

CS-213 Advanced Programming

Assignment-01

“Exploring Open Source Softwares”



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What Is Xoops?

Xoops, which stands for eXtensible Object Oriented Portal System, is a widely used open source Content Management System Platform that is written in PHP. It is totally free to use, modify and redistribute.

The platform can be used for various types of websites ranging from the smallest to the largest. It has various installation modules through which you can expand the website as much as you want to.

You can make a site as simple as a web journal or make it commercial adding tons of users with different privileges.

How Do You Configure?

For the configuration, you will need to have:

1. Database Server

For this step, phpMy is installed and a database is created to connect with the site once its created.

2. Web Server

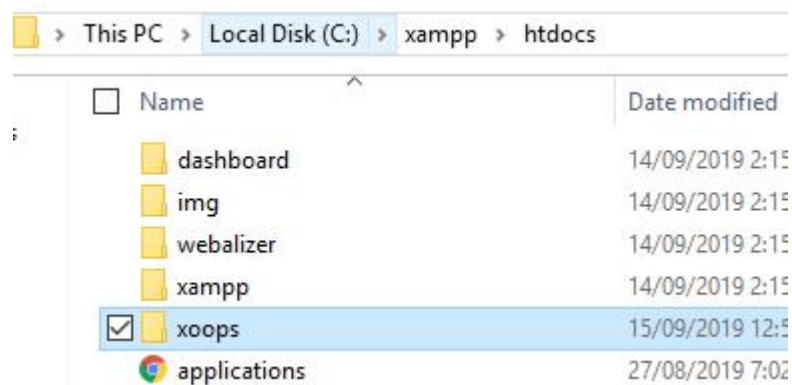
To host a local web server, I have installed XAMPP, an Apache based web server.

3. Downloading XOOPS

The compatible version is downloaded from the official xoops.org website in a zipped format. And the files are extracted in the **htdocs** folder of the local web server.

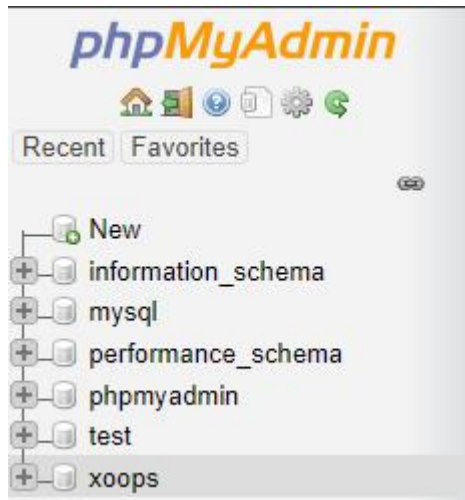
4. Placing XOOPS files in the local server folder

Xoops folder is placed in the htdocs folder of localserver as shown below:



5. Creating Database

The database is also initialized on the localhost using the phpMyAdmin, as shown below:



6. Making The Files Editable

The license file inside the data folder of xoops is toggled from **read-only** mode to make sure that the license number can be copied automatically into the file.

