among those signs, but not in the same file. The PHP programming language is similar to Pascal. There is no need to define any variables before using them, and it is very simple to establish the array and the Hash. PHP also has some object-oriented features which are provided to support and to organizing and packaging the source code.



3.2 INSTALLATION AND BASIC SYNTAX

Since PHP is open source, it is easy to download the Windows Binaries from the PHP official website. The PHP version used in this project is 5.2.0. Above all, the PHP 5.2.0 zip file was downloaded and decompressed to local hard disk. In order to associate PHP with the local database, some extensions were enabled in a text file called php.ini such as string, gd2 and MySQL. In the next place, index.php was added into the default library of IIS so that the server could recognize the php file located in the root of the web server once the visitor accesses the IP address or the DNS name. Figure 1. A sample test file. The successful of installation was tested by creating a file called info.php which is shown in Figure 1, the file was placed into default website folder and the browser showed the result by typing <http://localhost/info.php>. Localhost is the DNS name of local IP address.

<?PHP //PHP opening tag

Statement 1;

Statement 2;

.....

.....

Statement n;

?> // PHP closing tag

We Define a Variable in PHP using Dollar (\$) sign.

Ex: \$asum, \$count , etc.

We use echo function for printing messages.

echo "rajat";

3.3 CHARACTERSTICS

Five important characteristics make PHP's practical nature possible –

- Simplicity
- Efficiency
- Security
- Flexibility
- Familiarity

3.4 APPLICATIONS

As mentioned before, PHP is one of the most widely used language over the web. I'm going to list few of them here:

- PHP performs system functions, i.e. from files on a system it can create, open, read, write, and close them.
- PHP can handle forms, i.e. gather data from files, save data to a file, through email you can send data, return data to the user.
- You add, delete, modify elements within your database through PHP.
- Access cookies variables and set cookies.
- Using PHP, you can restrict users to access some pages of your website.
- It can encrypt data

Chapter 04

Introduction to php PDO

4.1 Introduction

PDO refers to **PHP Data Object**, which is a PHP extension that defines a lightweight and consistent interface for accessing a database in PHP. It is a set of PHP extensions which provide a core PDO class and database-specific driver. Each database driver can expose database-specific features as a regular extension function that implements the PDO interface.

PDO mainly focuses on data access abstraction rather than database abstraction. It provides **data-access abstraction layer**, which means, regardless of which database we are using, we have to use the same functions provided by that database to issue queries and fetch data. PDO does not provide data abstraction, as it does not rewrite the SQL or emulate missing features.

4.2 Benefits

PDO is the native database driver. There are some benefits of using PDO that are given below:

- **Usability** - It contains many helper functions to operate automatic routine operations.
- **Reusability** - It offers the unified API to access multiple databases.
- **Security** - It uses a prepared statement which protects from SQL injection. A prepared statement is a pre-compiled SQL statement that separates the instruction of the SQL statement from the data.

4.3 PDO Classes

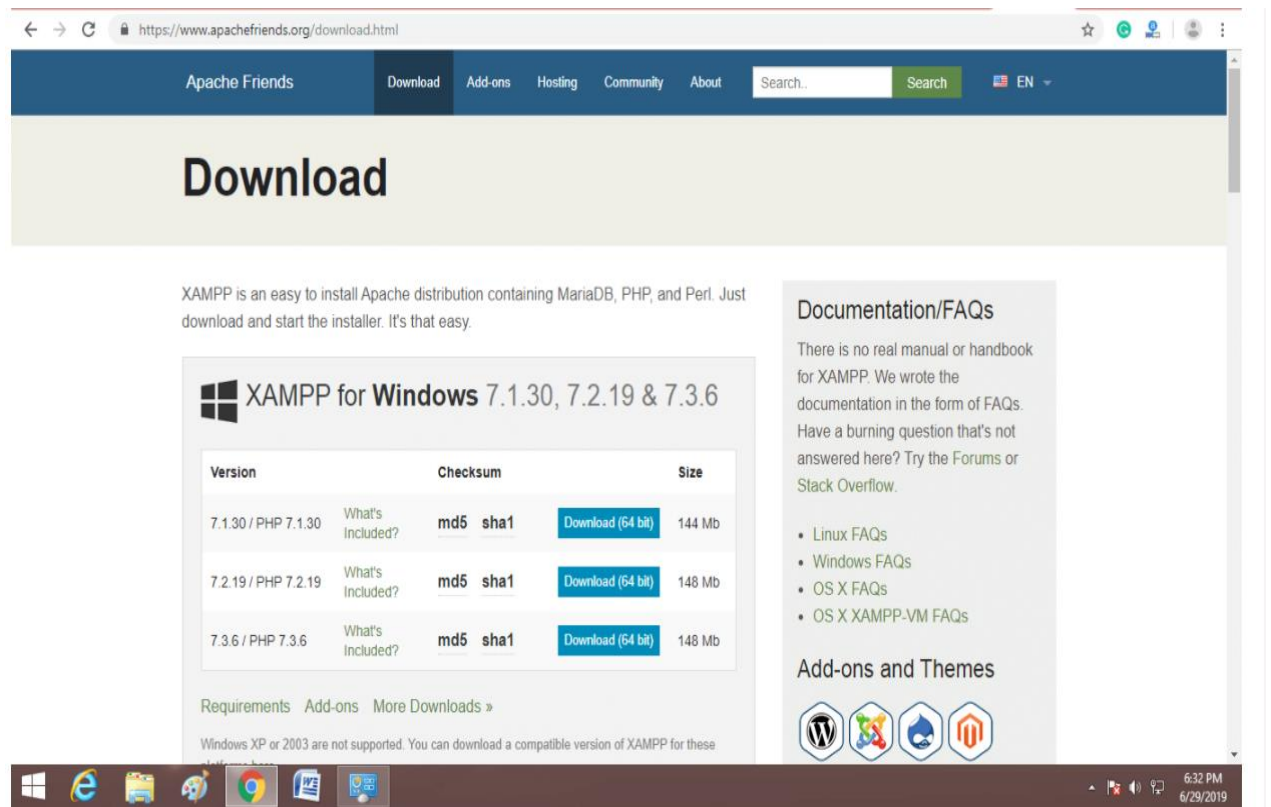
There are three PDO classes, which are given below:

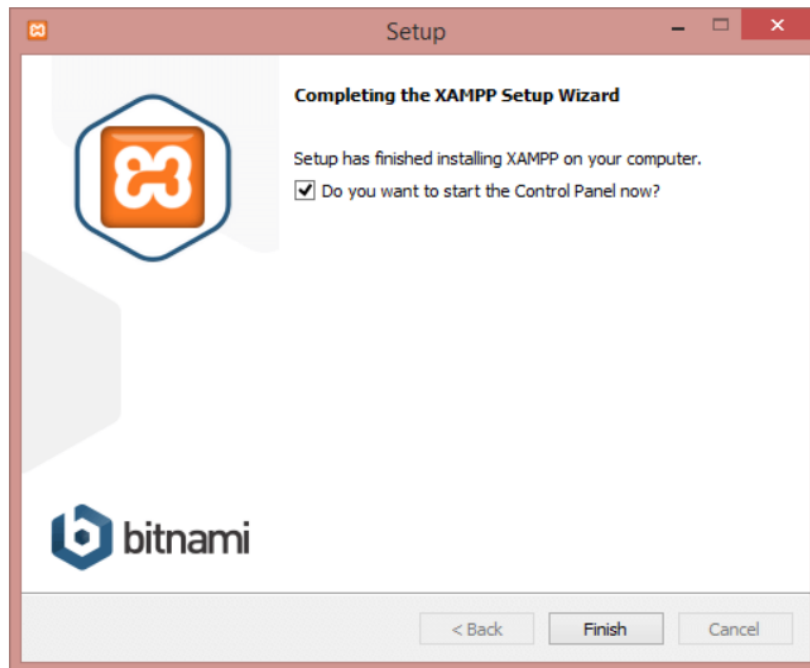
- **PDO** - It represents a connection between PHP and the database.
- **PDOStatement** - It represents the prepared statement and after the execution of the statement, sets an associated result.
- **PDOException** - It represents errors raised by PDO.

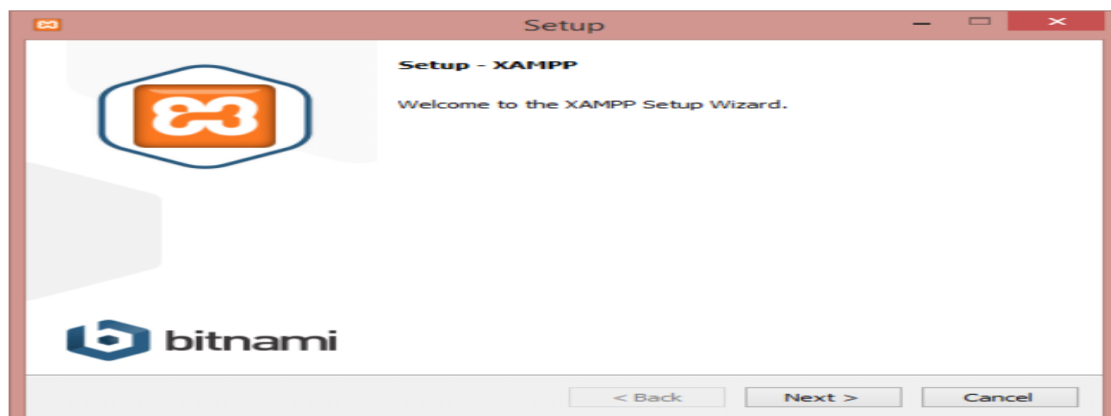
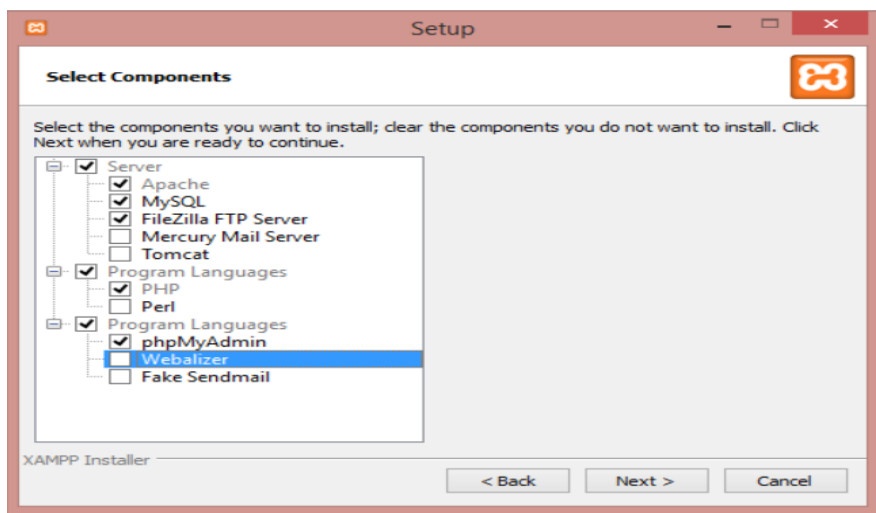
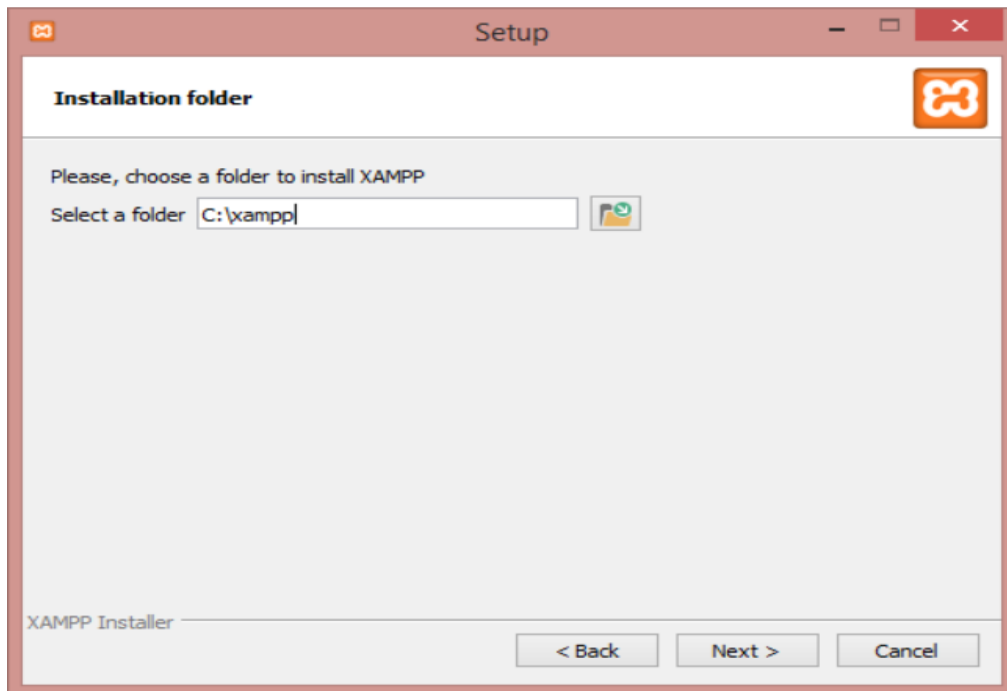
4.4 Installation of XAMPP Server

