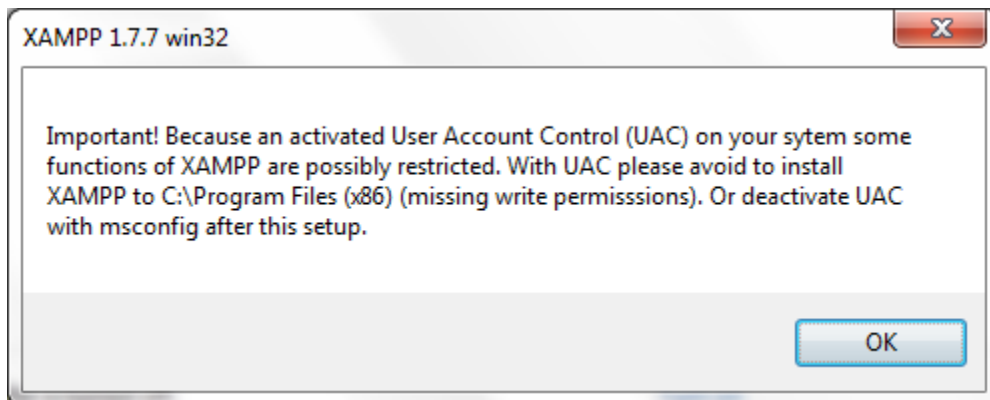


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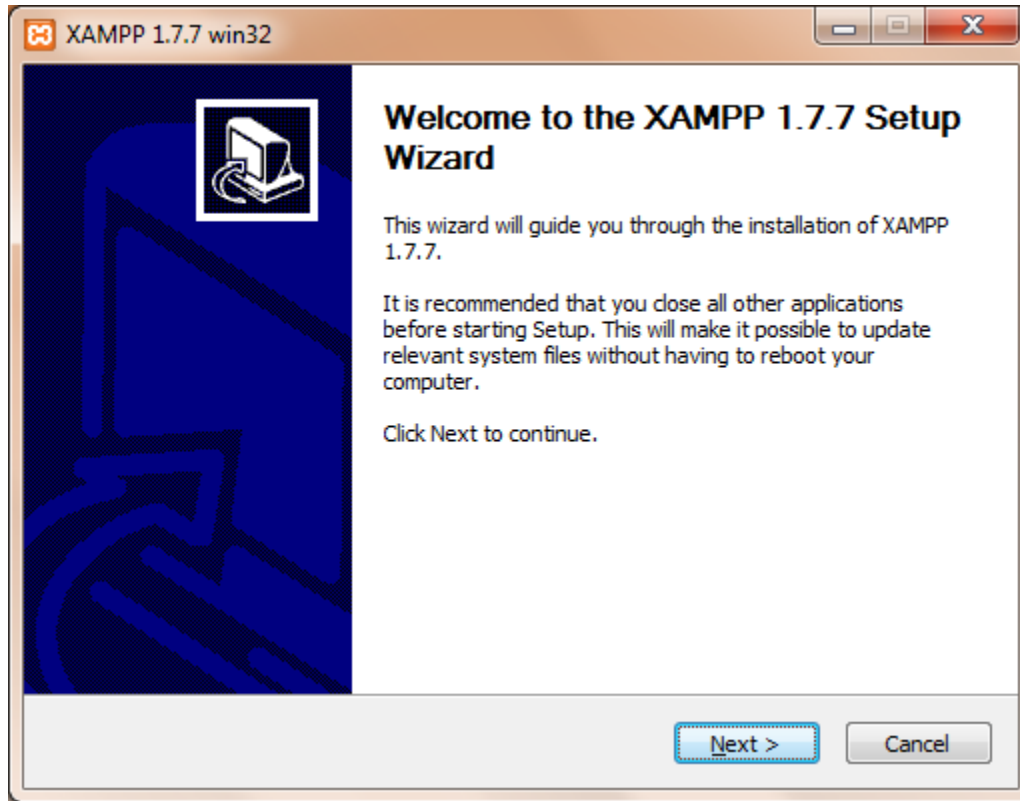
## XAMPP Installation

---

1. Download XAMPP from <http://www.apachefriends.org/en/xampp.html>
2. XAMPP for Windows exists in three different flavors. The “Installer” version is “probably the most comfortable way to install XAMPP” according to the XAMPP website.
3. Start the XAMPP installation
4. Note that Windows 7 will warn that installing to the Program Files directory will keep XAMPP from being able to write to its directory due to UAC. Disabling UAC is not recommended. XAMPP can be installed to C:\XAMPP to avoid this issue or XAMPP can be given permission to run as Administrator.

