

Module 5

Ethical Hacking Lab

Practical 1:

Aim: 1. Hack a website using remote file inclusion:

- A. Building a web hacking lab.
- B. Install Xampp

Theory:

A web hacking lab allows security professionals, developers, and students to practice their skills without causing harm to real-world systems. The lab setup includes tools that simulate vulnerabilities found in actual web applications. By working in this environment, users can understand and learn how to exploit and mitigate security flaws in a controlled manner.

Steps:

1. Install xampp

Go to shell

mysql -u root

Show databases

Create database

2. download Dwva master zip

Enter dwva download in google

To aid security professionals to test their skills (Certified Ethical hacking course)

Helps web developers to understand the process

And helps students to learn the web application security

3. Copy dwva folder in c:/xampp/htdocs

4. Change the file name c:/xampp/htdocs/dwva/config/config.inc.php.dist to config.inc.php

Check dwva database settings

5. Enter in the browser

<http://localhost/dwva-master/setup.php>

a. Click on create database

b. It will redirect you to dwva login

admin

password

6. Remote file inclusion

Dwva security should be made low

Click on file inclusion :

In the address bar set page attribute to google.com

7. Local file inclusion

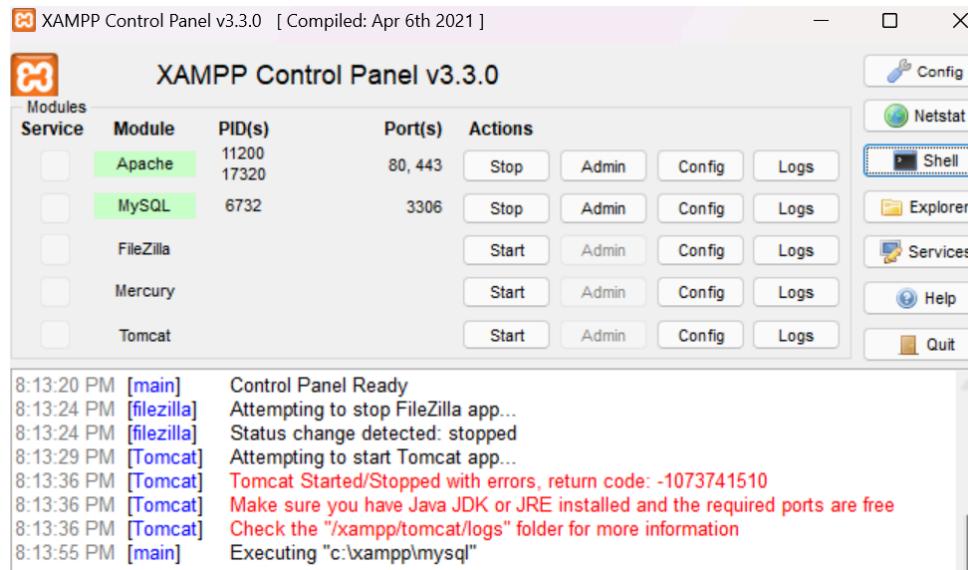
Set the page attribute to local file

8. Enable url inclusion in htdocs/php/php.ini file(configuration file)

Note: Include urls in:

Ex: <http://localhost/dwva/vulnerabilities/fi/?page=https://www.google.com/>

<http://localhost/dwva/vulnerabilities/fi/?page=file:///C:/xampp/htdocs/applications.html>



