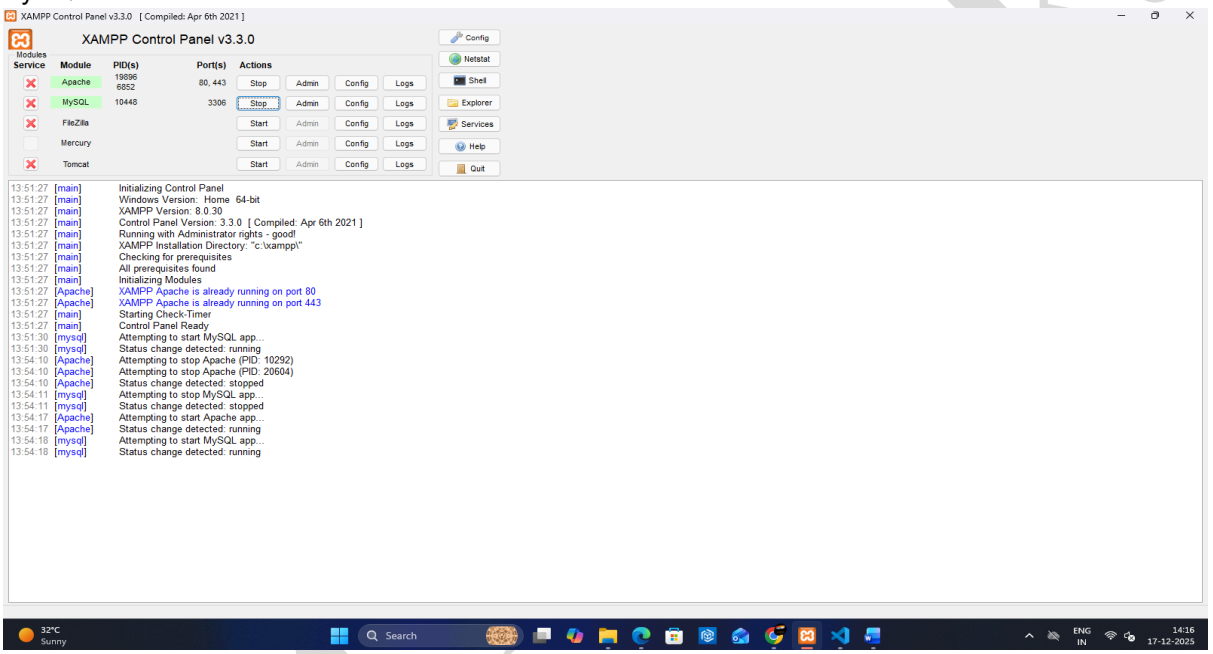
Practical No.9

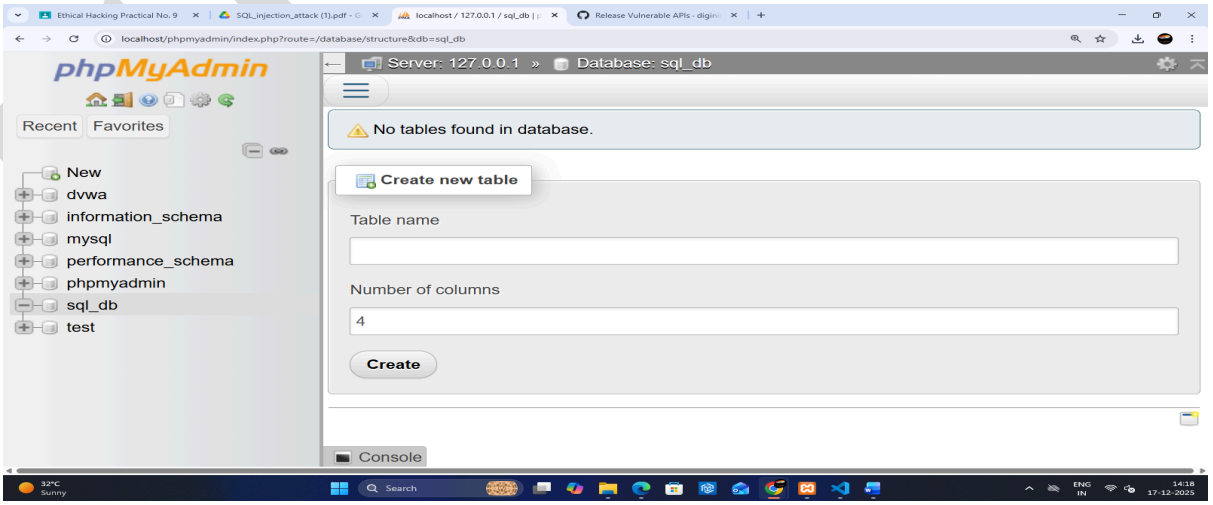
Aim: SQL Injection Attack

- **Identify a web application vulnerable to SQL injection.**
- **Craft and execute SQL injection