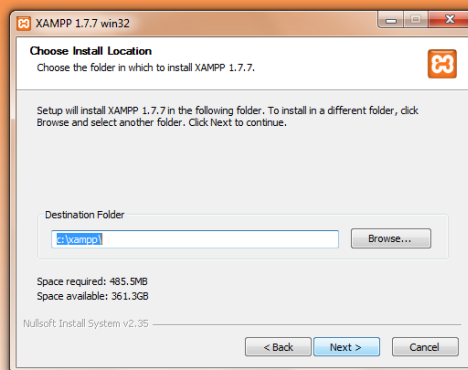


5. The XAMPP installation starts with a splash screen. Click “Next”.

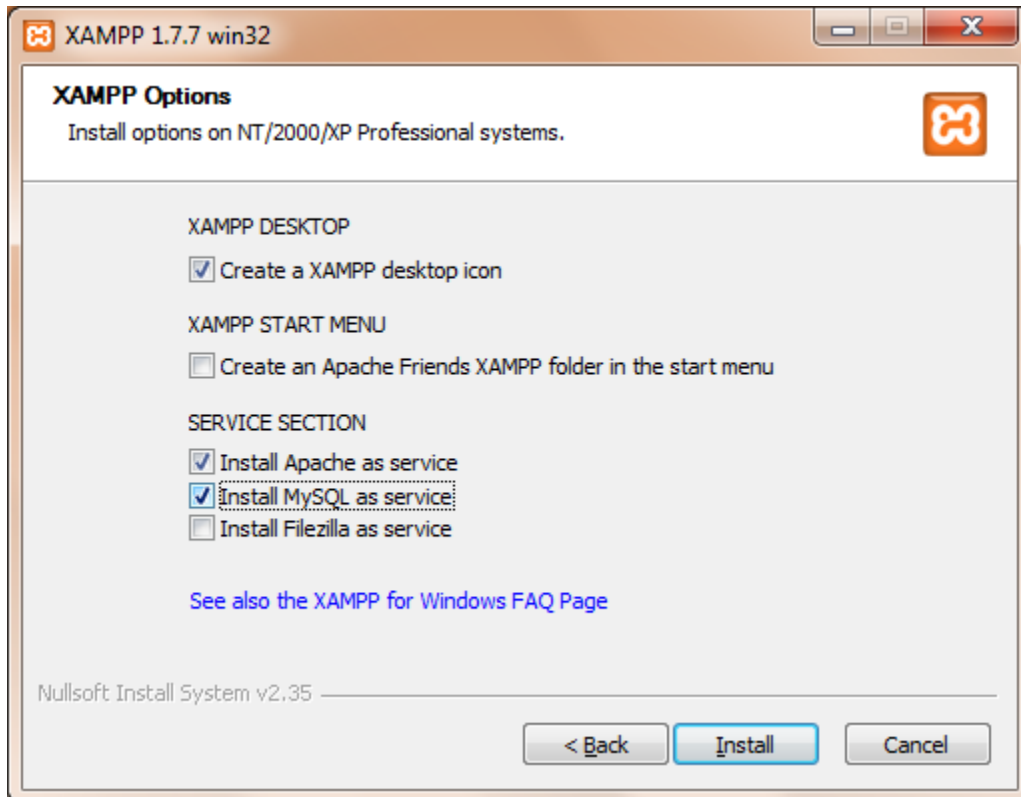


6. Choose which directory to install XAMPP. Installing in C:\XAMPP can make installation easier.

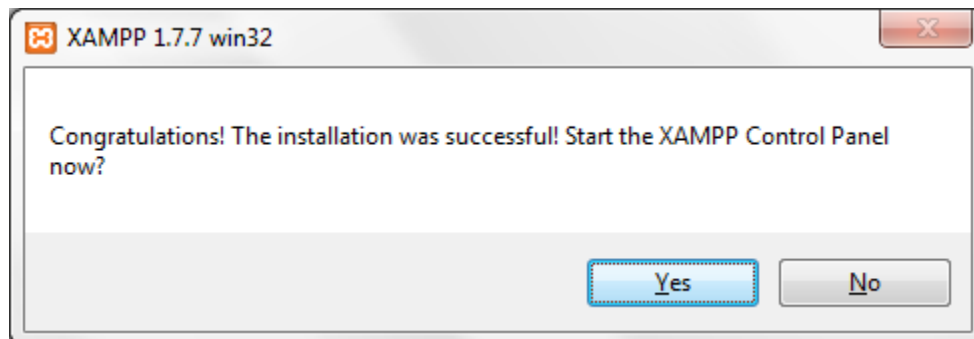
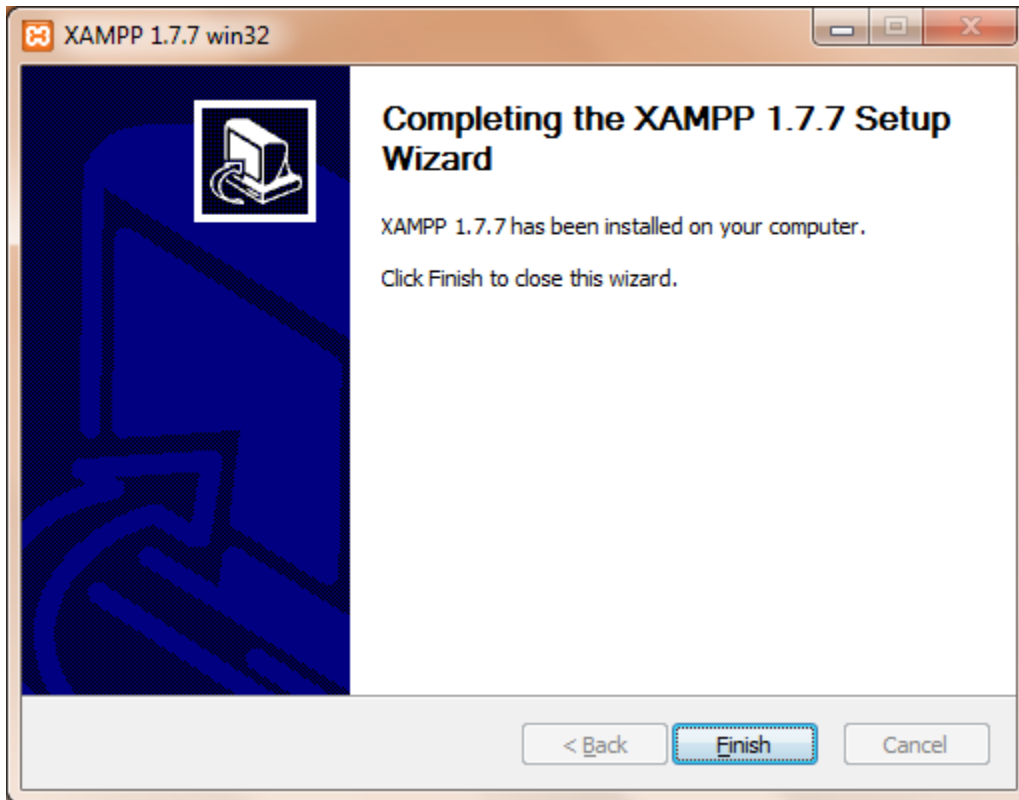
*XAMPP 1.7.7 win32*



