

Assignment 1: Vulnerability labs

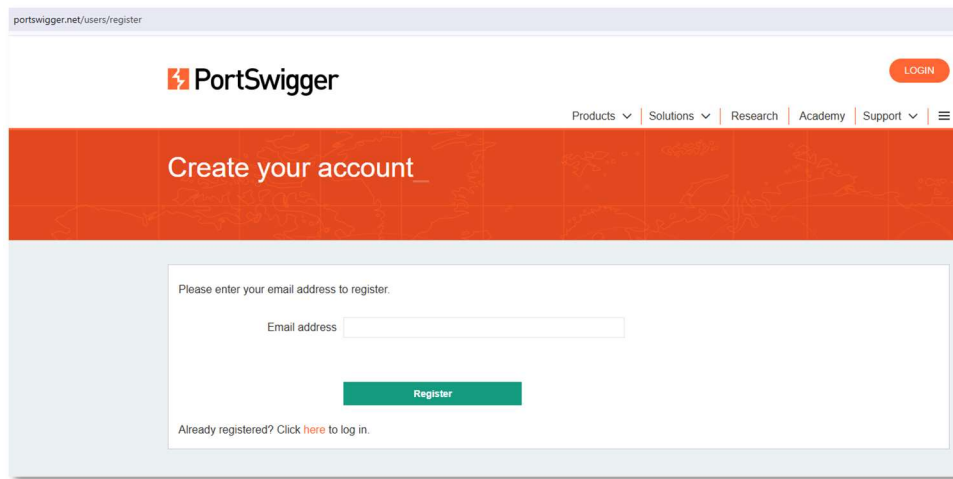
Version: February 17, 2025

COSC 3371
Spring 2025

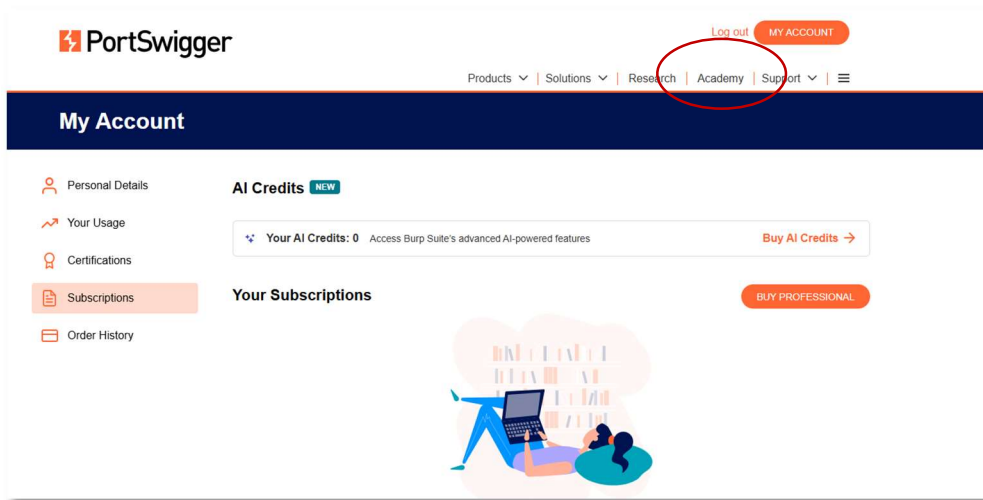
[1] **Objectives:** This assignment aims to provide students with experience with web vulnerabilities. Since these vulnerabilities require complicated setups, we ask you to do it on a popular website used by cybersecurity professionals.

[2] **Description:** Follow the instructions below. The website will provide plenty of help.

1. Register at <https://portswigger.net/users/register>



2. Use your UH email to register.
3. Login using your credentials.



4. Click on "Academy" in the top right corner. You will see your dashboard.

Welcome back!

Learn to secure the web one step at a time, with our practical, interactive learning materials. Covering the latest research, and completely free.

New topic: Web cache deception



Learn how to discover and exploit web cache deception vulnerabilities using new powerful techniques that exploit RFC ambiguities, bypassing the limitations of web cache deception attacks you may already be familiar with. Content and labs based on Gotta cache em all: bending the rules of web cache exploitation, first presented by PortSwigger Research at Black Hat USA 2024.

