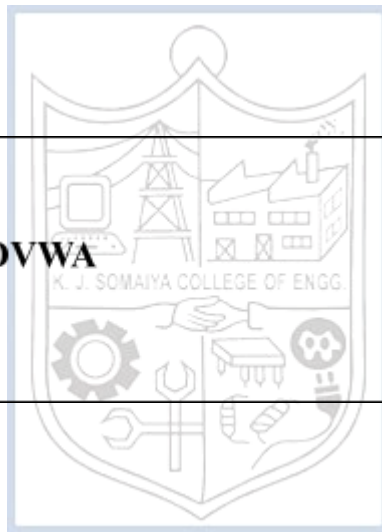


Tutorial No. 4

Title: Installation of DVWA



Roll No.: 16010423076**Tutorial No.:4****Aim: Installation of DVWA**

Resources : <https://github.com/digininja/DVWA>

Theory:

Damn Vulnerable Web Application (DVWA) is a PHP/MySQL web application that is damn vulnerable. The main goal of this pen testing playground is to aid pen testers and security professionals to test their skills and tools. In addition, it can aid web devs better understand how to secure web apps, but also aid students/teachers to learn all about web app security and possible vulnerabilities

DVWA offers multiple levels

- Low
- Medium
- High
- Impossible

Pen Tester or security professional can freely choose the one that they want

It also shows multiple forms of attack that we can launch like Brute Force, Command Injection, CSRF, etc

Now, let's look at the installation process.

Installation Process

```
└─(kali㉿kali)-[~]
```

```
└─$ cd /var/www/html
```

```
└─(kali㉿kali)-[/var/www/html]
```

```
└─$ sudo apt-get update
```

//This is just a way to check that we are all up to date

//Though it hadn't worked properly :P (Explained well, later)

```
└─(kali㉿kali)-[/var/www/html]
```

```
└─$ sudo git clone https://github.com/digininja/DVWA
```

fatal: destination path 'DVWA' already exists and is not an empty directory.

```
└─(kali㉿kali)-[/var/www/html]
```

```
└─$ sudo mv DVWA dvwa
```

-----Configuring DVWA-----

```
└─(kali㉿kali)-[/var/www/html]
```

```
└─$ sudo chmod -R 777 dvwa/
```

```
└─(kali㉿kali)-[/var/www/html]
```

```
└─$ cd dvwa/DVWA/config
```

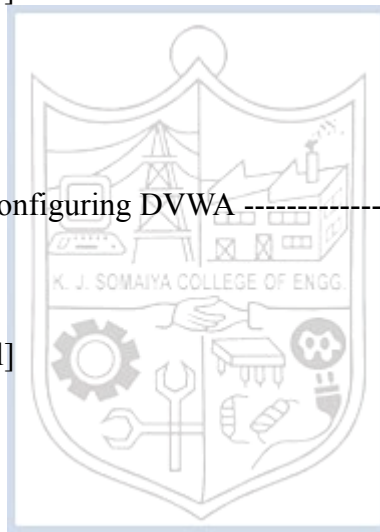
```
└─(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
└─$ sudo cp config.inc.php.dist config.inc.php
```

//Here, we created a copy of the file as a backup in case we mess up somewhere in the code later on.

```
└─(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

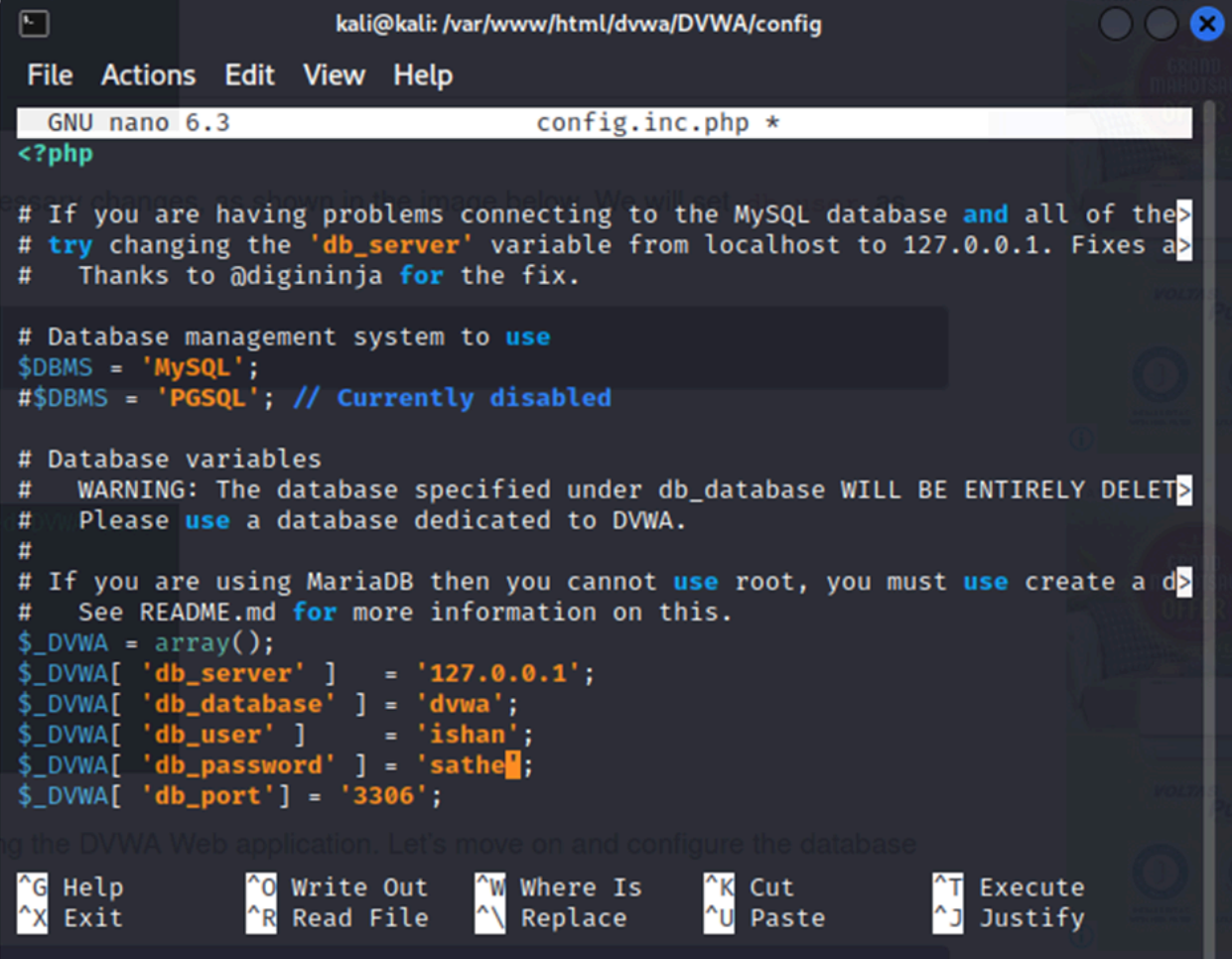
```
└─$ sudo nano config.inc.php
```



//We then changed the db_user and db_password to 'ishan' and 'sathe' respectively.

//then Ctrl+O and enter to save the file

//Ctrl+X to exit.



