Week 5 Assignment 1

Course: Cloud and Network Security - C1-2026

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Class Exercise: Introduction to Web Applications

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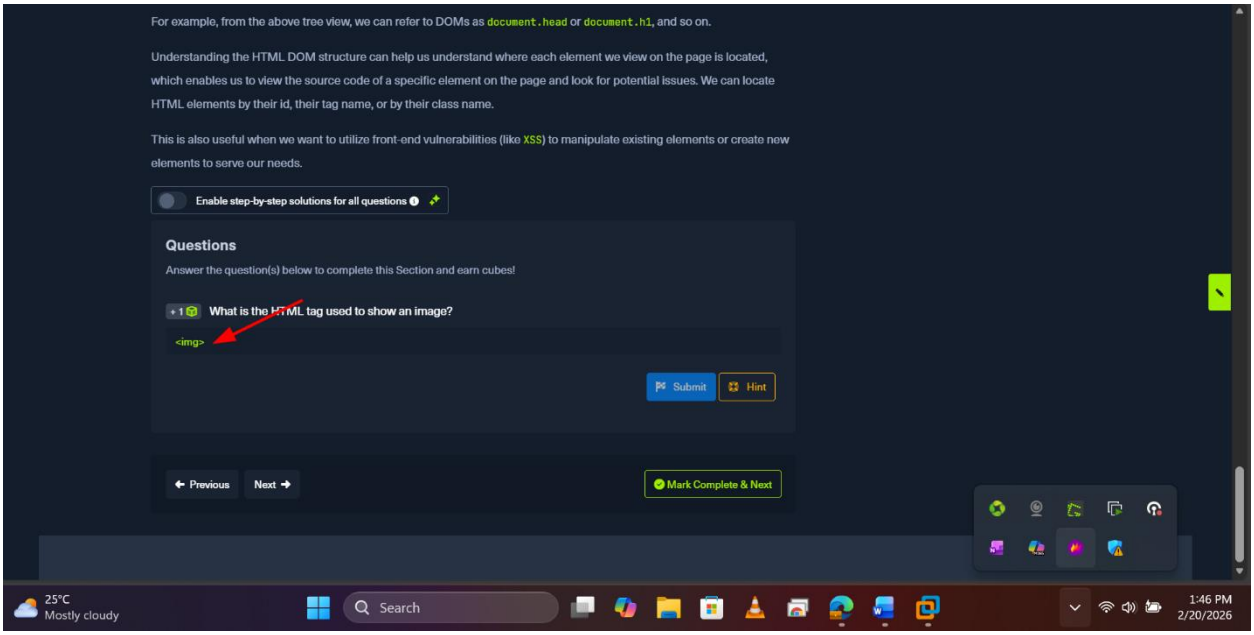
Introduction

This report details the concepts and security principles explored in the Hack The Box Academy module, Introduction to Web Applications. As modern web applications grow in complexity, understanding their underlying architecture is a critical first step for identifying and mitigating security risks. This report will break down the fundamental differences between front-end and back-end environments. On the client side, it explores core front-end components such as HTML, CSS, and JavaScript, alongside critical vulnerabilities including Data Exposure, HTML Injection, Cross-Site Scripting (XSS), and Cross-Site Request Forgery (CSRF). Additionally, the report will examine server-side architecture, detailing the roles of back-end servers, web servers, databases, and development APIs, while highlighting the common web vulnerabilities that threaten these systems.