1. Download the latest XAMPP Server from the link:

<https://www.apachefriends.org/download.html>







CHAPTER 05

INTRODUCTION TO WEB DEVELOPMENT

5.1 INTRODUCTION TO HTML



HTML stands for **Hyper Text Markup Language**, which is the most widely used language on Web to develop web pages. **HTML** was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML specification which was published in 1995. HTML 4.01 was a major version of HTML and it was published in late 1999. Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published in 2012.

APPLICATIONS

- **Web pages development** - HTML is used to create pages which are rendered over the web. Almost every page of web is having html tags in it to render its details in browser.
- **Internet Navigation** - HTML provides tags which are used to navigate from one page to another and is heavily used in internet navigation.
- **Responsive UI** - HTML pages now-a-days works well on all platform, mobile, tabs, desktop or laptops owing to responsive design strategy.
- **Offline support** HTML pages once loaded can be made available offline on the machine without any need of internet.

- **Game development-** HTML5 has native support for rich experience and is now useful in gaming development arena as well.

5.2 INTRODUCTION TO JAVASCRIPT



Our **JavaScript Tutorial** is designed for beginners and professionals both. JavaScript is used to create client-side dynamic pages.

JavaScript is *an object-based scripting language* which is lightweight and cross-platform.

JavaScript is not a compiled language, but it is a translated language. The JavaScript Translator (embedded in the browser) is responsible for translating the JavaScript code for the web browser.

JavaScript (js) is a light-weight object-oriented programming language which is used by several websites for scripting the webpages. It is an interpreted, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document. It was introduced in the year 1995 for adding programs to the webpages in the Netscape Navigator browser. Since then, it has been adopted by all other graphical web browsers. With JavaScript, users can build modern web applications to interact directly without reloading the page every time. The traditional website uses js to provide several forms of interactivity and simplicity.

Although, JavaScript has no connectivity with Java programming language. The name was suggested and provided in the times when Java was gaining popularity in the market. In addition to web browsers, databases such as CouchDB and MongoDB uses JavaScript as their scripting and query language.

FEATURES:

1. All popular web browsers support JavaScript as they provide built-in execution environments.
2. JavaScript follows the syntax and structure of the C programming language. Thus, it is a structured programming language.
3. JavaScript is a weakly typed language, where certain types are implicitly cast (depending on the operation).
4. JavaScript is an object-oriented programming language that uses prototypes rather than using classes for inheritance.
5. It is a light-weighted and interpreted language.
6. It is a case-sensitive language.
7. JavaScript is supportable in several operating systems including, Windows, macOS, etc.
8. It provides good control to the users over the web browsers.

APPLICATIONS:

JavaScript is used to create interactive websites. It is mainly used for:

- Client-side validation,
- Dynamic drop-down menus,
- Displaying date and time,
- Displaying pop-up windows and dialog boxes (like an alert dialog box, confirm dialog box and prompt dialog box),
- Displaying clocks etc.

CHAPTER 06

IMPLEMENTATION AND BASIC DETAILS

We have divided our project into various modules and sub modules whose explanation is as follows:

- Building Users Features.
 1. Connecting to MySQL database using PDO.
 2. Creating index page and forms.
 3. Creating method for login and logout and display user information.
 4. Implementing sign up validation.
 5. Creating insert and update methods to update the database.
 6. Completing sign up steps along with integration to the database.
 7. Creating users profile page and edit profile page to update the database.
 8. Creating account and password page to edit the credentials as per wish.
 9. Creating search method to search for the users.

- Creating NewsFeed(Tweet System).
 1. Creating mysql table tweets and a method to post tweets.
 2. Displaying tweets and hashtag suggestions from the database.(trends table)
 3. Creating likes table and methods to like the tweets.
 4. Displaying like and unlike button.
 5. Creating method to unlike tweets.
 6. Creating and displaying popup for retweeting a tweet.
 7. Displaying all the tweets and retweets in homepage.
 8. Creating table for storing the comments on a tweet.