The screenshot shows a terminal window titled 'XAMPP for Windows - mysql'. It displays the following MySQL connection information:

```
Setting environment for using XAMPP for Windows.
Siddhi@LAPTOP-6KRKPSI8 c:\xampp
# mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 22
Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

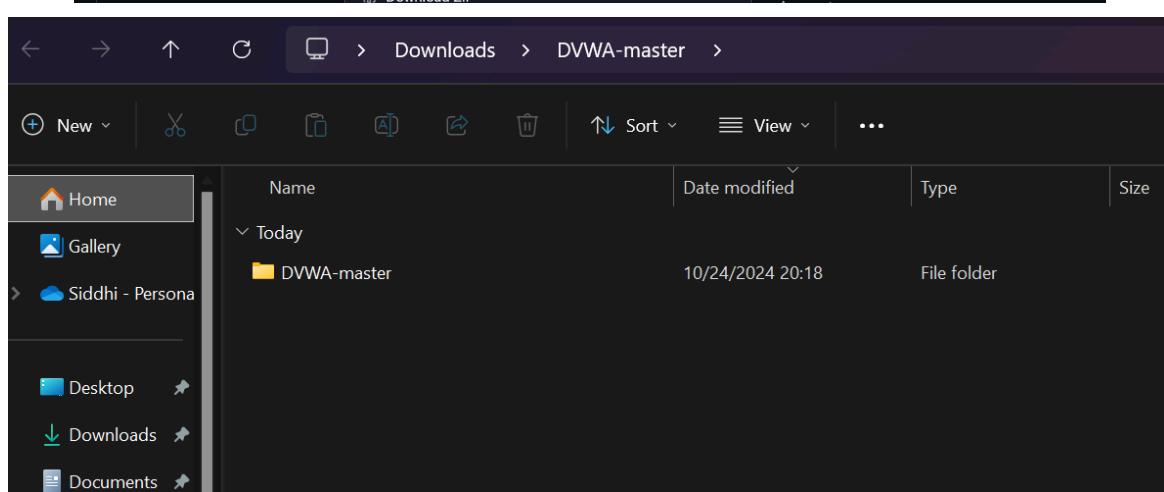
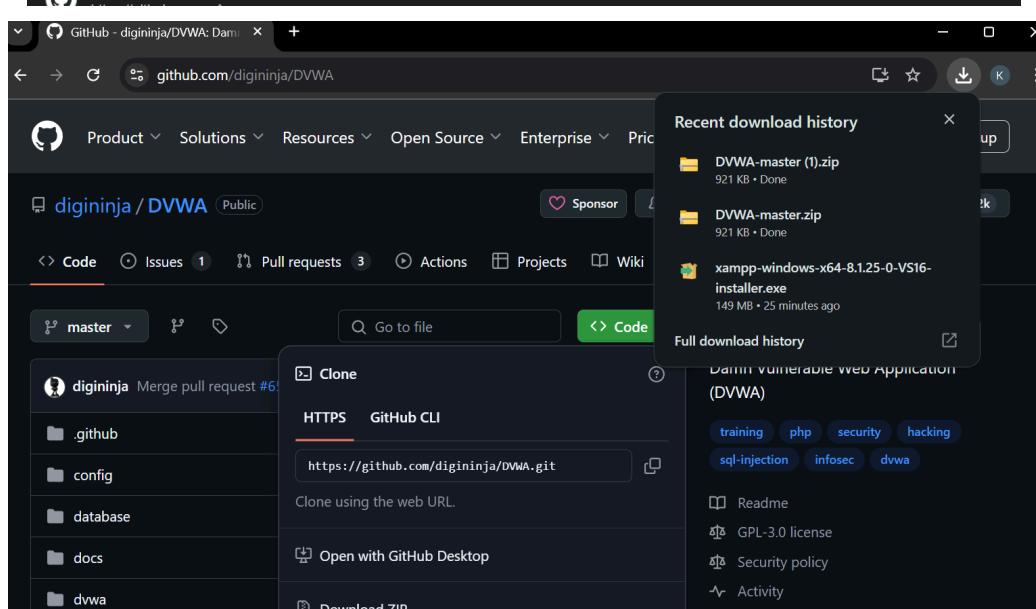
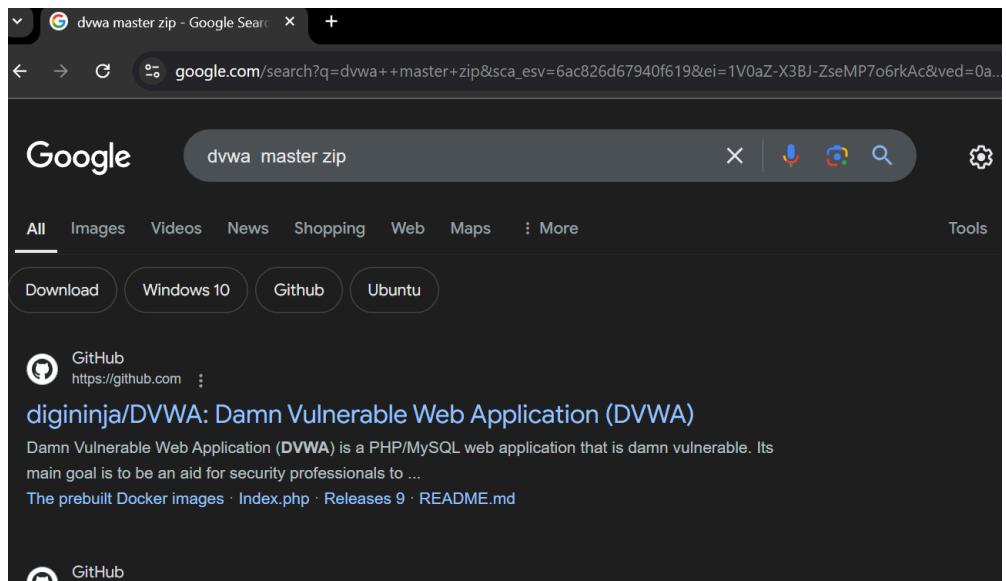
MariaDB [(none)]> |
```

