

National Institute of Statistics of Rwanda

Go fast on the Drupal installation
Case study of KNOWNET
Intranet at NISR

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Go fast on the Drupal installation: Case study of KNOWNET - Intranet at NISR (By Aimable Twahirwa)

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GENERAL INTRODUCTION

With the release of several new Free Open Source Software (FOSS), it is a good idea now to start to practice and learn how to install some of them especially those focusing on web applications. Before the implementation of these Web packages Software, it is important to understand their functionality (such as roles) and analyze the installation options to ensure that they are compatible with the intent of your project. This documentation will cover the fundamentals of installing a full package of XAMPP and Drupal on Windows Server 2003 Standard Edition.

This is a step-by-step guide that can help you on Drupal Installation on Windows Server Server 2003 as it is the case for the Knowledge Network (KNOWNET) which is a new Intranet at the National Institute of Statistics of Rwanda (NISR). Everything has been tested personally, on a default installation. Before starting with this installation, it is important to ensure that Windows Server 2003 components are installed correctly with Web hosting environments that provide a specific platform for deploying Web services and applications.

Hence, following are the current system status for Windows Server 2003 Standard Edition at NISR:

Supported processor speed – 2.99 GHz

Processor speed – 3.00 GHz

Supported RAM – 0.99GB

Amount of recommended RAM -- 256MB

Amount of RAM supported by Windows Server 2003 Standard Edition – 0.99 GB

Space for installation (hard disk) – 232.6 GB.

Other requirements include hardware such as Keyboard and mouse (or other pointing device).

Installing Windows Server 2003 is pretty straight-forward as long as you either have an installation CD-driver, or are able to put the installation files onto a USB flash drive. The whole install process took a little over 30 minutes and the installation consumed some 4.40 GB of drive space.

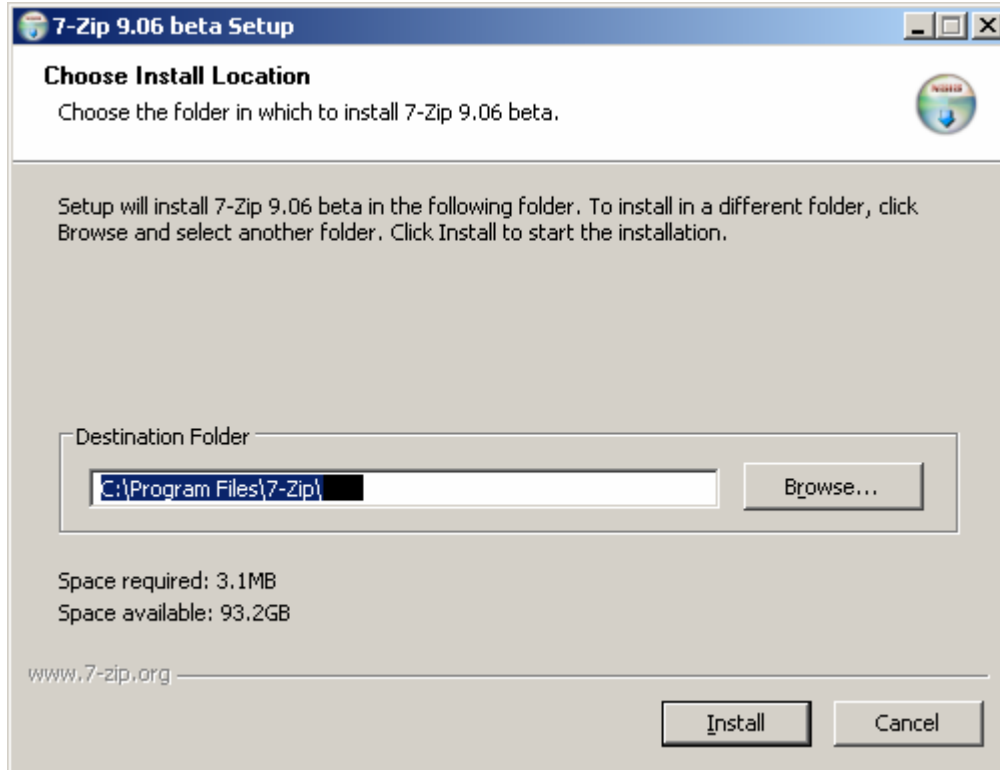
After ensuring that Windows Server 2003 has been installed, the next step is the installation of *XAMPP* which is a free and open source cross-platform web server package, consisting mainly of the integrated server package of Apache, MySQL, PHP and Perl (*XAMPP*, where originates its acronym).

It is important to notice the required *XAMPP* components that should be installed, because there are some restrictions regarding which package will compatible with *Drupal* through configuring a front-end user and set up its database.

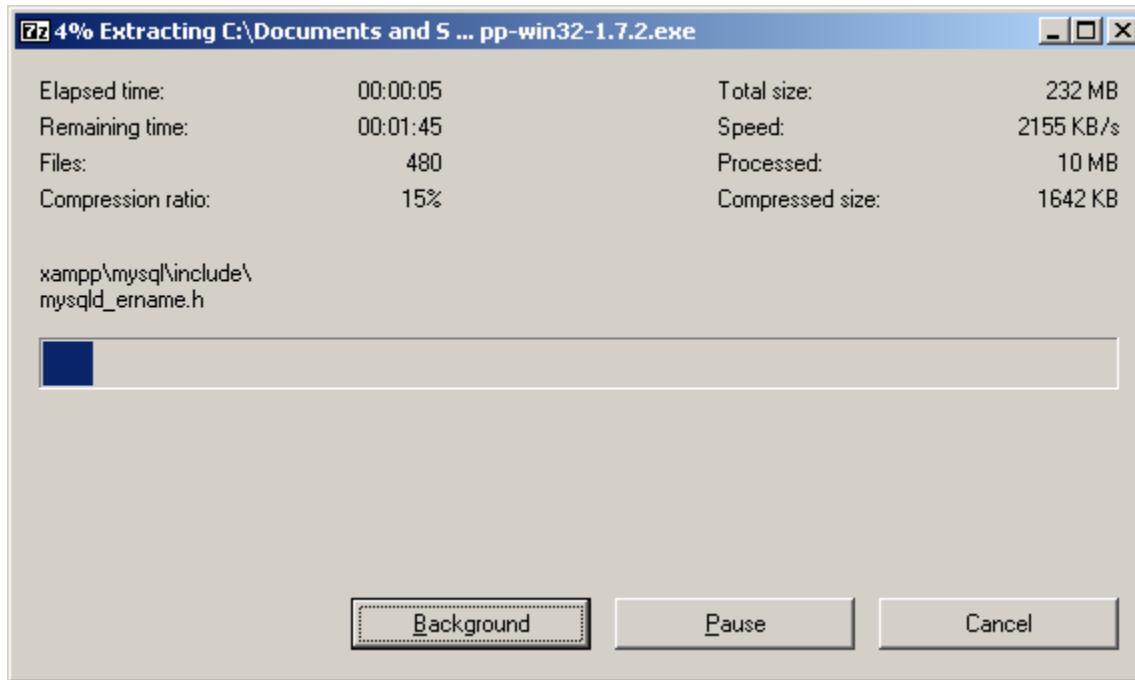
PART I. XAMPP installation and Configuration

Assume you finished downloading XAMPP set up file, as a Free Open Source Software (FOSS) package, the next step will be its installation which is a straight-forward step. As there are several ways of XAMPP installation, we preferred to use the *extracting method*, which is the most recommended for this step.