Questions and Answers

HTML

What is the HTML tag used to show an image? <img>



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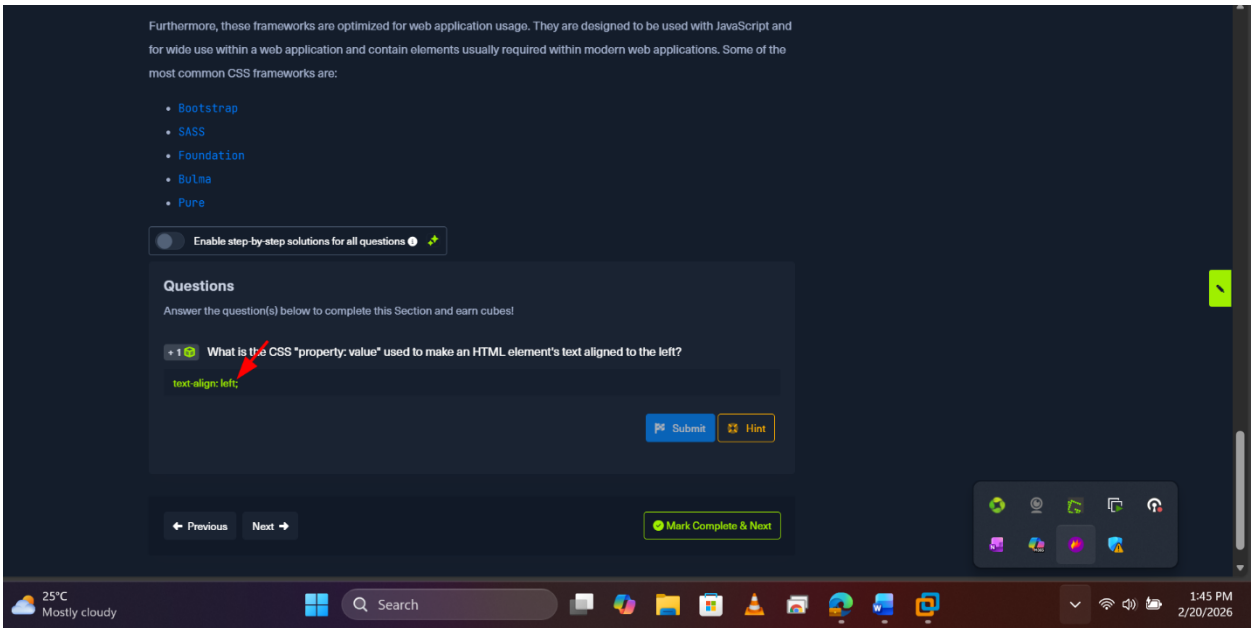
Cascading Style Sheets (CSS)

What is the CSS "property: value" used to make an HTML element's text aligned to the left?

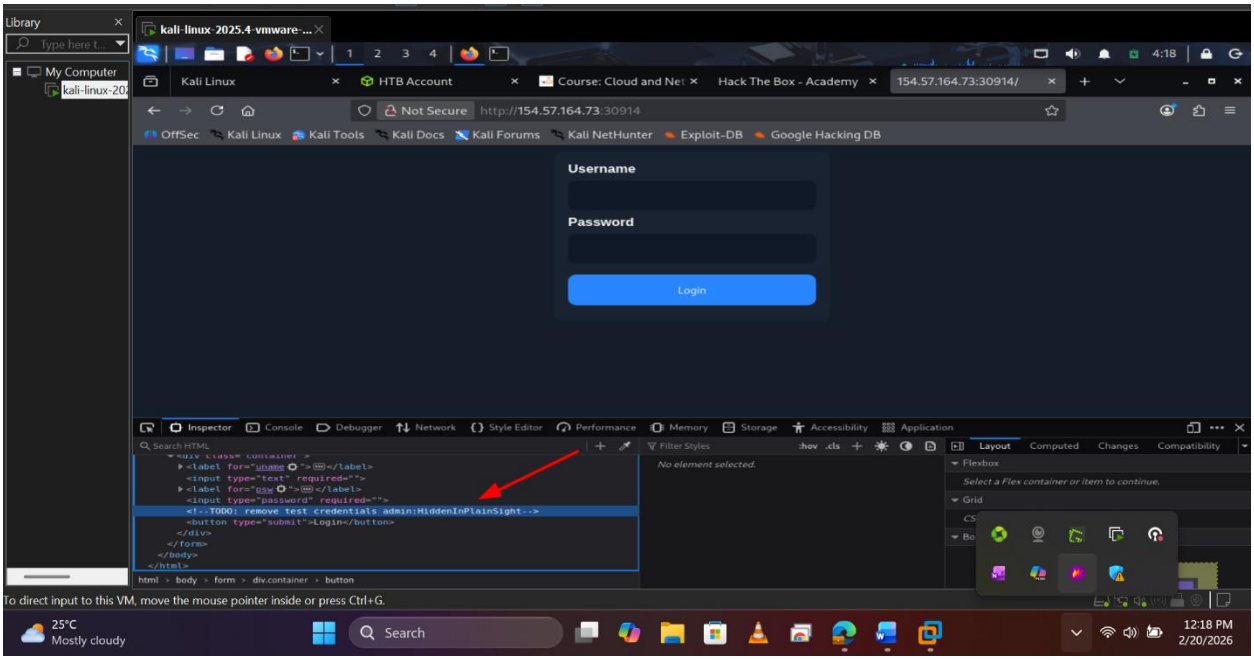
text-align: left;



Sensitive Data Exposure

Check the above login form for exposed passwords. Submit the password as the answer.