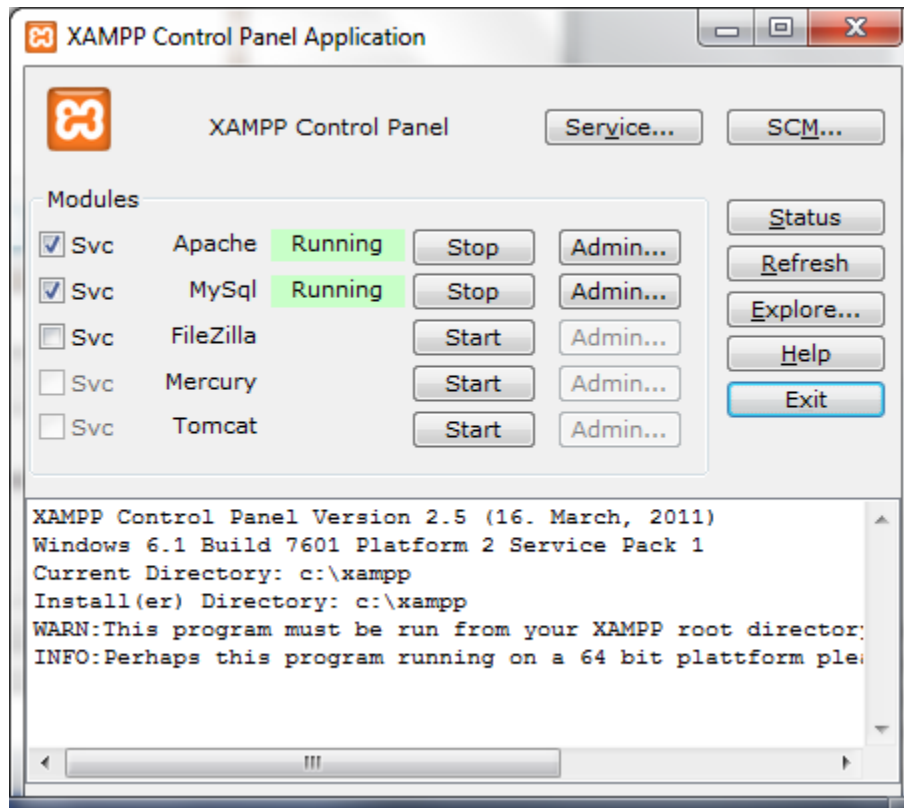
7. **Installing Apache and MySQL as a service can give more options for running XAMPP when desired. When installed as services, the “services.msc” snap-in can be used to set the services to run “manually”. Running XAMPP services manually can help prevent opening security holes accidentally.**