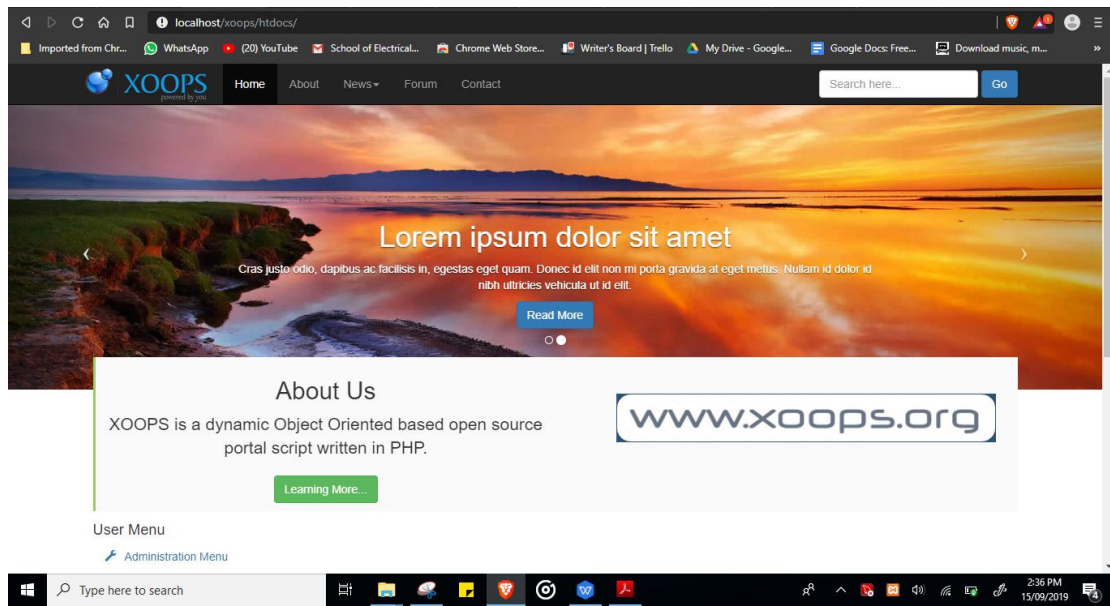


7. Setting Up the Website

From the local host, installation wizard of XOOPS is visited and the steps followed. Also, the connection to the database is made properly and the settings done based upon certain preferences.

During the process, the modules to be used in the websites are chosen like different features that are to be used in the website. Eg: Private messaging, posting etc.

Once the wizard is complete, automatic redirection to home page is executed.



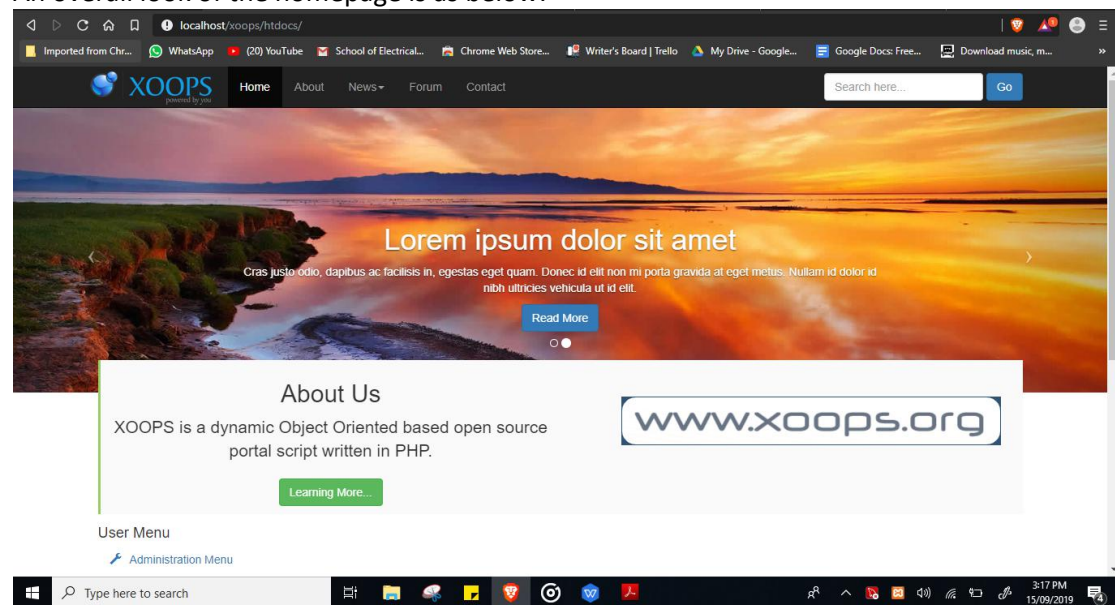
Exploring The Site From User Perspective

Now that we're fully done with creating a new website based on our local server, we can traverse all the different features and the services provided by the website to see different aspects of its usage.