```

kali@kali: /var/www/html/dvwa/DVWA/config
File Actions Edit View Help
GNU nano 6.3 config.inc.php *
<?php

# If you are having problems connecting to the MySQL database and all of the
# try changing the 'db_server' variable from localhost to 127.0.0.1. Fixes a
# Thanks to @digininja for the fix.

# Database management system to use
$DBMS = 'MySQL';
#$DBMS = 'PGSQL'; // Currently disabled

# Database variables
# WARNING: The database specified under db_database WILL BE ENTIRELY DELETED
# Please use a database dedicated to DVWA.
#
# If you are using MariaDB then you cannot use root, you must use create a database
# See README.md for more information on this.
$_DVWA = array();
$_DVWA[ 'db_server' ] = '127.0.0.1';
$_DVWA[ 'db_database' ] = 'dvwa';
$_DVWA[ 'db_user' ] = 'ishan';
$_DVWA[ 'db_password' ] = 'sathe';
$_DVWA[ 'db_port' ] = '3306';

g the DVWA Web application. Let's move on and configure the database

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute
^X Exit      ^R Read File  ^N Replace    ^U Paste      ^J Justify
  
```

-----Installing MySQL on Kali Linux-----

//Now, according to the site I was following. It said that it is normal for Kali Linux OS to have mysql-client and mysql-server pre-installed.

//However, if in a case it is not, we use following command

└─(kali@kali)-[/var/.../html/dvwa/DVWA/config]

└─\$ sudo apt install default-mysql-server

E: dpkg was interrupted, you must manually run 'sudo dpkg --configure -a' to correct the problem.

```
(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
└─$ sudo dpkg --configure -a
```

//Running the above commands seems to have installed php7.3-common and all its related packages. It took some time to complete the process.

//Mostly creating config files, setting up cli, processing triggers, etc

//I have now again entered the install default-mysql-server command

//It seems to have started downloading

```
(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
└─$ sudo apt install default-mysql-server
```

Reading package lists... Done

Building dependency tree... Done

Reading state information... Done

default-mysql-server is already the newest version (1.0.8).

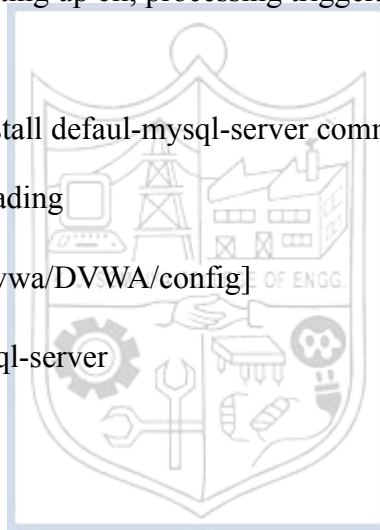
0 upgraded, 0 newly installed, 0 to remove and 1050 not upgraded.

//So far so good

-----Configuring MySQL-----

```
(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
└─$ sudo service mysql start
```



//Below is the status of mysql service, it is very large so I won't be showing all of its output

//But key fact being that it is loaded and running.

