Experiment 01

Aim:

To install and set up Burp Suite, Mutillidae, and Kali Linux for web application security testing.

Tools:

- **Burp Suite** – Web vulnerability scanner and proxy.
- **Mutillidae** – A deliberately vulnerable web application.
- **Kali Linux** – A Linux distribution for penetration testing and security auditing.

Theory:

- **Burp Suite** is an integrated platform used for testing web application security. It includes features like proxy, spider, scanner, intruder, repeater, and sequencer.
- **Mutillidae** is a free, open-source, deliberately vulnerable web application for learning and testing security tools.
- **Kali Linux** is a Debian-based distribution equipped with numerous tools for ethical hacking, penetration testing, and digital forensics.

Steps for Installation and Setup:

1. Kali Linux Installation

- Download Kali Linux ISO from the official website: https://www.kali.org/ ● Install using:
  - **VirtualBox/VMware** (recommended for beginners).
  - OR create a bootable USB and install directly on hardware.
- Follow on-screen instructions to complete the installation.

2. Burp Suite Setup

- Burp Suite is pre-installed in Kali Linux. To launch:

Applications → Web Application Analysis → Burp Suite

- Configure the browser (Firefox/Chrome) to use proxy:

  - Proxy IP: 127.0.0.1

- Proxy Port: 8080

- Import Burp's CA certificate into the browser for HTTPS interception.

3. Mutillidae Installation

- Prerequisites: Apache, MySQL, PHP (pre-installed in Kali).

Clone the repository:

```
git clone https://github.com/webpwnized/mutillidae.git

sudo mv mutillidae /var/www/html/
```

Start services:

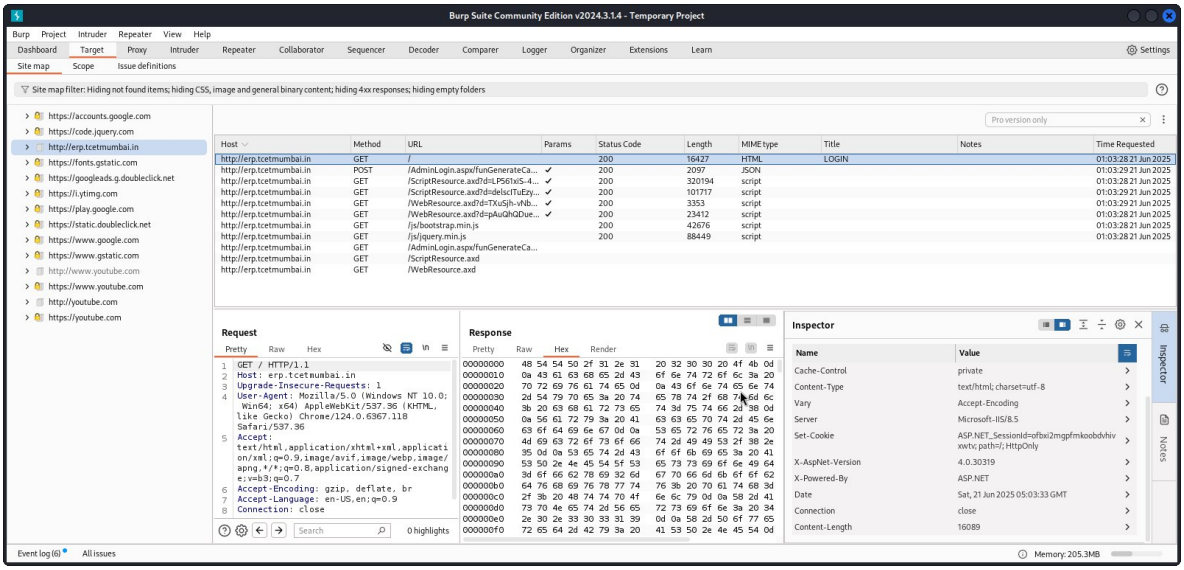
```
 sql
sudo service apache2 start

sudo service mysql start
```

- Setup database:

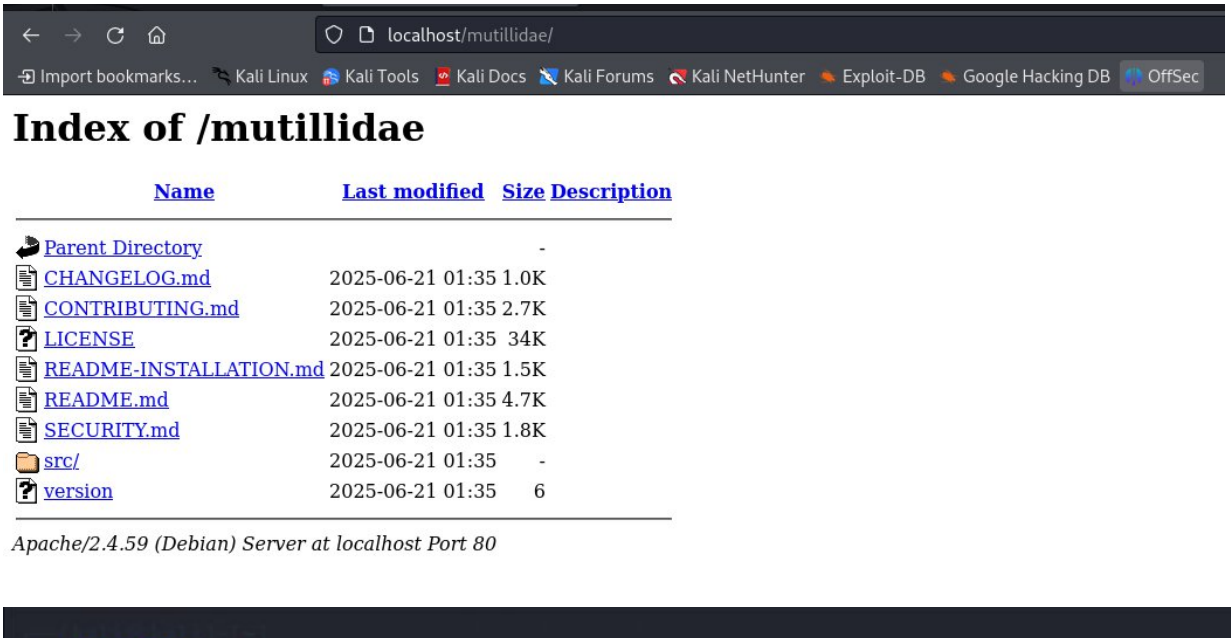
  - Open browser and navigate to http://localhost/mutillidae