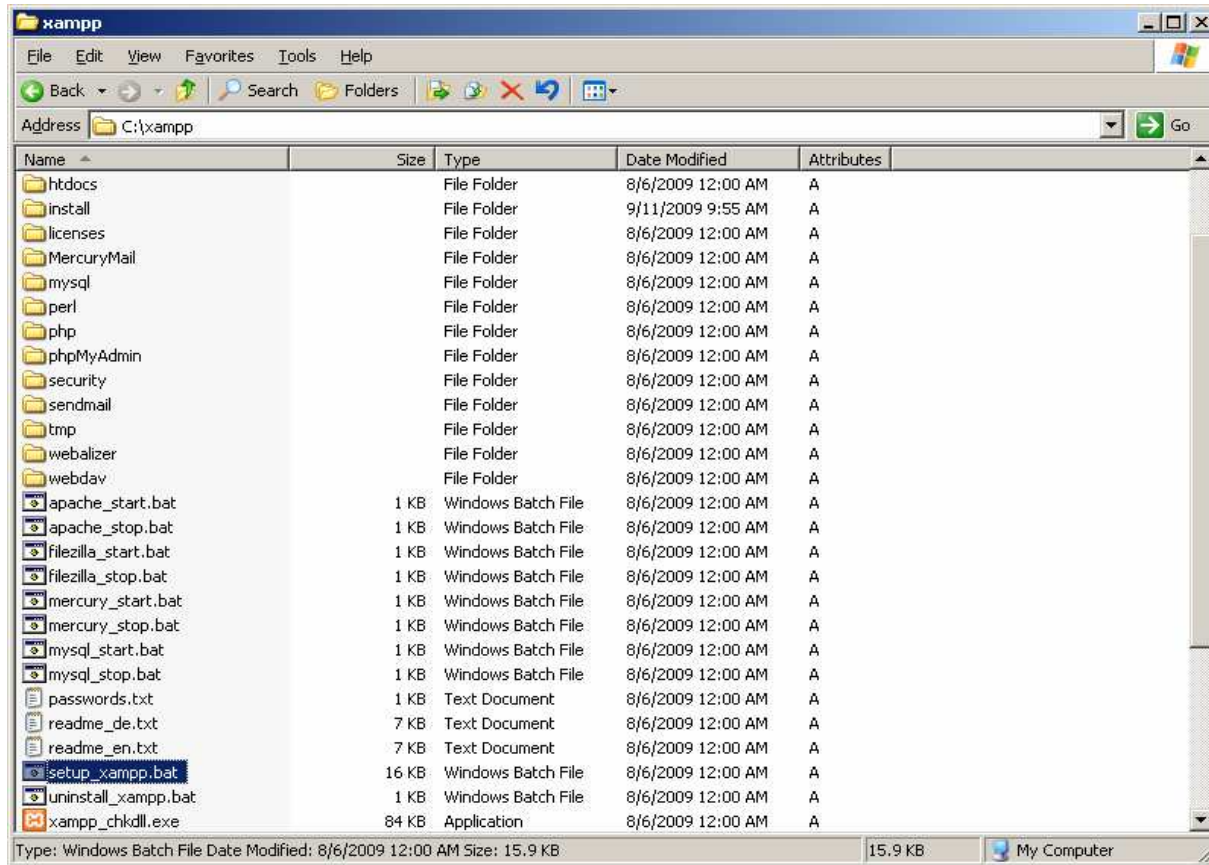
First start by running 7-Zip setup files which will help you in extracting XAMMP system components and proceed with its straightforward installation.



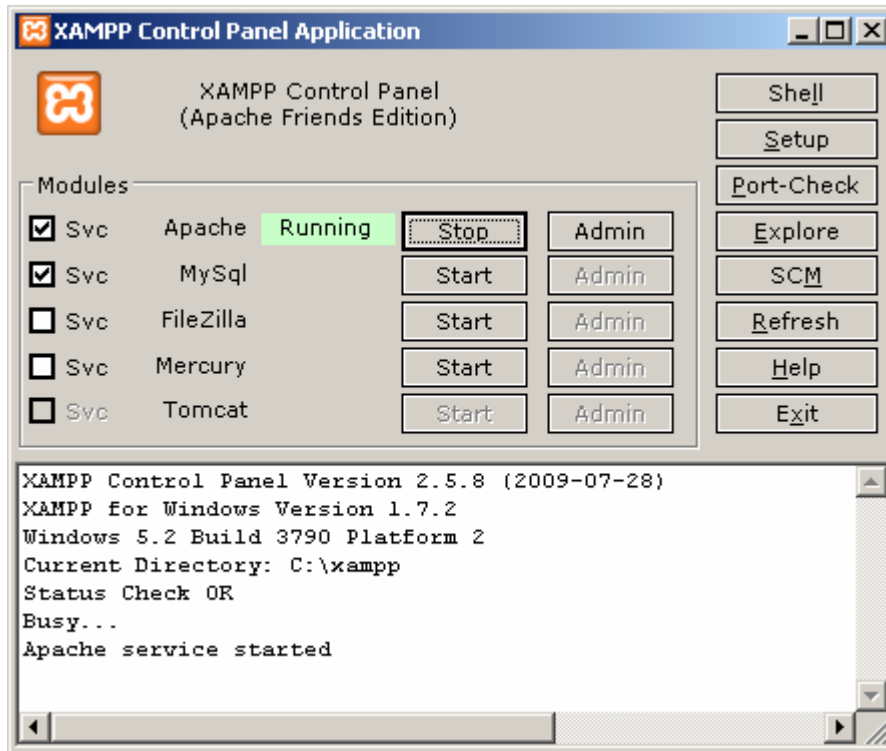
Right-click on XAMPP set-up file, then click 7-Zip and go to extract files (Also, remember that all files will be extracted on C: drive



Remember that you will access all XAMPP configurations by going to C: and through opening XAMPP folder.



Now suppose you manage to open *XAMPP* folder on *C: drive*, the next step is the installation of its preferred server package that will be compatible with *Drupal* components. To proceed with this step, it is recommended to run the *setup_xampp* file. After the Command windows is opened automatically, please type 1 as your choice to proceed with the final step of *XAMPP* installation.



The *XAMPP* Control panel application will appear automatically and select *Apache* and *MySQL* as the only components to **run**, as described to be compatible with our *Drupal* system. You will need to select these two *XAMPP* services (*Apache* and *MySQL*) and then Click "Start" (Start will only become enabled after you click on Start button).

To make sure that the *XAMPP* was configured type open the web browser and type *http://localhost* or *http://127.0.0.1* in the address bar. The pre-built *XAMPP* page appears automatically

PART II. Drupal Database Management System (Bbms)

Drupal is normally defined as a content management system that makes use of modules to allow site administrators to organize and display content. By installing and running drupal the user or administrator will be able to access to web resources.

This tool is so important in web application, because it help in customizing in a simple manner, the appearance and manages routine tasks, such as registration for websites requiring user names and passwords.

Furthermore, Drupal require a database, such as MySQL to store content and settings. Anyone can create modules for Drupal, and currently available modules range from photo galleries to other web application systems such as *Knownet*, an intranet currently being used in the National Institute of Statistics of Rwanda (NISR).

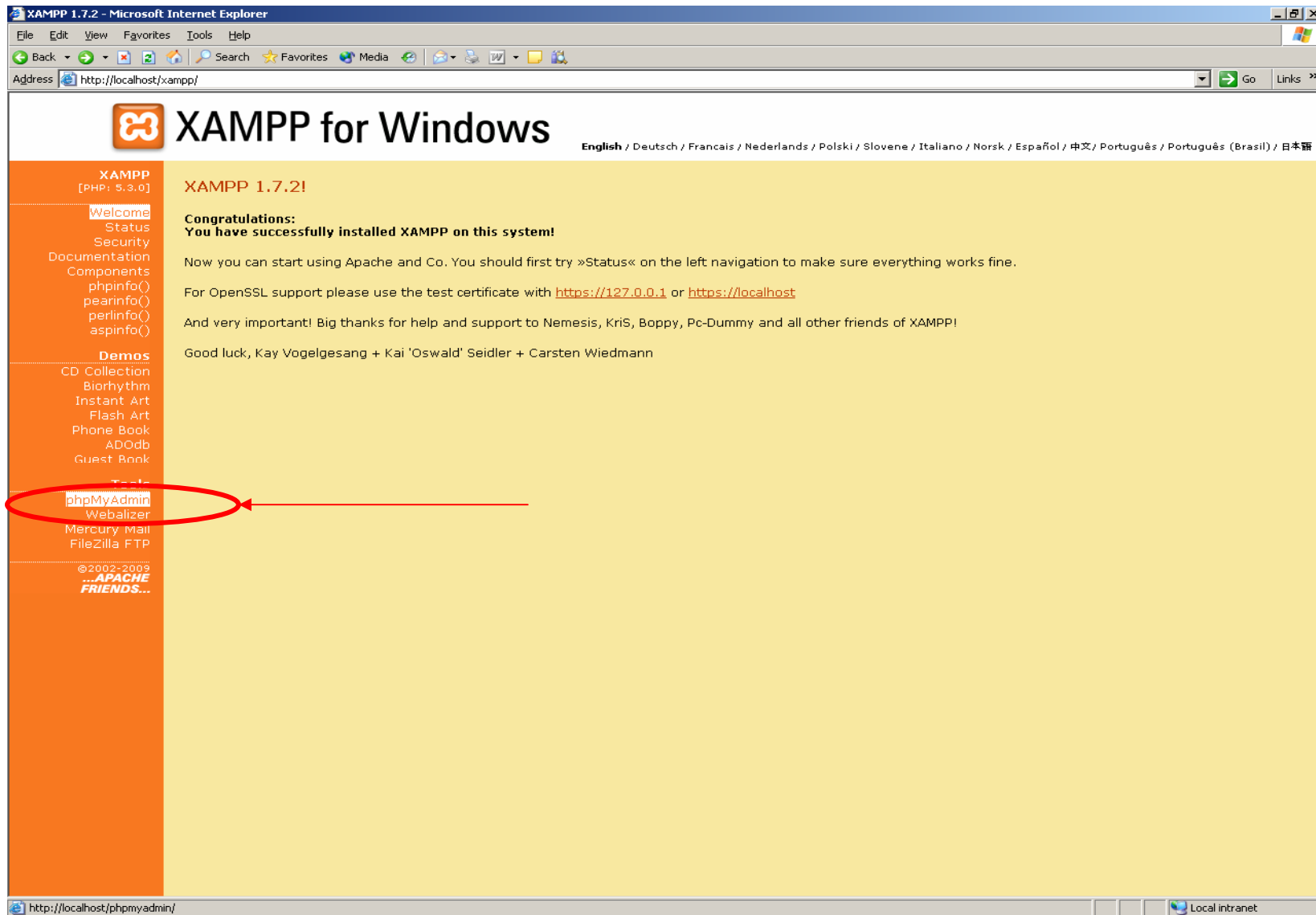
Drupal is a flexible modular base Content Management System, but *Joomla* which is another application used for NISR public website is a content management system considered the chief alternative to Drupal.