```
(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
└─$ systemctl status mysql
```

- mariadb.service - MariaDB 10.6.8 database server

Loaded: loaded (/lib/systemd/system/mariadb.service; disabled; vendor p>

Active: active (running) since Mon 2022-10-17 06:40:36 EDT; 47s ago

//We now login to MySQL database. For this we need certainty form user, that's why they asked for password

```
(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
└─$ sudo mysql -u root -p
```

Enter password:

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 32

Server version: 10.6.8-MariaDB-1 Debian builddd-unstable

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)]> create user 'ishan'@'127.0.0.1' identified by 'sathe';
```

Query OK, 0 rows affected (0.046 sec)

```
MariaDB [(none)]> grant all privileges on dvwa.* to 'ishan'@'127.0.0.1' identified by 'sathe';
```

Query OK, 0 rows affected (0.635 sec)

```
MariaDB [(none)]> exit
```

Bye

//TBH I think the commands used here are pretty straightforward so I won't be explaining them

-----Install PHP-----

PHP comes installed in Kali Linux. However, if you want to install a particular version, you can do it manually from the Terminal. In this post, we will install PHP 7.4 which is the latest release as of writing this post. Follow the steps below.

First, update your system and add the SURY PHP PPA repository by executing the commands below.

sudo apt update command is not working

It says that the ppa repository does not have a release file and hence cannot be doing anything

Run the following commands

[Note: Other than 'sudo apt update' all other commands are working properly.

Even so, failure of apt update has not caused any problems so far]

```
sudo apt update
```

```
sudo apt -y install lsb-release apt-transport-https ca-certificates
```

```
sudo wget -O /etc/apt/trusted.gpg.d/php.gpg https://packages.sury.org/php/apt.gpg
```

```
echo "deb https://packages.sury.org/php/ buster main" | sudo tee /etc/apt/sources.list.d/php.list
```

```
sudo apt install php7.4 -y
```

//Now the above command does not work and says set up has broken packages.

//Now to improvise, download the latest php version and it has been successful

Run this command

```
sudo apt install php -y
```

Congratulations! we have now finally become successful in installing PHP

-----Configuring Apache Server-----

```
(kali㉿kali)-[/var/.../html/dvwa/DVWA/config]
```

```
$ cd /etc/php/8.1/apache2
```

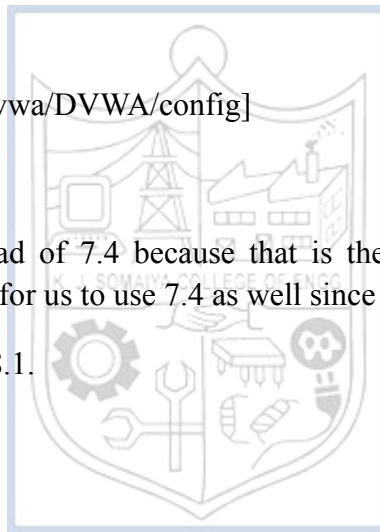
//Here, we have used 8.1 instead of 7.4 because that is the php version (latest) that we installed. Though it was possible for us to use 7.4 as well since both of them got installed

//Still, we will move ahead with 8.1.

//Because we are badassess.

```
(kali㉿kali)-[/etc/php/8.1/apache2]
```

```
$ sudo nano php.ini
```




```

kali@kali: /etc/php/8.1/apache2
File Actions Edit View Help
GNU nano 6.3 php.ini
upload_max_filesize = 2M
; Maximum number of files that can be uploaded via a single request
max_file_uploads = 20

;;;;;;;;;;
; 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
; https://php.net/allow-url-include
allow_url_include = On

; Define the anonymous ftp password (your email address). PHP's default sett
; for this is empty.
; https://php.net/from
;from="john@doe.com"

; Define the User-Agent string. PHP's default setting for this is empty.
[ Wrote 1950 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify

```

//The file opened by this is very large

//in order to search for the place where we want to make changes we enter

// Ctrl+W and then enter the text that we want (may have to press enter again?)

//Once at the place, we make the necessary changes

//P.S You have to set both allow_url_fopen and allow_url_include to 'on'

```
└─(kaliⓈkali)-[/etc/php/8.1/apache2]
```

```
└─$ sudo service apache2 start
```

```
└─(kaliⓈkali)-[/etc/php/8.1/apache2]
```

```
└─$ systemctl status apache2
```

- apache2.service - The Apache HTTP Server

Loaded: loaded (/lib/systemd/system/apache2.service; disabled; vendor p>

Active: active (running) since Mon 2022-10-17 07:17:17 EDT; 15s ago

Docs: <https://httpd.apache.org/docs/2.4/>

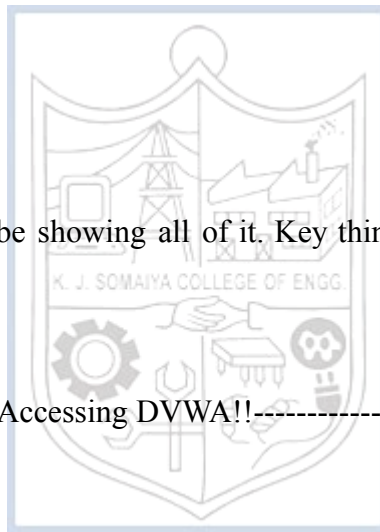
Process: 26511 ExecStart=/usr/sbin/apachectl start (code=exited, status=>

Main PID: 26515 (apache2)

Tasks: 6 (limit: 2293)

//Again, large output and won't be showing all of it. Key thing to notice is that apache 2 is loaded and active (running)

-----Accessing DVWA!!-----



That's all! We now have everything configured and can proceed to launch DVWA.