Learn more ->

Your learning progress

NEW! Ready to keep learning? Pick up where you left off, or start a new path ... [VIEW ALL PATHS](#)

| | |
|--|--|
| <p>My progress 1 of 29</p> <p>PRACTITIONER</p> <p>API testing</p> <p>View progress -> RESUME -></p> | <p>My progress 6 of 51</p> <p>PRACTITIONER</p> <p>SQL Injection</p> <p>View progress -> RESUME -></p> |
|--|--|

Your level

Ne **NEWBIE** Solve 57 more labs to become an apprentice.

See where you rank

- Check out our [Hall of Fame](#)

Hall of Fame high flyers

- Read three of our [user journeys](#)

Find your next topic

- [View all topics](#)

Your certifications

NOT READY You're not ready to

Level progress

| | | |
|-----------------------|--------------------------|-------------------|
| 2 of 59 Apprentice | 2 of 171 Practitioner | 0 of 39 Expert |
|-----------------------|--------------------------|-------------------|

Vulnerability labs

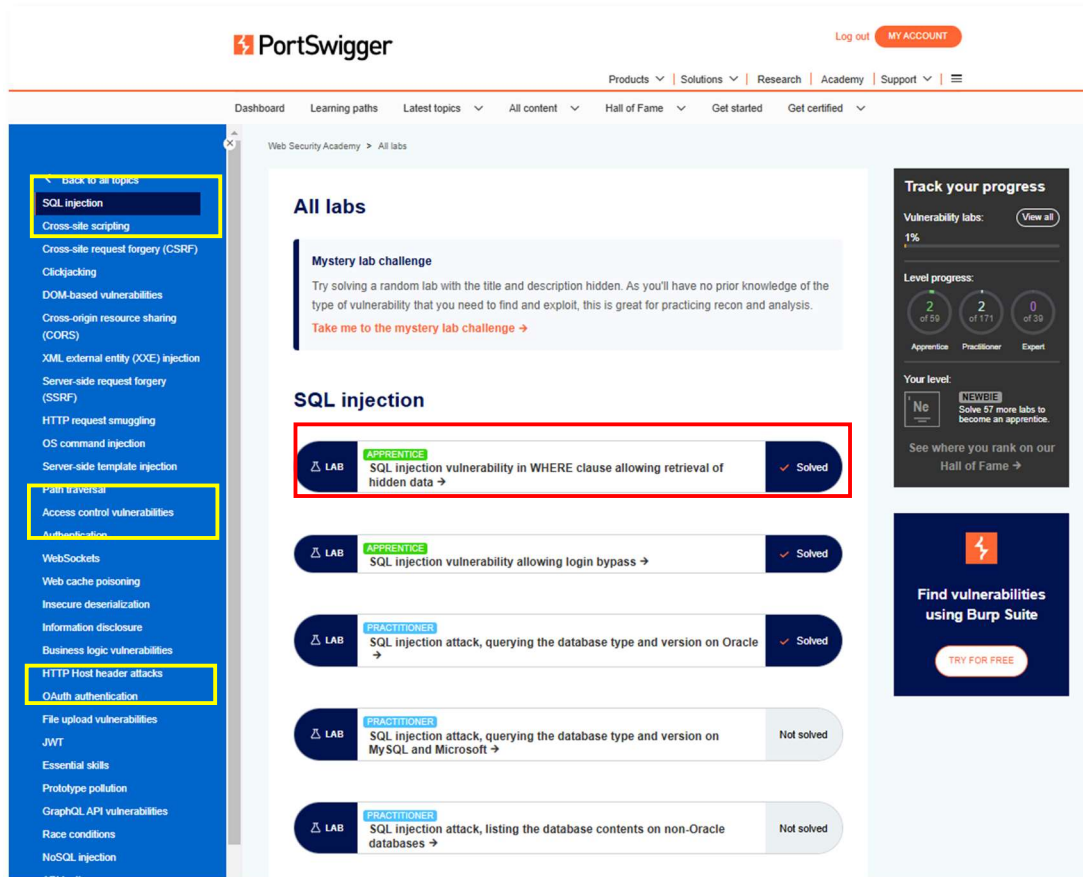
1% [VIEW ALL](#)