In case ok KNOWNET at National Institute of Statistics of Rwanda (NISR), the “*localhost*” root name can be compared as the same to the ‘*knownet*’ database, which defines it pathname, while Drupal can be described as a front-end user for content management.

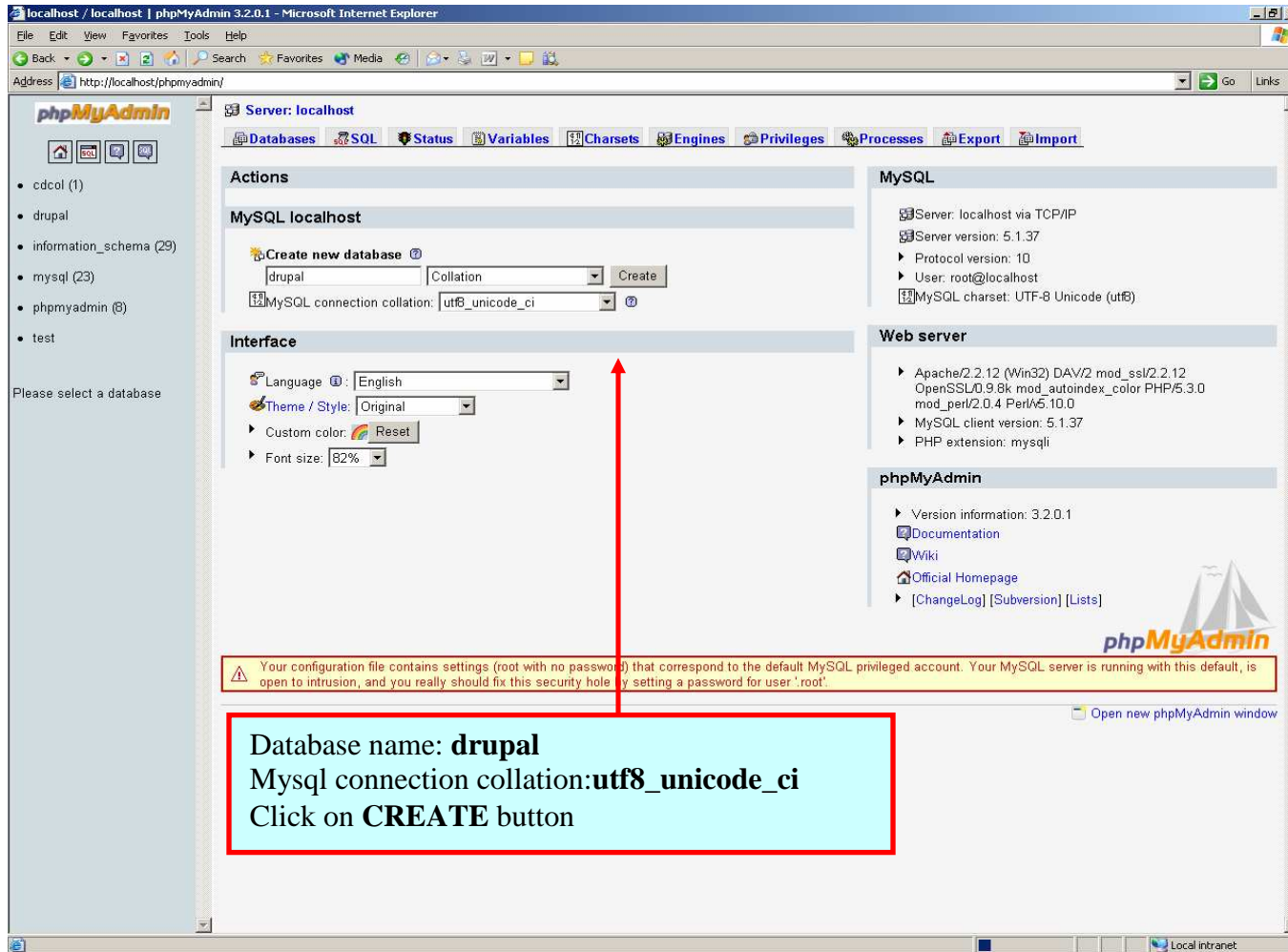
II. 1. Setting up Drupal for use with MySQL database on Knownet production server

Before installing Drupal database, there are two important steps, by assigning a *name* to your database and a *username* with a *password* to your interface.

In creating 'drupal' database On XAMPP Page, click 'PhpMyAdmin' and create a new database 'drupal' with character set *utf8 unicode*)



After your database has been created, a message of confirmation will be displayed on the upper front of your screen



II. 2. Setting password for MySQL

To set MySQL password, open Web browser, go to <http://localhost/security>, scroll down and click on <http://localhost/security/xamppsecurity.php>. This will open Security console. Enter password for MySQL and click “Password Changing” button.

XAMPP for Windows

XAMPP SECURITY [Security Check 1.1]

This page gives you a quick overview of the security status of your XAMPP installation. (Please continue reading after the table.)

Subject	Status
These XAMPP pages are accessible through the network by anyone <small>Every XAMPP demo page you are looking at right now is accessible by everyone over the network. Everyone who knows your IP address can see these pages.</small>	UNSECURE
The MySQL admin user root has NO password <small>Every local user on this Windows machine can access your MySQL database with administrator rights. You should set a password.</small>	UNSECURE
PhpMyAdmin is freely accessible by network <small>PhpMyAdmin is accessible by network without a password. The configuration 'htpdd' or 'cookie' in the "config.inc.php" can help.</small>	UNSECURE
A FTP server is not running or is blocked by a firewall!	UNKNOWN
A POP3 server like Mercury Mail is not running or is blocked by a firewall!	UNKNOWN
The Tomcat add-on is not installed.	UNKNOWN

The green marked points are secure; the red marked points are definitively insecure and the yellow marked points couldn't be checked (for example because the software to check isn't running).