Open your browser and enter the URL

<http://127.0.0.1/dvwa/DVWA/setup.php>

//That's the URL for existing set up

//For you it can be different

//Just note that even in that, you have to be in 'setup.php' file

//and not 'login.php' file. That's where I was earlier and nothing would load.

Don't panic over the error/etc in red

Scroll down and click 'Create/Reset Database' button

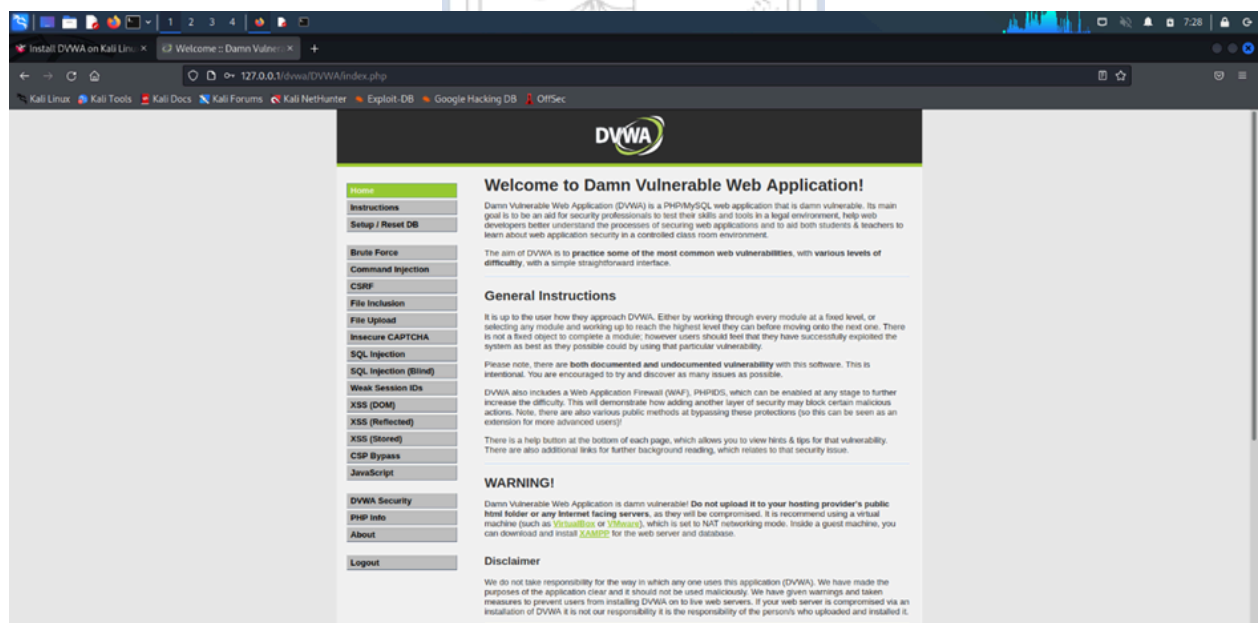
This will create and configure the database. After some time you will be redirected to the DVWA login page

There, enter the following credentials

Username - admin

Password - password

Once logged in, you will see the DVWA main page. On the left panel, we have different types of attacks you can exploit and the DVWA security button that allows you to choose the desired security level!



That's it!

We are done installing DVWA

Implementation :

1. Update System and Install Dependencies

```

File Actions Edit View Help
[ritesh@vbox:~]$ sudo apt-get update
[sudo] password for ritesh:
Get:1 http://kali.download/kali kali-rolling InRelease [41.5 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 Packages [30.3 MB]
Get:3 http://kali.download/kali kali-rolling/main amd64 Contents (deb) [42.9 MB]
Get:4 http://kali.download/kali kali-rolling/contrib amd64 Packages [113 kB]
Get:5 http://kali.download/kali kali-rolling/contrib amd64 Contents (deb) [259 kB]
Get:6 http://kali.download/kali kali-rolling/non-free amd64 Packages [189 kB]
Get:7 http://kali.download/kali kali-rolling/non-free amd64 Contents (deb) [874 kB]
Fetched 70.7 MB in 25s (2,788 kB/s)
Reading package lists... Done
[ritesh@vbox:~]$