9. Displaying the comments in a tweet.
10. Creating method to delete a comment.
11. Creating methods to delete a tweet.
12. Creating methods to display the tweets in profile page(timeline).
13. Restricting tweet buttons for profile tweets.

- Creating Follow/ Unfollow System:

1. Creating new table follow in database.
2. Creating method to display follow button.
3. Displaying follow/unfollow button
4. Creating following and followers page.
5. Making following and followers button work.
6. Displaying followers and following list.

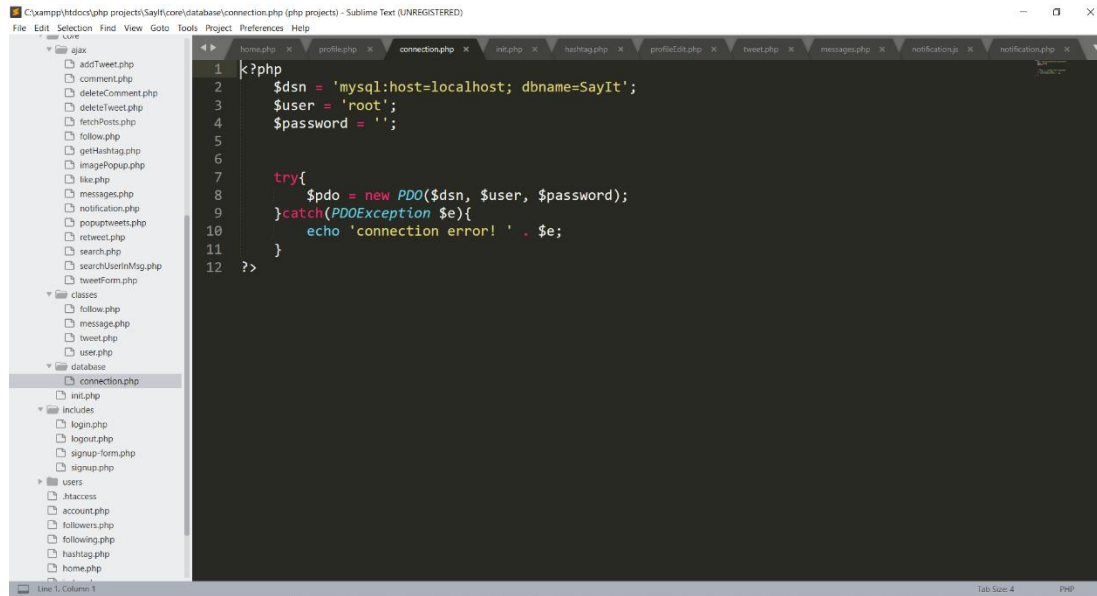
- Creating Messaging System.

1. Creating new table messages in the database.
2. Creating class and method to display recent messages.
3. Displaying conversation list for the user.
4. Creating method to receive messages.
5. Sending messages.
6. Making search option work in message popup.
7. Deleting messages from chat.

- Creating Trends System
 1. Creating trends method to display trends.
 2. Creating hashtag page to display tweets.
 3. Creating trending tweets and accounts related to them.
 4. Displaying images of trending tweets.

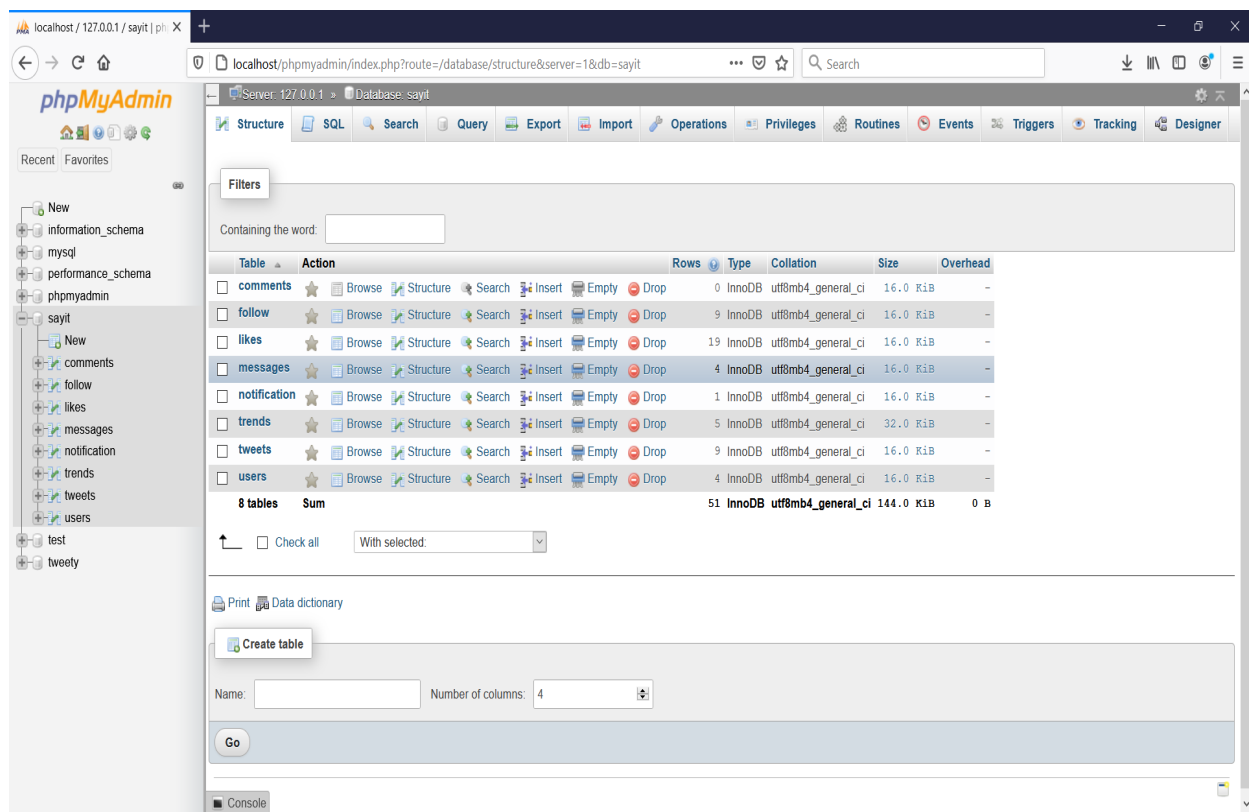
- Creating notification system
 1. Creating notification table
 2. Creating method to display notification
 3. Fetching notification count
 4. Updating messaging counts.
 5. Displaying messaging and notifications.
 6. Creating method to prevent user to access PHP files.