To fix the problems for mysql, phpmyadmin and the xampp directory simply use
=> <http://localhost/security/xamppsecurity.php> [allowed only for localhost]

Some other important notes:

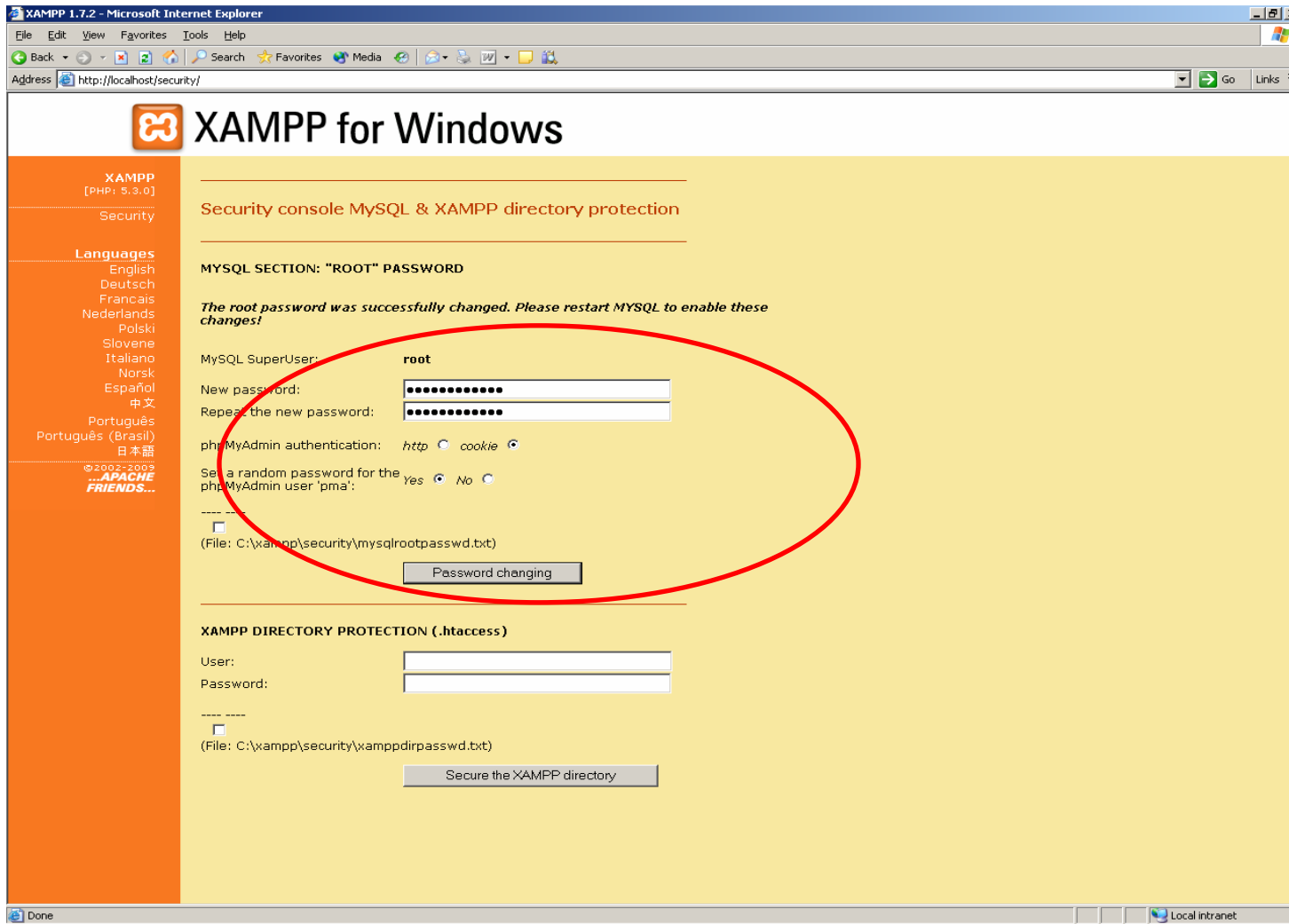
- All these test are made available ONLY to the host "localhost" (127.0.0.1).
- For FileZilla FTP and Mercury Mail, you must fix all security problems by yourself! Sorry.
- If your computer is blocked by a firewall or not online, your servers are SECURE against outside attacks.
- If servers are not running, they are also SECURE!

Please consider this: With more XAMPP security, some examples will NOT execute error free. If you use PHP in "safe mode" for example, some functions of this security frontend will not work anymore. Often more security means less functionality.

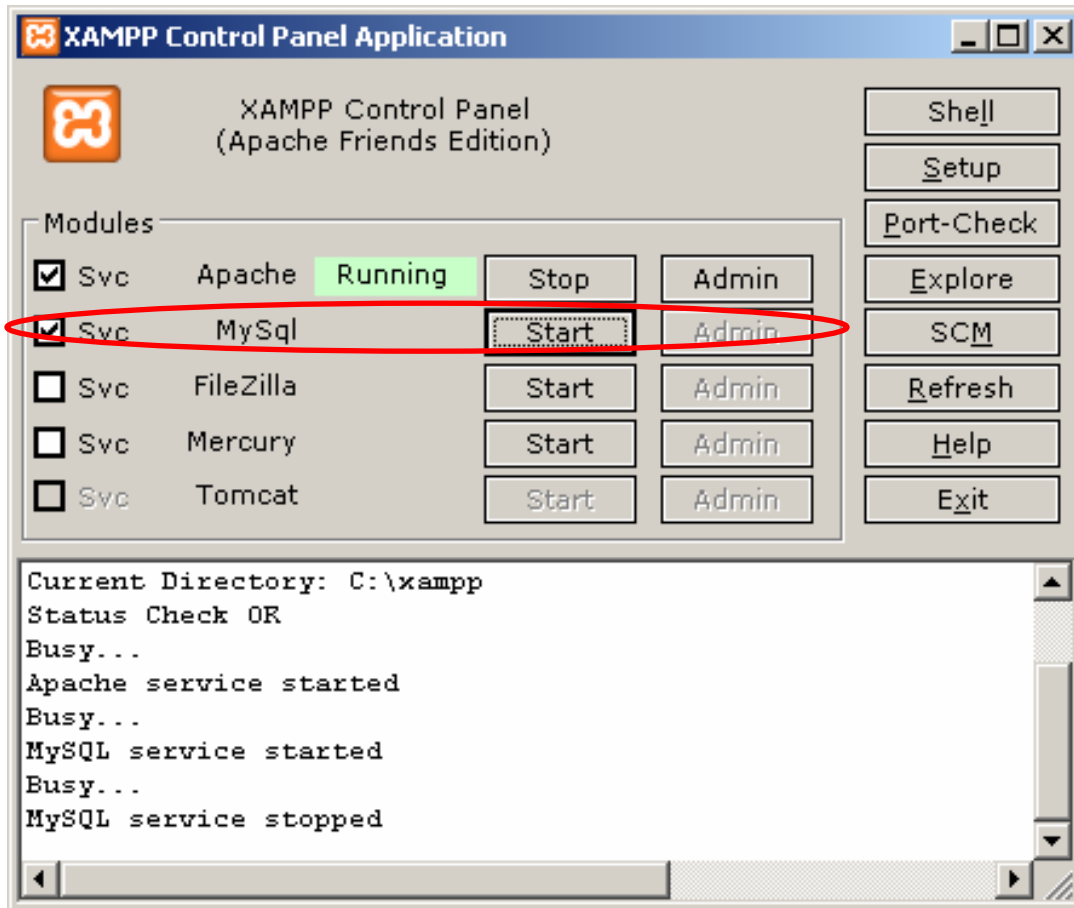
The XAMPP default ports:

ftp	21/tcp	# File Transfer [Control] (XAMPP: FTP Default Port)
smtp	25/tcp	mail # Simple Mail Transfer (XAMPP: SMTP Default Port)
http	80/tcp	# World Wide Web HTTP (XAMPP: Apache Default Port)
pop3	110/tcp	# Post Office Protocol - Version 3 (XAMPP: POP3 Default Port)
imap	143/tcp	# Internet Message Access Protocol (XAMPP: IMAP Default Port)
https	443/tcp	# http protocol over TLS/SSL (XAMPP: Apache SSL Port)
mysql	3306/tcp	# MySQL (XAMPP: MySQL Default Port)
APD/1.3	8000	# APD/1.3 (XAMPP: Tomcat APD/1.3 Port)

Set up your new password!