HiddenInPlainSight



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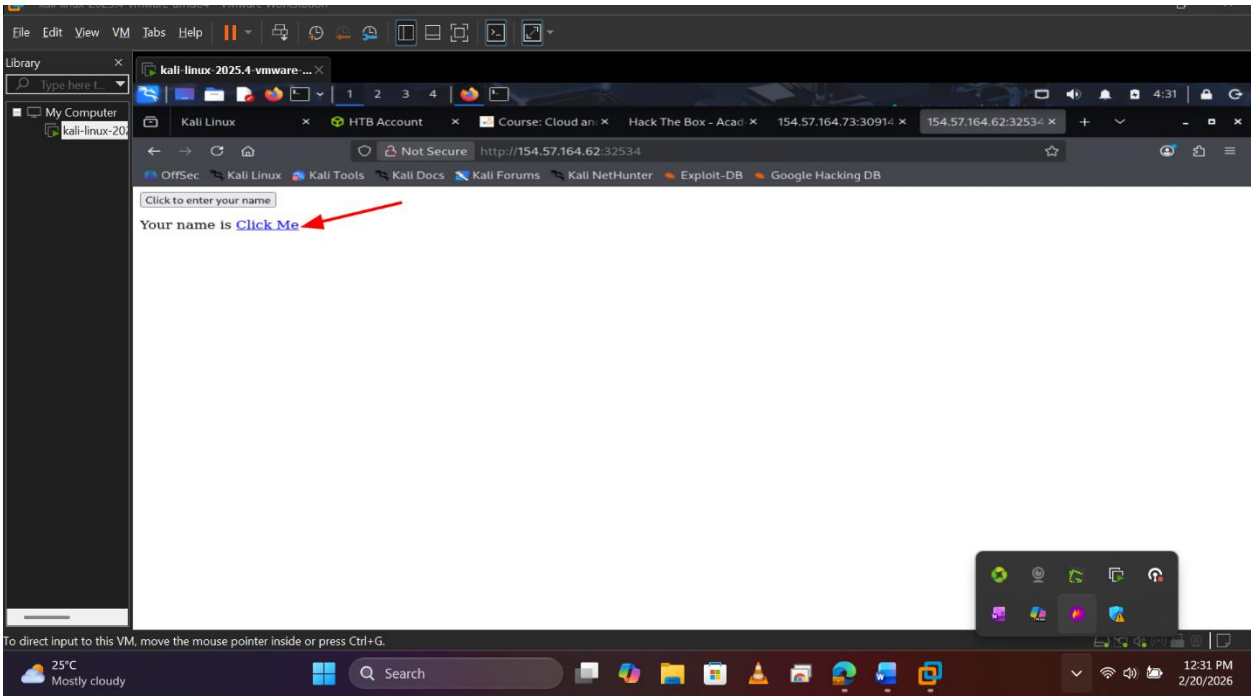
HTML Injection

What text would be displayed on the page if we use the following payload as our input: Click Me Your name is click Me



Cross-Site Scripting (XSS)