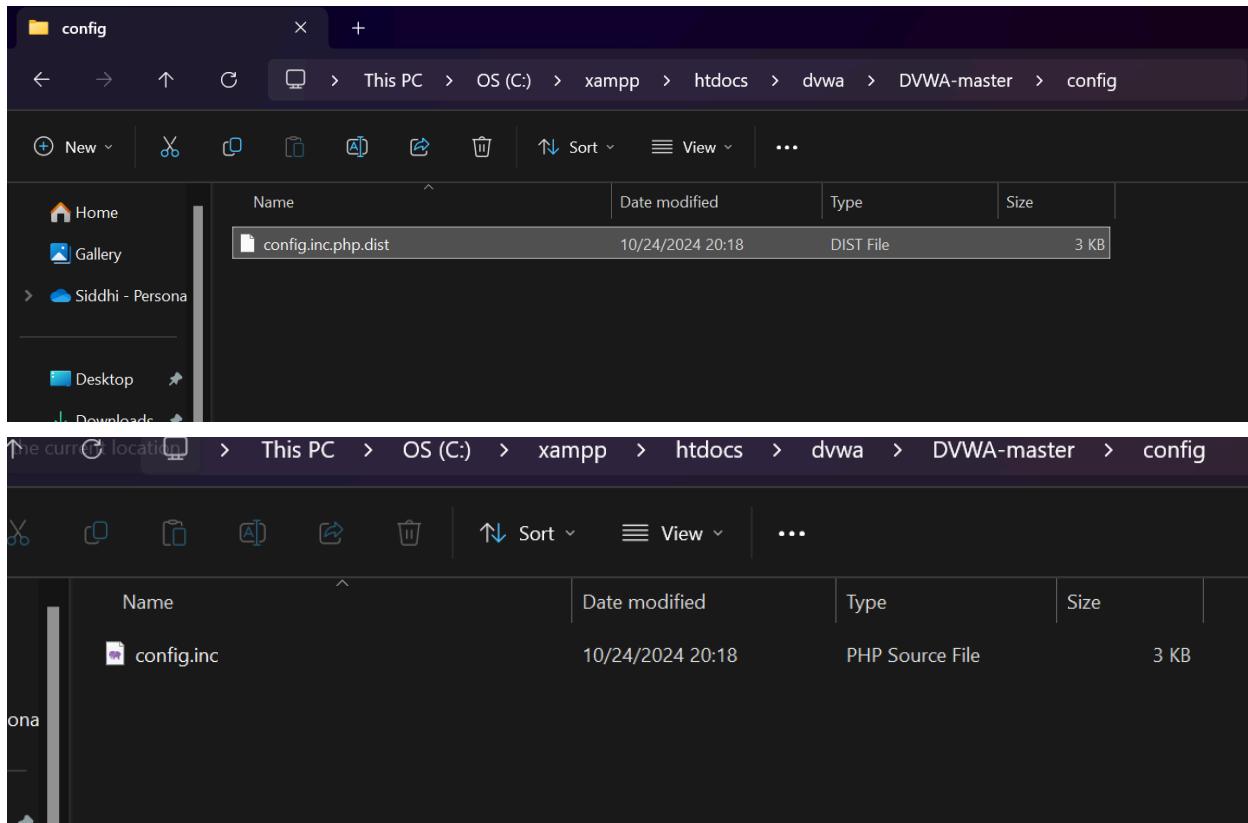
```
XAMPP for Windows - mysql X + ▾
MariaDB [(none)]> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| mysql          |
| performance_schema |
| phpmyadmin     |
| test           |
+-----+
5 rows in set (0.001 sec)

MariaDB [(none)]> create database dvwa;
Query OK, 1 row affected (0.002 sec)

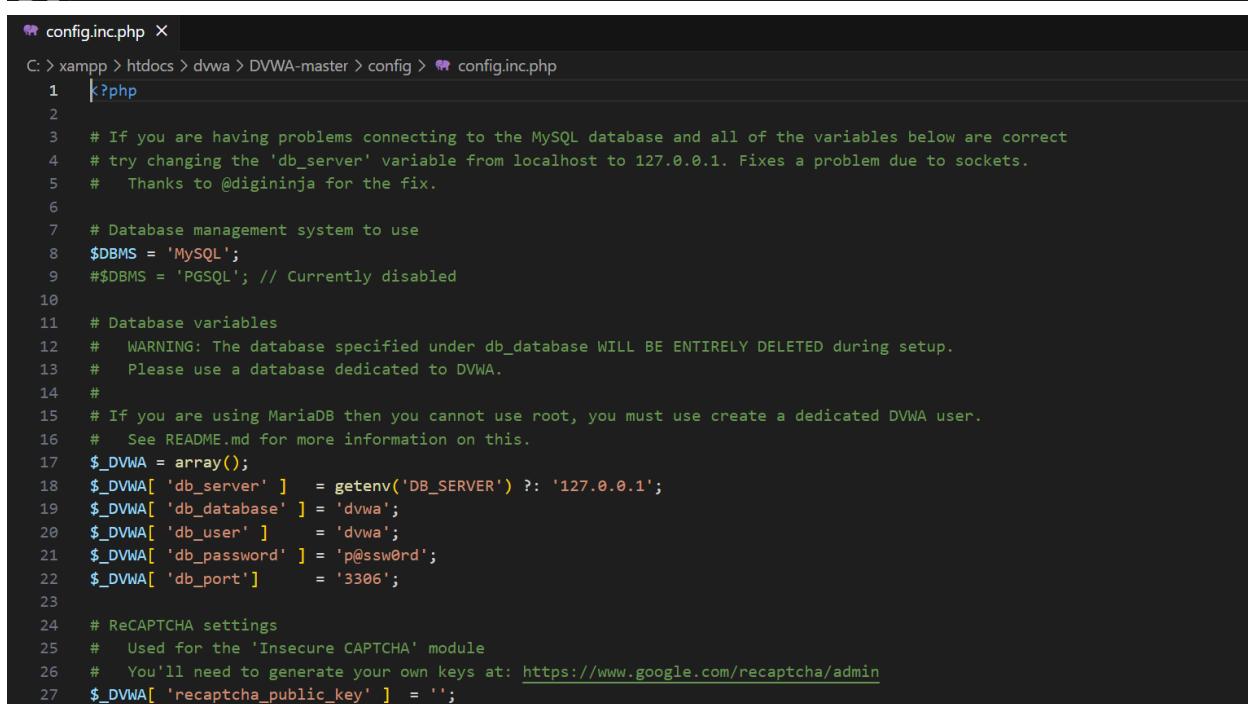
MariaDB [(none)]> |
```