8. Complete the installation. It may take a while.



9. The XAMPP installation completes. The XAMPP control panel can be started. In Windows, using services.msc can be used to control Apache and MySQL as long as they are installed as a service.



10. Note that the XAMPP installation contains a folder named "htdocs". For example, if XAMPP is installed to "C:\xampp" then there is an htdocs directory located at "C:\xampp\htdocs". The "htdocs" folder is where web applications are placed.

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## Installing Mutillidae

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11. Download Mutillidae files from Irongeek. (URL as of this writing is <http://www.irongeek.com/i.php?page=mutillidae/mutillidae-deliberately-vulnerable-php-owasp-top-10>)



The screenshot shows a web browser window displaying the Irongeek website. The page title is "Mutillidae". The main content area is divided into several sections:

- Latest Version (Scroll to bottom for previous versions)**
  - [Download Mutillidae 2.1.4](#)
  - [Change Log](#)
- Documentation**
  - [Installation Instructions](#)
  - [Vulnerabilities](#)
  - [How to Access Mutillidae Over Virtual Box Network](#)
  - [Change Log](#)
- Usage Instructions**

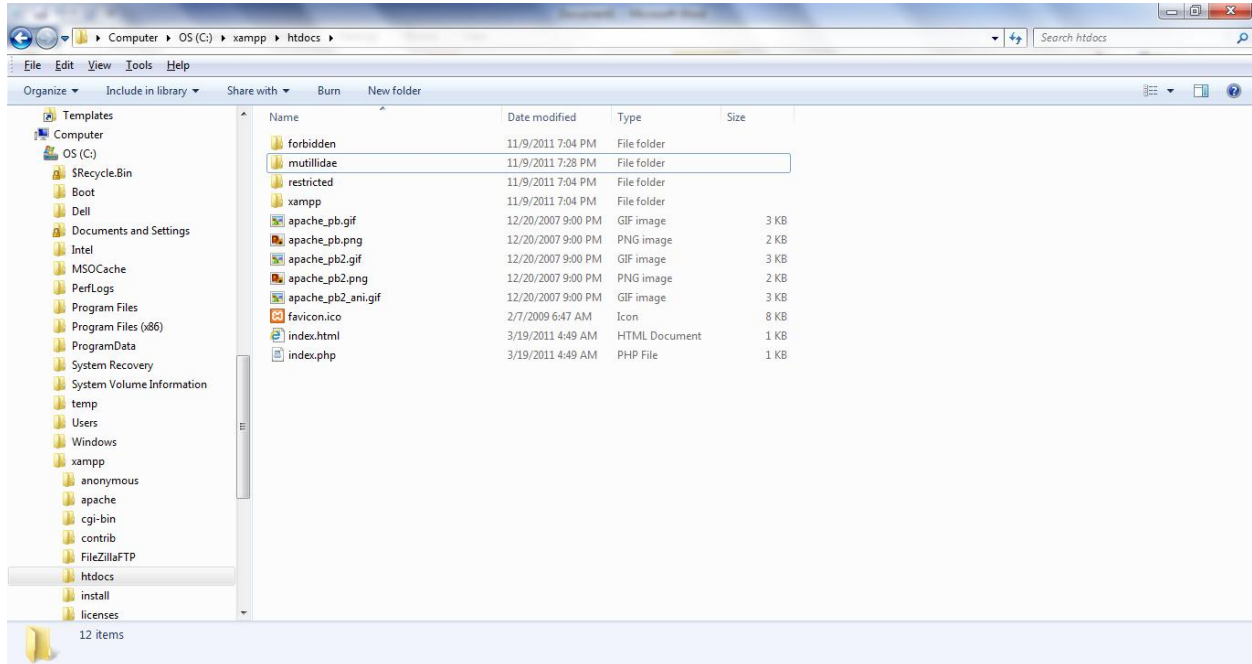
Mutillidae implements the [OWASP Top 10](#) in PHP. Go to the [OWASP Top 10](#) page to read about a vulnerability, then choose it from the list on the left to try it out. Hints may help. Mutillidae currently has two modes: secure and insecure (default). In insecure mode, the project works like Mutillidae 1.0. Pages are vulnerable to at least the topic they fall under in the menu. Most pages are vulnerable to much more. In secure mode, Mutillidae attempts to protect the pages with server side scripts. Also, hints are disabled in secure mode. In the interest of making as many challenges as possible, this can be defeated. In Mutillidae 2.0, the code has been commented to allow the user to see how the defense works. To get the most out of the project, avoid reading the source code until after learning how to exploit it. But if you get stuck, the comments should help. Learning how the attack works should help to understand the defense.
- PHP "Strict" Errors**