1. Home Page

In the home page, there is info available for the website including a background cover. On the top, the navigation bar is available for navigation between different sections of the website along with a search bar.

An overall look of the homepage is as below:



Expanding the search bar will list different filters you can use to search users or content on the website as shown below:

Search

Keyword(s)*

Type

Search in

Search Rule Keywords shorter than 5 characters will be ignored

Going further down on the homepage, there can be found a **User Menu** and a **Main Menu**.

In the main menu, different services are mentioned that are provided by the website like viewing the profiles and private messaging.

Main Menu

 Home

✓ Private Messaging

✓ User Profile

While in the User Menu, there are different options available to personalize and manage your account, ranging from editing your profile and checking your inbox etc.

User Menu

 Administration Menu

 View Account

 Edit Account

 Notifications

 Inbox

 Logout

If you haven't logged in, instead of the **User Menu**, you will see a login form where you can put your credentials to login if you haven't already.

Login

Username:

Password:

☐ Remember me

User Login

Lost Password?

Register now!

Or, if you are not a registered user, you can register yourself by a button given at the bottom. A form will be displayed asking for your personal information in order to get yourself a new account on this website. Fill out the form and submit your info to get registered.

Register steps: Basic » Advanced

Basic

Username *

Email *

Password *

Verify Password *

Disclaimer

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You agree not to post any abusive, obscene, vulgar, slanderous, hateful, threatening, sexually-orientated or any other material that may violate any applicable laws. Doing so may lead to you being immediately and permanently banned (and your service provider being informed). The IP address of all posts is recorded to aid in enforcing these conditions. Creating multiple accounts for a single user is not allowed. You agree that the webmaster, administrator and moderators of this site have the right to remove, edit, move or close any topic at any time should they see fit. As a user you agree to any information you have entered above being stored in a database. While this information will not be disclosed to any third party without your consent the webmaster, administrator and moderators cannot be held responsible for any hacking attempt that may lead to the data being compromised.

This site system uses cookies to store information on your local computer. These cookies do not contain any of the information you have entered above, they serve only to improve your viewing pleasure. The email address is used only for confirming your registration details and password (and for sending new passwords should you forget your current one).

By clicking Register below you agree to be bound by these conditions.

☐ I agree to the above

Confirmation Code *

Input the result from the expression
Maximum attempts you can try: 10

In case of not remembering the password, an option for recovering your password is also available. Just press the **lost password** and hit enter. A form will be shown asking for your email associated with your account that you've lost the password to. This will send you a link to **reset** your password.

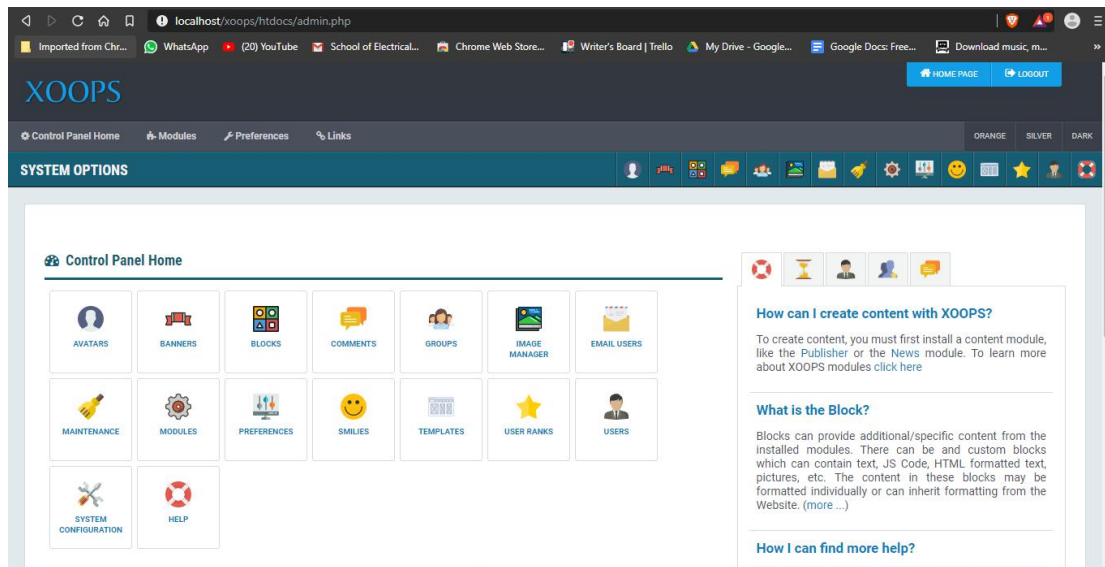
Lost your Password?

