

# ETHICAL HACKING PROJECT REPORT

## Steps for Task-1:

- 1) Open Portswigger website and login.
- 2) Click on 'All labs' icon.
- 3) Select any 5 labs in the list shown.
- 4) Read the problem statement in each lab
- 5) For help and hints see the solution and community solutions.
- 6) Proceed with the lab as the problem statement
- 7) Complete the labs.

## Screenshots of Portswigger labs:

The screenshot displays the Portswigger website interface. The browser's address bar shows the URL: `portswigger.net/web-security/cross-site-scripting/reflected/lab-html-context-nothing-encoded`. The website's navigation bar includes links for Products, Solutions, Research, Academy, Daily Swig, and Support. Below this, a secondary navigation bar lists Academy Home, Learning Path, Latest Topics, All Labs, Hall of Fame, Getting Started Guide, and Get Certified. The main content area features a breadcrumb trail: Web Security Academy » Cross-site scripting » Reflected » Lab. The lab title is 'Lab: Reflected XSS into HTML context with nothing encoded', marked as 'APPRENTICE' and 'Solved'. The description states: 'This lab contains a simple reflected cross-site scripting vulnerability in the search functionality. To solve the lab, perform a cross-site scripting attack that calls the `alert` function.' A green button labeled 'Access the lab' is visible. Below the description are sections for 'Solution' and 'Community solutions'. On the right side, a sidebar titled 'Track your progress' shows learning materials (0%), vulnerability labs (0%), and level progress (1 of 52 for Apprentice, 0 of 137 for Practitioner, 0 of 35 for Expert). The user's level is 'NEWBIE', and they are prompted to solve 51 more labs to become an apprentice.

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Web Security Academy » SQL injection » Lab

# Lab: SQL injection vulnerability in WHERE clause allowing retrieval of hidden data

APPRENTICELABSolved

This lab contains an **SQL injection** vulnerability in the product category filter. When the user selects a category, the application carries out an SQL query like the following:

```
SELECT * FROM products WHERE category = 'Gifts' AND released = 1
```

To solve the lab, perform an SQL injection attack that causes the application to display details of all products in any category, both released and unreleased.

Access the lab

Solution

Community solutions

Track your progress

Learning materials: 0%

View all

Vulnerability labs: 1%

View all

Level progress:

3 of 52Apprentice

0 of 137Practitioner

0 of 35Expert

Your level:

Ne

NEWBIE

Solve 49 more labs to become an apprentice.

https://portswigger.net/web-security/getting-started/index.html

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Web Security Academy » SQL injection » Lab

# Lab: SQL injection vulnerability allowing login bypass

APPRENTICELABSolved

This lab contains an **SQL injection** vulnerability in the login function.

To solve the lab, perform an SQL injection attack that logs in to the application as the `administrator` user.

Access the lab

Solution

Community solutions

Track your progress

Learning materials: 0%

View all

Vulnerability labs: 1%

View all

Level progress:

4 of 52Apprentice

0 of 137Practitioner

0 of 35Expert

Your level:

Ne

NEWBIE

Solve 49 more labs to become an apprentice.

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Web Security Academy » Cross-site scripting » DOM-based » Lab

Lab: DOM XSS in `document.write` sink using source `location.search`

APPRENTICE

LABSolved

This lab contains a **DOM-based cross-site scripting** vulnerability in the search query tracking functionality. It uses the JavaScript `document.write` function, which writes data out to the page. The `document.write` function is called with data from `location.search`, which you can control using the website URL.

To solve this lab, perform a **cross-site scripting** attack that calls the `alert` function.

Access the lab

Solution

Track your progress

Learning materials: 0%  
View all

Vulnerability labs: 2%  
View all

Level progress:

5 of 52  
Apprentice

1 of 137  
Practitioner

0 of 35  
Expert

Your level:

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Web Security Academy » SQL injection » UNION attacks » Lab

Lab: SQL injection UNION attack, determining the number of columns returned by the query

PRACTITIONER

LABSolved

This lab contains an SQL injection vulnerability in the product category filter. The results from the query are returned in the application's response, so you can use a UNION attack to retrieve data from other tables. The first step of such an attack is to determine the number of columns that are being returned by the query. You will then use this technique in subsequent labs to construct the full attack.

To solve the lab, determine the number of columns returned by the query by performing an **SQL injection UNION** attack that returns an additional row containing null values.

Access the lab

Solution

Track your progress

Learning materials: 0%  
View all

Vulnerability labs: 2%  
View all

Level progress:

4 of 52  
Apprentice

1 of 137  
Practitioner

0 of 35  
Expert

Your level:

## **Task-2**

Please click on the link to see the ppts and report

<https://docs.google.com/presentation/d/1oko448nprOUufGarGqSXIFSPdUk4apvZKxbZAWIJpYQ/edit?usp=sharing>

## **Task-3**

Please click on the link to see the ppts and POC

<https://docs.google.com/presentation/d/1EcbHk1CUwVK21qA-SwEwjw6B0FVPIrDKT1oxndZxngo/edit?usp=sharing>