

# Отчет ко 2 этапу индивидуального проекта

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## Common information

discipline: Основы информационной безопасности  
group: НПМбд-02-21  
author: Бабина Ю. О.

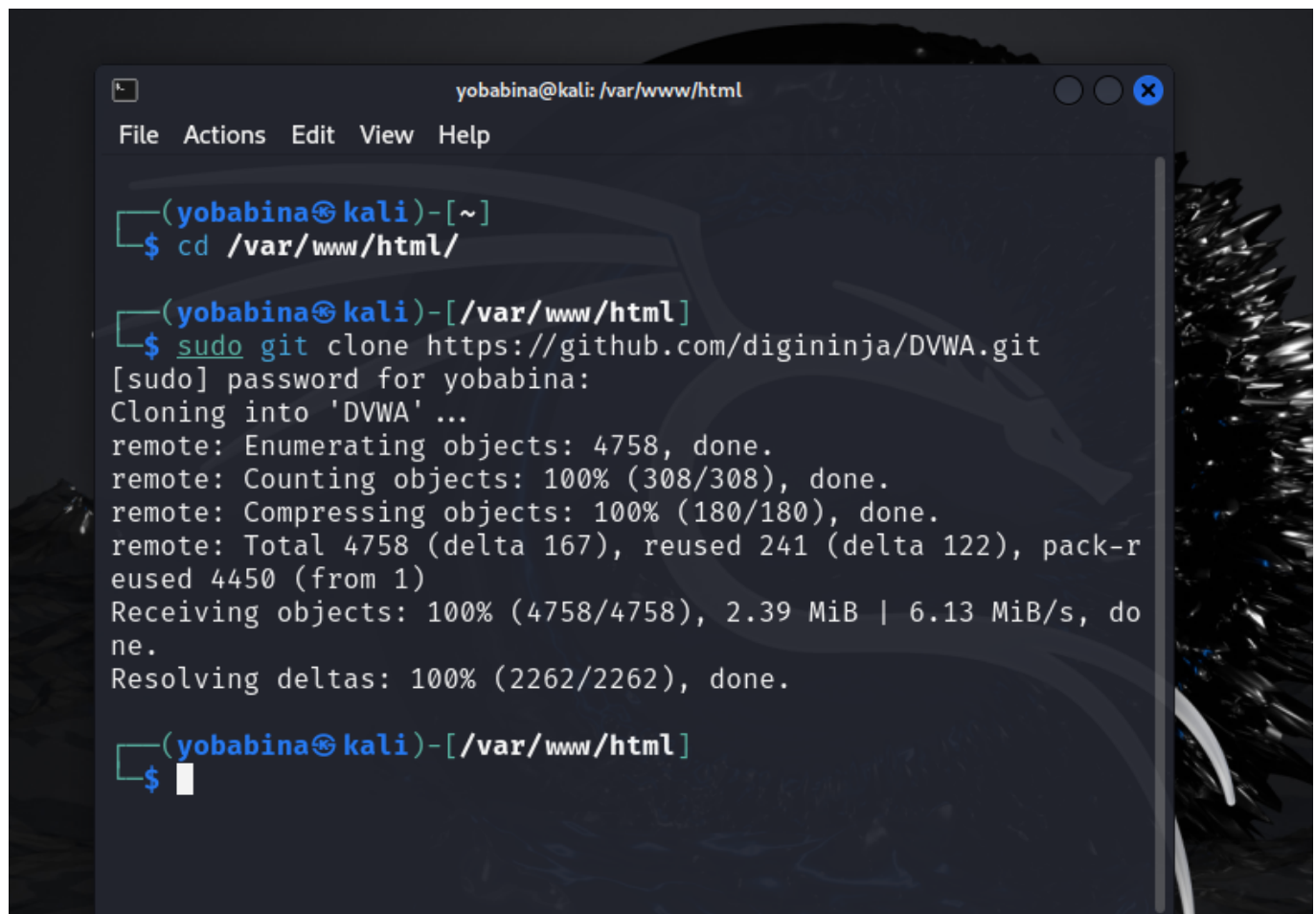
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## Цель работы

Приобретение практического навыка установки и развертывания веб-приложений DVWA в гостевую систему к Kali Linux.