The screenshot shows the phpMyAdmin interface running in a web browser. The URL is `localhost/phpmyadmin/index.php?route=/database/structure&db=dvwa`. The 'dvwa' database is selected. On the left, there's a sidebar with 'Recent' and 'Favorites' tabs, and a tree view of databases including 'New', 'dvwa', 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', and 'test'. The main content area has a heading 'Server: 127.0.0.1 » Database: dvwa'. Below it, a message says 'No tables found in database.' There's also a 'Create new table' form with fields for 'Table name' (containing '4') and 'Number of columns' (containing '4'). At the top, there are tabs for Structure, SQL, Search, Query, Export, Import, Operations, Privileges, and Routines.





The screenshot shows two instances of the Windows File Explorer. The top instance is navigating through the directory structure: This PC > OS (C:) >xampp >htdocs > dvwa > DVWA-master > config. It displays a file named config.inc.php.dist with a size of 3 KB. The bottom instance is also navigating through the same directory structure and shows a file named config.inc with a size of 3 KB. Both instances have a sidebar on the left showing Home, Gallery, Siddhi - Persona, Desktop, and Downloads.



The screenshot shows a code editor window titled "config.inc.php". The code is as follows:

```
C: > xampp > htdocs > DVWA-master > config > config.inc.php
1  k?php
2
3  # If you are having problems connecting to the MySQL database and all of the variables below are correct
4  # try changing the 'db_server' variable from localhost to 127.0.0.1. Fixes a problem due to sockets.
5  #   Thanks to @digininja for the fix.
6
7  # Database management system to use
8 $DBMS = 'MySQL';
9 #$DBMS = 'PGSQL'; // Currently disabled
10
11 # Database variables
12 #   WARNING: The database specified under db_database WILL BE ENTIRELY DELETED during setup.
13 #   Please use a database dedicated to DVWA.
14 #
15 # If you are using MariaDB then you cannot use root, you must use create a dedicated DVWA user.
16 #   See README.md for more information on this.
17 $_DVWA = array();
18 $_DVWA[ 'db_server' ] = getenv('DB_SERVER') ?: '127.0.0.1';
19 $_DVWA[ 'db_database' ] = 'dvwa';
20 $_DVWA[ 'db_user' ] = 'dvwa';
21 $_DVWA[ 'db_password' ] = 'p@ssw0rd';
22 $_DVWA[ 'db_port' ] = '3306';
23
24 # ReCAPTCHA settings
25 #   Used for the 'Insecure CAPTCHA' module
26 #   You'll need to generate your own keys at: https://www.google.com/recaptcha/admin
27 $_DVWA[ 'recaptcha_public_key' ] = '';
```

```
; Maximum n
request
max_file_up~~~~~ a a single
;
; Fopen wrappers ;
;
; Whether to allow the treatment of URLs (like http:// or
; ftp://) as files.
; https://php.net/allow-url-fopen
allow_url_fopen=On

; Whether to allow include/require to open URLs (like
; https:// or ftp://) as files.
; https://php.net/allow-url-include
allow_url_include=On

; Define the anonymous ftp password (your email address).
; PHP's default setting
; for this is empty.
; https://php.net/allow_url_fopen
```

Setup DVWA

localhost/dvwa/dvwa/setup.php

Database Setup

Click on the 'Create / Reset Database' button below to create or reset your database.
If you get an error make sure you have the correct user credentials in:
C:\xampp\htdocs\DVWA\dvwa\config\config.inc.php

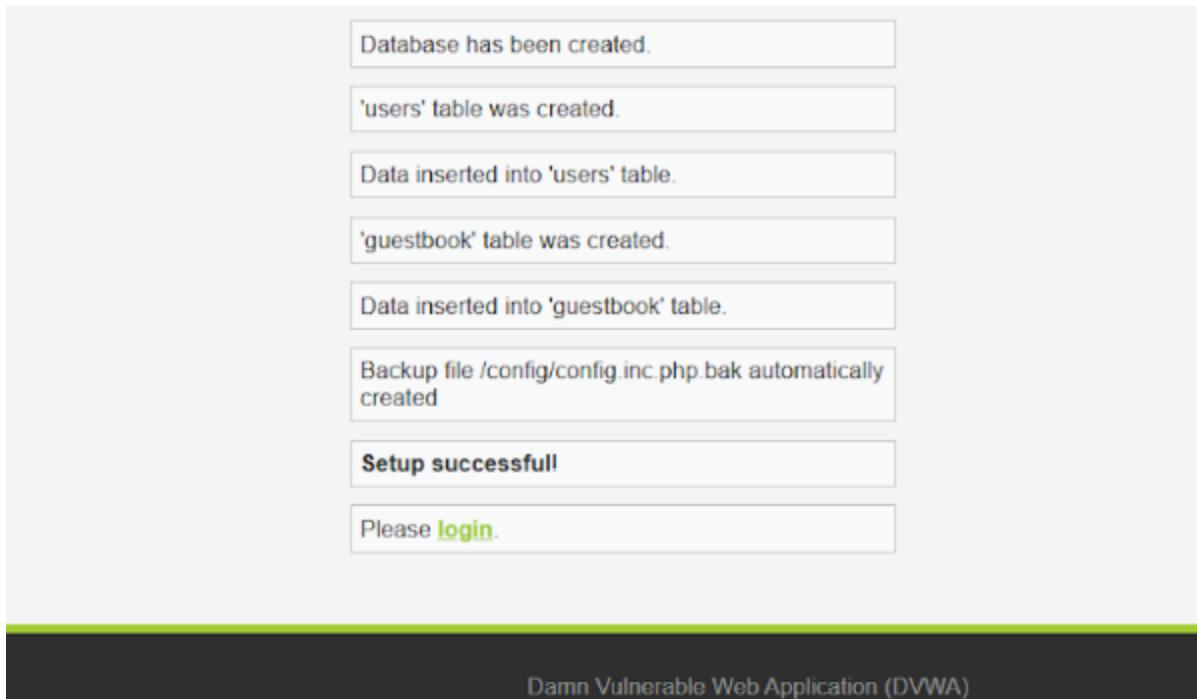
If the database already exists, it **will be cleared and the data will be reset**.
You can also use this to reset the administrator credentials ("admin // password") at any stage.