Exam preparation steps **NOT READY**

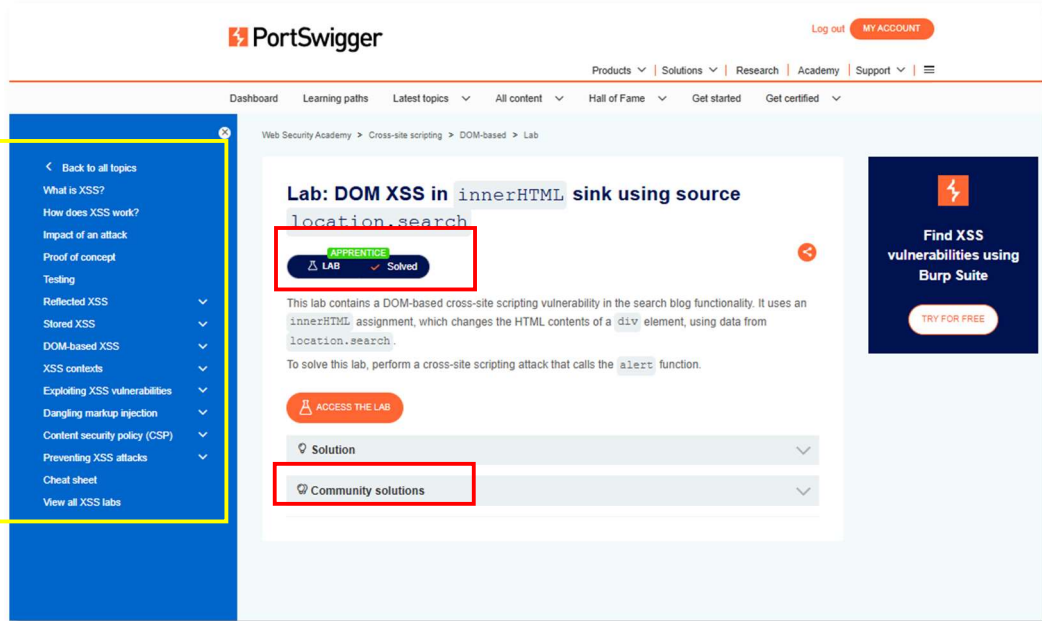
The labs you choose to complete must be "Practitioner" level or higher.

| | | | |
|---------|--------|--------|--------|
| 1 of 23 | 1 of 8 | 0 of 5 | 0 of 1 |
|---------|--------|--------|--------|

5. Find “Vulnerability labs” on your dashboard and click the “VIEW ALL” button.



6. You will see all the labs on the left side of the topic list. You are encouraged to practice on all of them. The labs in each topic have several difficulty levels. You can start with the easiest one.
7. You will find information about this lab and the key concept explanations in each lab. If you are stuck somewhere, don't panic! You can always find community support.



8. We pick up SQL injection, cross-site scripting, Authentication, OAuth, and Access Control Vulnerabilities. Here are the required labs:

| Lab topic | Lab count |
|--------------------------------|-----------|
| SQL injection | Top 2 |
| Cross-site Scripting | Top 9 |
| Authentication | Top 3 |
| OAuth Authentication | Top 1 |
| Access Control Vulnerabilities | Top 9 |

9. If you feel these labs are not challenging, please try more sophisticated with blue labeled "Practitioner" or purple "Expert" labs. Have fun!

[3] **Submission:** Write a report summarizing the work you did. You are welcome to do more than is required. In this case, please include a description of the work you did. You are encouraged to suggest labs that you think are important or interesting. The instructor is seeking input for future classes. Please submit the short report (about one page), screenshots of your finished required lab topics, and your dashboard with your progress bar. Please save all your screenshots in one file, save it as a PDF file, and upload it to Canvas. The upload instructions will be posted on the class website. The instructor may ask you to show your work on the website. Have fun.

[4] **Deadline:** 11:59 pm, Monday, April 26, 2025.

Your learning progress

NEW!

Ready to keep learning? Pick up where you left off, or start a new path ... [VIEW ALL PATHS](#)

My progress 1 of 29

PRACTITIONER

API testing

[View progress →](#) [RESUME →](#)

My progress 6 of 51

PRACTITIONER

SQL injection

[View progress →](#) [RESUME →](#)

Your level

Ne **NEWBIE**

Solve 52 more labs to become an apprentice.

Level progress

| | | |
|----------------------------------|-------------------------------------|------------------------------|
| <p>7 of 59</p> <p>Apprentice</p> | <p>2 of 171</p> <p>Practitioner</p> | <p>0 of 39</p> <p>Expert</p> |
|----------------------------------|-------------------------------------|------------------------------|