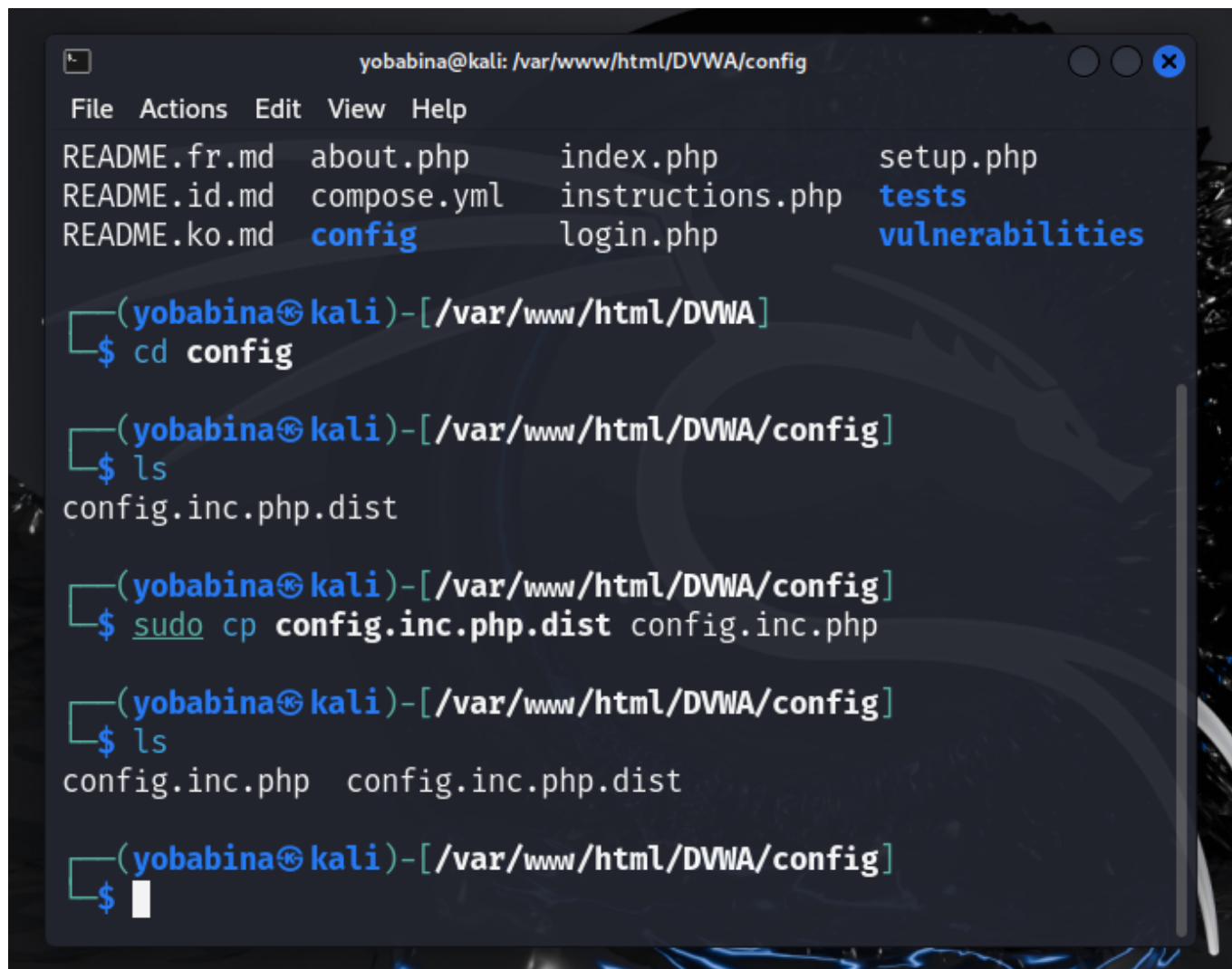
## Выполнение работы

Перейдем в директорию /var/www/html/ и склонируем репозиторий командой: "git clone https://github.com/digininja/DVWA.git"

A screenshot of a terminal window titled 'yobabina@kali: /var/www/html'. The window has a menu bar with 'File', 'Actions', 'Edit', 'View', and 'Help'. The terminal shows the following commands and output:

```
(yobabina@kali)-[~]  
$ cd /var/www/html/  
  
(yobabina@kali)-[/var/www/html]  
$ sudo git clone https://github.com/digininja/DVWA.git  
[sudo] password for yobabina:  
Cloning into 'DVWA' ...  
remote: Enumerating objects: 4758, done.  
remote: Counting objects: 100% (308/308), done.  
remote: Compressing objects: 100% (180/180), done.  
remote: Total 4758 (delta 167), reused 241 (delta 122), pack-  
reused 4450 (from 1)  
Receiving objects: 100% (4758/4758), 2.39 MiB | 6.13 MiB/s, do  
ne.  
Resolving deltas: 100% (2262/2262), done.  
  
(yobabina@kali)-[/var/www/html]  
$
```