Setup Check

Web Server SERVER_NAME: localhost
Operating system: Windows

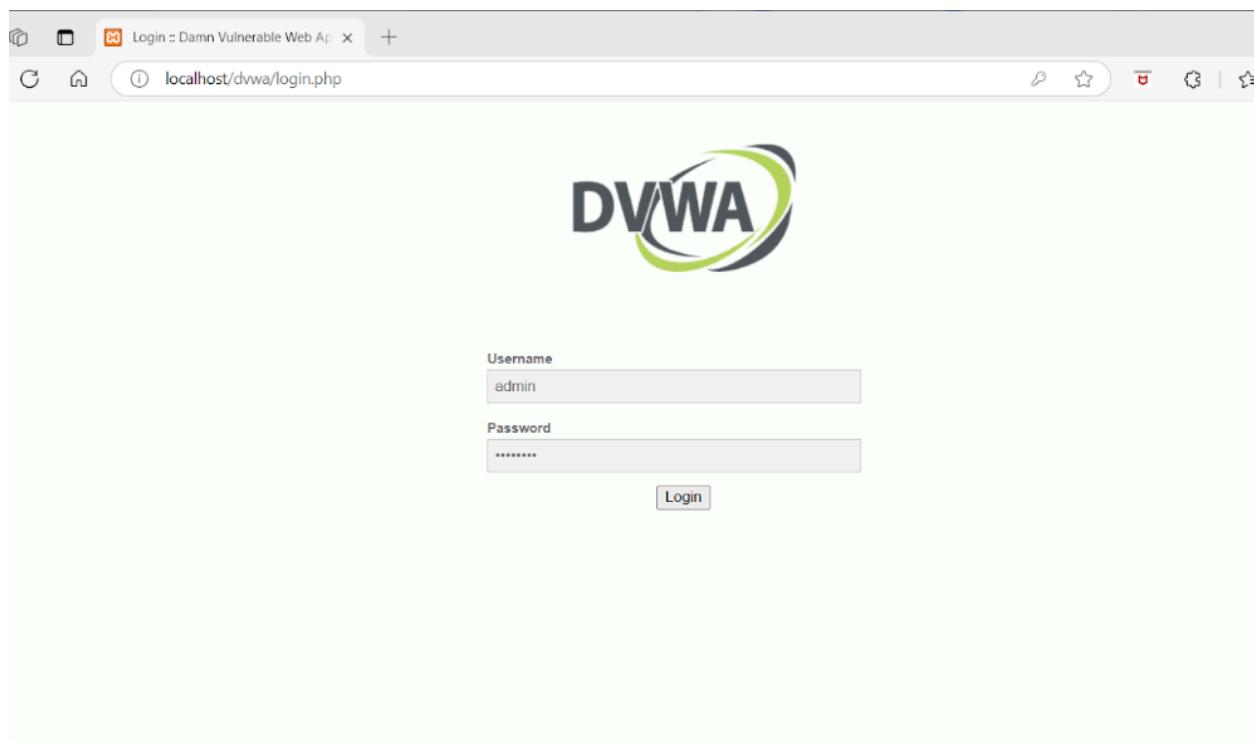
PHP version: 8.1.25
PHP function display_errors: Enabled
PHP function display_startup_errors: Enabled
PHP function allow_url_include: **Disabled**
PHP function allow_url_fopen: Enabled
PHP module gd: **Missing - Only an issue if you want to play with captchas**
PHP module mysql: Installed
PHP module pdo_mysql: Installed

Backend database: MySQL/MariaDB
Database username: admin
Database password: ****
Database database: dvwa