Try to use XSS to get the cookie value in the above page XSSisFun

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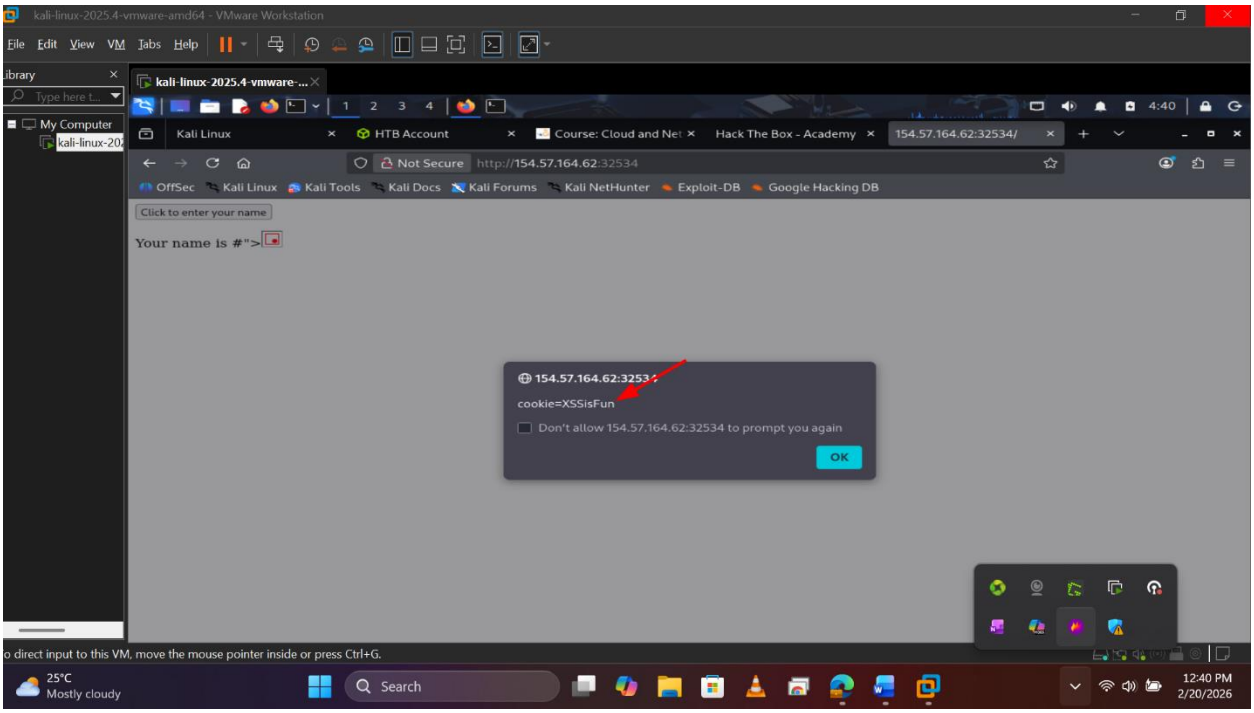
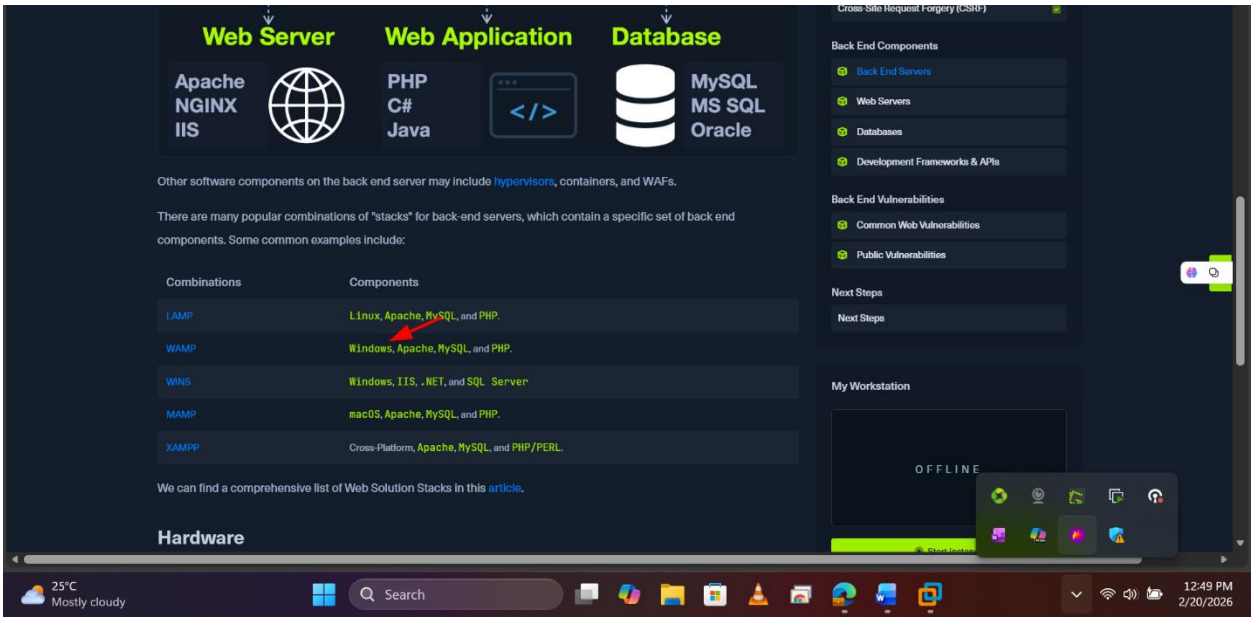