queries to exploit the vulnerability.**
- **Extract sensitive information or manipulate the database through the SQL injection attack.**

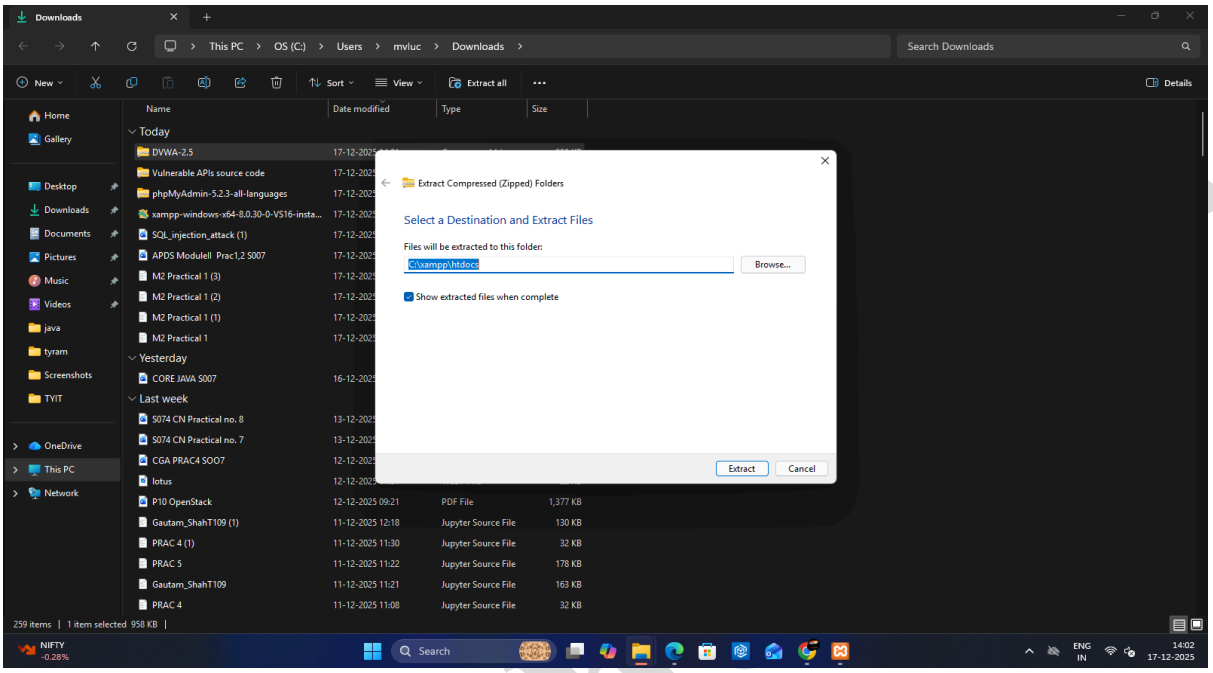
Step 1: Start XAMPP
Open XAMPP Control Panel.