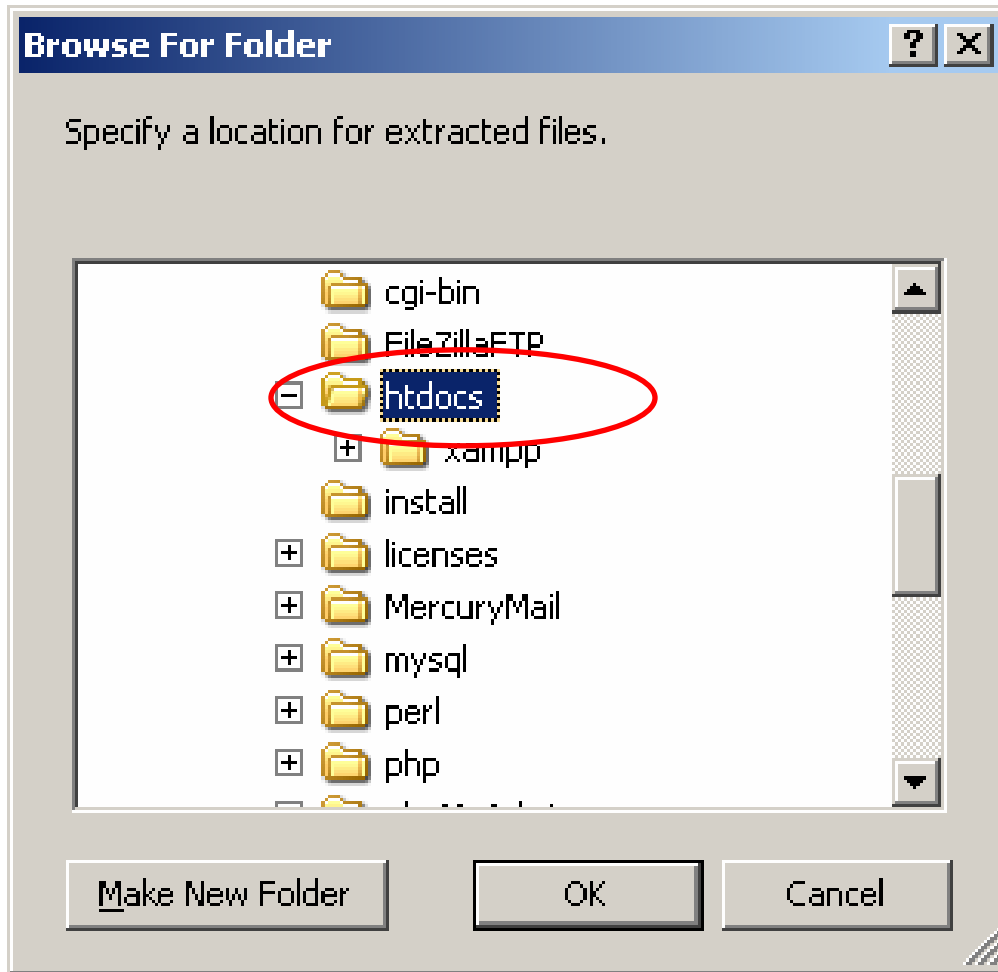


Before extracting Drupal files, you need to restart MySQL in XAMPP Control Panel. Click “Stop” and “Start” button next to MySQL.

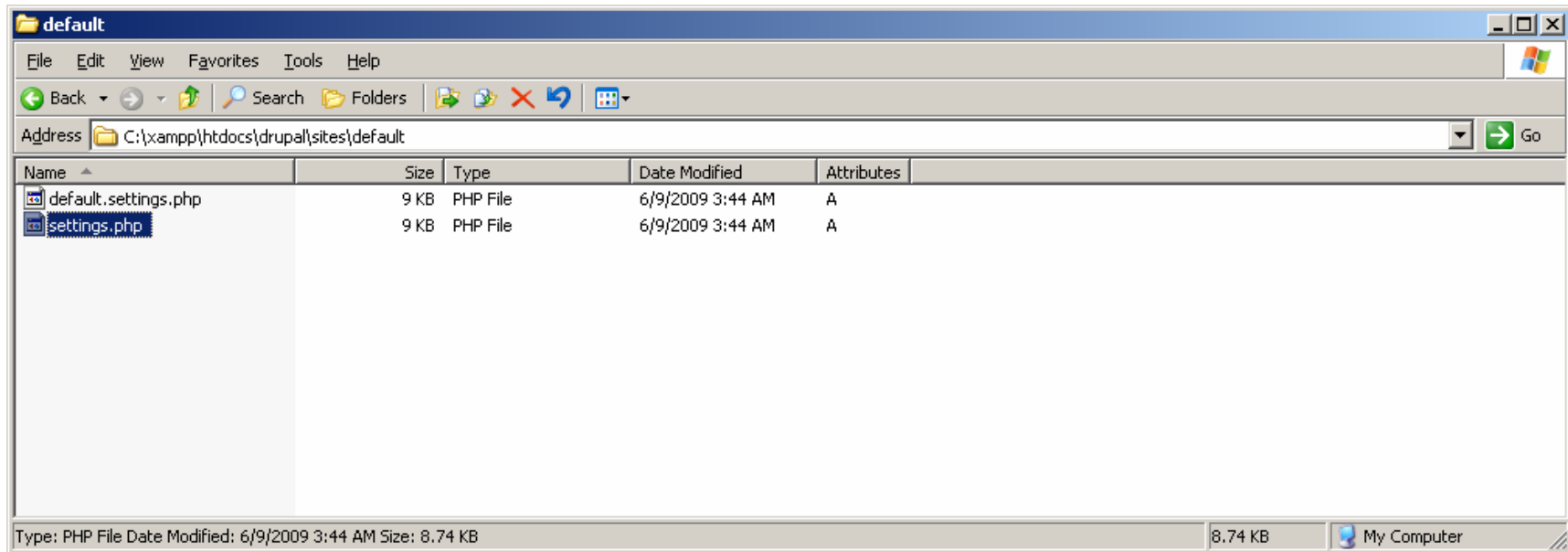


PART III. Site Contents design

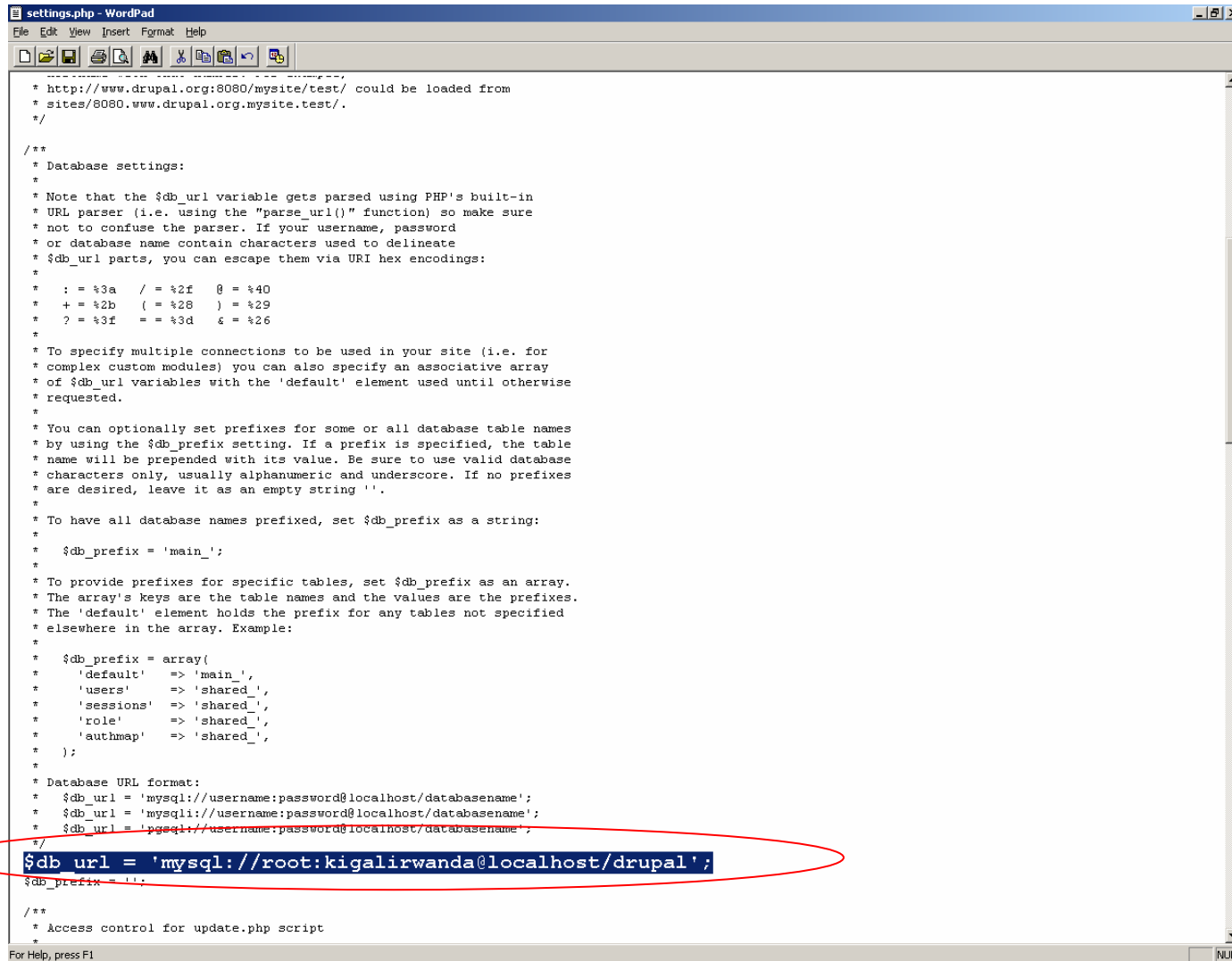
Extract drupal files to C:\xampp\htdocs folder. In uploading the contents of Drupal folder to HTDOC which is a file where the website files will be stored.