On the right side of the page, there is a sidebar with a logo for "Free Vulnerability Scanner Introducing Retina Community" and a promotional message: "A FREE vulnerability assessment solution for up to 32 IPs" with the eEye Digital Security logo and website URL [www.eeye.com](http://www.eeye.com).

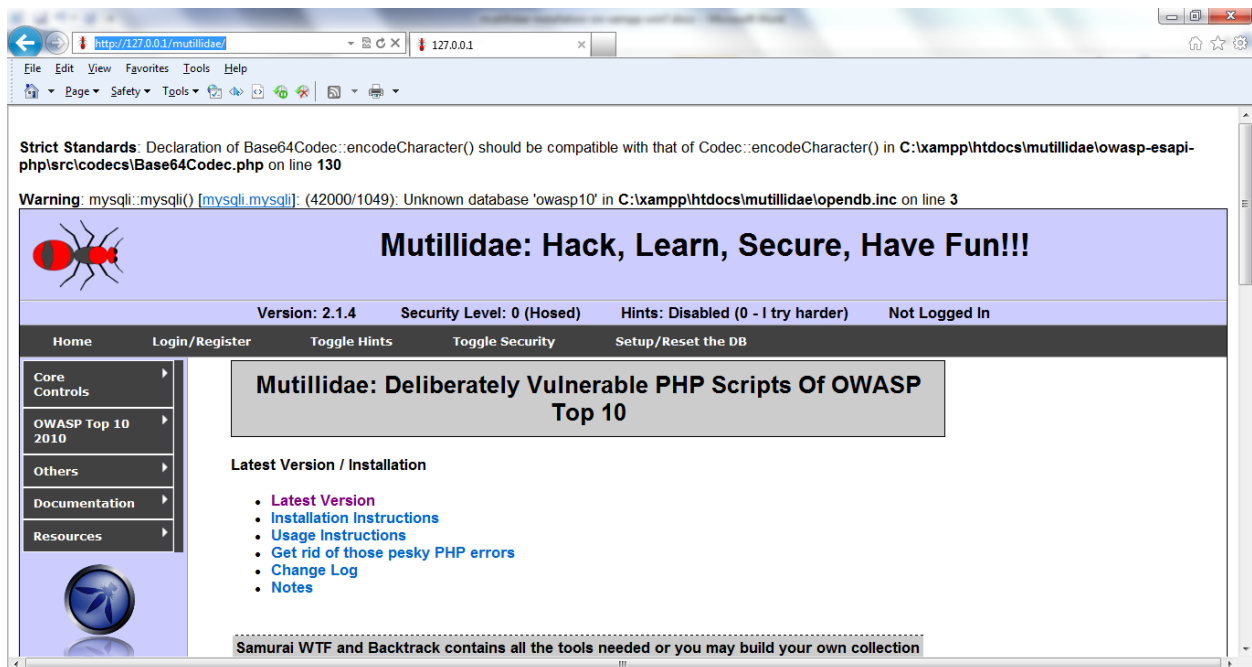
12. Unzip the Mutillidae download.

13. The download contain a single folder named Mutillidae. Leave all the files in this single folder.

14. Copy the entire Mutillidae folder to the XAMPP htdocs directory. For example, if XAMPP is installed to "C:\xampp" then there is an htdocs directory located at "C:\xampp\htdocs". In this example, copy the mutillidae folder into "C:\xampp\htdocs".