Click Start for:
Apache
MySQL



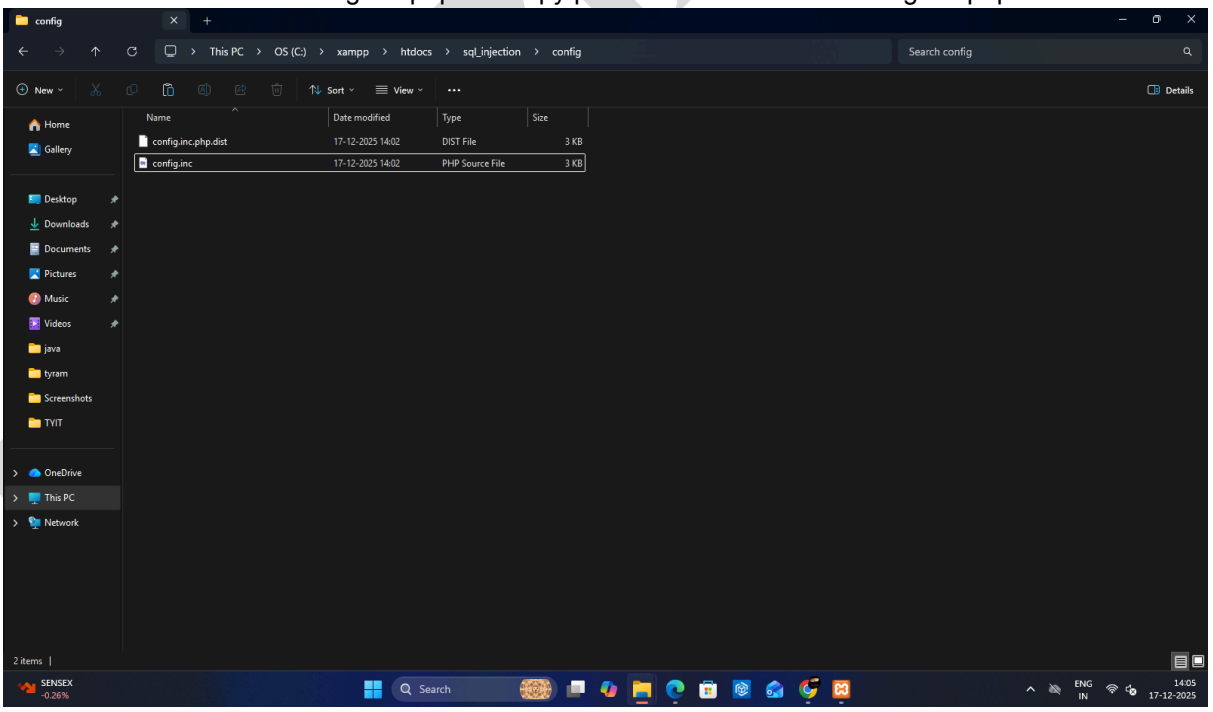
Step 2: Open phpMyAdmin
Create a Database
sql_db
Click Create.



Step 3: Download & Setup DVWA
Set Up the SQL Injection Environment
Download DVWA from GitHub:
Go to: https://github.com/digininja/DVWA
Click Code → Download ZIP.
- Extract the downloaded ZIP file inside C:\xampp\htdocs\.
- Rename the DVWA-master folder to sql_injection.