DATABASE CONNECTION



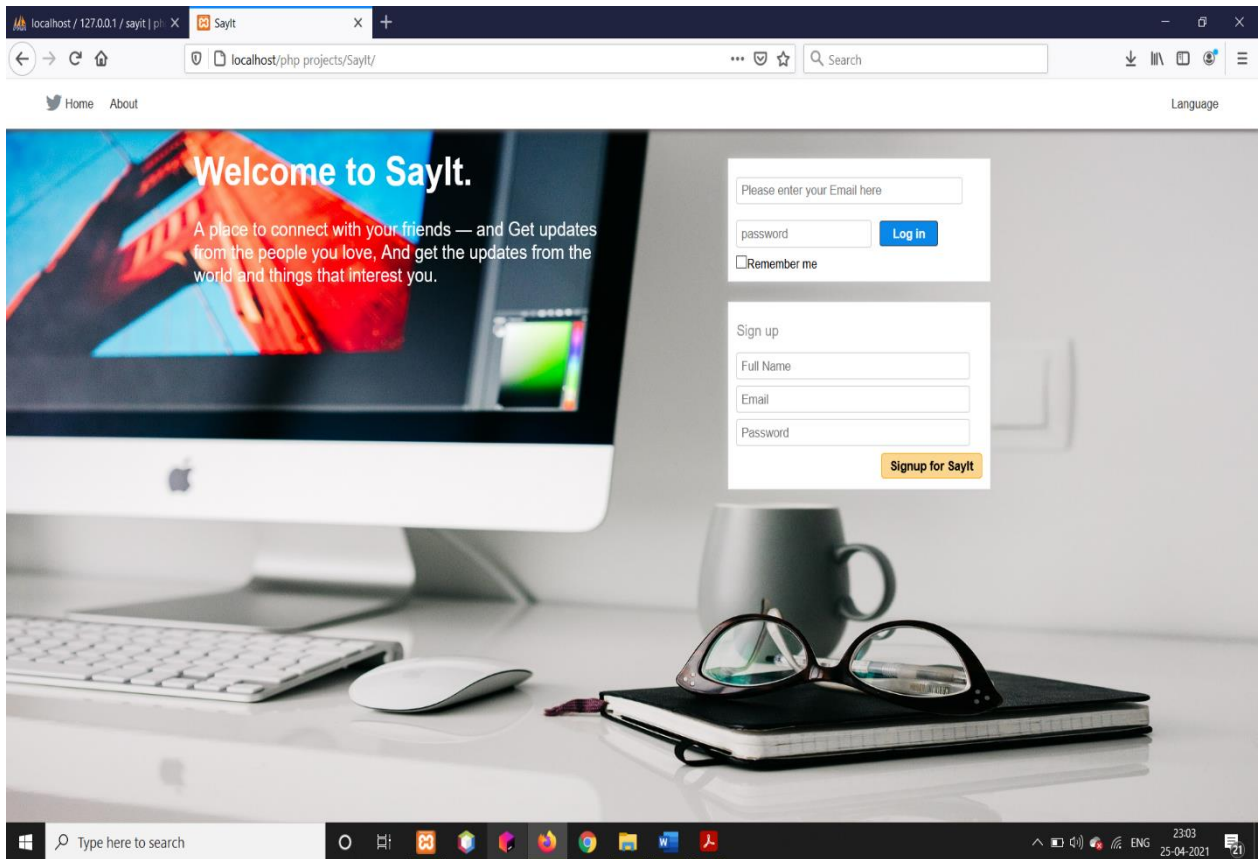
```
1 k?php
2 $dsn = 'mysql:host=localhost; dbname=SayIt';
3 $user = 'root';
4 $password = '';
5
6
7 try{
8     $pdo = new PDO($dsn, $user, $password);
9 }catch(PDOException $e){
10     echo 'connection error! ' . $e;
11 }
12 ?>
```