The screenshot shows the phpMyAdmin interface for the 'dvwa' database, specifically the 'users' table. The table contains the following data:

	user_id	first_name	last_name	user	password	avatar	last_login
<input type="checkbox"/>	1	admin	admin	admin	5f4dcc3b5aa765d61d8327deb882cf99	/dvwa/hackable/users/admin.jpg	2024-10-24 07:49:45
<input type="checkbox"/>	2	Gordon	Brown	gordong	e99a18c428cb38d5f260853678922e03	/dvwa/hackable/users/gordonb.jpg	2024-10-24 07:49:45
<input type="checkbox"/>	3	Hack	Me	1337	8d3533d75ae2c3966d7e0d4fcc69216b	/dvwa/hackable/users/1337.jpg	2024-10-24 07:49:45
<input type="checkbox"/>	4	Pablo	Picasso	pablo	0d107d09f5bbe40cade3de5c71e9e9b7	/dvwa/hackable/users/pablo.jpg	2024-10-24 07:49:45
<input type="checkbox"/>	5	Bob	Smith	smithy	5f4dcc3b5aa765d61d8327deb882cf99	/dvwa/hackable/users/smithy.jpg	2024-10-24 07:49:45



A screenshot of the DVWA welcome page. The URL in the address bar is 'localhost/dvwa/index.php'. The page has a navigation menu on the left with items like Home, Instructions, Setup / Reset DB, and various attack modules. The main content area features the DVWA logo and a heading 'Welcome to Damn Vulnerable Web Application!'. It explains the purpose of DVWA and provides general instructions. A warning section at the bottom cautions against uploading files to public servers.

Welcome to Damn Vulnerable Web Application!

Damn Vulnerable Web Application (DVWA) is a PHP/MySQL web application that is damn vulnerable. Its main goal is to be an aid for security professionals to test their skills and tools in a legal environment, help web developers better understand the processes of securing web applications and to aid both students & teachers to learn about web application security in a controlled class room environment.

The aim of DVWA is to **practice some of the most common web vulnerabilities**, with **various levels of difficulty**, with a simple straightforward interface.

General Instructions

It is up to the user how they approach DVWA. Either by working through every module at a fixed level, or selecting any module and working up to reach the highest level they can before moving onto the next one. There is not a fixed object to complete a module; however users should feel that they have successfully exploited the system as best as they possible could by using that particular vulnerability.

Please note, there are **both documented and undocumented vulnerabilities** with this software. This is intentional. You are encouraged to try and discover as many issues as possible.

There is a help button at the bottom of each page, which allows you to view hints & tips for that vulnerability. There are also additional links for further background reading, which relates to that security issue.

WARNING!

Damn Vulnerable Web Application is damn vulnerable! **Do not upload it to your hosting provider's public html folder or any Internet facing servers**, as they will be compromised. It is recommend using a virtual machine (such as [VirtualBox](#) or [VMware](#)), which is set to NAT networking mode. Inside a guest machine, you can download and install [XAMPP](#) for the web server and database.

The image contains three screenshots of the DVWA application:

- Screenshot 1: DVWA Security :: Damn Vulnerable Web Application**

The page shows the DVWA logo and navigation menu. The "File Inclusion" option is selected in the sidebar. The main content area displays the "Security Level" section, which is currently set to "low". It includes a list of security levels (Low, Medium, High, Impossible) and their descriptions. A note states that prior to DVWA v1.9, the "high" level was known as "high". Below this is a dropdown menu set to "Low" with a "Submit" button. A message box at the bottom says "Security level set to low".
- Screenshot 2: DVWA Vulnerability: File Inclusion**

The page shows the DVWA logo and navigation menu. The "File Inclusion" option is selected in the sidebar. The main content area displays the "Vulnerability: File Inclusion" section. It shows a URL input field containing "[file1.php] - [file2.php] - [file3.php]". Below this is a "More Information" section with links to "Wikipedia - File_inclusion_vulnerability", "WSTG - Local File Inclusion", and "WSTG - Remote File Inclusion".
- Screenshot 3: Google Search Result**

The page shows a Google search results page for "https://www.google.com". The search bar contains "Google". Below it are "Google Search" and "I'm Feeling Lucky" buttons. At the bottom, there is a link to "Advanced search". The footer of the page includes a message in Telugu: "Google offered in: తెలుగు బాగు తెలుగు మరాఠీ తమిల్ ముహార్రి కన్డక్ట మలయాళం ప్రమాజి".

Practical 2: 2. Using firefox, disguise/emulate as google bot to view hidden content of a Website.

Theory:

Websites often display different content to search engine crawlers like Googlebot compared to normal visitors. By emulating Googlebot in your browser, you can sometimes gain access to hidden or SEO-specific content. Below are the detailed steps to disguise Firefox as Googlebot.

Steps:

Step 1 :To determine the user agent of firefox.

- a. Go to firefox - <http://www.proxyserverprivacy.com/>
- b. Select detector proxy
- c. Select advanced proxy detector.