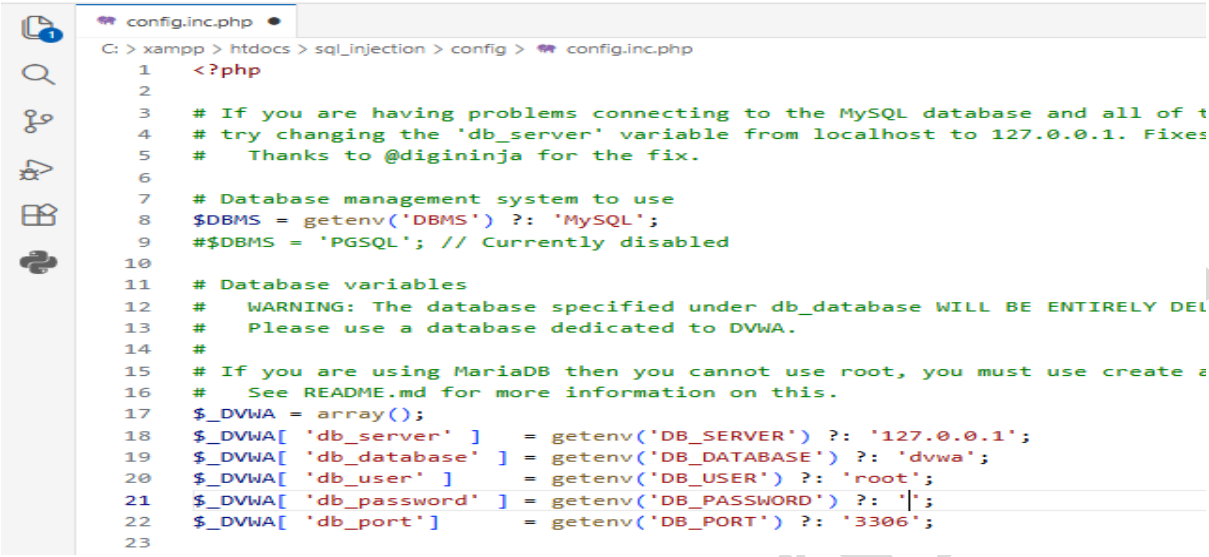
Now go to the sql_injection\config folder
This file should be there config.inc.php.dist copy paste and rename it to config.inc.php



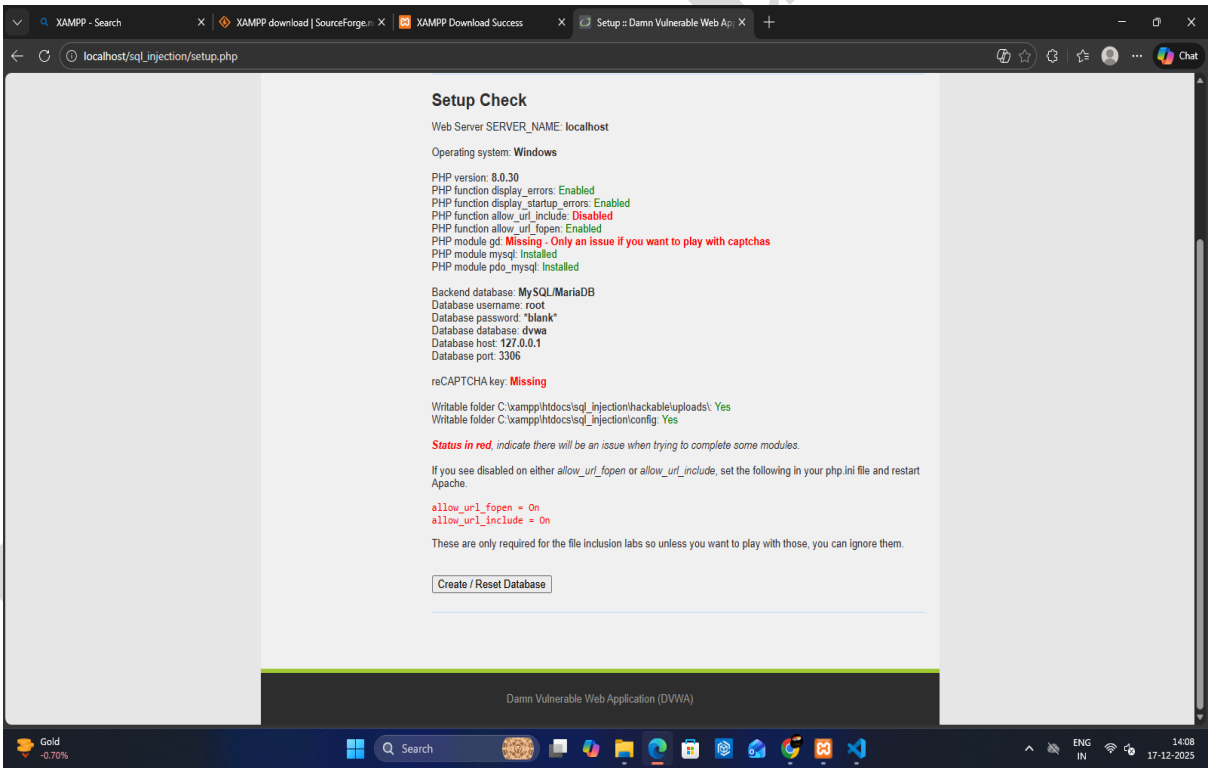
Modify the Database Credentials
Inside config.inc.php, find this section:
$_DVWA['db_user'] = 'dvwa';
$_DVWA['db_password'] = 'p@ssw0rd';

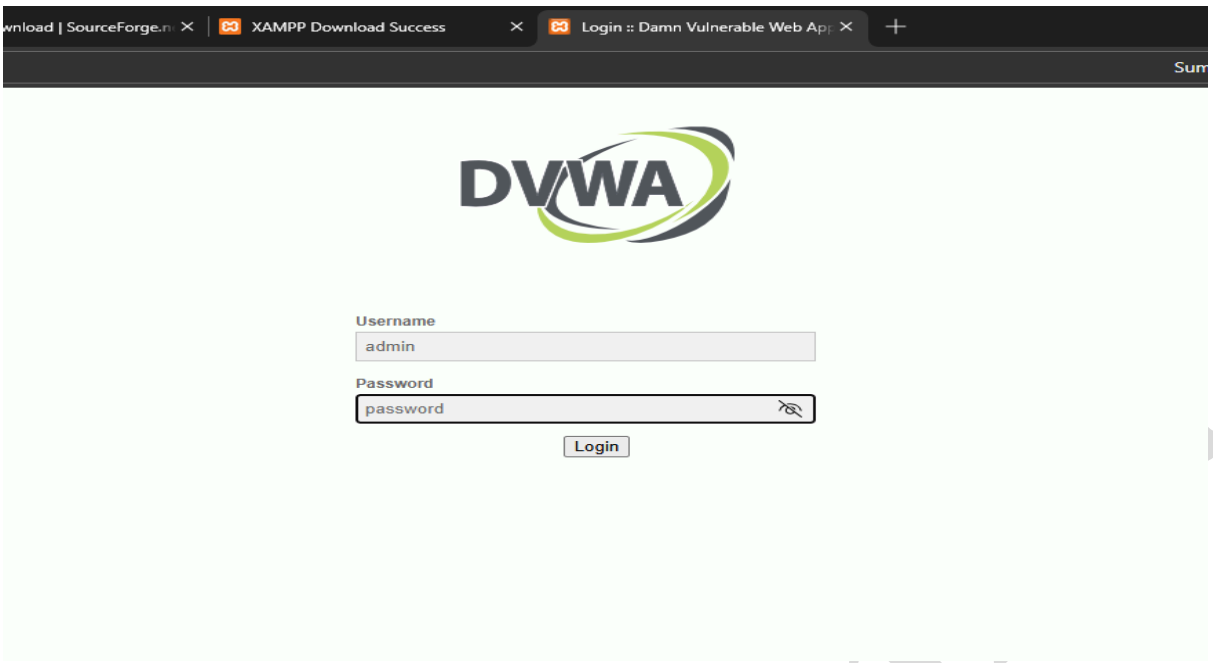
- Change it to use MySQL's default root user:

$_DVWA['db_user'] = 'root';
$_DVWA['db_password'] = '';
Since XAMPP MySQL doesn't have a password for root by default, leaving it empty will work.