DATABASE STRUCTURE



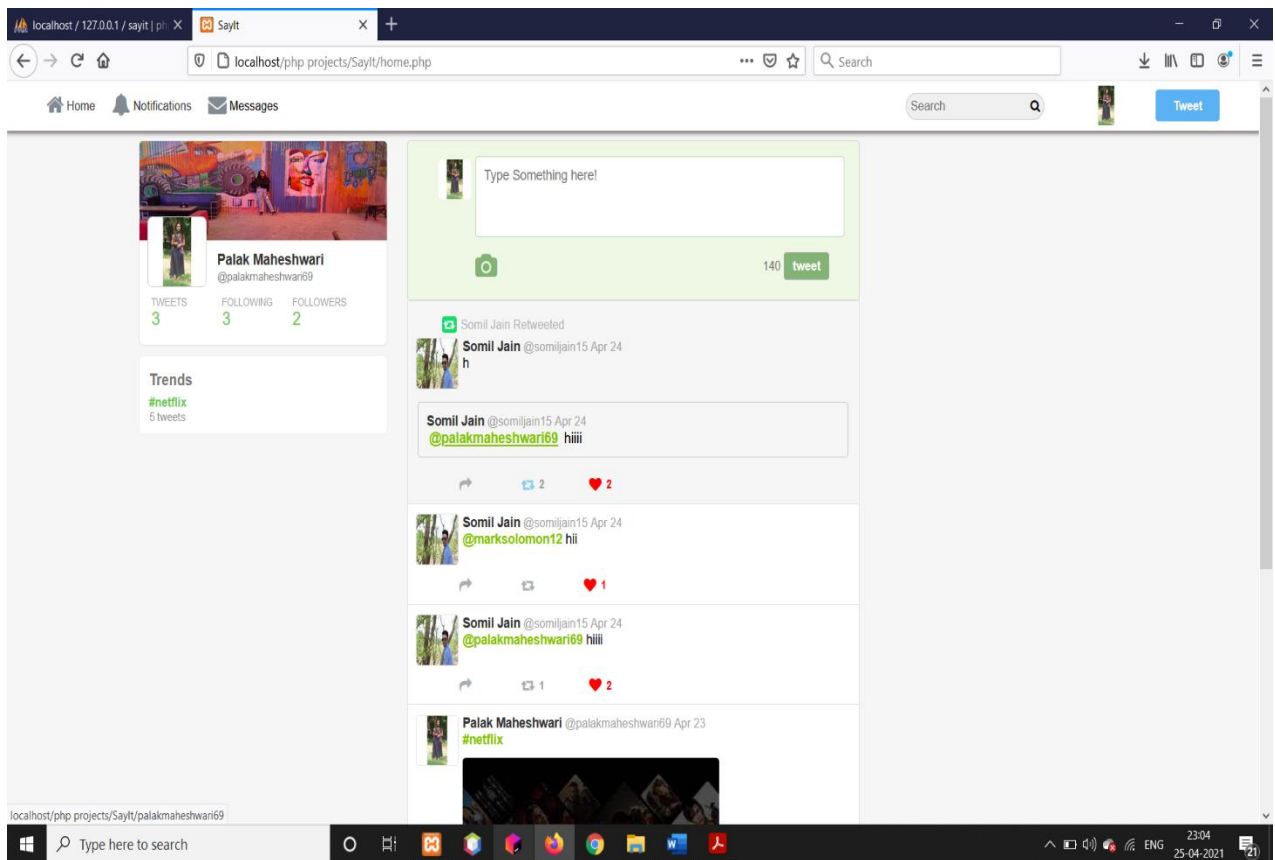
| Table | Action | Rows | Type | Collation | Size | Overhead |
|--|--------|------|--------|--------------------|-----------|----------|
| <input type="checkbox"/> comments | | 0 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> follow | | 9 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> likes | | 19 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input checked="" type="checkbox"/> messages | | 4 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> notification | | 1 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> trends | | 5 | InnoDB | utf8mb4_general_ci | 32.0 KiB | - |
| <input type="checkbox"/> tweets | | 9 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> users | | 4 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| 8 tables | Sum | 51 | InnoDB | utf8mb4_general_ci | 144.0 KiB | 0 B |

