Stuti Maitra Sarkar
Assignment 1

OWASP Top 10

1. Broken Access Control
2. Cryptographic Failures
3. Injection
4. Insecure Design
5. Security Misconfiguration .
6. Vulnerable and Outdated Components
7. Identification and Authentication Failures
8. Software and Data Integrity Failures
9. Security Logging and Monitoring Failures
10. Server-Side Request Forgery

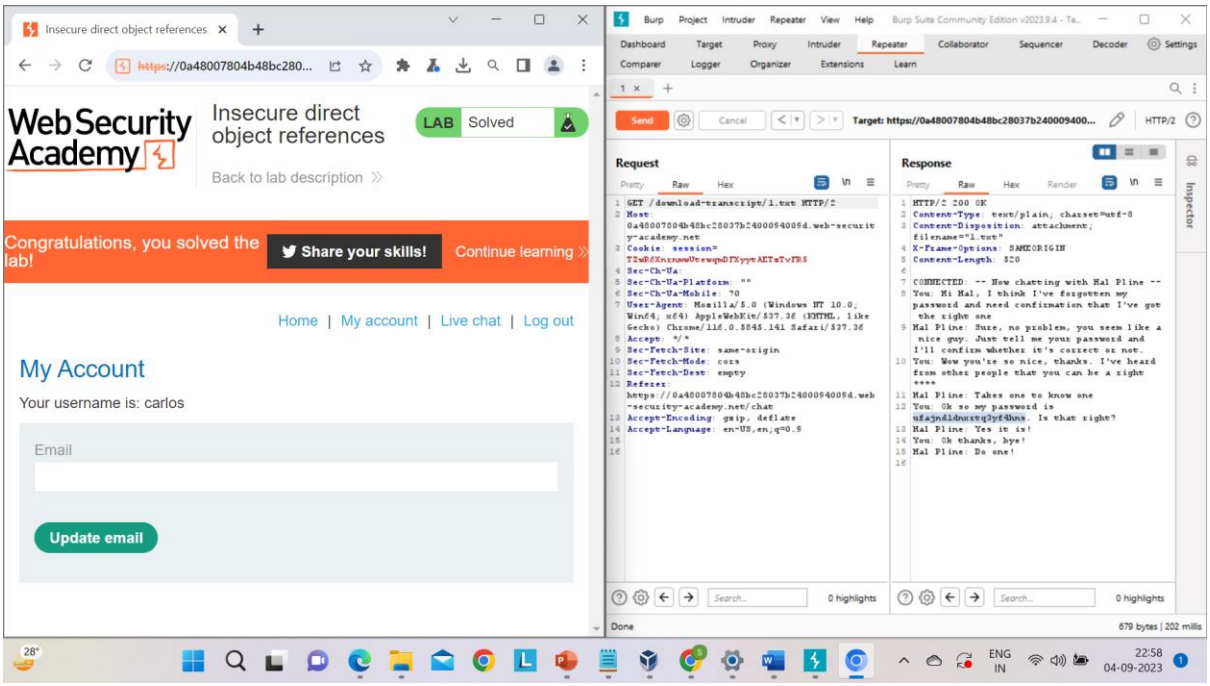
Broken Access Control

List of Mapped CWEs:

1. CWE-22 Improper Limitation of a Pathname to a Restricted Directory ('Path Traversal')
2. CWE-23 Relative Path Traversal
3. CWE-35 Path Traversal: '.../...//'
4. CWE-59 Improper Link Resolution Before File Access ('Link Following')
5. CWE-200 Exposure of Sensitive Information to an Unauthorized Actor
6. CWE-201 Exposure of Sensitive Information Through Sent Data
7. CWE-219 Storage of File with Sensitive Data Under Web Root
8. CWE-264 Permissions, Privileges, and Access Controls (should no longer be used)
9. CWE-275 Permission Issues
10. CWE-276 Incorrect Default Permissions
11. CWE-284 Improper Access Control

Etc.