Back End Servers

What operating system is 'WAMP' used with? Windows



Web Servers

If a web server returns an HTTP code 201, what does it stand for? created

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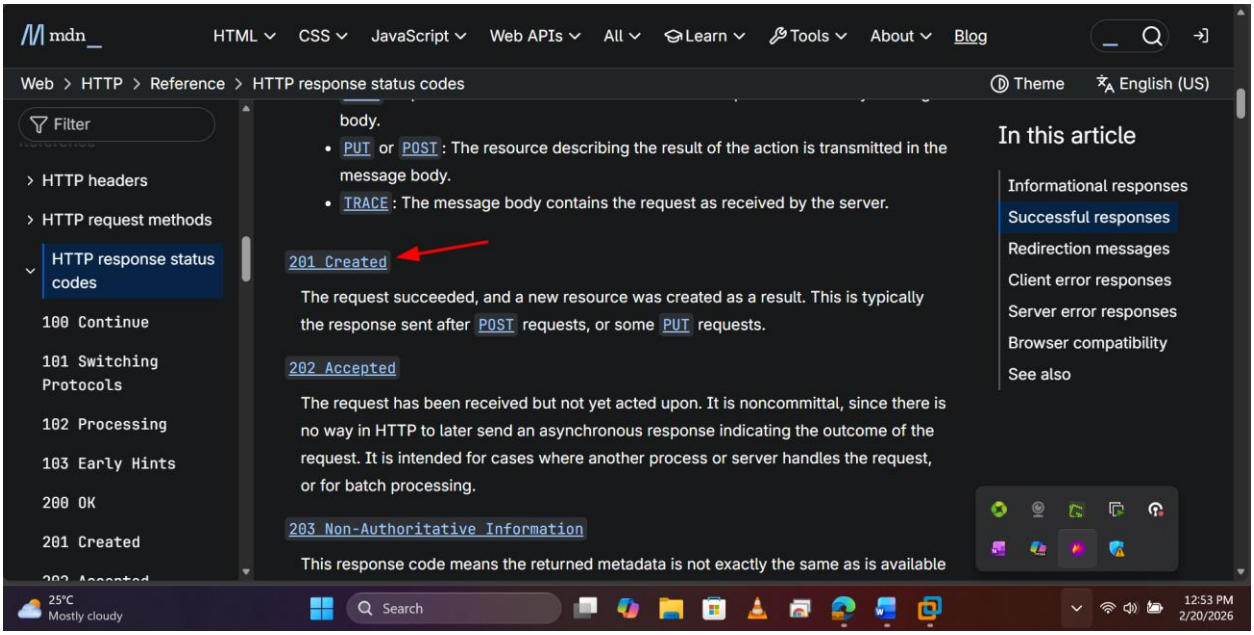
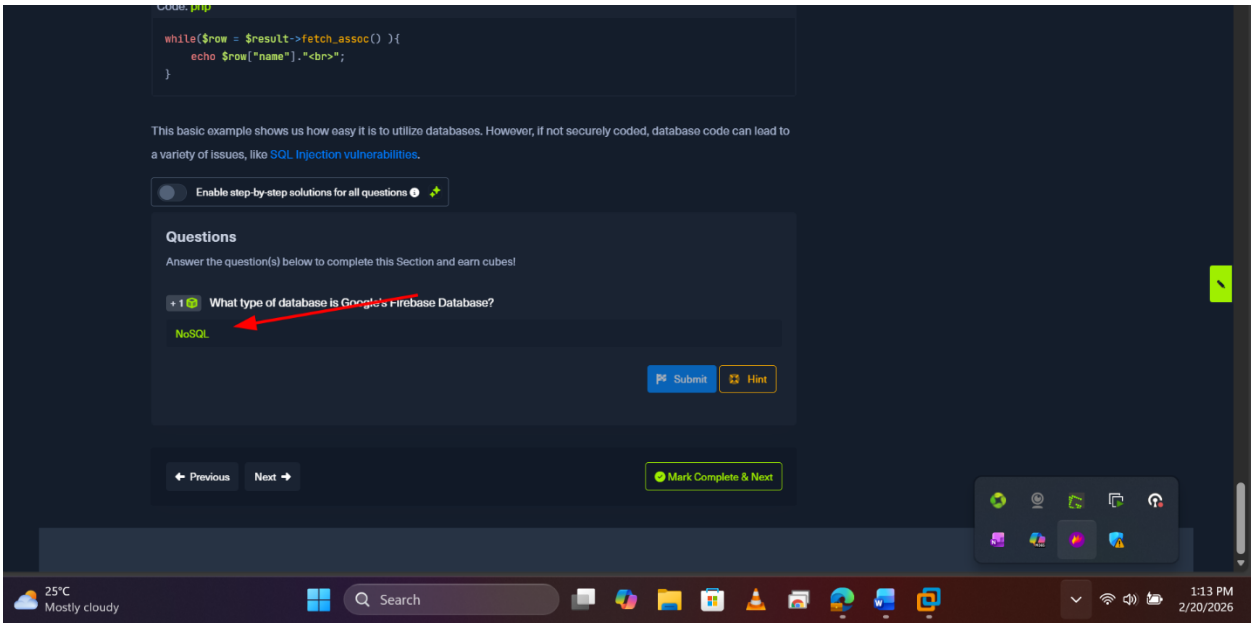