Step 2 : To find out the string for google bot

To change above useragent to googlebot

- a. Goto <http://useragentstring.com/>
- b. Locate the string for google bot
[Googlebot/2.1\(+http://www.googlebot.com/bot.html\)](http://www.googlebot.com/bot.html)

Step 3 : Configure

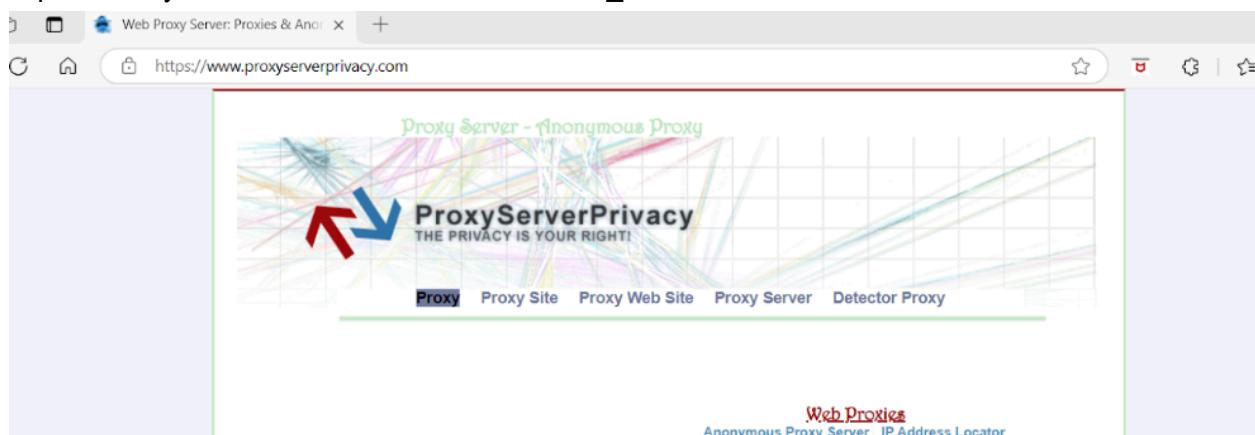
- a. Goto firefox
- b. Type about:config
- c. Type general.useragent.override and assign Googlebot/2.1
- d. Goto <http://www.proxyserverprivacy.com/> to check that the useragent in googlebot
3. Use Kaspersky/Quick heal for lifetime without patch
- a. Explain the steps to use KasperKey / Quickheal for lifetime without patch.

References:

<http://maroofcreations.weebly.com/how-to-use-kaspersky-for-lifetime-without-patch.html>

<https://youtu.be/DbSk10kX09s>

https://www.youtube.com/watch?v=MTWYdhH_wH0



The image displays two side-by-side screenshots of a web browser window. Both screenshots show the same website, <https://www.proxyserverprivacy.com/detector-proxy.shtml>, which is identified as the "Proxy Detector". The top screenshot shows the main navigation bar with tabs for "Proxy", "Proxy Site", "Proxy Web Site", "Proxy Server", and "Detector Proxy" (which is highlighted). The bottom screenshot shows a similar view but with the tab "Detector Proxy" highlighted. Both screenshots feature a logo with a red arrow pointing up and a blue arrow pointing down, and the text "ProxyServerPrivacy THE PRIVACY IS YOUR RIGHT!". Below the tabs is a search bar with a "Search" button. The bottom section of both screenshots contains the heading "Proxy Checker - Advanced Free Proxy Detector", a link to "Basis free proxy detector", and a link to "Advanced Free Proxy Detector". The right side of the bottom screenshot includes a circular logo for "ProxyServerPrivacy Detector".

Free Proxy Checker Detection

Your IP Address: **103.210.202.135**
Host: **103.210.202.135**
Your Country:
Proxy HTTP_X_FORWARDED Variable: **(none)**
Proxy HTTP_VIA Variable: **(none)**
Proxy HTTP_PROXY_CONNECTION: **(none)**
Cache Pragma: **(none)**
Your Browser: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/130.0.0.0 Safari/537.36 Edg/130.0.0.0
Type of Your connection: **keep-alive**
Server Protocol: **HTTP/1.1**
Your language: **en-US,en;q=0.9,en-IN;q=0.8**
Accept: **text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7**
Accept-Encoding: **gzip, deflate, br, zstd**
Referer - HTTP Request come from: <https://www.proxyserverprivacy.com/detector-proxy.shtml>
Your Port: **31231**

Conclusion after analyzing IP address:

You do not use proxy

User Agent String.Com

[Home](#) | [List of User Agent Strings](#) | [Links](#) | [API](#) |

User Agent String explained :

Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/130.0.0.0 Safari/537.36 Edg/130.0.0.0

Copy/paste any user agent string in this field and click 'Analyze'

Analyze

Chrome 130.0.0.0

 Chrome 130.0.0.0	Mozilla MozillaProductSlice. Claims to be a Mozilla based user agent, which is only true for Gecko based browsers like Firefox and Netcane. For all other user agents it means 'Mozilla-compatible'. To
---	---

User Agent String Checker (Left Tab)

Home | List of User Agent Strings | Links | API |

User Agent String explained :

Googlebot/2.1 (+http://www.googlebot.com/bot.html)

Copy/paste any user agent string in this field and click 'Analyze'

Googlebot 2.1

Googlebot	Name :	Googlebot
2.1	Googlebot version	
http://www.googlebot.com/bot.html	URL	

IP address and host name

- 66.249.64.101 - crawl-66-249-64-101.googlebot.com
- 66.249.64.102 - crawl-66-249-64-102.googlebot.com
- 66.249.64.104 - crawl-66-249-64-104.googlebot.com
- 66.249.64.106 - crawl-66-249-64-106.googlebot.com
- 66.249.64.108 - crawl-66-249-64-108.googlebot.com
- 66.249.64.109 - crawl-66-249-64-109.googlebot.com

Network Configuration (Right Tab)

- Caching: Disable cache
- Network throttling: No throttling
- User agent: Use browser default