Viewing previous chat transcripts to gain access to password:



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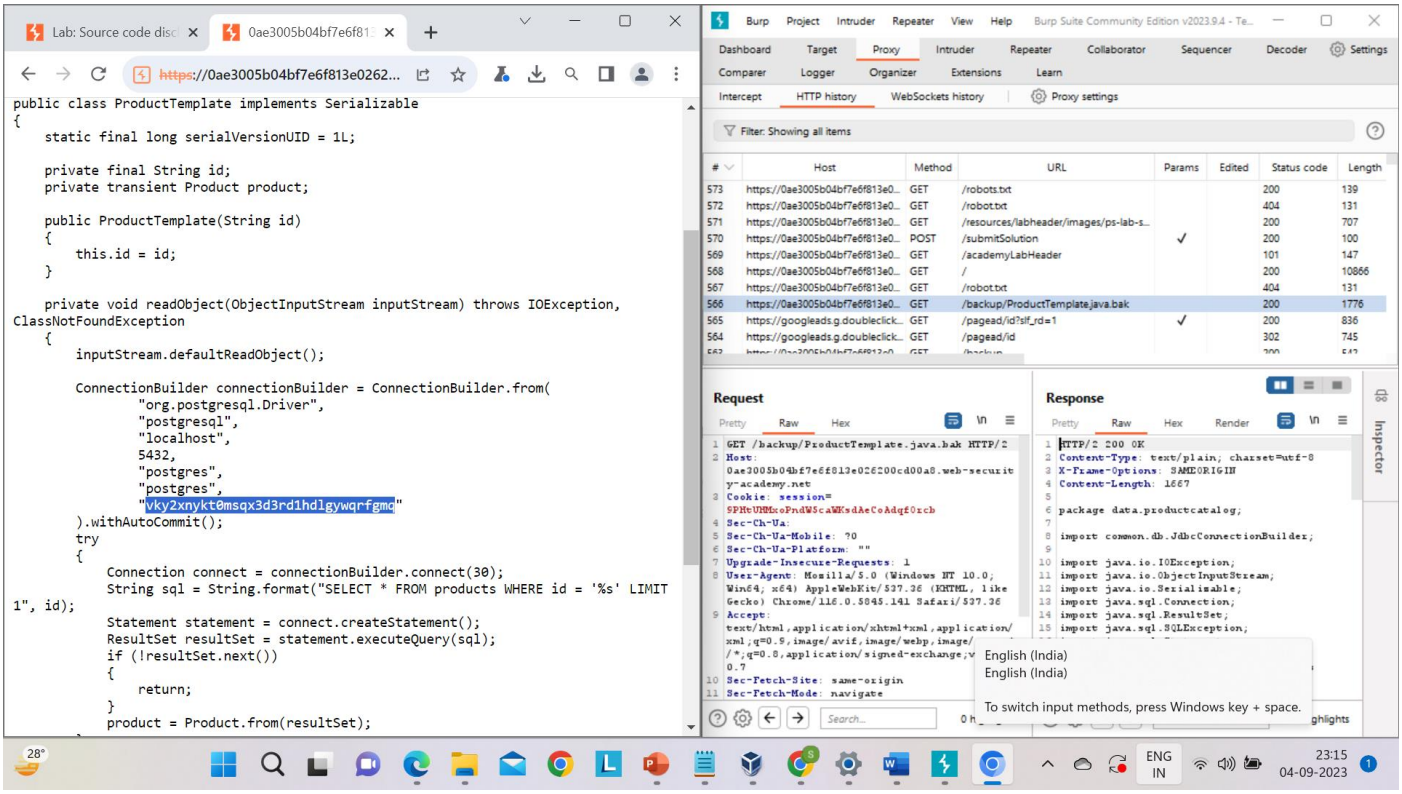
Cryptographic failures:

List of Mapped CWEs

1. CWE-261 Weak Encoding for Password
2. CWE-296 Improper Following of a Certificate's Chain of Trust
3. CWE-310 Cryptographic Issues
4. CWE-319 Cleartext Transmission of Sensitive Information
5. CWE-321 Use of Hard-coded Cryptographic Key
6. CWE-322 Key Exchange without Entity Authentication
7. CWE-323 Reusing a Nonce, Key Pair in Encryption
8. CWE-324 Use of a Key Past its Expiration Date
9. CWE-325 Missing Required Cryptographic Step
10. CWE-326 Inadequate Encryption Strength
11. CWE-327 Use of a Broken or Risky Cryptographic Algorithm
12. CWE-328 Reversible One-Way Hash
13. CWE-329 Not Using a Random IV with CBC Mode
14. CWE-330 Use of Insufficiently Random Values

Etc.