```

2. Download DVWA

```

File Actions Edit View Help
[ritesh@vbox:~]$ sudo apt install apache2 -y
Installing dependencies:
libldap2
Summary:
Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 1161
Download size: 2,367 kB
Space needed: 606 kB / 8,531 MB available

Get:1 http://kali.org/kali kali-rolling/main amd64 libldap2 amd64 2.6.9+dfsg-1 [192 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 apache2 amd64 2.4.63-1 [219 kB]
Get:3 http://kali.download/kali kali-rolling/main amd64 apache2-bin amd64 2.4.63-1 [1,399 kB]
Get:4 http://kali.download/kali kali-rolling/main amd64 apache2-data all 2.4.63-1 [168 kB]
Get:5 http://kali.org/kali kali-rolling/main amd64 ldap-utils amd64 2.6.9+dfsg-1 [155 kB]
Get:6 http://kali.org/kali kali-rolling/main amd64 libldap-common all 2.6.9+dfsg-1 [34.5 kB]
Get:7 http://mirrors.ustc.edu.cn/kali kali-rolling/main amd64 apache2-utils amd64 2.4.63-1 [212 kB]
Fetched 2,367 kB in 35s (68.2 kB/s)
Selecting previously unselected package libldap2:amd64.
(Reading database ... 400107 files and directories currently installed.)
Preparing to unpack .../0-libldap2_2.6.9+dfsg-1_amd64.deb ...
Unpacking libldap2:amd64 (2.6.9+dfsg-1) ...
Preparing to unpack .../1-apache2_2.4.63-1_amd64.deb ...
Unpacking apache2 (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../2-apache2-bin_2.4.63-1_amd64.deb ...
Unpacking apache2-bin (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../3-apache2-data_2.4.63-1_all.deb ...
Unpacking apache2-data (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../4-apache2-utils_2.4.63-1_amd64.deb ...
Unpacking apache2-utils (2.4.63-1) over (2.5.18+dfsg-3+b1) ...
Preparing to unpack .../5-libldap-common_2.6.9+dfsg-1_all.deb ...
Unpacking libldap-common (2.6.9+dfsg-1) over (2.5.18+dfsg-3) ...
Setting up libldap-common (2.6.9+dfsg-1) ...
Installing new version of config file /etc/ldap/ldap.conf ...
Setting up apache2-data (2.4.63-1) ...
Setting up libldap2:amd64 (2.6.9+dfsg-1) ...
Setting up apache2-utils (2.4.63-1) ...
Setting up ldap-utils (2.6.9+dfsg-1) ...
Setting up apache2 (2.4.63-1) ...
apache2.service is a disabled or a static unit not running, not starting it.
apache2-htcacheclean.service is a disabled or a static unit not running, not starting it.
Processing triggers for man-db (2.11.8-1) ...
Processing triggers for kali-menu (2024.4.0) ...
Processing triggers for libc-bin (2.40-3) ...
[ritesh@vbox:~]$

```

```

File Actions Edit View Help
Get:6 http://http.kali.org/kali kali-rolling/main amd64 ldap-utils amd64 2.6.9+dfsg-1 [151 kB]
Get:7 http://http.kali.org/kali kali-rolling/main amd64 libldap-common all 2.6.9+dfsg-1 [34.5 kB]
Get:8 http://mirrors.ustc.edu.cn/kali kali-rolling/main amd64 apache2-utils amd64 2.4.63-1 [212 kB]
Fetched 2,367 kB in 3s (991 kB/s)
Selecting previously unselected package libldap2:amd64.
(Reading database ... 490197 files and directories currently installed.)
Preparing to unpack .../0-libldap2_2.6.9+dfsg-1_amd64.deb ...
Unpacking libldap2:amd64 (2.6.9+dfsg-1) ...
Preparing to unpack .../1-apache2_2.4.63-1_amd64.deb ...
Unpacking apache2 (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../2-apache2-bin_2.4.63-1_amd64.deb ...
Unpacking apache2-bin (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../3-apache2-data_2.4.63-1_all.deb ...
Unpacking apache2-data (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../4-apache2-utils_2.4.63-1_amd64.deb ...
Unpacking apache2-utils (2.4.63-1) over (2.4.62-3) ...
Preparing to unpack .../5-ldap-utils_2.6.9+dfsg-1_amd64.deb ...
Unpacking ldap-utils (2.6.9+dfsg-1) over (2.5.18+dfsg-3+b1) ...
Preparing to unpack .../6-libldap-common_2.6.9+dfsg-1_all.deb ...
Unpacking libldap-common (2.6.9+dfsg-1) over (2.5.18+dfsg-3) ...
Setting up libldap-common (2.6.9+dfsg-1) ...
Installing new version of config file /etc/ldap/ldap.conf ...
Setting up apache2-data (2.4.63-1) ...
Setting up libldap2:amd64 (2.6.9+dfsg-1) ...
Setting up apache2-utils (2.4.63-1) ...
Setting up apache2-bin (2.4.63-1) ...
Setting up ldap-utils (2.6.9+dfsg-1) ...
Setting up apache2 (2.4.63-1) ...
apache2.service is a disabled or a static unit not running, not starting it.
apache-htcacheclean.service is a disabled or a static unit not running, not starting it.
Processing triggers for man-db (2.13.0-1) ...
Processing triggers for kali-menu (0.826+1.0) ...
Processing triggers for libc-bin (2.40-3) ...

(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo mkdir -p /var/www/html
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo chmod -R 755 /var/www
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo chown -R www-data:www-data /var/www
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo service apache2 restart
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ ls /var/www/html
index.html  index.nginx-debian.html
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$

```

3. Configure DVWA

```

File Actions Edit View Help
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ cd /var/www/html
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ cd /var/www/html
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo git clone https://github.com/digininja/DVWA
Cloning into 'DVWA'...
remote: Enumerating objects: 5077, done.
remote: Counting objects: 100% (67/67), done.
remote: Compressing objects: 100% (21/21), done.
remote: Total 5077 (delta 56), reused 46 (delta 46), pack-reused 5010 (from 2)
Receiving objects: 100% (5077/5077), 2.48 MiB | 4.78 MiB/s, done.
Resolving deltas: 100% (2479/2479), done.
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo mv DVWA dvwa
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ sudo chmod -R 777 dvwa/
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ cd dvwa/config
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$ cd /var/www/html/dvwa/config
(ritesh@vbox:~)~$
(ritesh@vbox:~)~$