Перейдем в директорию config и скопируем содержимое файла config.inc.php.dist в файл config.inc.php командой: "cp config.inc.php.dist config.inc.php":



```
yobabina@kali: /var/www/html/DVWA/config
File Actions Edit View Help
README.fr.md  about.php      index.php      setup.php
README.id.md  compose.yml    instructions.php tests
README.ko.md  config         login.php      vulnerabilities

(yobabina@kali)-[/var/www/html/DVWA]
$ cd config

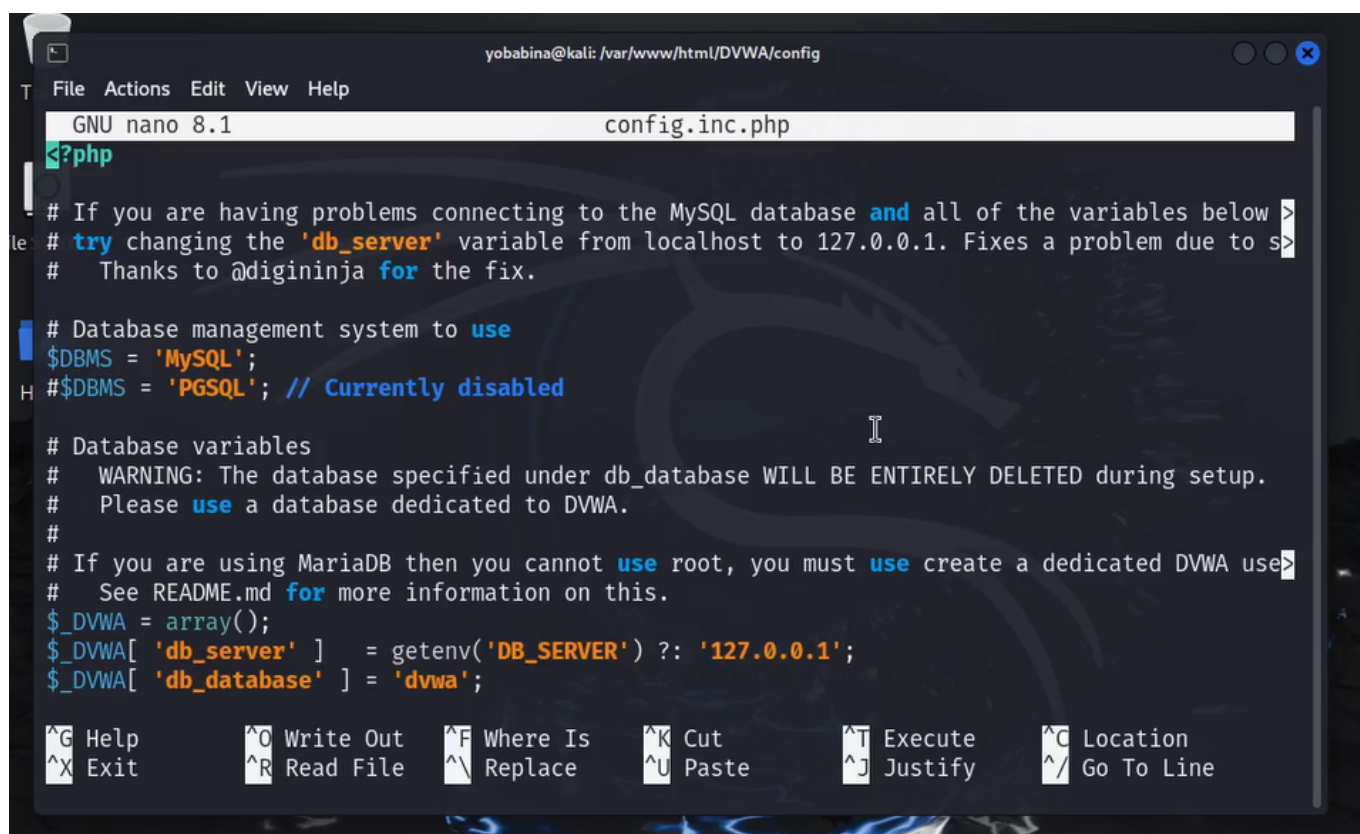
(yobabina@kali)-[/var/www/html/DVWA/config]
$ ls
config.inc.php.dist

(yobabina@kali)-[/var/www/html/DVWA/config]
$ sudo cp config.inc.php.dist config.inc.php

(yobabina@kali)-[/var/www/html/DVWA/config]
$ ls
config.inc.php  config.inc.php.dist

(yobabina@kali)-[/var/www/html/DVWA/config]
$
```