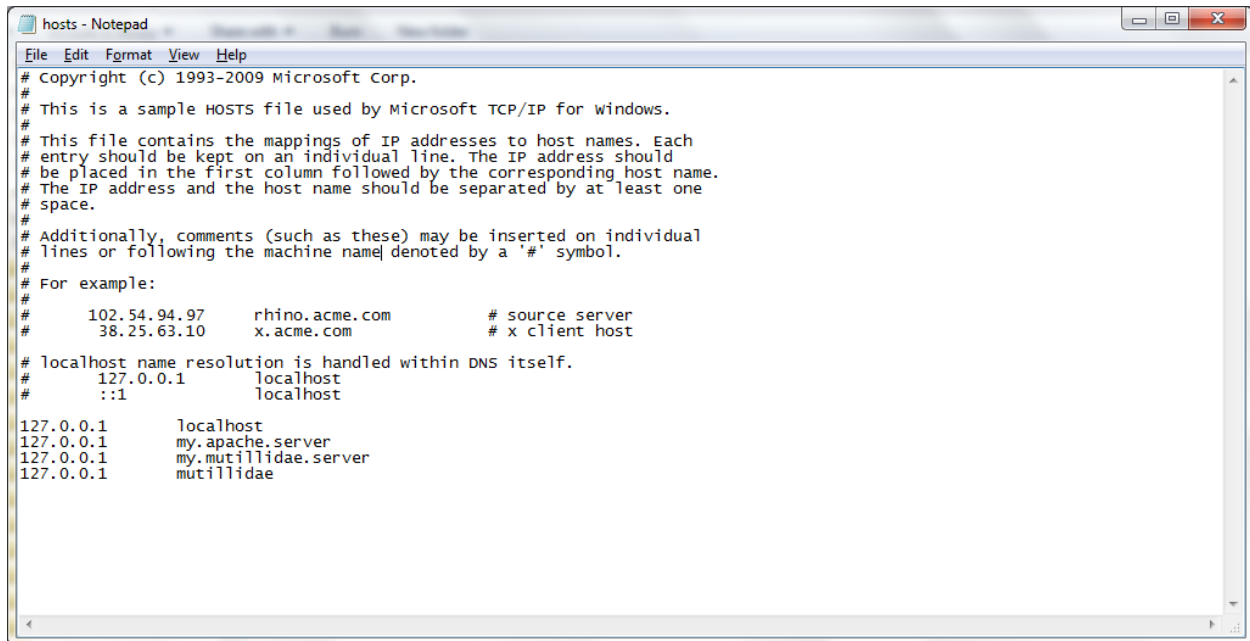


15. Open a browser and browse to <http://127.0.0.1/mutillidae/>



16. You may add “localhost 127.0.0.1” to your hosts file so you can browse to <http://localhost/mutillidae/> instead

17. While your in the hosts file, it might be cool to add “my.mutillidae.server 127.0.0.1” to your hosts file (or whatever) so you can browse to <http://my.mutillidae.server/mutillidae/>. In Win7, do forget to start Notepad as Administrator or you will not be able to save. Again, disabling UAC is not best practice.



```
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name, denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97    rhino.acme.com    # source server
#       38.25.63.10   x.acme.com       # x client host
#
# localhost name resolution is handled within DNS itself.
#
#       127.0.0.1     localhost
#       ::1          localhost
127.0.0.1     localhost
127.0.0.1     my.apache.server
127.0.0.1     my.mutillidae.server
127.0.0.1     mutillidae
```

18. By default, Mutillidae only allows access from localhost (127.\*.\*) and 192.168.\*.\*. Edit the .htaccess file to change this behavior (not recommended on a public network). The .htaccess file is in the mutillidae folder.