No problem. Simply enter the e-mail address we have on file for your account.

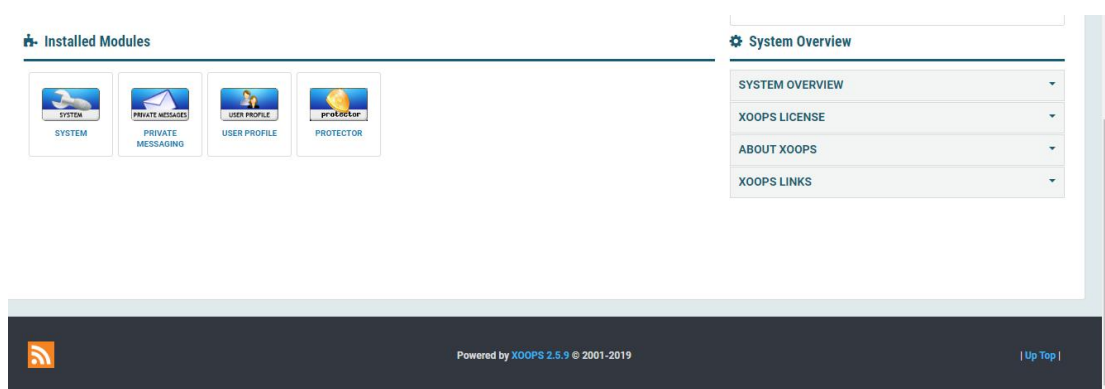
Your Email:

2. Admin Panel

If the current logged in user is an authorized admin, then he can access a whole lot of different options from **control panel** to perform different operations on the website and manage the content and can change **System options** as well. Some of the available options are shown in the screenshot below:



Information about the installed modules System overview is also provided In the admin panel.



- Admin can also add or kick users out of the website and make groups as well.

SYSTEM OPTIONS

Users Management

- Manage Xoops users

Search User:
All groups
All users
20

	Status	User Name	Email	Registered date	Last login	Comments/Posts	Action
		muneeb	muneebhashmi10@gmail.com	2019/9/15 10:27	2019/9/15 15:57	0	

From The Database Manager Perspective

So far, we have explored the features and services of the website by looking at eyes through the eyes of a regular user. Now we will see how the database is being managed at backend to get a deeper insight.

We established the database using phpMyAdmin during the configuration stage and connected it to the website.

The database was automatically populated by the software and the tables initialized accordingly.

There's a total of 39 tables that are used to store the data of the website, having different fields and attributes that are pre-set. The tables include different entities including users, configs, images, modules and so on and so forth.

However, the database is totally modifiable and we can insert or drop any table according to our needs. An example view of the tables is attached below.