Откроем файл с помощью команды: "nano config.inc.php"



```
yobabina@kali: /var/www/html/DVWA/config
GNU nano 8.1 config.inc.php
<?php
# If you are having problems connecting to the MySQL database and all of the variables below
# try changing the 'db_server' variable from localhost to 127.0.0.1. Fixes a problem due to s
# Thanks to @diggininja for the fix.

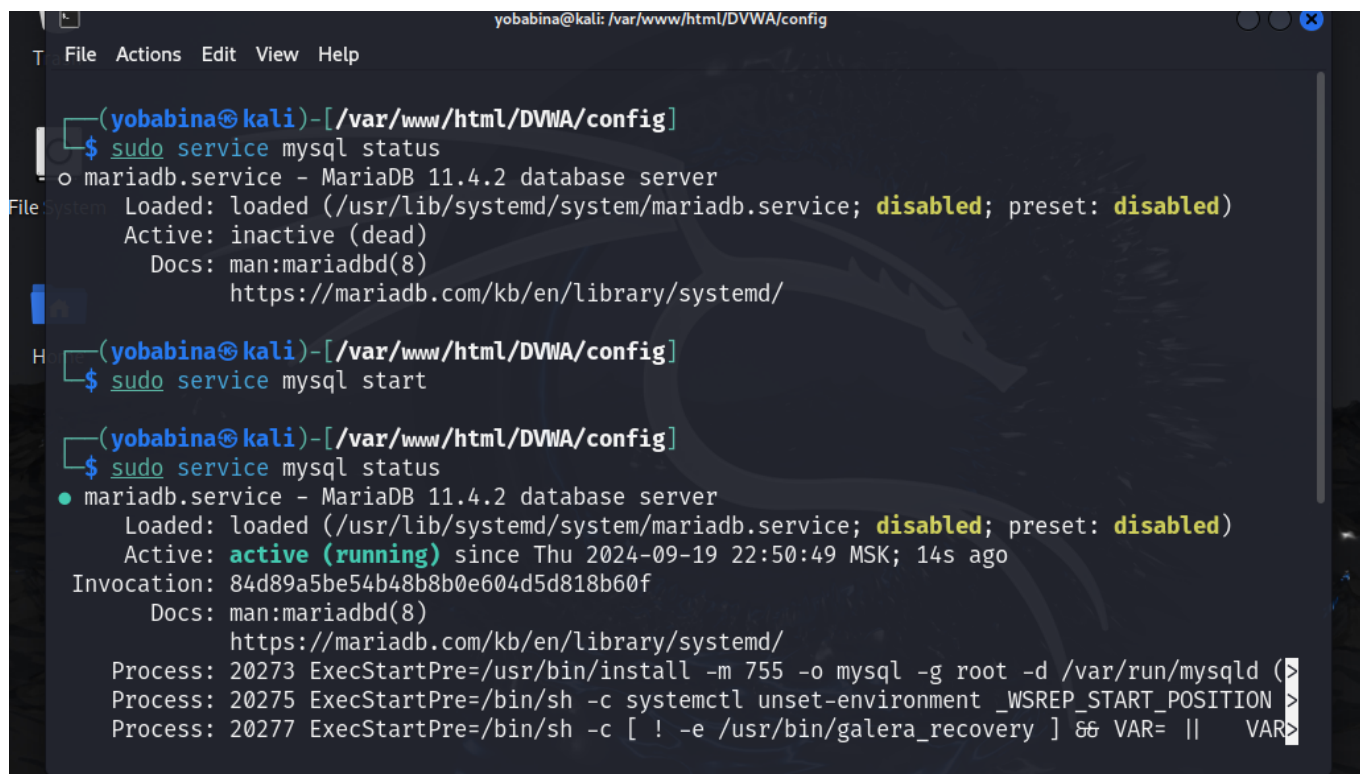
# Database management system to use
$DBMS = 'MySQL';
# $DBMS = 'PGSQL'; // Currently disabled

# Database variables
# WARNING: The database specified under db_database WILL BE ENTIRELY DELETED 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 use
# See README.md for more information on this.
$_DVWA = array();
$_DVWA[ 'db_server' ] = getenv('DB_SERVER') ?: '127.0.0.1';
$_DVWA[ 'db_database' ] = 'dvwa';

^G Help      ^O Write Out  ^F Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^N Replace    ^U Paste      ^J Justify    ^_ Go To Line
```

Как видим, файл содержит конфигурацию для подключения к СУБД MySQL, как к СУБД по умолчанию.

По умолчанию в Kali Linux установлена данная СУБД, значит, нам нужно лишь запустить процесс командой: "sudo service mysql start" и посмотреть статус работы с помощью команды: "sudo service mysql status".