Databases

What type of database is Google's Firebase Database? NoSQL



Development Frameworks & APIs

Use GET request '/index.php?id=0' to search for the name of the user with id number 1?
superadmin

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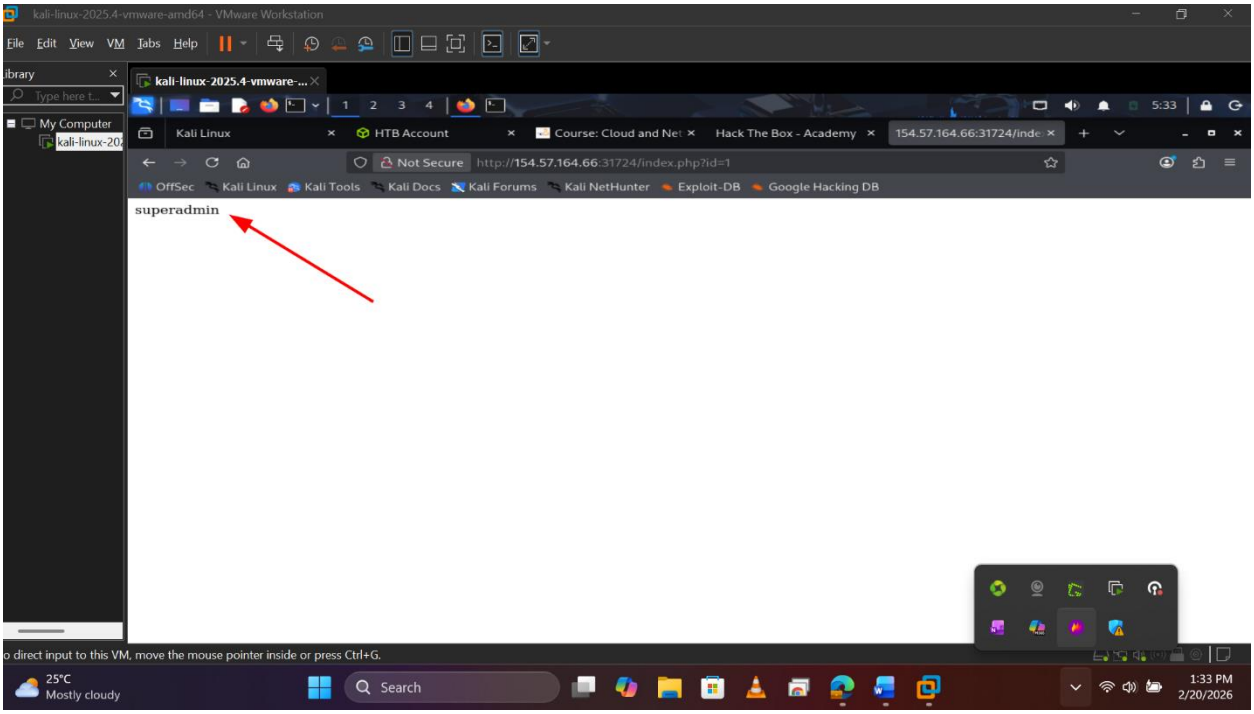
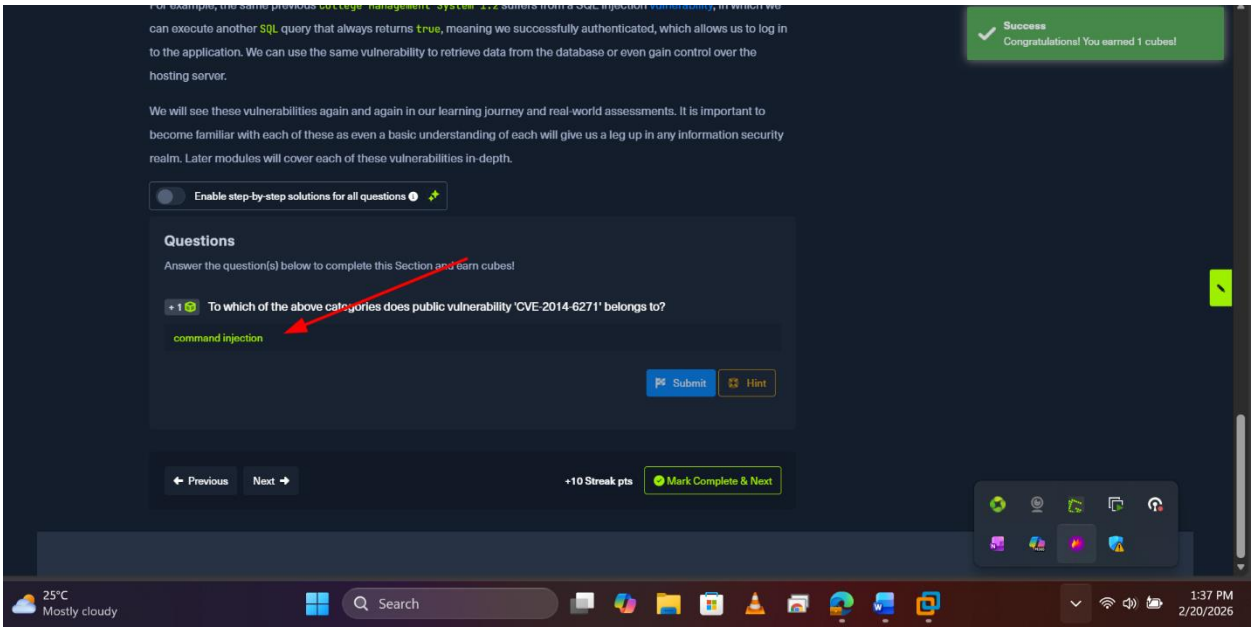