Open 'drupal' folder, copy "*default.settings.php*" to the same folder and rename it to "*settings.php*"



Open *settings.php* with wordpad and enter *db_url* and *base_url*. Assuming that all is set to go, open your browser and type the URL of the site where the drupal is installed <http://localhost/drupal>. Replace username by root, password by admin & databasename by *drupal*.

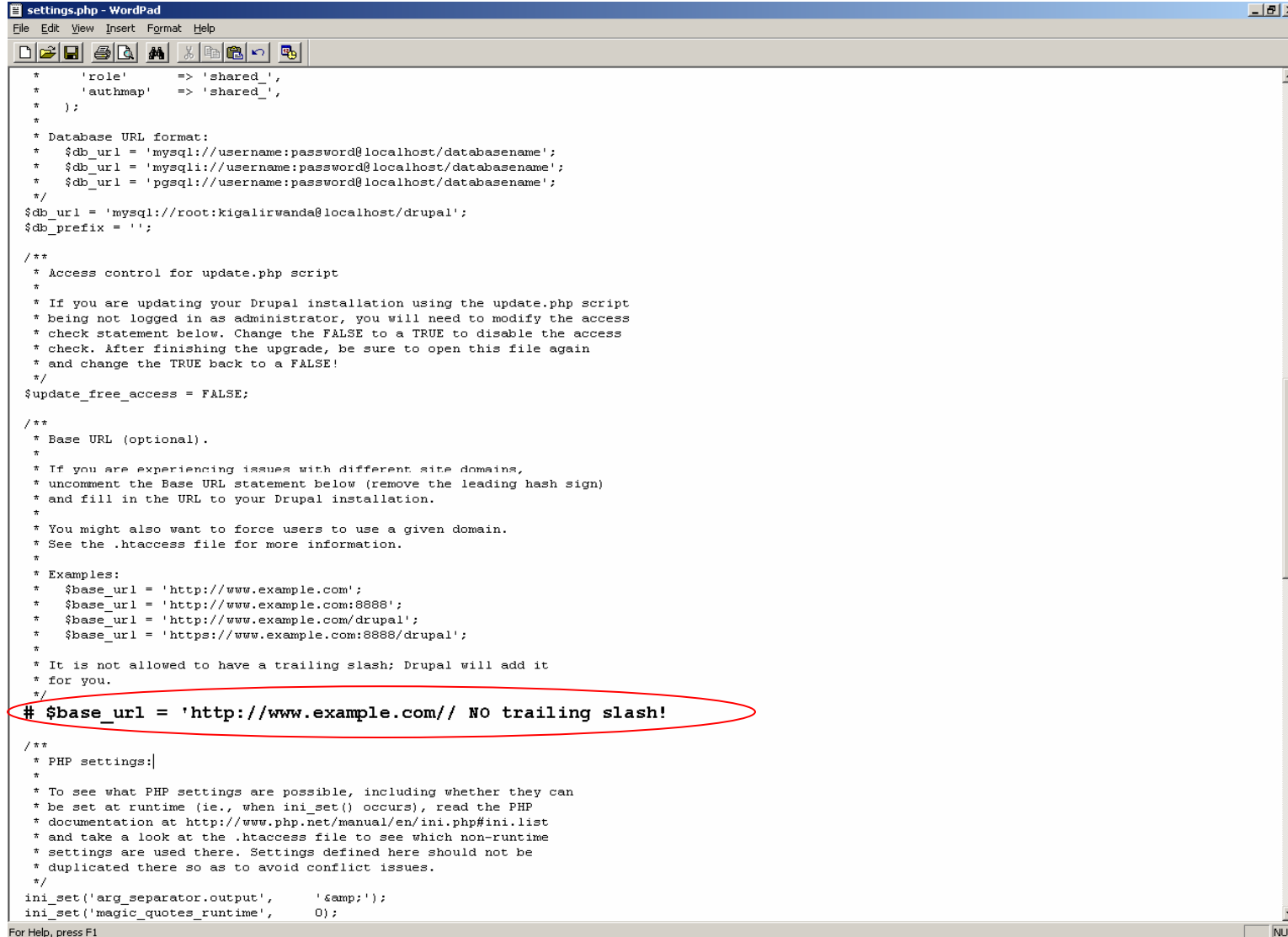


```
settings.php - WordPad
File Edit View Insert Format Help
* http://www.drupal.org:8080/mysite/test/ could be loaded from
* sites/8080.www.drupal.org.mysite.test/.
*/

/**
 * Database settings:
 *
 * Note that the $db_url variable gets parsed using PHP's built-in
 * URL parser (i.e. using the "parse_url()" function) so make sure
 * not to confuse the parser. If your username, password
 * or database name contain characters used to delineate
 * $db_url parts, you can escape them via URI hex encodings:
 *
 * : = %3a / = %2f @ = %40
 * + = %2b ( = %28 ) = %29
 * ? = %3f = = %3d & = %26
 *
 * To specify multiple connections to be used in your site (i.e. for
 * complex custom modules) you can also specify an associative array
 * of $db_url variables with the 'default' element used until otherwise
 * requested.
 *
 * You can optionally set prefixes for some or all database table names
 * by using the $db_prefix setting. If a prefix is specified, the table
 * name will be prepended with its value. Be sure to use valid database
 * characters only, usually alphanumeric and underscore. If no prefixes
 * are desired, leave it as an empty string ''.
 *
 * To have all database names prefixed, set $db_prefix as a string:
 *
 * $db_prefix = 'main';
 *
 * To provide prefixes for specific tables, set $db_prefix as an array.
 * The array's keys are the table names and the values are the prefixes.
 * The 'default' element holds the prefix for any tables not specified
 * elsewhere in the array. Example:
 *
 * $db_prefix = array(
 *   'default' => 'main_',
 *   'users' => 'shared_',
 *   'sessions' => 'shared_',
 *   'role' => 'shared_',
 *   'authmap' => 'shared_',
 * );
 *
 * Database URL format:
 * $db_url = 'mysql://username:password@localhost/databasename';
 * $db_url = 'mysql://username:password@localhost/databasename';
 * $db_url = 'pgsql://username:password@localhost/databasename';
 */
$db_url = 'mysql://root:kigalirwanda@localhost/drupal';
$db_prefix = '';

/**
 * Access control for update.php script
 */
```