SNAPSHOTS



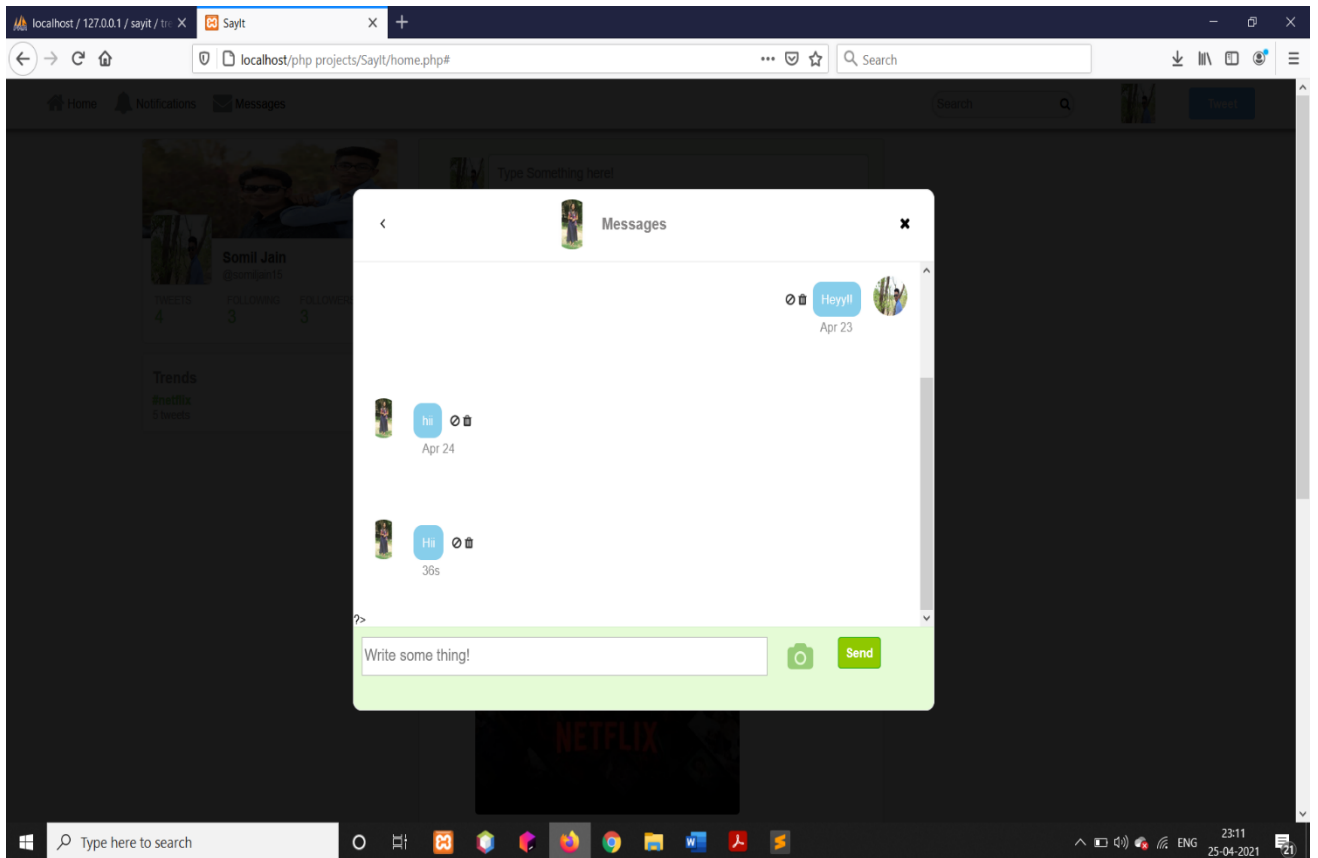
Welcome Page

SayIt – A social Networking Site



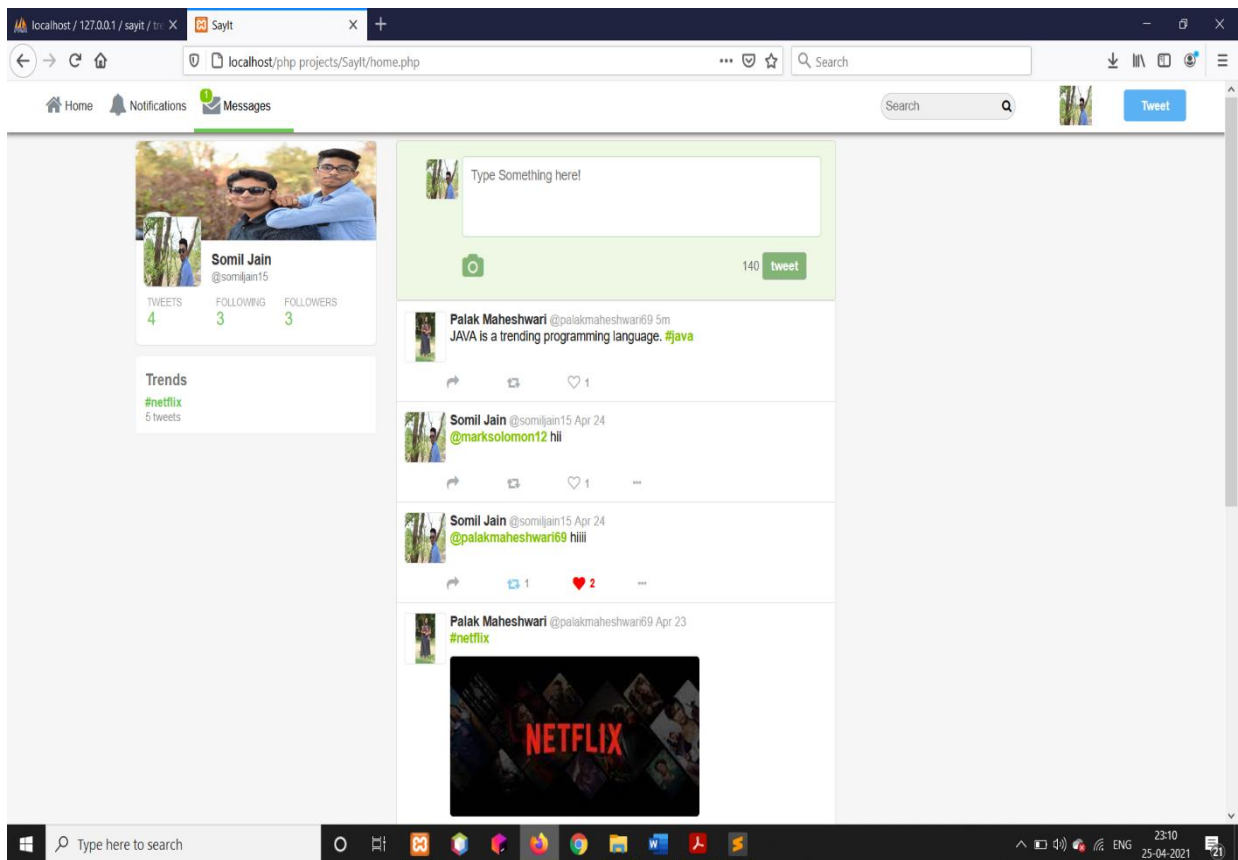
HomePage after logging in

SayIt – A social Networking Site



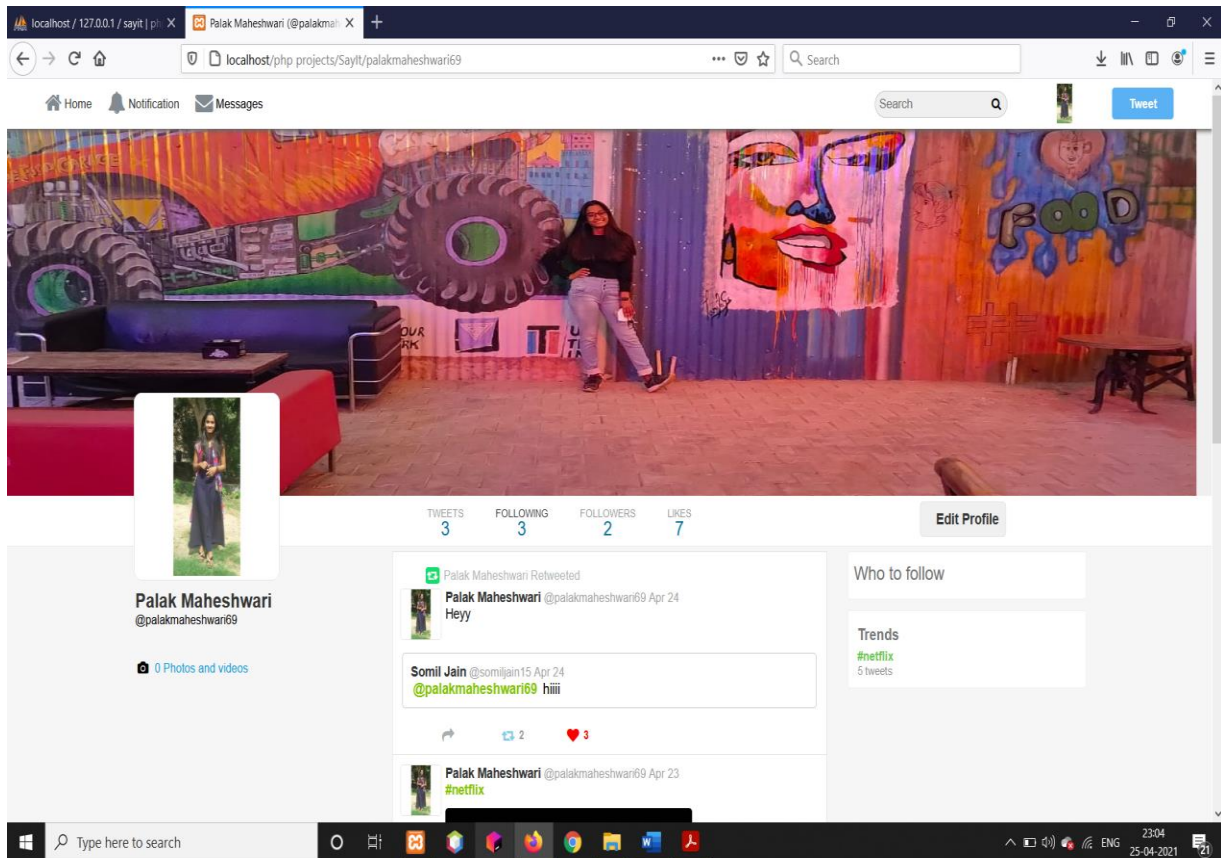
Message Popup

SayIt – A social Networking Site