Common Web Vulnerabilities

To which of the above categories does public vulnerability 'CVE-2014-6271' belongs to?
Command injection



What is the CVSS v2.0 score of the public vulnerability CVE-2017-0144? 9.3

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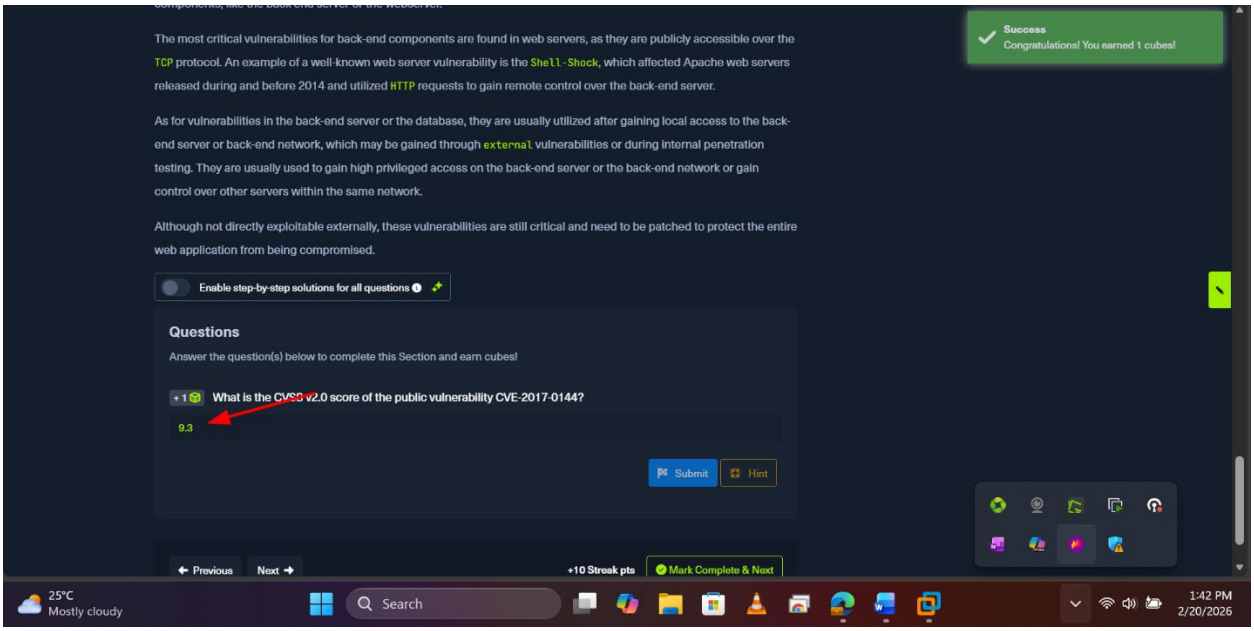
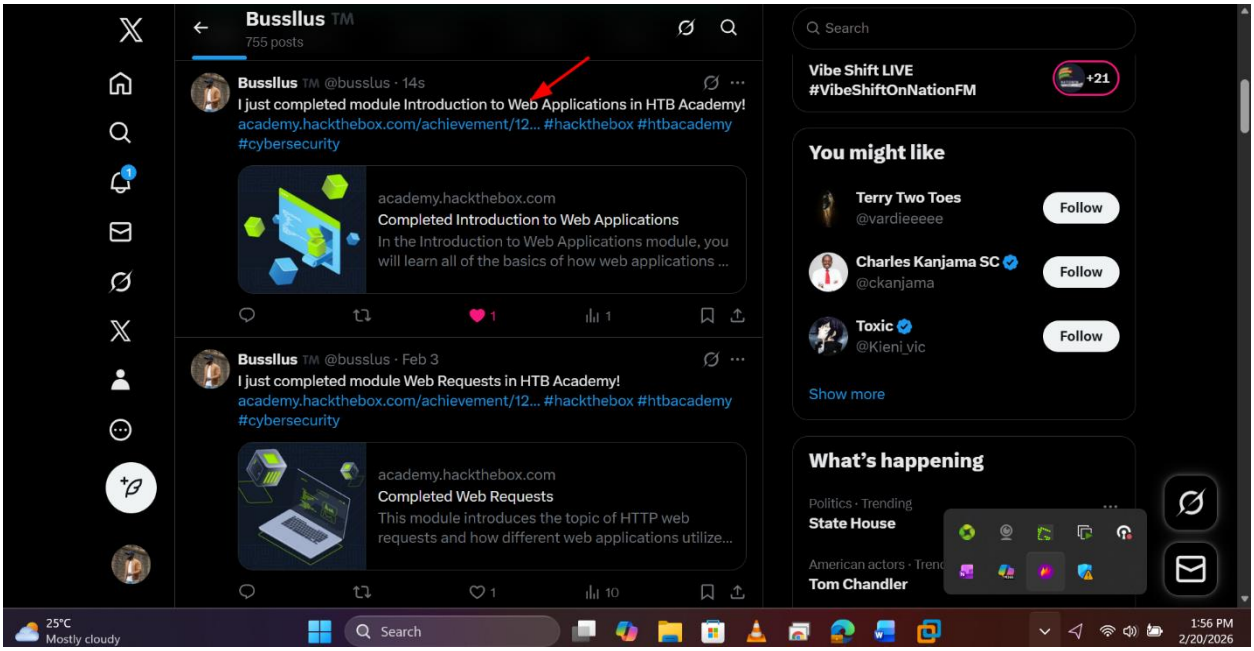


Shareable link

https://academy.hackthebox.com/achievement/1264364/75

Verification of Completion

This completion has been shared on professional networks like Twitter to publicly document my commitment to continuous learning in cybersecurity. This section provides the official verification artifacts for the "introduction to web applications" module.



Conclusion

In conclusion, the Hack The Box lab provided a foundational understanding of how web applications operate and where their most significant security weaknesses reside. By analyzing both sides of web application architecture, it is evident that robust security requires a defense-in-depth approach. The front-end remains highly susceptible to user-targeted attacks like HTML Injection and XSS/CSRF, which manipulate how browsers interpret data. Conversely, the back-end infrastructure including databases and web frameworks must be secured against public and common web vulnerabilities that could compromise the entire server environment. Ultimately, mastering the interplay between these front-end and back-end components is essential for effectively securing modern web applications against evolving cyber threats