In the same Wordpad coding, replace <http://www.example.com> by <http://localhost/drupal> and remove the # sign at the beginning of the line and after SAVE and CLOSE the SETTINGS php. File



```
settings.php - WordPad
File Edit View Insert Format Help

*
* 'role' => 'shared',
* 'authmap' => 'shared',
* );
*
* Database URL format:
* $db_url = 'mysql://username:password@localhost/databasename';
* $db_url = 'mysql://username:password@localhost/databasename';
* $db_url = 'pgsql://username:password@localhost/databasename';
*/
$db_url = 'mysql://root:kigalirwanda@localhost/drupal';
$db_prefix = '';

/**
 * Access control for update.php script
 *
 * If you are updating your Drupal installation using the update.php script
 * being not logged in as administrator, you will need to modify the access
 * check statement below. Change the FALSE to a TRUE to disable the access
 * check. After finishing the upgrade, be sure to open this file again
 * and change the TRUE back to a FALSE!
 */
$update_free_access = FALSE;

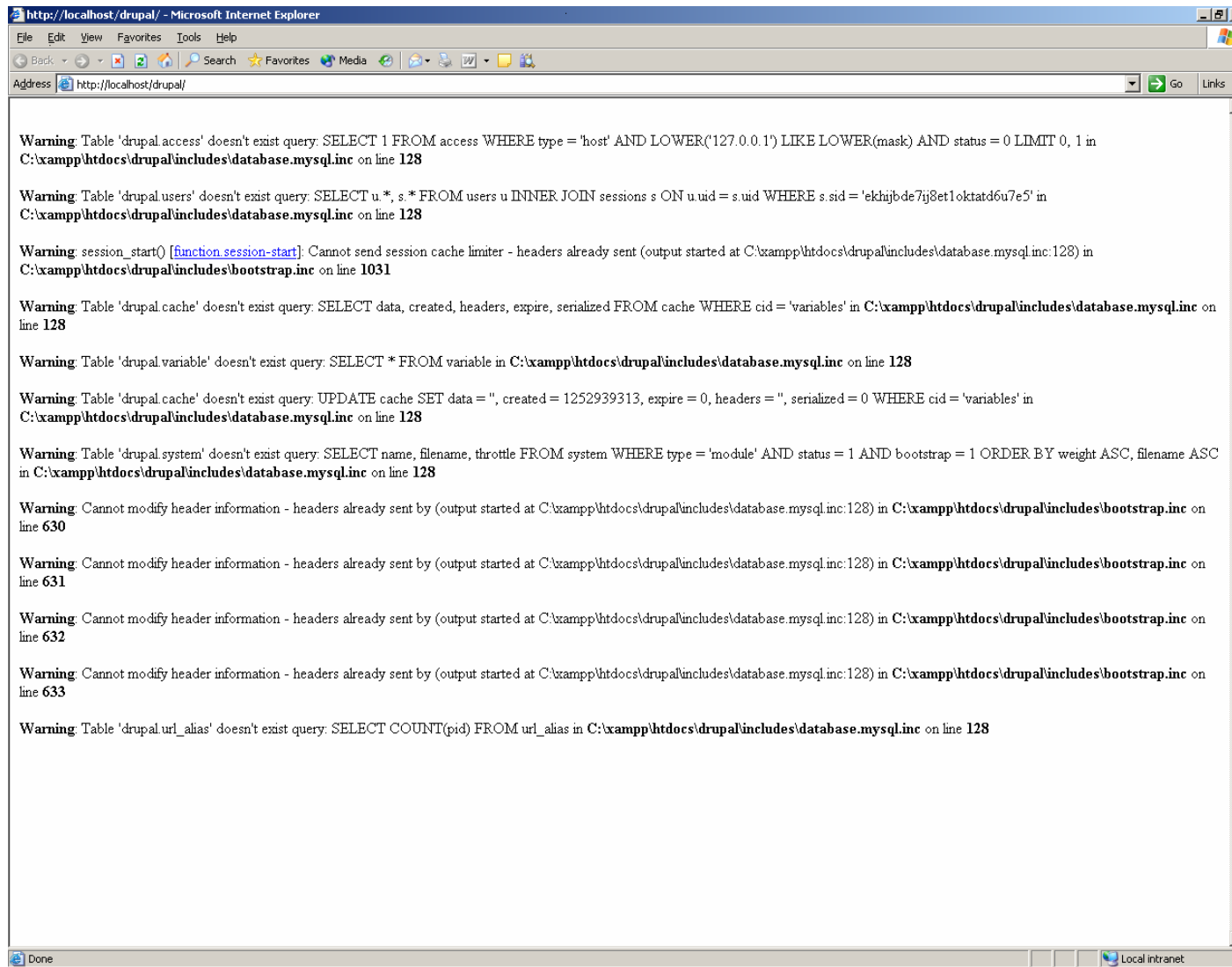
/**
 * Base URL (optional).
 *
 * If you are experiencing issues with different site domains,
 * uncomment the Base URL statement below (remove the leading hash sign)
 * and fill in the URL to your Drupal installation.
 *
 * You might also want to force users to use a given domain.
 * See the .htaccess file for more information.
 *
 * Examples:
 * $base_url = 'http://www.example.com';
 * $base_url = 'http://www.example.com:8888';
 * $base_url = 'http://www.example.com/drupal';
 * $base_url = 'https://www.example.com:8888/drupal';
 *
 * It is not allowed to have a trailing slash; Drupal will add it
 * for you.
 */
# $base_url = 'http://www.example.com// NO trailing slash!

/**
 * PHP settings:|
 *
 * To see what PHP settings are possible, including whether they can
 * be set at runtime (ie., when ini_set() occurs), read the PHP
 * documentation at http://www.php.net/manual/en/ini.php#ini.list
 * and take a look at the .htaccess file to see which non-runtime
 * settings are used there. Settings defined here should not be
 * duplicated there so as to avoid conflict issues.
 */
ini_set('arg_separator.output', '&');
ini_set('magic_quotes_runtime', 0);

For Help, press F1
```

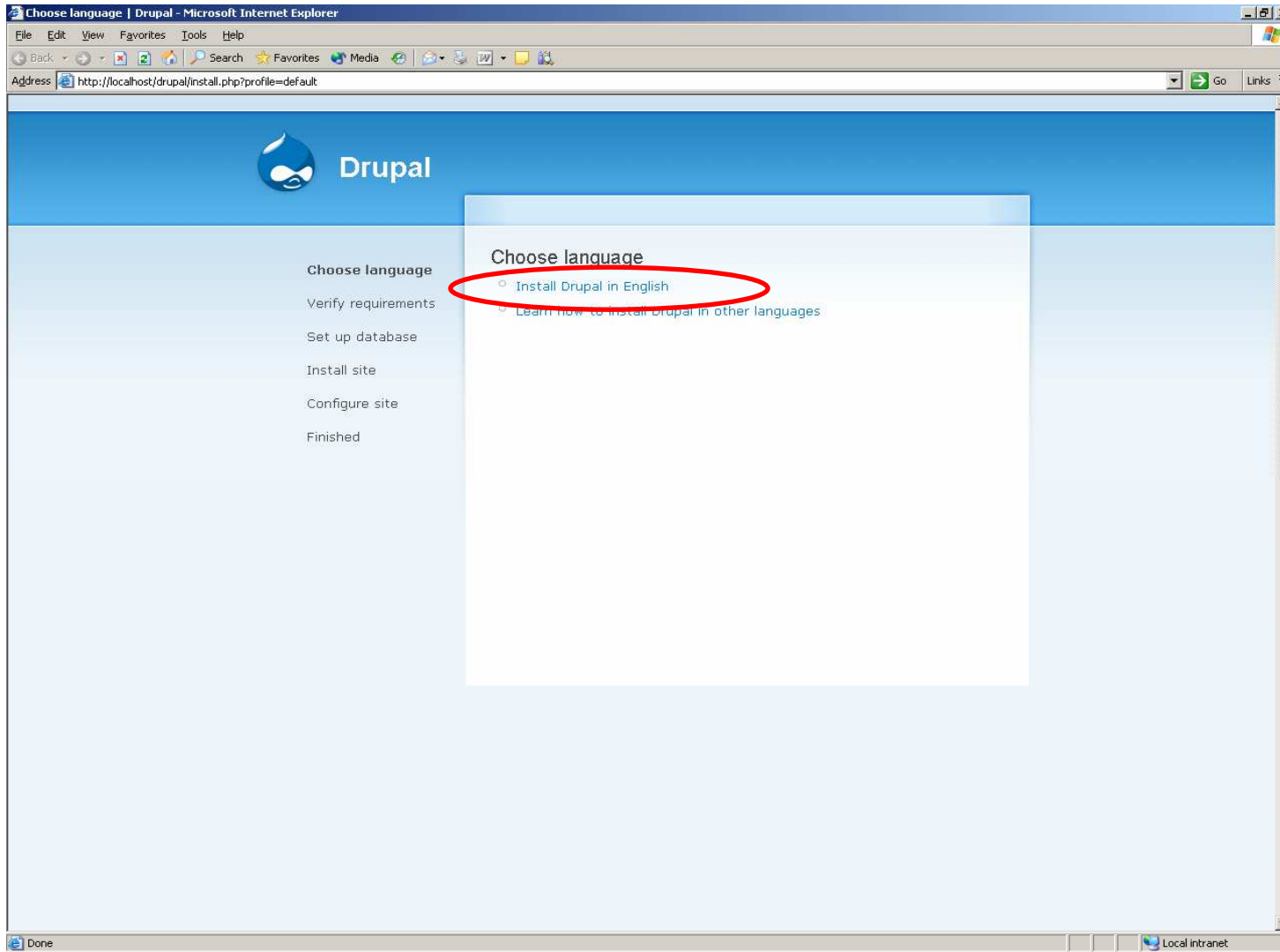
III. 1. Last steps involved in Drupal Configuration