```

```

ritesh@vbox: /var/www/html/dvwa/config
File Actions Edit View Help
GNU nano 8.2 config.inc.php
<?php
# If you are having problems connecting to the MySQL database and all of the variables below are correct
# try changing the 'db_server' variable from localhost to 127.0.0.1. Fixes a problem due to sockets.
# Thanks to @digininja for the fix.

# Database management system to use
$dbms = getenv('DBMS') ? : 'MySQL';
$dbms = 'PGSQL'; // Currently disabled

# Database variables
# WARNING: The database specified under db_database WILL BE ENTIRELY DELETED during setup.
# Please use a database dedicated to DVWA.
# If you are using MariaDB then you cannot use root, you must use create a dedicated DVWA user.
# See README.md for more information on this.
$_DVWA = array();
$_DVWA['db_server'] = getenv('DB_SERVER') ? : '127.0.0.1';
$_DVWA['db_database'] = getenv('DB_DATABASE') ? : 'dvwa';
$_DVWA['db_user'] = getenv('DB_USER') ? : 'ritesh';
$_DVWA['db_password'] = getenv('DB_PASSWORD') ? : 'hal4u';
$_DVWA['db_port'] = getenv('DB_PORT') ? : '3306';

# RECAPTCHA settings
# Used for the 'Insecure CAPTCHA' module
# You'll need to generate your own keys at: https://www.google.com/recaptcha/admin
$_DVWA['recaptcha_public_key'] = getenv('RECAPTCHA_PUBLIC_KEY') ? : '';
$_DVWA['recaptcha_private_key'] = getenv('RECAPTCHA_PRIVATE_KEY') ? : '';

# Default security level
# Default value for the security level with each session.
# The default is 'impossible'. You may wish to set this to either 'low', 'medium', 'high' or 'impossible'.
$_DVWA['default_security_level'] = getenv('DEFAULT_SECURITY_LEVEL') ? : 'impossible';

# Default locale
# Default locale for the help page shown with each session.
# The default is 'en'. You may wish to set this to either 'en' or 'zh'.
$_DVWA['default_locale'] = getenv('DEFAULT_LOCALE') ? : 'en';

# Disable authentication
# Some tools don't like working with authentication and passing cookies around
# so this setting lets you turn off authentication.
$_DVWA['disable_authentication'] = getenv('DISABLE_AUTHENTICATION') ? : false;

define('MYSQL', 'mysql');
define('SQLITE', 'sqlite');

# SQLi DB Backend

```

```

ritesh@vbox: /var/www/html/dvwa/config
File Actions Edit View Help
--(ritesh@vbox)-[~]
$ cd /var/www/html
--(ritesh@vbox)-[/var/www/html]
$ sudo git clone https://github.com/digininja/DVWA
Cloning into 'DVWA'...
remote: Enumerating objects: 5077, done.
remote: Counting objects: 100% (67/67), done.
remote: Compressing objects: 100% (21/21), done.
remote: Total 5077 (delta 56), reused 46 (delta 46), pack-reused 5010 (from 2)
Receiving objects: 100% (5077/5077), 2.44 MiB | 4.70 MiB/s, done.
Resolving deltas: 100% (2479/2479), done.
--(ritesh@vbox)-[/var/www/html]
$ sudo mv DVWA dvwa
--(ritesh@vbox)-[/var/www/html]
$ sudo chmod -R 777 dvwa/
--(ritesh@vbox)-[/var/www/html]
$ cd dvwa/config
--(ritesh@vbox)-[/var/www/html/dvwa/config]
$ sudo cp config.inc.php.dist config.inc.php
--(ritesh@vbox)-[/var/www/html/dvwa/config]
$ sudo nano config.inc.php
--(ritesh@vbox)-[/var/www/html/dvwa/config]
$

```

4. Install and Configure MySQL

```
ritesh@vbox: /var/www/html/dvwa/config
File Actions Edit View Help

ritesh@vbox:~$ sudo mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 33
Server version: 11.4.3-MariaDB-1 Debian n/a

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

Support MariaDB developers by giving a star at https://github.com/MariaDB/server
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create user 'ritesh'@'127.0.0.1' identified by 'kali';
Query OK, 0 rows affected (0.009 sec)

MariaDB [(none)]> grant all privileges on dvwa.* to 'ritesh'@'127.0.0.1' identified by 'kali';
Query OK, 0 rows affected (0.005 sec)

MariaDB [(none)]> exit
Bye
ritesh@vbox:~$
```

```
ritesh@vbox: /var/www/html/dvwa/config
File Actions Edit View Help

ritesh@vbox:~$ sudo apt install php -y
php is already the newest version (2:8.2+93+nmu1).
php set to manually installed.
Summary:
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 1161

ritesh@vbox:~$ sudo nano /etc/php/8.1/apache2/php.ini
ritesh@vbox:~$ php -v
PHP 8.2.24 (cli) (built: Oct 24 2024 09:17:11) (NTS)
Copyright (c) The PHP Group
Zend Engine v8.2.24, Copyright (c) Zend Technologies
with Zend OPcache v8.2.24, Copyright (c), by Zend Technologies

ritesh@vbox:~$ ls /etc/php
8.2
ritesh@vbox:~$ ls /etc/php/8.1/apache2
conf.d  php.ini
ritesh@vbox:~$
```