Server: 127.0.0.1 » Database: xoops	
Structure	SQL
Search	Query
Export	Import
Operations	Privileges
Routines	Events
More	
<input type="checkbox"/> xce3_protector_access	1 MyISAM utf8_general_ci 17.4 KiB 348 B
<input type="checkbox"/> xce3_protector_log	0 MyISAM utf8_general_ci 4 KiB -
<input type="checkbox"/> xce3_ranks	7 MyISAM utf8_general_ci 6.4 KiB -
<input type="checkbox"/> xce3_session	2 MyISAM utf8_general_ci 5.8 KiB -
<input type="checkbox"/> xce3_smiles	17 MyISAM utf8_general_ci 2.9 KiB -
<input type="checkbox"/> xce3_tplfile	92 MyISAM utf8_general_ci 19.1 KiB -
<input type="checkbox"/> xce3_tplset	1 MyISAM utf8_general_ci 2 KiB -
<input type="checkbox"/> xce3_tplsource	92 MyISAM utf8_general_ci 232.9 KiB -
<input type="checkbox"/> xce3_users	1 MyISAM utf8_general_ci 6.2 KiB -
<input type="checkbox"/> xce3_xoopscomments	0 MyISAM utf8_general_ci 1 KiB -
<input type="checkbox"/> xce3_xoopsnotifications	0 MyISAM utf8_general_ci 1 KiB -
39 tables	Sum
	781 InnoDB utf8_general_ci 428.8 KiB 348 B

☐ Check all / Check tables having overhead With selected:

We can perform various actions on the database as well like running queries, exporting different records or tables, or importing them from any other databases according to the situation.

Specific records can also be searched.



[Structure](#) [SQL](#) [Search](#) [Query](#) [Export](#) [Import](#) [Operations](#) [Privileges](#) [Routines](#) [Events](#) [More](#)

Filters

Containing the word:

We can further explore the attributes of different tables by collapsing them. For example, the user table has a total of 31 columns, used to hold the data of all the users that are registered with this website.

The different columns can also be modified or deleted from here.

A screenshot as a reference to the fields is shown below:

	Browse	Structure	SQL	Search	Insert	Export	Import	Privileges	Operations	Tracking	Triggers
<input type="checkbox"/>	17	posts	mediumint(8)	UNSIGNED	No	0			Change	Drop	More
<input type="checkbox"/>	18	attachsig	tinyint(1)	UNSIGNED	No	0			Change	Drop	More
<input type="checkbox"/>	19	rank	smallint(5)	UNSIGNED	No	0			Change	Drop	More
<input type="checkbox"/>	20	level	tinyint(3)	UNSIGNED	No	1			Change	Drop	More
<input type="checkbox"/>	21	theme	varchar(100)	utf8_general_ci	No				Change	Drop	More
<input type="checkbox"/>	22	timezone_offset	float(3,1)		No	0.0			Change	Drop	More
<input type="checkbox"/>	23	last_login	int(10)	UNSIGNED	No	0			Change	Drop	More
<input type="checkbox"/>	24	umode	varchar(10)	utf8_general_ci	No				Change	Drop	More
<input type="checkbox"/>	25	uorder	tinyint(1)	UNSIGNED	No	0			Change	Drop	More
<input type="checkbox"/>	26	notify_method	tinyint(1)		No	1			Change	Drop	More
<input type="checkbox"/>	27	notify_mode	tinyint(1)		No	0			Change	Drop	More
<input type="checkbox"/>	28	user_occ	varchar(100)	utf8_general_ci	No				Change	Drop	More
<input type="checkbox"/>	29	bio	tinytext	utf8_general_ci	Yes	NULL			Change	Drop	More
<input type="checkbox"/>	30	user_intrest	varchar(150)	utf8_general_ci	No				Change	Drop	More
<input type="checkbox"/>	31	user_mailok	tinyint(1)	UNSIGNED	No	1			Change	Drop	More

☐ Check all With selected: ☐ Browse ☐ Change ☐ Drop ☐ Primary ☐ Unique ☐ Index ☐ Fulltext ☐ Fulltext ☐ Add to central columns
☐ Remove from central columns

Moreover, the database backend also gives you options to add or delete any users or other data of the website directly. Just click on any record to directly modify or delete it.