Step A: On the browser type “<http://localhost/drupal/>”, you will see an error page as shown below

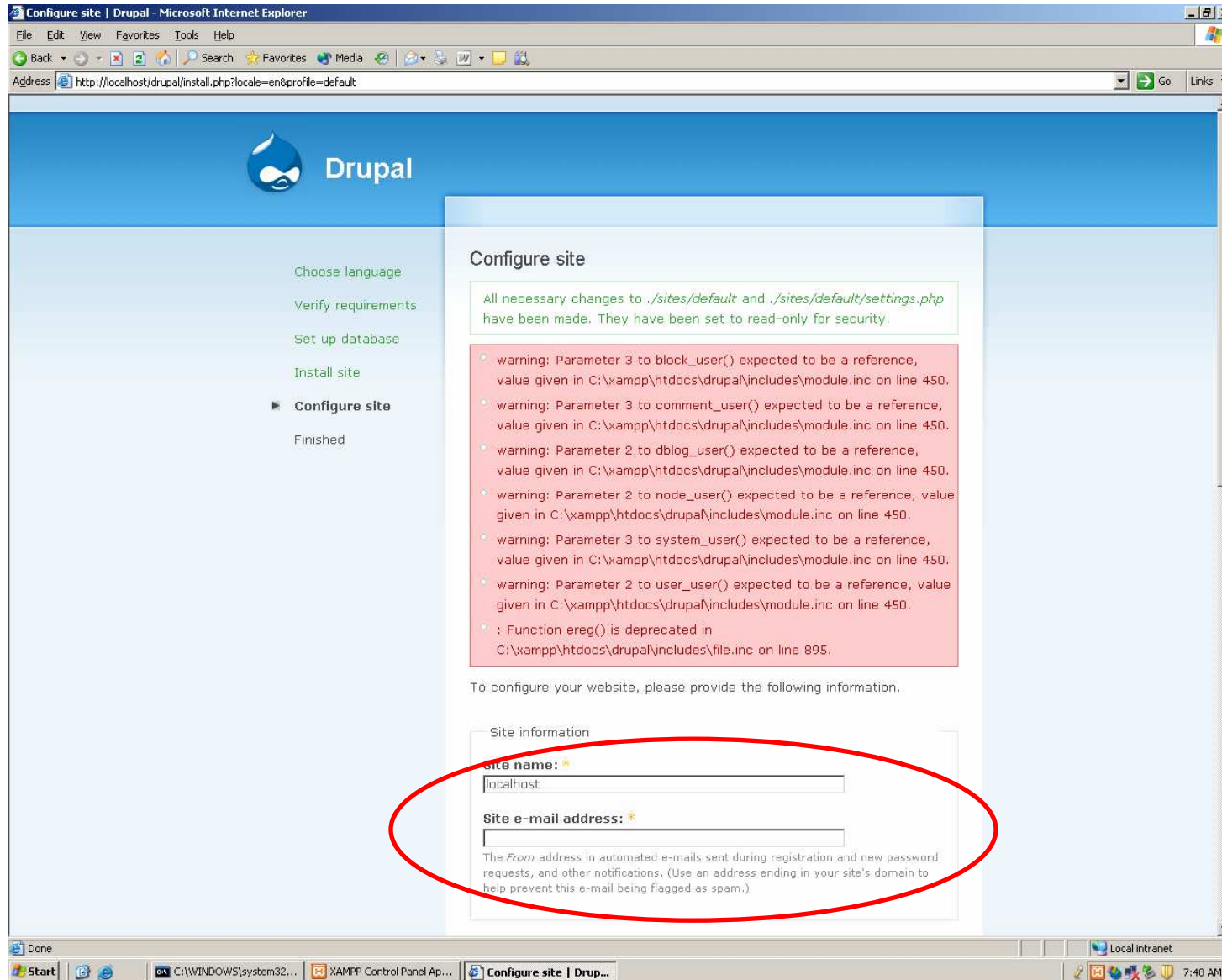


Step B: On the browser type “<http://localhost/drupal/install.php>” and proceed with the final step by clicking on

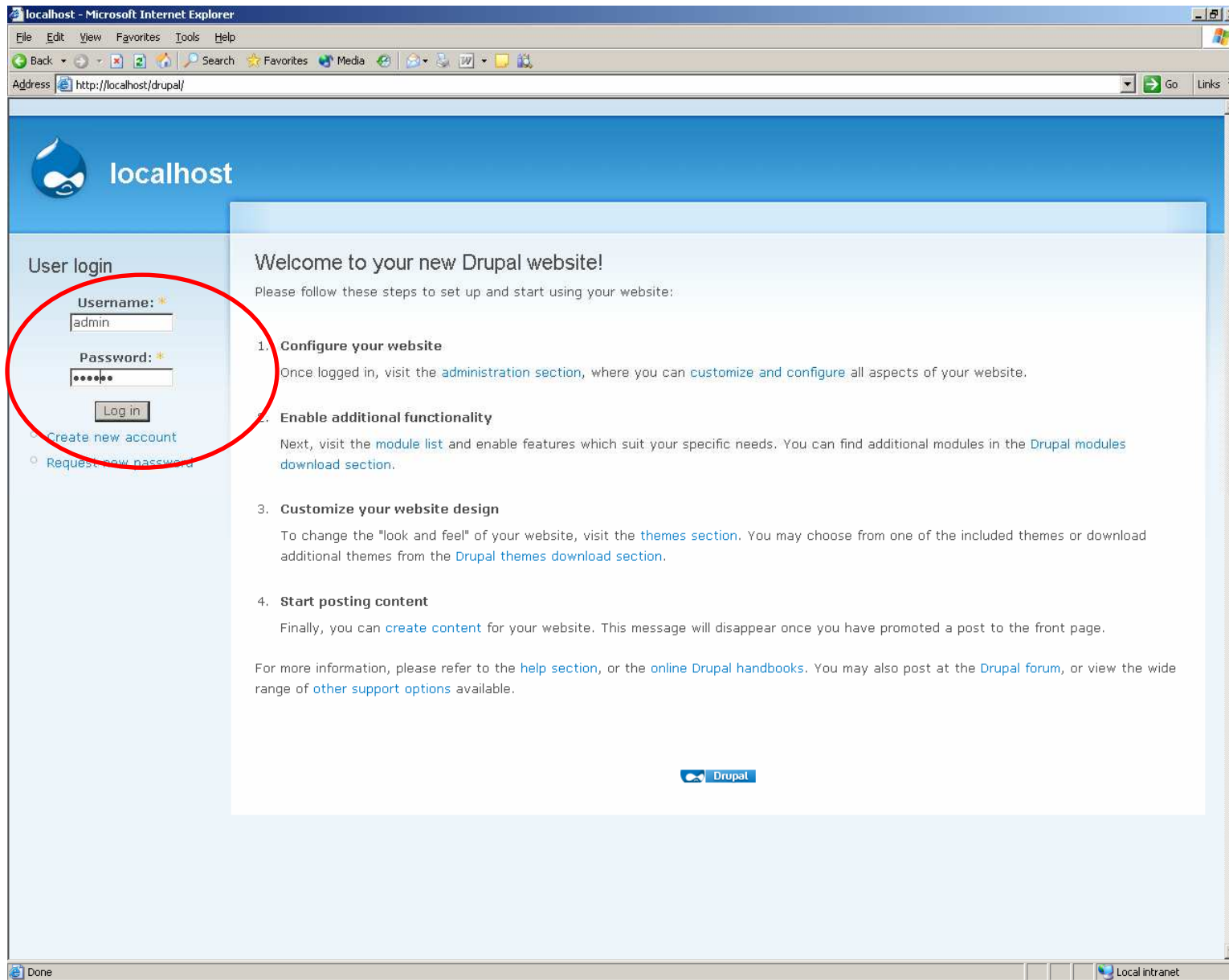
“Install Drupal in English”



Step C: Rename your *site* and enter your *email address* and set the *username* and *password* for your Drupal interface



Step D: Enter *Username* and *Password* and **LOGIN**



Step E: From this step you will have access to manage the contents of your site as an Administrator