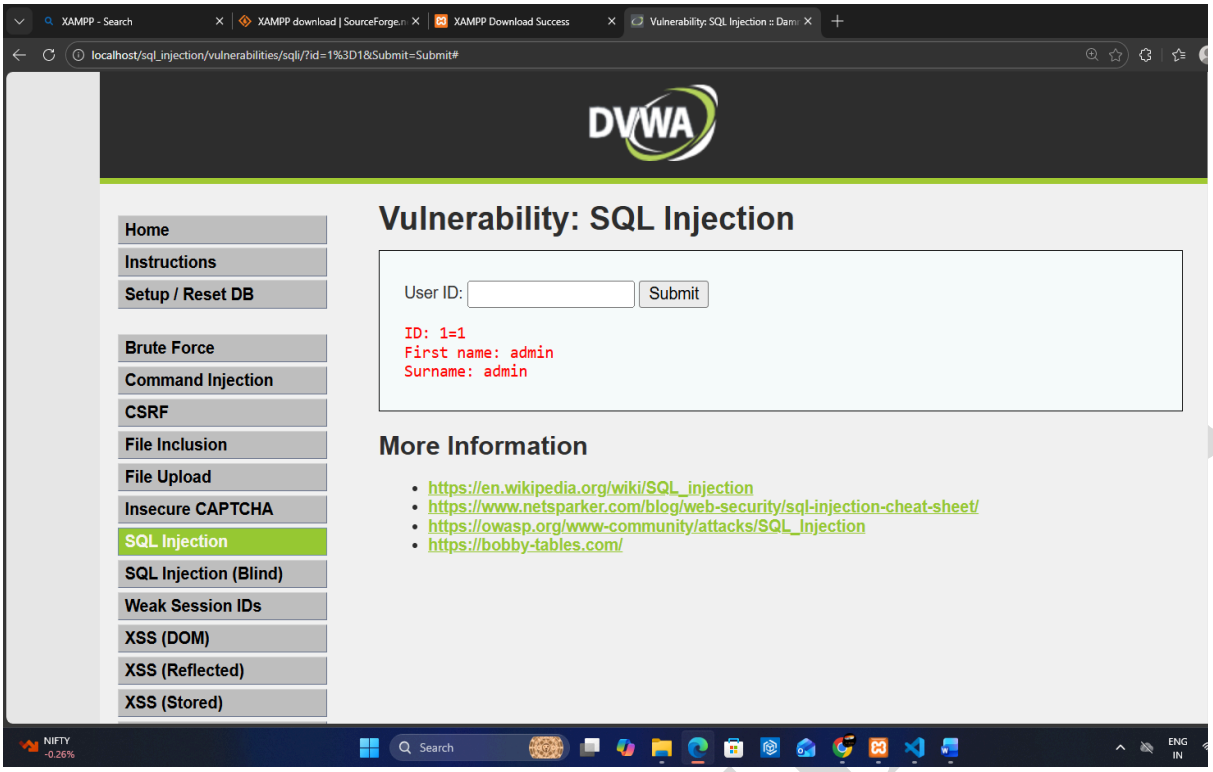
Step 4: Open a web browser.
Type in the URL:
http://localhost/sql_injection/setup.php
Click on Create/Reset Database.





Step 6: Lower Security Level
Look at the left-side menu.
Click on DVWA Security.
Set the Security Level to Low.

Click on SQL Injection from the left-side menu.