5. Install PHP

```
File Actions Edit View Help
GNU nano 8.2 /etc/php/8.2/apache2/php.ini
; Whether to allow HTTP file uploads.
; https://php.net/file-uploads
file_uploads = On

; Temporary directory for HTTP uploaded files (will use system default if not
; specified).
; https://php.net/upload-tmp-dir
upload_tmp_dir =

; Maximum allowed size for uploaded files.
; https://php.net/upload-max-filesize
upload_max_filesize = 2M

; Maximum number of files that can be uploaded via a single request
max_file_uploads = 20

; Open wrappers
; https://php.net/allow-url-fopen
allow_url_fopen = On

; Whether to allow the treatment of URLs (like http:// or ftp://) as files.
; https://php.net/allow-url-include
allow_url_include = Off

; Define the anonymous ftp password (your email address). PHP's default setting
; for this is empty.
; https://php.net/from
;from="john@doe.com"

; Define the User-Agent string. PHP's default setting for this is empty.
; https://php.net/user-agent
user_agent="PHP"

; Default timeout for socket based streams (seconds)
; https://php.net/default-socket-timeout
default_socket_timeout = 60

; If your scripts have to deal with files from Macintosh systems,
; or you are running on a Mac and need to deal with files from
; unix or win32 systems, setting this flag will cause PHP to
; automatically detect the EOL character in those files so that
; fgets() and file() will work regardless of the source of the file.

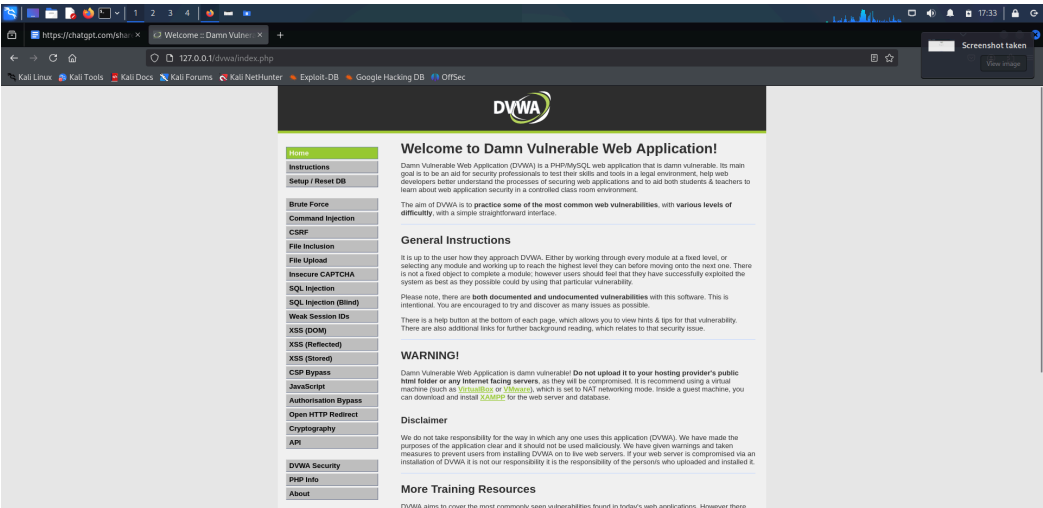
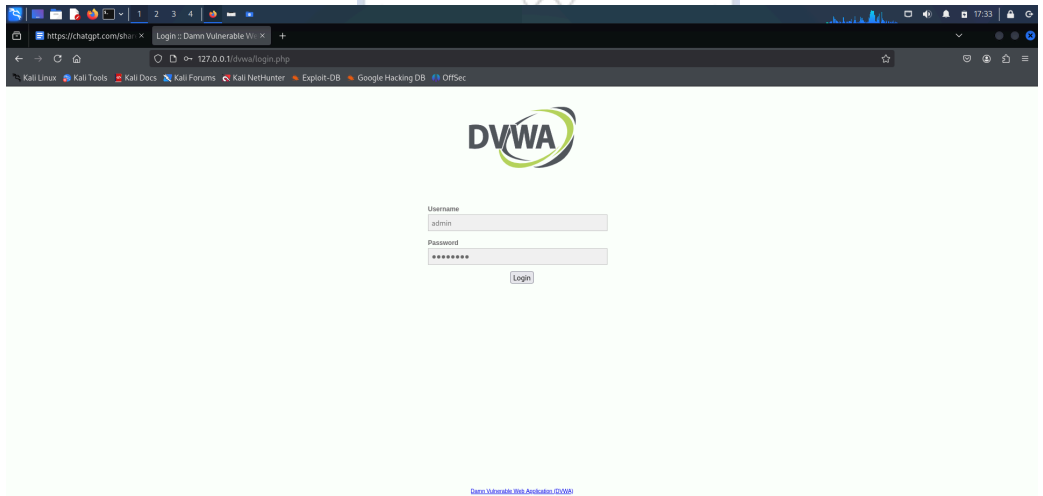
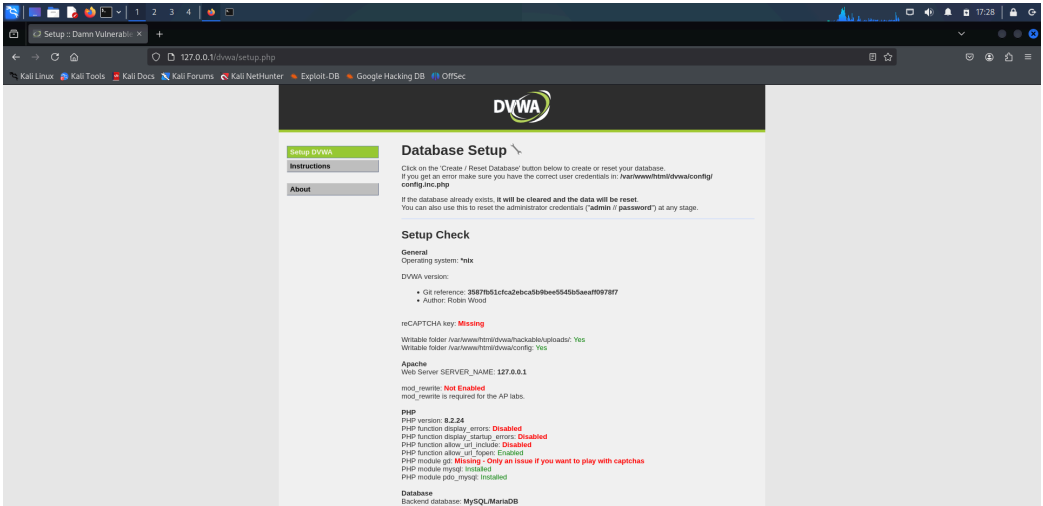
; Help      Write Out  Where Is  Cut      Execute
; Exit      Read File  Replace  Paste    Justify
;           Location  Go To Line  Undo     Redo     Set Mark
;           Where Was  Next      Previous Back  Prev Word Next Word Home  End
```