  - Click on "Setup/reset the DB" to initialize the database.

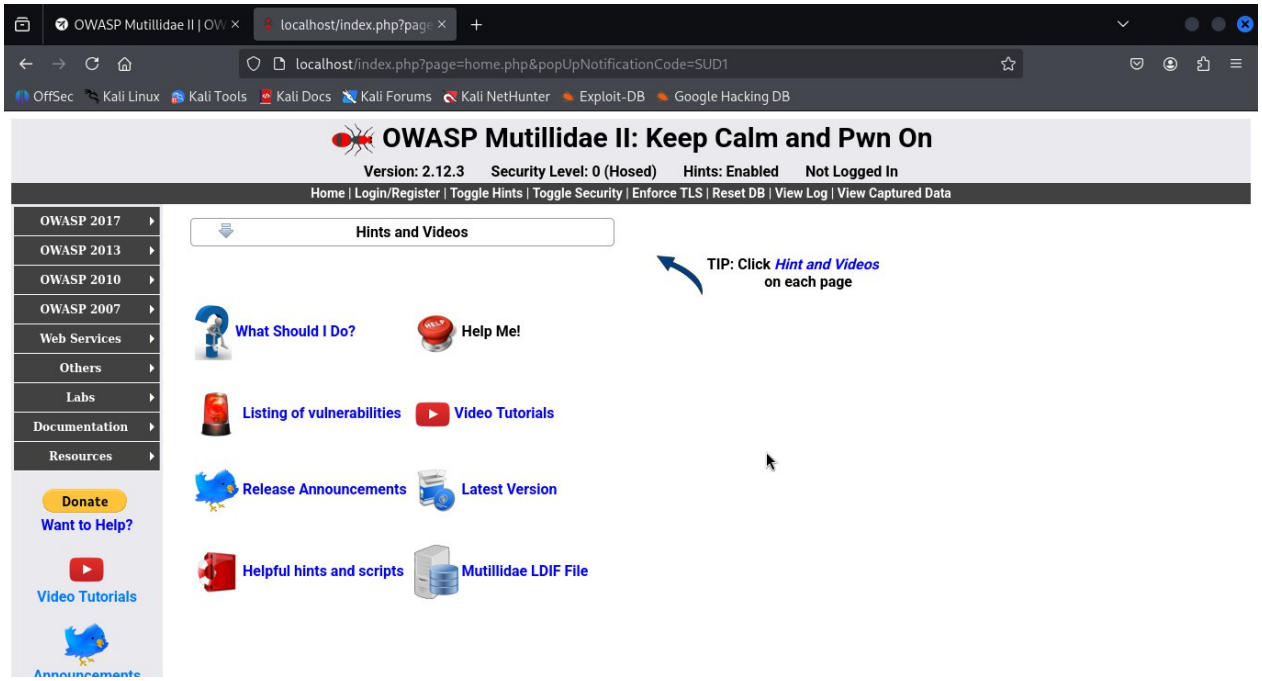
Burp Suite:



Mutillidae:




```
┌──(kali㉿kali)-[~]
└─$ git clone https://github.com/webpwnized/mutillidae.git
Cloning into 'mutillidae'...
remote: Enumerating objects: 8099, done.
remote: Counting objects: 100% (1225/1225), done.
remote: Compressing objects: 100% (255/255), done.
remote: Total 8099 (delta 1073), reused 970 (delta 970), pack-reused 6874 (from 3)
Receiving objects: 100% (8099/8099), 10.64 MiB | 10.33 MiB/s, done.
Resolving deltas: 100% (4340/4340), done.

┌──(kali㉿kali)-[~]
└─$ sudo mv mutillidae /var/www/html/

┌──(kali㉿kali)-[~]
└─$ sudo service apache2 start

┌──(kali㉿kali)-[~]
└─$ sudo service mysql start

┌──(kali㉿kali)-[~]
└─$
```



Conclusion:

The experiment provided hands-on experience with setting up a safe and controlled web application security testing environment using Kali Linux, Burp Suite, and Mutillidae.

Theory Questions:

1. What are the different modules provided by Burp Suite for testing web vulnerabilities?
2. Explain how a browser is configured to work with Burp Suite's proxy.
3. What is the purpose of Mutillidae in web security testing?

Learning Outcomes:

Outcomes:

- Demonstrate the ability to successfully install and configure Burp Suite, Mutillidae, and Kali Linux to create a secure testing environment for web application security.

- Understand and apply the basic functionality of Burp Suite and Mutillidae in conjunction with Kali Linux tools to perform vulnerability assessments and exploit web application security flaws.

Conclusion:

Name :
Class: BE CSE
Roll no:

For Faculty Use:

Correction Parameters	**Formative Assessment [40%]**	**Timely completion of Practical [40%]**	**Attendance / Learning Attitude [20%]**	
Marks Obtained				