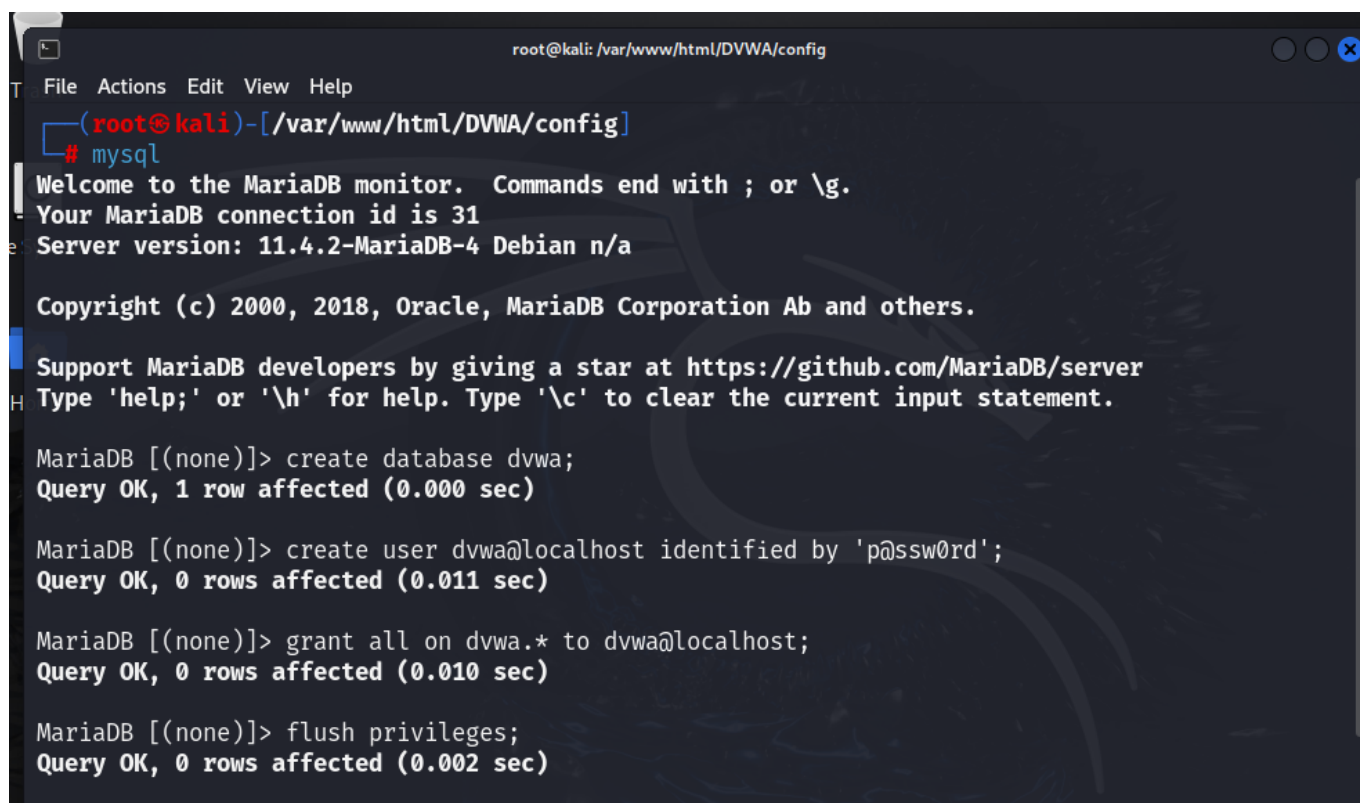
A terminal window titled 'yobabina@kali: /var/www/html/DVWA/config' showing the execution of 'sudo service mysql status' and 'sudo service mysql start'. The status command shows the service is disabled. The start command is followed by another status check showing the service is now active and running.

```
(yobabina@kali)-[/var/www/html/DVWA/config]
$ sudo service mysql status
o mariadb.service - MariaDB 11.4.2 database server
   Loaded: loaded (/usr/lib/systemd/system/mariadb.service; disabled; preset: disabled)
   Active: inactive (dead)
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/

(yobabina@kali)-[/var/www/html/DVWA/config]
$ sudo service mysql start

(yobabina@kali)-[/var/www/html/DVWA/config]
$ sudo service mysql status
● mariadb.service - MariaDB 11.4.2 database server
   Loaded: loaded (/usr/lib/systemd/system/mariadb.service; disabled; preset: disabled)
   Active: active (running) since Thu 2024-09-19 22:50:49 MSK; 14s ago
 Invocation: 84d89a5be54b48b8b0e604d5d818b60f
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 20273 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/run/mysqld (>
   Process: 20275 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_START_POSITION >
   Process: 20277 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && VAR= || VAR>
```

Теперь перейдем к созданию базы данных и пользователя в соответствии с файлом config.inc.php:

A terminal window titled 'root@kali: /var/www/html/DVWA/config' showing the MySQL command-line interface. The user enters 'mysql' and is greeted by the MariaDB monitor. They then execute commands to create a database 'dvwa', a user 'dvwa@localhost', grant privileges, and flush privileges.

```
(root@kali)-[/var/www/html/DVWA/config]
# mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 31
Server version: 11.4.2-MariaDB-4 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 database dvwa;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> create user dvwa@localhost identified by 'p@ssw0rd';
Query OK, 0 rows affected (0.011 sec)

MariaDB [(none)]> grant all on dvwa.* to dvwa@localhost;
Query OK, 0 rows affected (0.010 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.002 sec)
```

```
(yobabina@kali)-[/var/www/html/DVWA/config]
$ mysql -u dvwa -pp@ssw0rd
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 32
Server version: 11.4.2-MariaDB-4 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)]> use dvwa;
Database changed
MariaDB [dvwa]>
```

После мы должны внести изменения в конфигурационный файл `php.ini` веб-сервера `apache2`.

Для корректной работы переменные `allow_url_include` и `allow_url_fopen` должны иметь значения `On`.

```
yobabina@kali: /etc/php/8.2/apache2
File Actions Edit View Help
GNU nano 8.1 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.

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

Запустим процесс веб-сервера аналогично MySQL:



```
yobabina@kali: /etc/php/8.2/apache2
File Actions Edit View Help

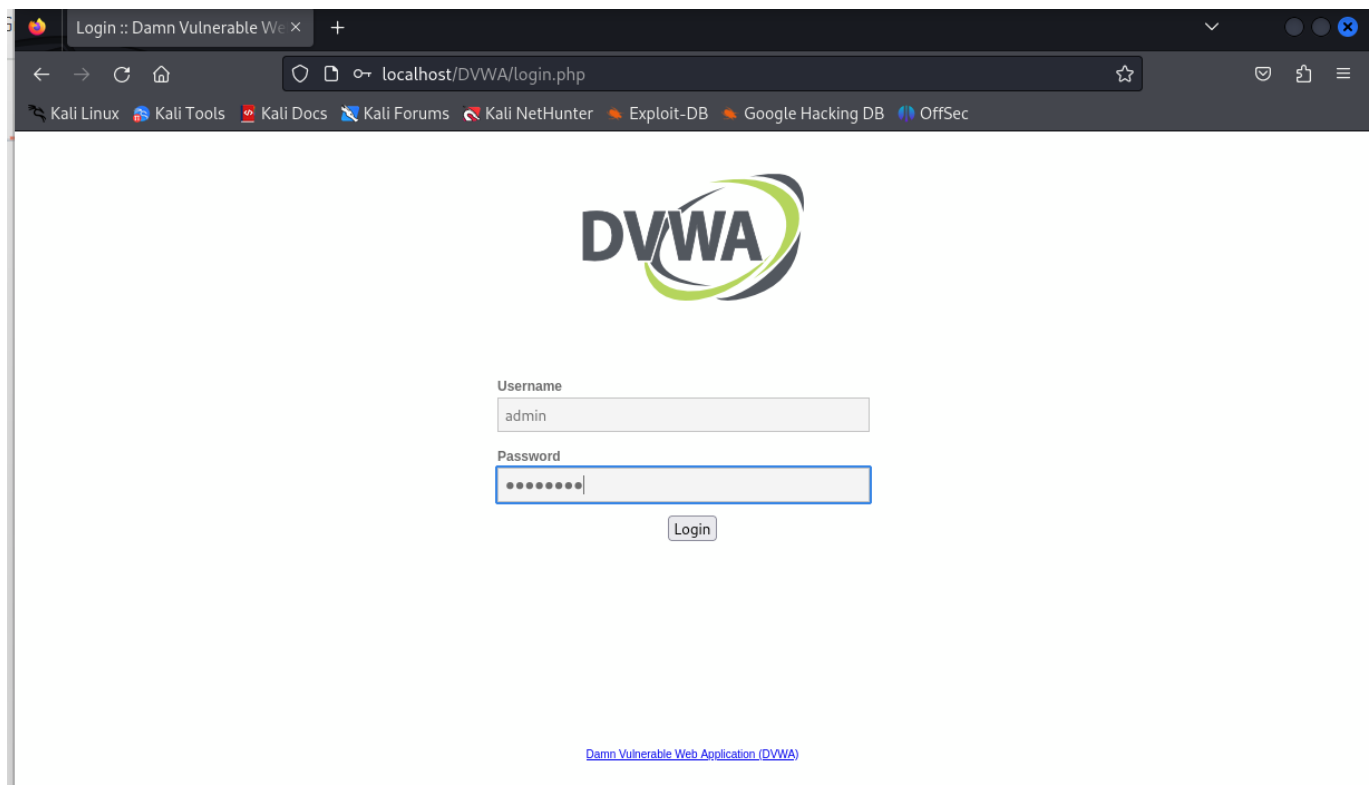
(yobabina@kali)-[/etc/php/8.2/apache2]
$ sudo service apache2 status
o apache2.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/apache2.service; disabled; pres>
  Active: inactive (dead)
  Docs: https://httpd.apache.org/docs/2.4/