6. Configure Apache Server

```
File Actions Edit View Help
Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 1161
--(ritesh@vbox: /var/www/html/dvwa/config)
$ sudo nano /etc/php/8.1/apache2/php.ini
--(ritesh@vbox: /var/www/html/dvwa/config)
$ nano ->
PHP 8.2.24 (cli) (built: Oct 24 2024 09:17:11) (NTS)
Copyright (c) The PHP Group
Zend Engine v8.2.24, Copyright (c) Zend Technologies
with Zend OPcache v8.2.24, Copyright (c), by Zend Technologies
--(ritesh@vbox: /var/www/html/dvwa/config)
$ ls /etc/php
conf.d  php
--(ritesh@vbox: /var/www/html/dvwa/config)
$ ls /etc/php/8.2/apache2
conf.d  php.ini
--(ritesh@vbox: /var/www/html/dvwa/config)
$ sudo nano /etc/php/8.2/apache2/php.ini
--(ritesh@vbox: /var/www/html/dvwa/config)
$ sudo service apache2 start
--(ritesh@vbox: /var/www/html/dvwa/config)
$ systemctl status apache2
● apache2.service - The Apache HTTP Server
Loaded: loaded (/usr/lib/systemd/system/apache2.service; disabled; preset: disabled)
Active: active (running) since Sun 2025-02-09 17:12:44 IST; 14min ago
Invocation: 6adac8d7f46dd72ba1863385de1e26d9
Docs: https://httpd.apache.org/docs/2.4/
Process: 10125 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
Main PID: 10141 (apache2)
Tasks: 6 (limit: 4557)
Memory: 18.0M (peak: 19M)
CPU: 247ms
CGroup: /system.slice/apache2.service
┌─10141 /usr/sbin/apache2 -k start
┌─10144 /usr/sbin/apache2 -k start
┌─10145 /usr/sbin/apache2 -k start
┌─10146 /usr/sbin/apache2 -k start
┌─10147 /usr/sbin/apache2 -k start
└─10148 /usr/sbin/apache2 -k start

Feb 09 17:12:44 vbox systemd[1]: Starting apache2.service - The Apache HTTP Server...
Feb 09 17:12:44 vbox apachectl[10140]: AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1. Set the 'ServerName' directive globally to suppress this message
Feb 09 17:12:44 vbox systemd[1]: Started apache2.service - The Apache HTTP Server.
--(ritesh@vbox: /var/www/html/dvwa/config)
```

7. Access DVWA in Browser



Outcome :

CO1: Realize the premise of vulnerability analysis and penetration testing (VAPT).

Conclusion: (Conclusion to be based on the objectives and outcomes achieved)

From this tutorial, I learned how to install and configure DVWA on Kali Linux by setting up MySQL, PHP, and Apache, adjusting necessary configurations, and ensuring the web application runs properly. The process involved cloning the DVWA repository, modifying configuration files, installing dependencies, and troubleshooting errors like package issues and service failures.

Grade: AA / AB / BB / BC / CC / CD / DD

Signature of faculty in-charge with date

REFERENCES:

<https://owasp.org/www-community/>

<https://github.com/digininja/DVWA>

<https://dvwa.co.uk>

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