## 19. Note those pesky PHP errors



## 20. Get rid of PHP "strict" errors.

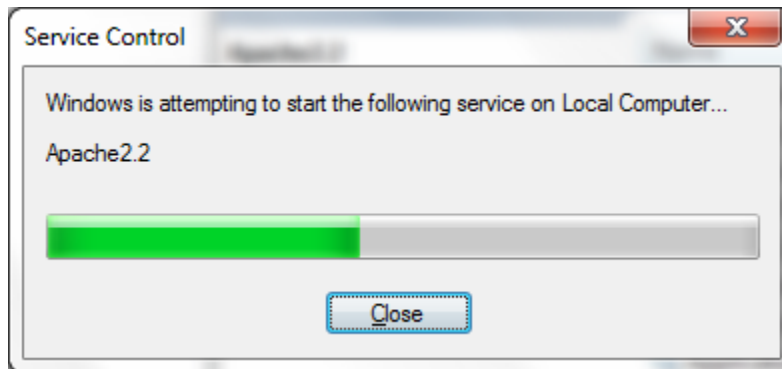
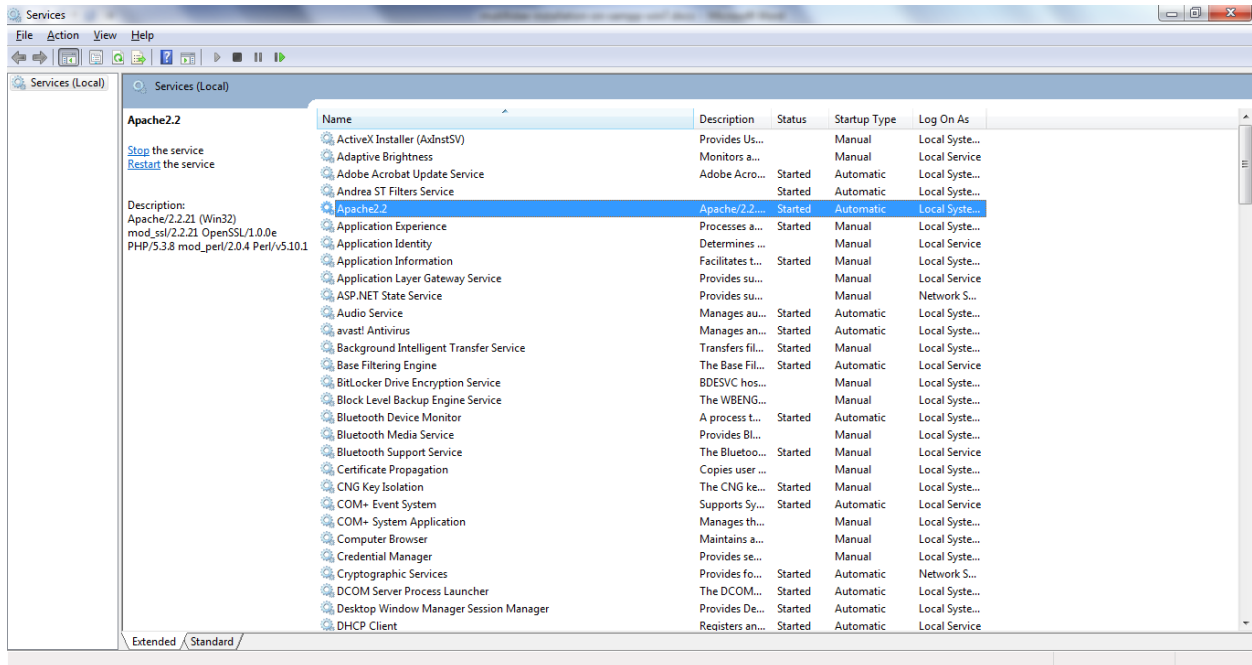
- a. They are not compatible with the OWASP ESAPI classes in use in Mutillidae 2.0. The error modifies headers disrupting functionality so this is not simply an annoyance issue. To do this, go to the PHP.INI file and change the line that reads "error\_reporting = E\_ALL | E\_STRICT" to "error\_reporting = E\_ALL & ~E\_NOTICE & ~E\_WARNING & ~E\_DEPRECATED". Once the modification is complete, restart the Apache service. If you are not sure how to restart the service, reboot.

Important note: If you use XAMPP Lite or various version of XAMPP on various operating systems, the path for your php.ini file may vary. You may even have multiple php.ini files in which case try to modify the one in the Apache directory first, then the one in the PHP file if that doesnt do the trick.