Step 7: Performing SQL Injection
Basic Injection
In the text box, type:
1
Bypassing Authentication
In the text box, type:
a' or ''='
Extracting Data
In the text box, type:
1=1
Wildcard Injection
In the text box, type:
1*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File Upload
Insecure CAPTCHA
SQL Injection
SQL Injection (Blind)
Weak Session IDs
XSS (DOM)
XSS (Reflected)
XSS (Stored)
Vulnerability: SQL Injection
User ID:
Submit
ID: 1=1
First name: admin
Surname: admin
More Information
https://en.wikipedia.org/wiki/SQL_injection
https://www.netsparker.com/blog/web-security/sql-injection-cheat-sheet/
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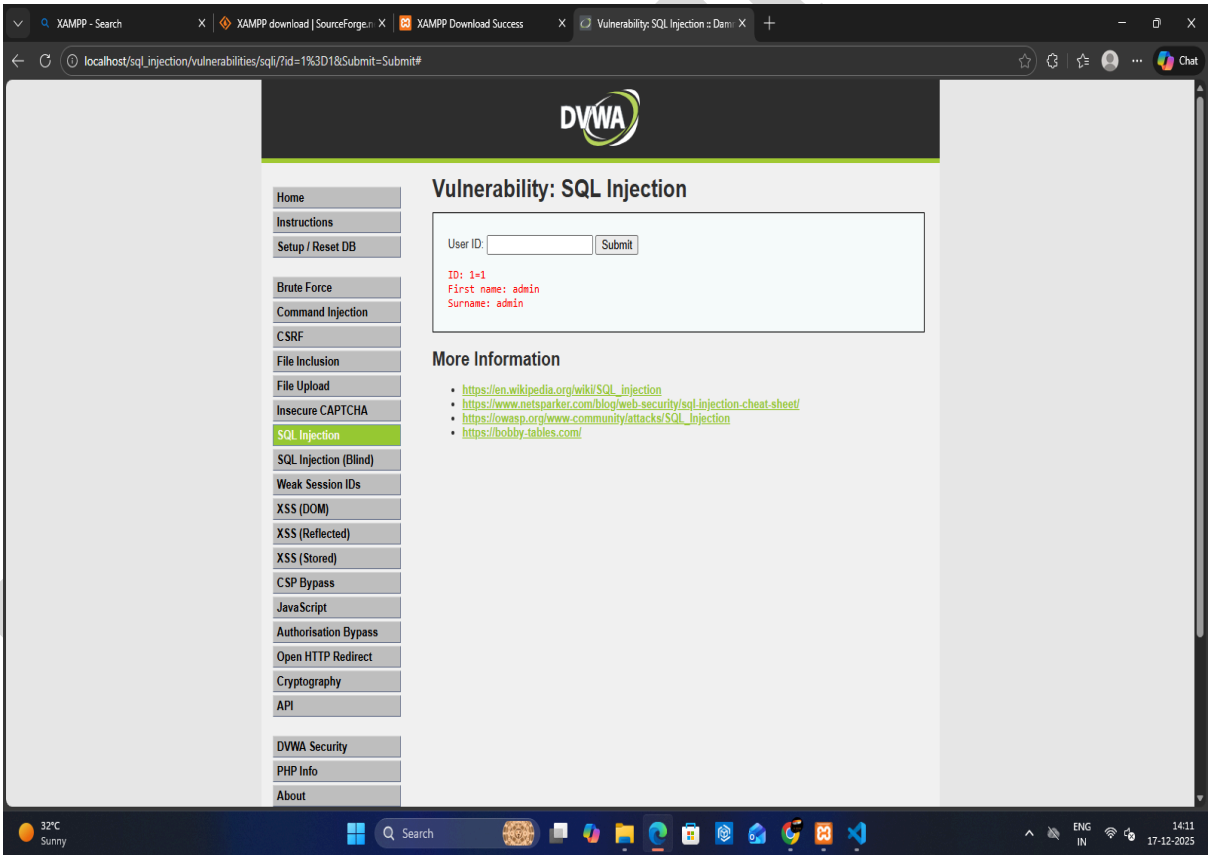
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SQL Injection
SQL Injection (Blind)
Weak Session IDs
XSS (DOM)
XSS (Reflected)
XSS (Stored)
CSP Bypass
JavaScript
Authorisation Bypass
Open HTTP Redirect
Cryptography
API
DVWA Security
PHP Info
About
Vulnerability: SQL Injection
User ID:
Submit
ID: 1=1
First name: admin
Surname: admin
More Information
https://en.wikipedia.org/wiki/SQL_injection
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