Changing The Name of The User

	uid	name	uname	email	url	user_avatar	user_regdate	user_icq	user_from	u
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1		<input type="text" value="muneeb"/>	muneebhashmi10@gmail.com	http://localhost/xoops/htdocs/avatars/blank.gif	1568536033				

Adding a New User

Column	Type	Function	Null	Value
uid	mediumint(8) unsigned	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
name	varchar(60)	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
uname	varchar(25)	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
email	varchar(60)	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
url	varchar(100)	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
user_avatar	varchar(30)	<input type="text"/>	<input type="checkbox"/>	blank.gif
user_regdate	int(10) unsigned	<input type="text"/>	<input type="checkbox"/>	0
user_icq	varchar(15)	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
user_from	varchar(100)	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
user_sig	tinytext	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>

☐ Console

























Data is Synchronized With The Website

The data in each one of these tables, like the case of users table shown here, is completely in sync with the content of the website and whenever we change any type of data on the frontend of the website, its automatically updated in the database as well.

From The Coding Perspective

XOOPS is a PHP based website and is open source so we have full access to the back-end files.

The files which contain all the PHP code are placed in the htdocs folder of the local server and if needed, they can be edited from there to change the layout or functionality of the XOOPS website.

Name	Date modified	Type	Size
 browse	16/08/2016 1:37 PM	PHP File	3 KB
 edituser	12/04/2017 7:46 AM	PHP File	21 KB
 favicon	16/08/2016 1:37 PM	Icon	2 KB
 footer	27/02/2017 7:51 AM	PHP File	3 KB
 header	23/08/2016 11:27 ...	PHP File	5 KB
 image	12/02/2017 2:13 AM	PHP File	25 KB
 imagemanager	01/03/2017 11:31 ...	PHP File	10 KB
 index	12/02/2017 2:13 AM	PHP File	4 KB
 lostpass	12/02/2017 2:13 AM	PHP File	4 KB
 mainfile.dist	15/02/2017 5:07 PM	PHP File	4 KB
 mainfile	15/09/2019 1:26 PM	PHP File	4 KB
 misc	12/02/2017 2:13 AM	PHP File	14 KB
 notifications	12/02/2017 2:13 AM	PHP File	10 KB
 pda	16/08/2016 1:37 PM	PHP File	2 KB
 pmlite	15/02/2017 5:07 PM	PHP File	7 KB
 readpmsg	11/02/2017 10:39 ...	PHP File	6 KB
 register	13/04/2017 7:27 PM	PHP File	16 KB
 robots	16/08/2016 1:37 PM	Text Document	1 KB
 search	07/03/2017 9:51 AM	PHP File	13 KB
 user	31/03/2017 12:07 ...	PHP File	7 KB
 userinfo	12/02/2017 2:13 AM	PHP File	10 KB
 viewpmsg	27/01/2017 9:55 PM	PHP File	6 KB
 xmlrpc	12/02/2017 2:13 AM	PHP File	3 KB
 xoops	16/08/2016 1:37 PM	CSS File	17 KB

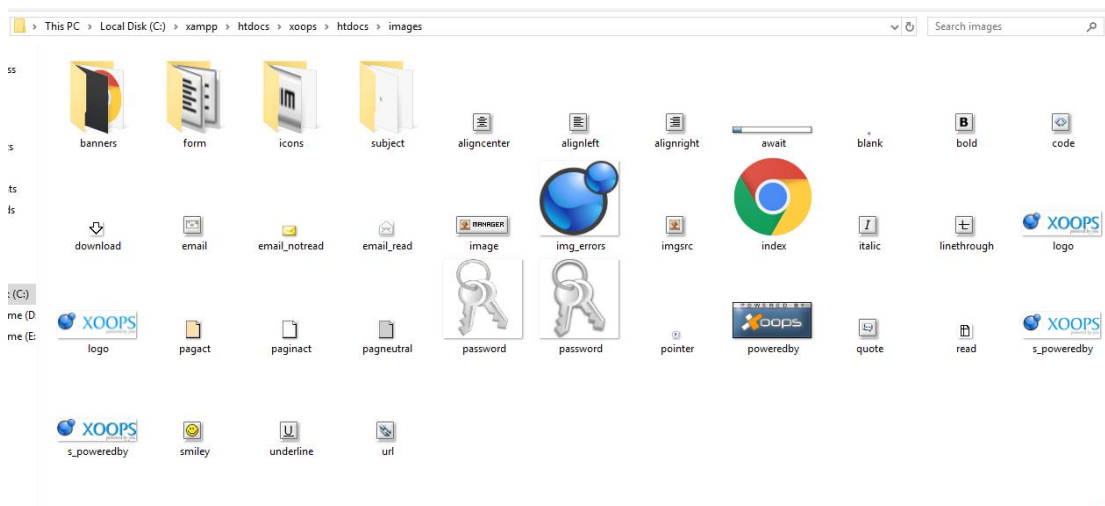
- The CSS file which contains all the styling of the website looks something like this:

```

1  /*
2  3  /*==== FORMAT BASIC ELEMENTS, can be overwritten in theme styles =====*/
4  5  table {
6      width: 100%;
7      border-collapse: collapse;
8      border-spacing: 0;
9  }
10
11 strong, b, dfn {
12     font-weight: bold;
13 }
14
15 u {
16     text-decoration: underline;
17 }
18
19 i, em {
20     font-style: italic;
21 }
22
23 del {
24     text-decoration: line-through;
25 }
26
27 sup {
28     vertical-align: text-top;
29 }
30
31 sub {
32     vertical-align: text-bottom;
33 }
34
35 ins {
36     text-decoration: none;
37 }