Source code disclosure via backup files



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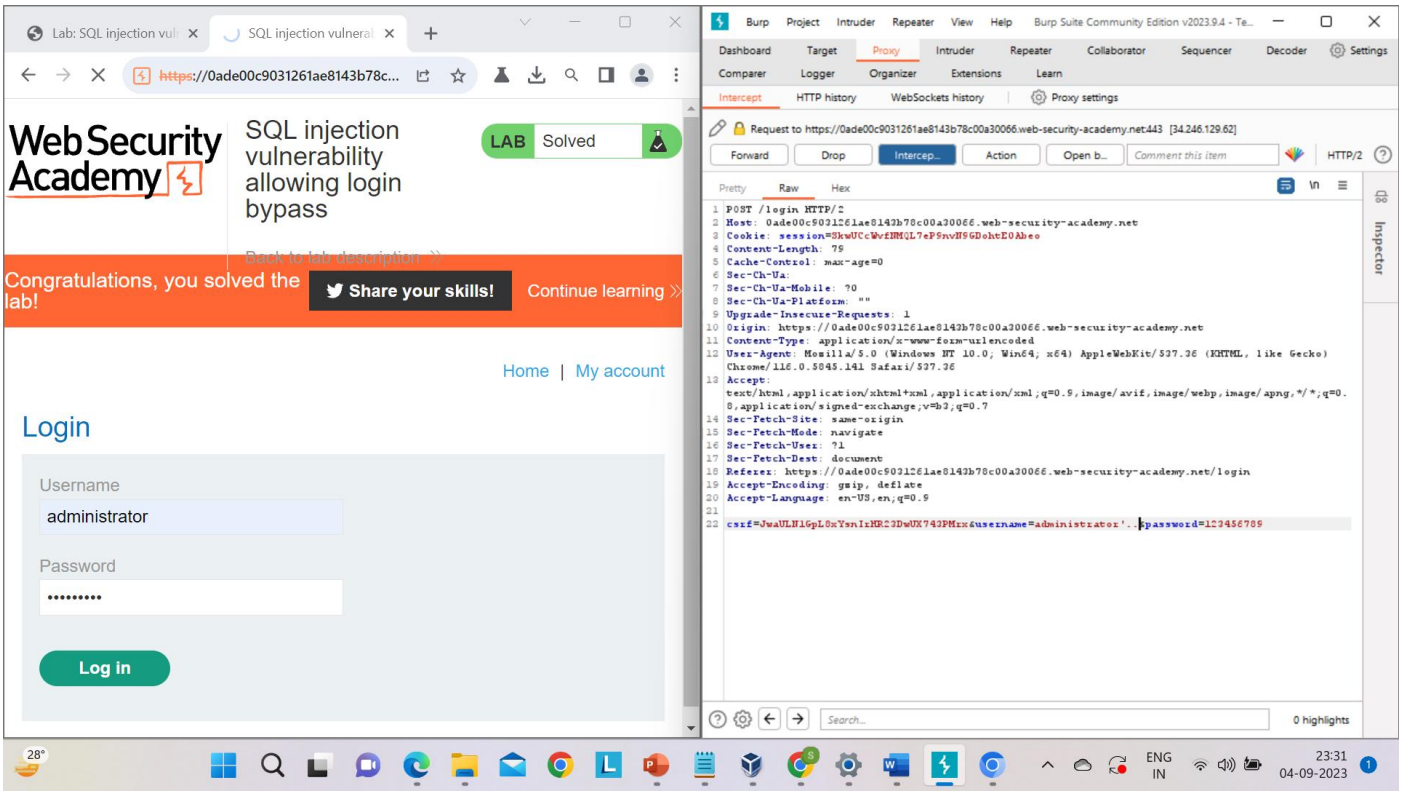
Injections:

List of Mapped CWEs

1. CWE-20 Improper Input Validation
2. CWE-74 Improper Neutralization of Special Elements in Output Used by a Downstream Component ('Injection')
3. CWE-75 Failure to Sanitize Special Elements into a Different Plane (Special Element Injection)
4. CWE-77 Improper Neutralization of Special Elements used in a Command ('Command Injection')
5. CWE-78 Improper Neutralization of Special Elements used in an OS Command ('OS Command Injection')
6. CWE-79 Improper Neutralization of Input During Web Page Generation ('Cross-site Scripting')
7. CWE-80 Improper Neutralization of Script-Related HTML Tags in a Web Page (Basic XSS)
8. CWE-83 Improper Neutralization of Script in Attributes in a Web Page
9. CWE-87 Improper Neutralization of Alternate XSS Syntax
10. CWE-88 Improper Neutralization of Argument Delimiters in a Command ('Argument Injection')
11. CWE-89 Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection')
12. CWE-90 Improper Neutralization of Special Elements used in an LDAP Query ('LDAP Injection')
13. CWE-91 XML Injection (aka Blind XPath Injection)

Etc

SQL injection vulnerability allowing login bypass:



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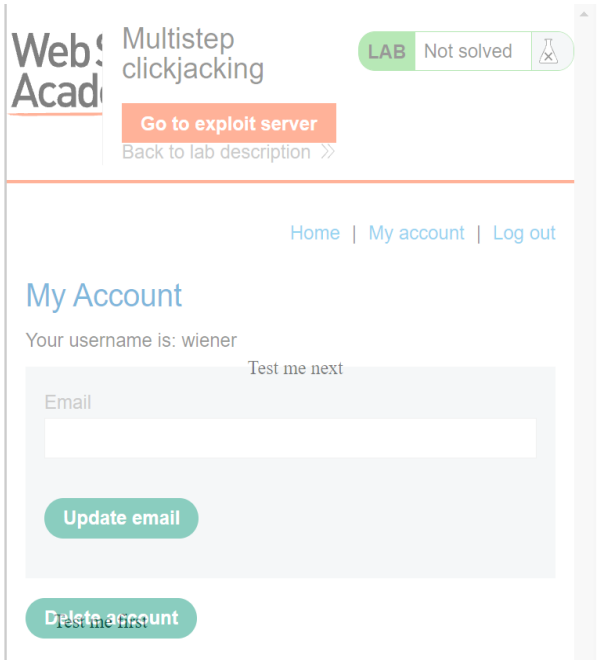
Insecure Design

List of Mapped CWEs

1. CWE-73 External Control of File Name or Path
2. CWE-183 Permissive List of Allowed Inputs
3. CWE-209 Generation of Error Message Containing Sensitive Information
4. CWE-213 Exposure of Sensitive Information Due to Incompatible Policies
5. CWE-235 Improper Handling of Extra Parameters
6. CWE-256 Unprotected Storage of Credentials
7. CWE-257 Storing Passwords in a Recoverable Format
8. CWE-266 Incorrect Privilege Assignment
9. CWE-269 Improper Privilege Management
10. CWE-280 Improper Handling of Insufficient Permissions or Privileges

Etc.

Multi-step Clickjacking



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Security Misconfiguration

List of Mapped CWEs

1. CWE-2 7PK - Environment
2. CWE-11 ASP.NET Misconfiguration: Creating Debug Binary
3. CWE-13 ASP.NET Misconfiguration: Password in Configuration File
4. CWE-15 External Control of System or Configuration Setting
5. CWE-16 Configuration
6. CWE-260 Password in Configuration File
7. CWE-315 Cleartext Storage of Sensitive Information in a Cookie
8. CWE-520 .NET Misconfiguration: Use of Impersonation
9. CWE-526 Exposure of Sensitive Information Through Environmental Variables
10. CWE-537 Java Runtime Error Message Containing Sensitive Information
11. CWE-541 Inclusion of Sensitive Information in an Include File