Googlebot/2.1 (+http://www.googlebot.com/bot.html)
- Accepted Content-Encodings: Use browser default
 deflate gzip br zstd

Proxy Server Privacy Detector (Bottom Left Tab)

https://www.proxyserverprivacy.com/adv-free-proxy-detector.shtml

detect

successfully determine if you are behind transparent proxy or anonymous proxy. Elite proxy (Level 1 and Level 2 proxy defined by Proxy.Ludge) does not send HTTP requests that include any of the three aforementioned HTTP headers. Proxy checker can success check and identify Elite proxy. And not only Elite proxy but also free web proxy server including any kind of CGI proxy or php proxy)

That's because Advanced Proxy Detector tries to examine and analyze not only typical proxy headers in HTTP request but also common port (8080, 80, 6588, 8000, 3128, 553, 554).
Typical proxy server HTTP variables are HTTP_VIA (most common), HTTP_Forwarded and HTTP_User_Agent_VIA. Another common element for proxy in most cases is the presence of connection type "close" and cache control.

Free Proxy Checker Detection (Bottom Right Tab)

Your IP Address: 103.210.202.135
Host: 103.210.202.135
Your Country:
Proxy HTTP_X_FORWARDED_Variable: (none)
Proxy HTTP_VIA_Variable: (none)
Proxy HTTP_PROXY_CONNECTION: (none)
Cache Pragma: max-age=0
Your Browser: Googlebot/2.1 (+http://www.googlebot.com/bot.html)
Type of Your connection: keep-alive
Server Protocol: HTTP/1.1
Your language: en-US,en;q=0.9,en-IN;q=0.8
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Accept-Encoding: gzip, deflate, br, zstd
Referer - HTTP Request come from: https://www.proxyserverprivacy.com/detector-proxy.shtml
Your Port: 31376

Conclusion after analyzing ip address:
You do not use proxy

3. Using Kaspersky/Quick Heal for a Lifetime Without a Patch

Steps to be followed:

Kaspersky typically provides a 30-day trial for its antivirus products. To renew your trial license ethically without using patches, follow these steps:

1. Disable Self-Defense:

- Open Kaspersky and go to Settings > Options.
- Turn off Enable Self-Defense and click OK.

2. Edit Registry:

- Open the Registry Editor by pressing Win + R, typing regedit, and hitting Enter.
- Navigate to the following paths:
 - For 32-bit OS:
HKEY_LOCAL_MACHINE\SOFTWARE\KasperskyLab\protected\AVP9\environment
 - For 64-bit OS:
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\KasperskyLab\protected\AVP9\environment
- Locate PCID, right-click, and modify the last three or four characters (e.g., change 8F10C22F-6EF6-4378-BAB1-34722F6D454 to a different combination).

3. Restart Kaspersky:

- Right-click the Kaspersky icon in the taskbar and select Exit.
- Reopen Kaspersky and activate the search for a trial license. You should receive a new 30-day trial.

4. Re-enable Self-Defense:

- Go back to Settings and turn Enable Self-Defense back on.

Note: This method modifies registry settings to change your PC's identification to Kaspersky servers, allowing you to obtain a new trial license. Ensure this process is done ethically and within legal boundaries.

Output:

The screenshot shows a web browser window with the URL maroofcreations.weebly.com/how-to-use-kaspersky-for-lifetime-without-patch.html. The page has a header with the 'MC MAROOF CREATIONS' logo and navigation links for HOME, ETHICAL HACKING TUTORIALS, TIPS & TRICKS, VIDEOS, CONTACT, and BLOG. The main content features a large image of the Brooklyn Bridge at sunset. A section titled 'How to use Kaspersky for Lifetime without Patch' contains text about bypassing Kaspersky's 30-day trial and steps to do so. To the right, there is a 'Related Posts' sidebar with links to various articles.

How to use Kaspersky for Lifetime without Patch

After a lot of searching and using a lot of patches I found this and I tried it on my Windows XP and it works for me 100% without any blacklisting problem. Actually this is a simple trick of playing with Registry settings.

Generally Kaspersky provide us 30 days trial period on its Anti-virus Product. So there are the few steps that you have to perform when your trial license going to expire after 30 days for getting a new trial license :

1. Delete old key and turn off self defense (Settings-Options in kaspersky and turn off Enable self-defense, and click OK).
2. Open Registry editor (click start in windows menu then goto run and write regedit and click Ok) and go through these :

For 32bit OS: HKEY_LOCAL_MACHINE \ SOFTWARE \ KasperskyLab \ protected \ AVP9 \ environment

POWERED BY weebly

Related Posts :-

- How to see all Hidden Files and Folders, Using DOS
- BIOS Update Procedure
- 20 Unrevealed Great Google Secrets
- How to use Kaspersky for lifetime without patch
- How To Make Single Name Account on Facebook
- How to automatically fix corrupted files in XP

The screenshot shows a YouTube video player with the URL youtube.com/watch?v=MTWYdhH_wHO. The video title is 'How To Use Quick Heal For Lifetime For FREE! Quick Heal Total Security Installation Window 10 | 2022'. The video frame displays a computer screen with the Quick Heal Total Security software interface. A message box says 'System is not secure' with a 'Buy Now' button. The video player has standard controls like play/pause, volume, and progress bar.