```

The images file, consisting of all the images that are used on the website.



- Next up is the view of **Index** filed opened in sublime text where we can edit the code if need be. Followed by the PHP files for the **users**.

```
C:\xampp\htdocs\xoops\htdocs\index.php - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

index.php
1 k?php
2 /**
3  * XOOPS global entry
4  *
5  * You may not change or alter any portion of this comment or credits
6  * of supporting developers from this source code or any supporting source code
7  * which is considered copyrighted (c) material of the original comment or credit authors.
8  * This program is distributed in the hope that it will be useful,
9  * but WITHOUT ANY WARRANTY; without even the implied warranty of
10 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
11 */
12 * @copyright      (c) 2000-2016 XOOPS Project (www.xoops.org)
13 * @license        GNU GPL 2 (http://www.gnu.org/licenses/gpl-2.0.html)
14 * @package        core
15 * @since          2.0.0
16 * @author         Kazumi Ono <webmaster@myweb.ne.jp>
17 * @author         Skarpa Keo <skarpa@xoops.org>
18 * @author         Taiwen Liang <phppp@users.sourceforge.net>
19 */
20 /* @var $xoopsUser XoopsUser */
21
22 if (file_exists(__DIR__ . '/mainfile.php')) {
23     include __DIR__ . '/mainfile.php';
24 }
25 if (!defined('XOOPS_MAINFILE_INCLUDED')) {
26     if (file_exists(__DIR__ . '/install/index.php')) {
27         header('location: install/index.php');
28         exit;
29     }
30 }
31
32 $xoopsPreload = XoopsPreload::getInstance();
33 $xoopsPreload->triggerEvent('core.index.start');
34
35 //check if start page is defined
```

```
C:\xampp\htdocs\xoops\htdocs\userinfo.php - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
















index.php userinfo.php
1 k?php
2 /**
3  * You may not change or alter any portion of this comment or credits
4  * of supporting developers from this source code or any supporting source code
5  * which is considered copyrighted (c) material of the original comment or credit authors.
6  *
7  * This program is distributed in the hope that it will be useful,
8  * but WITHOUT ANY WARRANTY; without even the implied warranty of
9  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
10 */
11
12 /**
13  * XOOPS User
14  *
15  * See the enclosed file license.txt for licensing information.
16  * If you did not receive this file, get it at http://www.gnu.org/licenses/gpl-2.0.html
17  *
18  * @copyright      (c) 2000-2016 XOOPS Project (www.xoops.org)
19  * @license        GNU GPL 2 or later (http://www.gnu.org/licenses/gpl-2.0.html)
20  * @package        core
21  * @since          2.0.0
22  * @author         Kazumi Ono <webmaster@myweb.ne.jp>
23  */
24 include __DIR__ . '/mainfile.php';
25 $xoopsPreload = XoopsPreload::getInstance();
26 $xoopsPreload->triggerEvent('core.userinfo.start');
27
28 xoops_loadLanguage('user');
29 include_once $GLOBALS['xoops']->path('class/module.textsanitizer.php');
30 include_once $GLOBALS['xoops']->path('modules/system/constants.php');
31
32 $uid = (int)$_GET['uid'];
33 if ($uid <= 0) {
34     redirect_header('index.php', 3, _US_SELECTING);
35 }
```