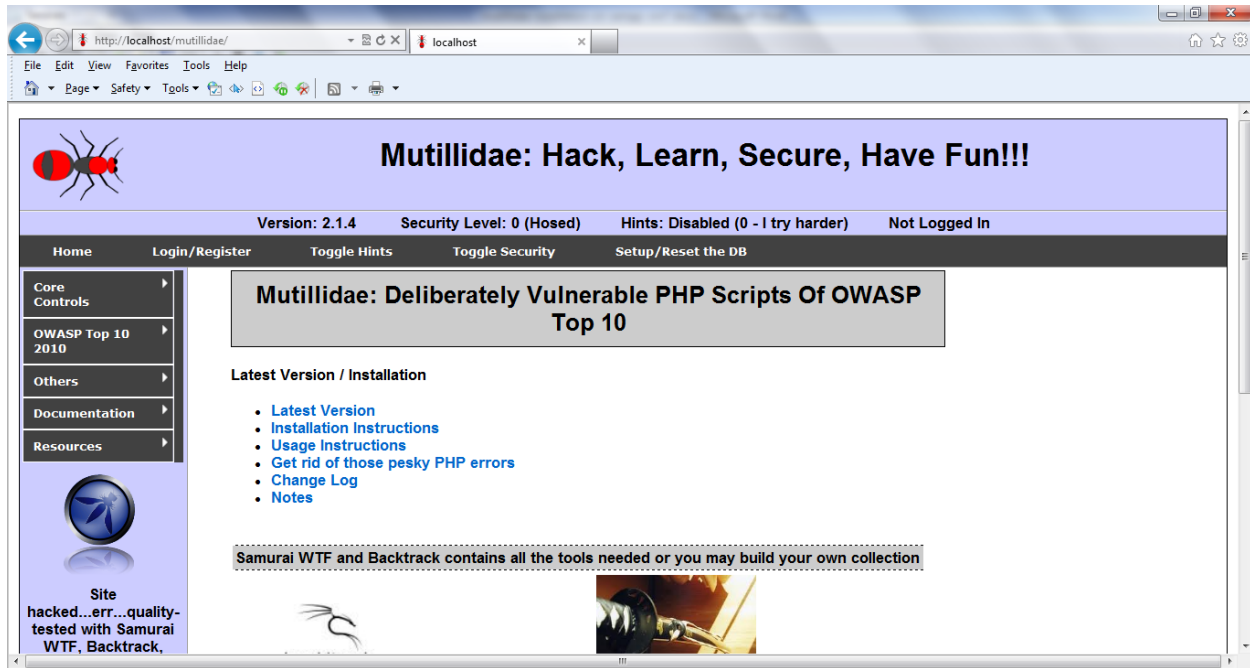
Windows possible default location C:\xampp\php\php.ini, C:\XamppLite\PHP\php.ini, others Linux possible default locations: /XamppLite/PHP/php.ini, /XamppLite/apache/bin/php.ini, others

```
php.ini - Notepad
File Edit Format View Help
:
: from a bug in your code, but it's possible that it was
: intentional (e.g., using an uninitialized variable and
: relying on the fact it's automatically initialized to an
: empty string)
: E_STRICT - run-time notices, enable to have PHP suggest changes
: to your code which will ensure the best interoperability
: and forward compatibility of your code
: E_CORE_ERROR - fatal errors that occur during PHP's initial startup
: E_CORE_WARNING - warnings (non-fatal errors) that occur during PHP's
: initial startup
: E_COMPILE_ERROR - fatal compile-time errors
: E_COMPILE_WARNING - compile-time warnings (non-fatal errors)
: E_USER_ERROR - user-generated error message
: E_USER_WARNING - user-generated warning message
: E_USER_NOTICE - user-generated notice message
: E_DEPRECATED - warn about code that will not work in future versions
: of PHP
: E_USER_DEPRECATED - user-generated deprecation warnings
:
: Common Values:
: E_ALL & ~E_NOTICE (Show all errors, except for notices and coding standards warnings.)
: E_ALL & ~E_NOTICE | E_STRICT (Show all errors, except for notices)
: E_COMPILE_ERROR|E_RECOVERABLE_ERROR|E_ERROR|E_CORE_ERROR (Show only errors)
: E_ALL | E_STRICT (Show all errors, warnings and notices including coding standards.)
: Default Value: E_ALL & ~E_NOTICE
: Development Value: E_ALL | E_STRICT
: Production Value: E_ALL & ~E_DEPRECATED
: http://php.net/error-reporting
error_reporting = E_ALL | E_STRICT
error_reporting = E_ALL & ~E_NOTICE & ~E_WARNING & ~E_DEPRECATED
:
: This directive controls whether or not and where PHP will output errors,
: notices and warnings too. Error output is very useful during development, but
: it could be very dangerous in production environments. Depending on the code
```

21. If Apache is installed as a service, it can be restarted using services.msc. Right click the Apache service and choose “restart”.



22. Once complete, browse to mutillidae again. The PHP errors should be gone.



23. If you are certain you have correctly configured the php.ini file and the PHP errors still show, then restart windows and try again.

24. With the Apache and MySQL services set to start “manually”, the services can be started with the “services.msc” snap-in. However, an easier way is to create a batch file to start both services. Commands can be placed in a notepad file and saved with a “.bat” extension. In Win7, this batch file will have to be run as Administrator.

25. Example batch file contents

```
echo "Starting apache 2.2 service"  
net start apache2.2  
echo "Started apache 2.2 service"  
pause  
echo "Starting MySQL service"  
net start mysql  
echo "Started MySQL service"  
pause
```