(yobabina@kali)-[/etc/php/8.2/apache2]
$ sudo service apache2 start

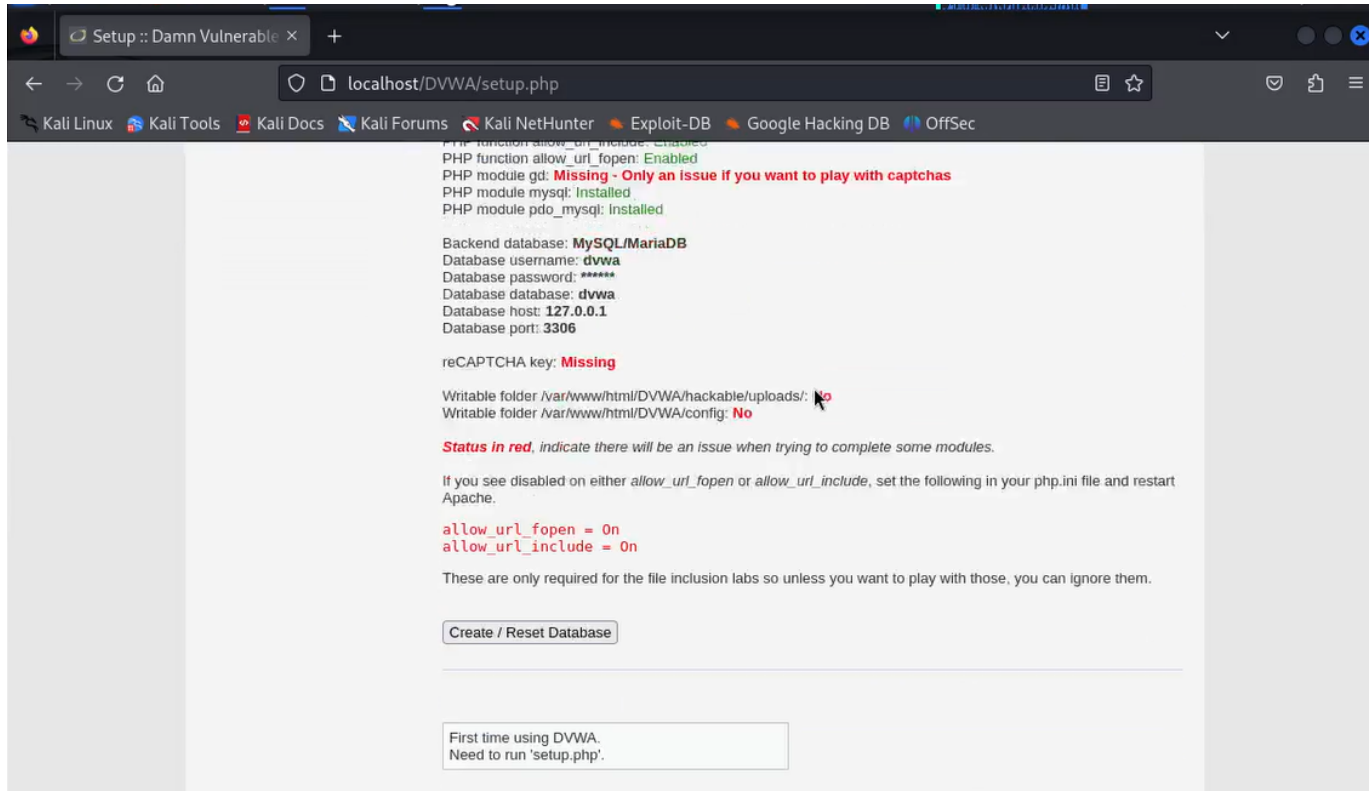
(yobabina@kali)-[/etc/php/8.2/apache2]
$ sudo service apache2 status
● apache2.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/apache2.service; disabled; pres>
  Active: active (running) since Thu 2024-09-19 23:12:04 MSK; 3s ago
  Invocation: 70c11090f5ec4a6e98bdb124aea61493
  Docs: https://httpd.apache.org/docs/2.4/
  Process: 31030 ExecStart=/usr/sbin/apachectl start (code=exited, status=
  Main PID: 31046 (apache2)
  Tasks: 6 (limit: 4607)
  Memory: 19.7M (peak: 19.9M)
  CPU: 168ms
  CGroup: /system.slice/apache2.service
          └─31046 /usr/sbin/apache2 -k start