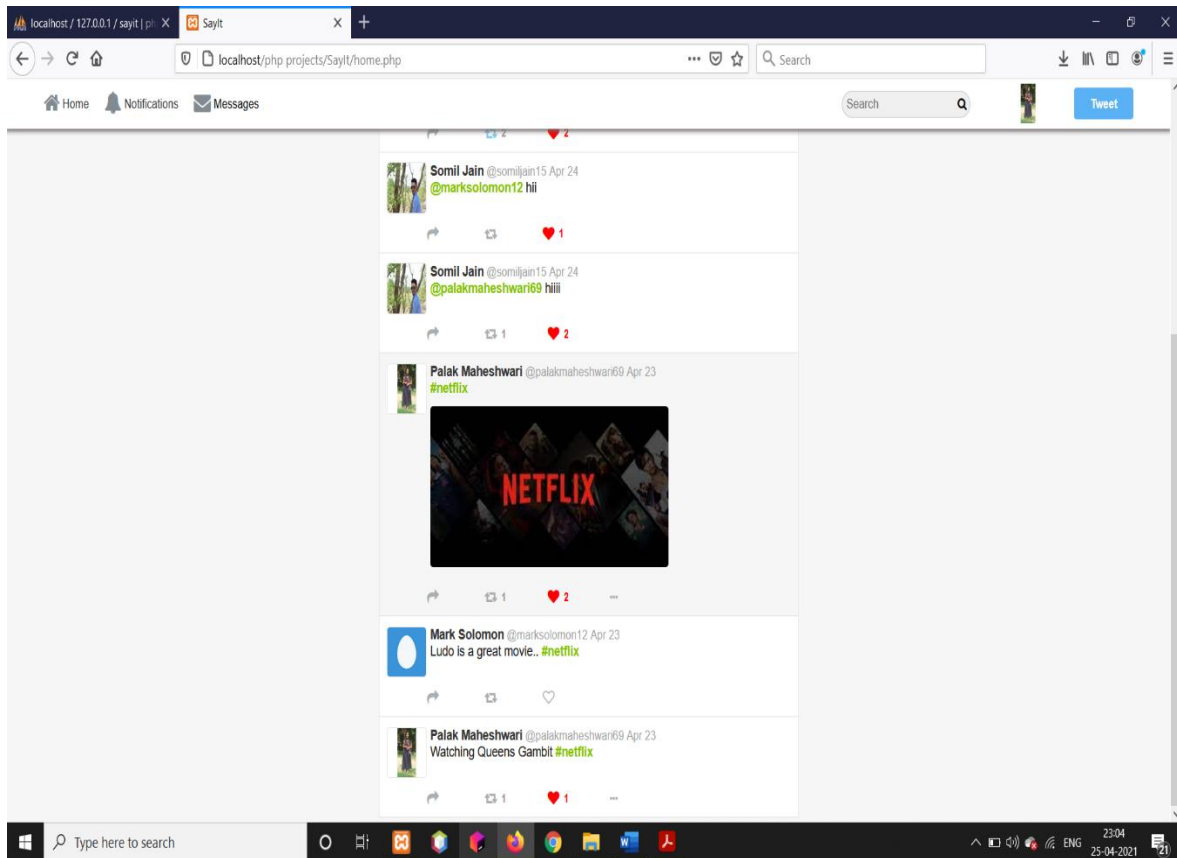
Other Account Display

SayIt – A social Networking Site



Profile Page display

SayIt – A social Networking Site



Tweets Display

CHAPTER 07

REFERENCES

1. <https://www.w3schools.com/php/>
2. <https://www.w3schools.com/sql/>
3. <https://www.w3schools.com/html/default.asp>