Adding More Modules To XOOPS

Going to the **Module Administration** panel from an admin account, we can install or uninstall different modules that are recognized by XOOPS into our website increasing or decreasing its functionality.

This menu also makes us capable of updating, deleting or hiding the modules or to inspect their features.




As of now, the website has 3 modules which are shown below:

Module	Version	Last Update	Active	Menu	Action
 System	2.14	2019/9/15 10:27			 
 Private Messaging	1.12 Final	2019/9/15 10:31			  
 User Profile	1.89 Final	2019/9/15 10:31			  

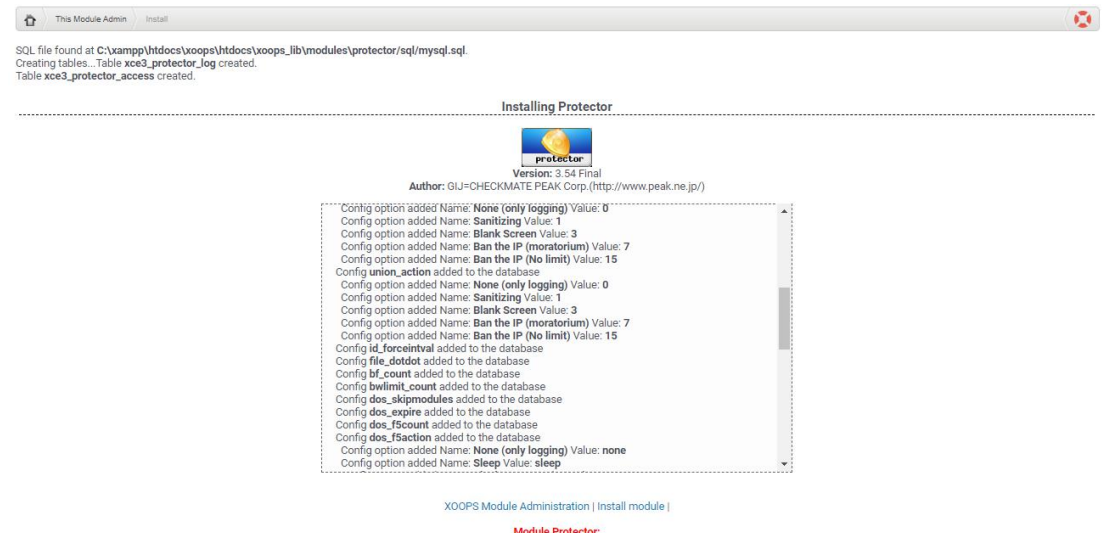
However, if we want to enhance our website, we can add new modules to our website by clicking the add modules button there as in the steps shown below:























- Clicking the button shows us the list of available modules that can be added to the website and are provided free of cost by the XOOPS developing community. From there, can select any number of modules that we want to add.
- Here, we have selected the **Protector** module to embed into our website.

Module	Version	Action
 Protector	3.54 Final	 

- Confirming it would start the installation process.



- Now that this module is added, there should be a total of 4 modules now that our website has, it can be confirmed by going back to the **module administration** now.

Module	Version	Last Update	Active	Menu	Action
 System	2.14	2019/9/15 10:27			 
 Private Messaging	1.12 Final	2019/9/15 10:31			  
 User Profile	1.89 Final	2019/9/15 10:31			  
 Protector	3.54 Final	2019/9/15 16:14			  
Submit					