            └─31049 /usr/sbin/apache2 -k start
```

Теперь перейдем по адресу <https://127.0.0.1/DVWA/login.php>.

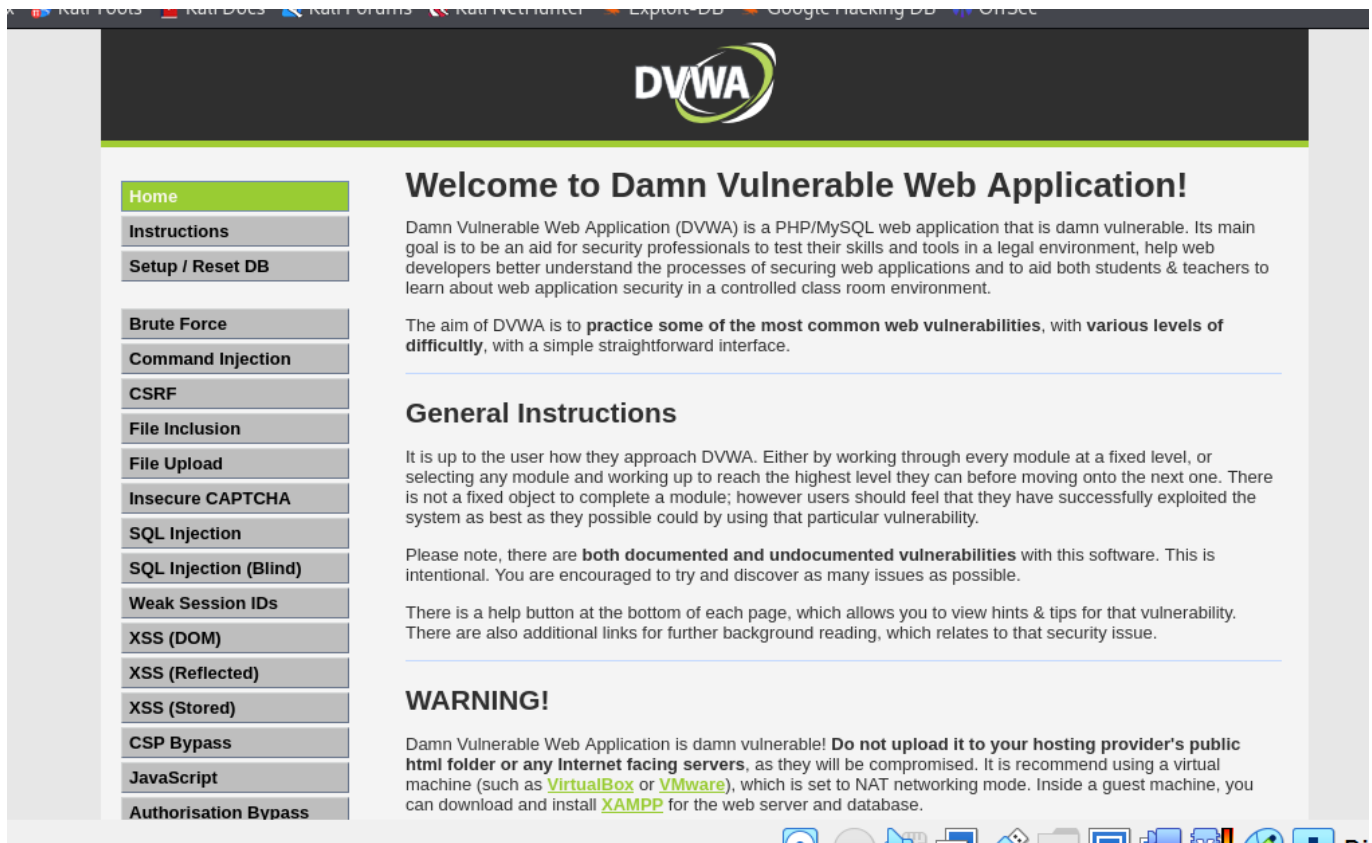
В форму авторизации введем имя пользователя-admin и пароль-password.



Перейдя на страницу приложения, прокрутим ее вниз до кнопки "Create / Reset Database" и нажмем на нее. После авторизуемся повторно:



Итак, веб-приложение DVWA установлено.



Вывод

В рамках выполнения данной лабораторной работы я приобрела практический навык установки и развертывания веб-приложений DVWA в гостевую систему к Kali Linux.

## Список литературы

- <https://www.kali.org/>
- <https://github.com/digininja/DVWA?tab=readme-ov-file>
- <https://kali.tools/?p=1820>