Week 2 Penetration Testing Report

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Date: 24-02-2025

Introduction

This report hereby describes the proceedings and results of a Black Box security assessment conducted against **Week 2 Labs**. The report hereby lists the findings and corresponding best practice mitigation actions and recommendations.

1. Objective

The objective of the assessment was to uncover vulnerabilities in the **Week 2 Labs** and provide a final security assessment report comprising vulnerabilities, remediation strategy, and recommendation guidelines to help mitigate the identified vulnerabilities and risks during the activity.

2. Scope

This section defines the scope and boundaries of the project.

Application Name	**{IDOR}, {SQL Injection}**

3. Summary

Outlined is a Black Box Application Security assessment for **Week 2 Labs**.

Total number of Sub-labs: 16 Sub-labs

High	Medium	Low
5	6	5

High	-	**Number of Sub-labs with hard difficulty level**
Medium	-	**Number of Sub-labs with medium difficulty level,**
Low	-	**Number of Sub-labs with Easy difficulty level**

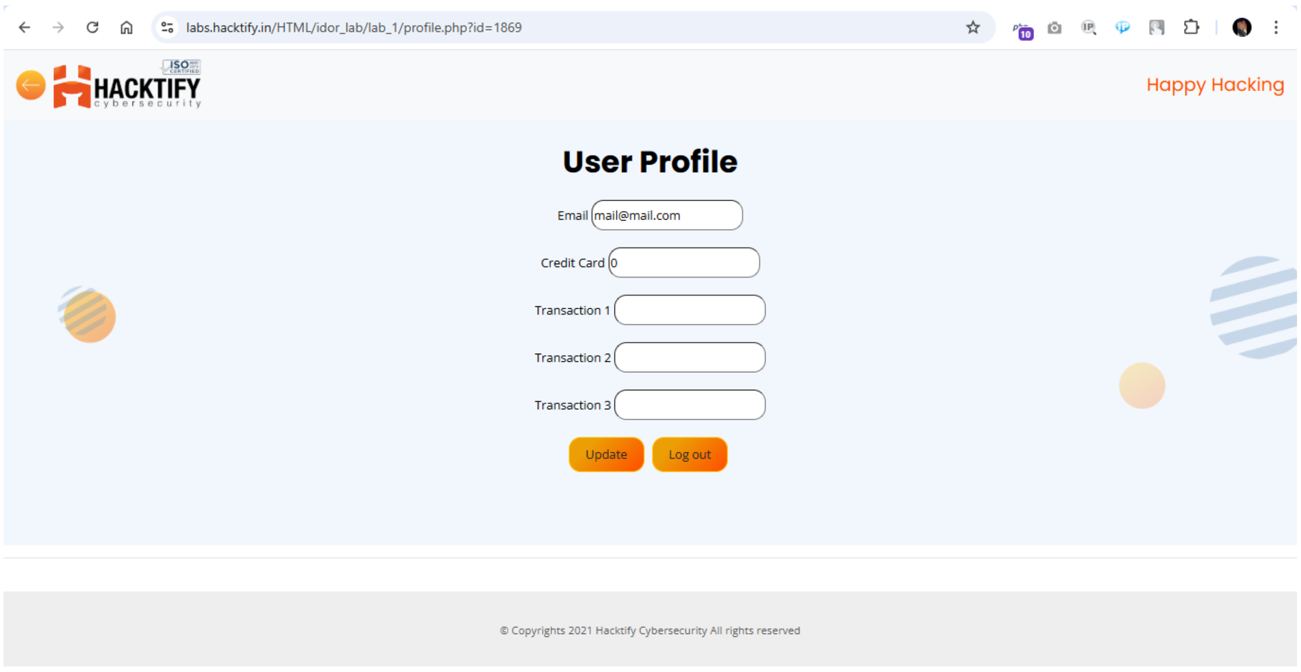
1. Insecure Direct Object References (IDOR)

1.1. Give me my amount!!

Reference	**Risk Rating**
Give me my amount!!	Low
Tools Used	
Google chrome	
Vulnerability Description	
An insecure direct object reference (IDOR) is an access control vulnerability where invalidated user input can be used for unauthorized access to resources or operations. It occurs when an attacker gains direct access by using user supplied input to an object that has no authorization to access. Attackers can bypass the authorization mechanism to access resources in the system directly by exploiting this vulnerability. Every resource instance can be called as an object and often represented with an ID. And if these IDs are easy enough to guess or an object can be used by an attacker to bypass access check somehow, we can talk about an IDOR at this point.	
How It Was Discovered	
I found this vulnerability by manipulating value of id parameter in the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/idor_lab/lab_1/profile.php?id=1869	
Consequences of not Fixing the Issue	
This vulnerability violates the privacy of a User.	
Suggested Countermeasures	
1. Developers should avoid displaying private object references such as keys or file names. 2. Validation of parameters should be properly implemented. 3. Verification of all the referenced objects should be checked. 4. Tokens should be generated in such a way that they can only be mapped to the user and is not public.	
References	
1. https://portswigger.net/web-security/access-control/idor 2. https://cheatsheetseries.owasp.org/cheatsheets/Insecure_Direct_Object_Reference_Prevention_Cheat_Sheet.html 3. https://www.bugcrowd.com/blog/how-to-find-idor-insecure-direct-object-reference-vulnerabilities-for-large-bounty-rewards/	
Payload Used	
Appending "?id=1869" at last in the URL	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



labs.hacktify.in/HTML/idor_lab/lab_1/profile.php?id=1869

User Profile

Email: mail@mail.com

Credit Card: 0

Transaction 1:

Transaction 2:

Transaction 3:

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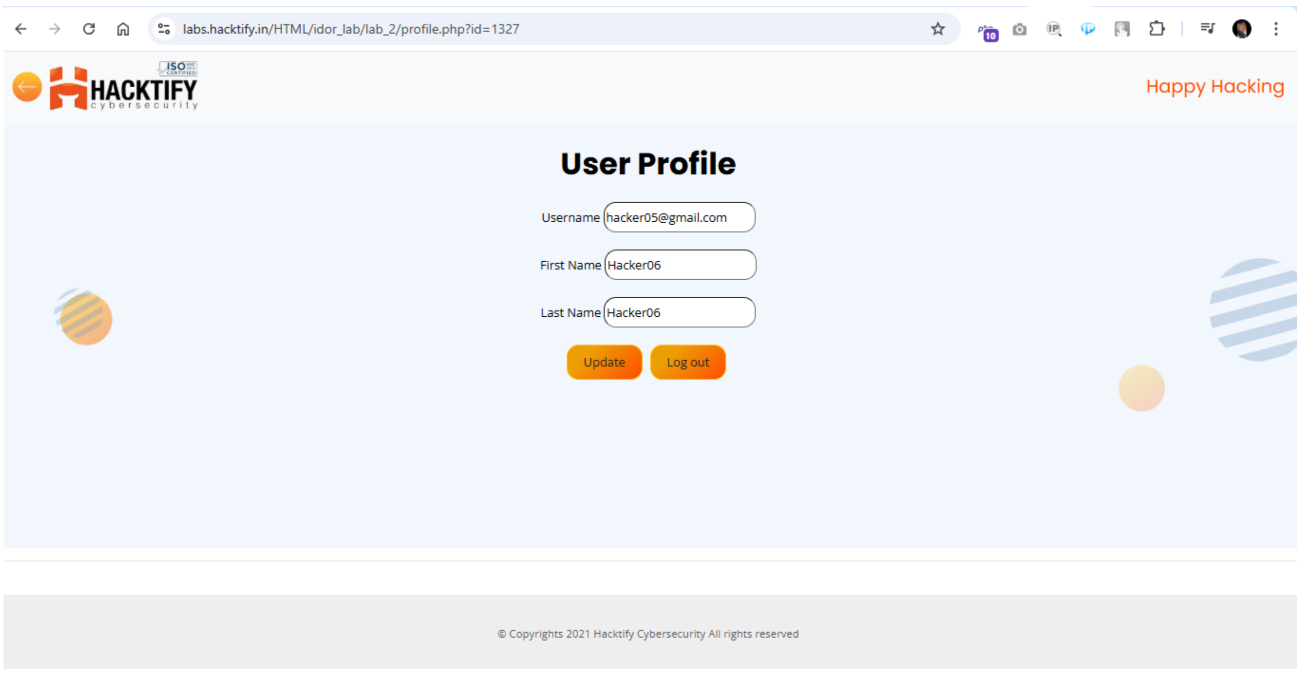
1.2. Stop polluting my params!

Reference	**Risk Rating**
Stop polluting my params!	**Medium**
Tools Used	
Google chrome	
Vulnerability Description	
An insecure direct object reference (IDOR) is an access control vulnerability where invalidated user input can be used for unauthorized access to resources or operations. It occurs when an attacker gains direct access by using user supplied input to an object that has no authorization to access. Attackers can bypass the authorization mechanism to access resources in the system directly by exploiting this vulnerability. Every resource instance can be called as an object and often represented with an ID. And if these IDs are easy enough to guess or an object can be used by an attacker to bypass access check somehow, we can talk about an IDOR at this point.	
How It Was Discovered	
I found this vulnerability by manipulating value of id parameter in the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/idor_lab/lab_2/profile.php?id=1327	
Consequences of not Fixing the Issue	
This vulnerability violates the privacy of a User.	
Suggested Countermeasures	
1. Developers should avoid displaying private object references such as keys or file names. 2. Validation of parameters should be properly implemented. 3. Verification of all the referenced objects should be checked. 4. Tokens should be generated in such a way that they can only be mapped to the user and is not public.	
References	
1. https://portswigger.net/web-security/access-control/idor 2. https://cheatsheetseries.owasp.org/cheatsheets/Insecure_Direct_Object_Reference_Prevention_Cheat_Sheet.html 3. https://www.bugcrowd.com/blog/how-to-find-idor-insecure-direct-object-reference-vulnerabilities-for-large-bounty-rewards/	
Payload Used	
Appending “?id=1327” at last in the URL	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab


labs.hacktify.in/HTML/idor_lab/lab_2/profile.php?id=1327

Happy Hacking
User Profile

Username: hacker05@gmail.com
First Name: Hacker06
Last Name: Hacker06

Update
Log out
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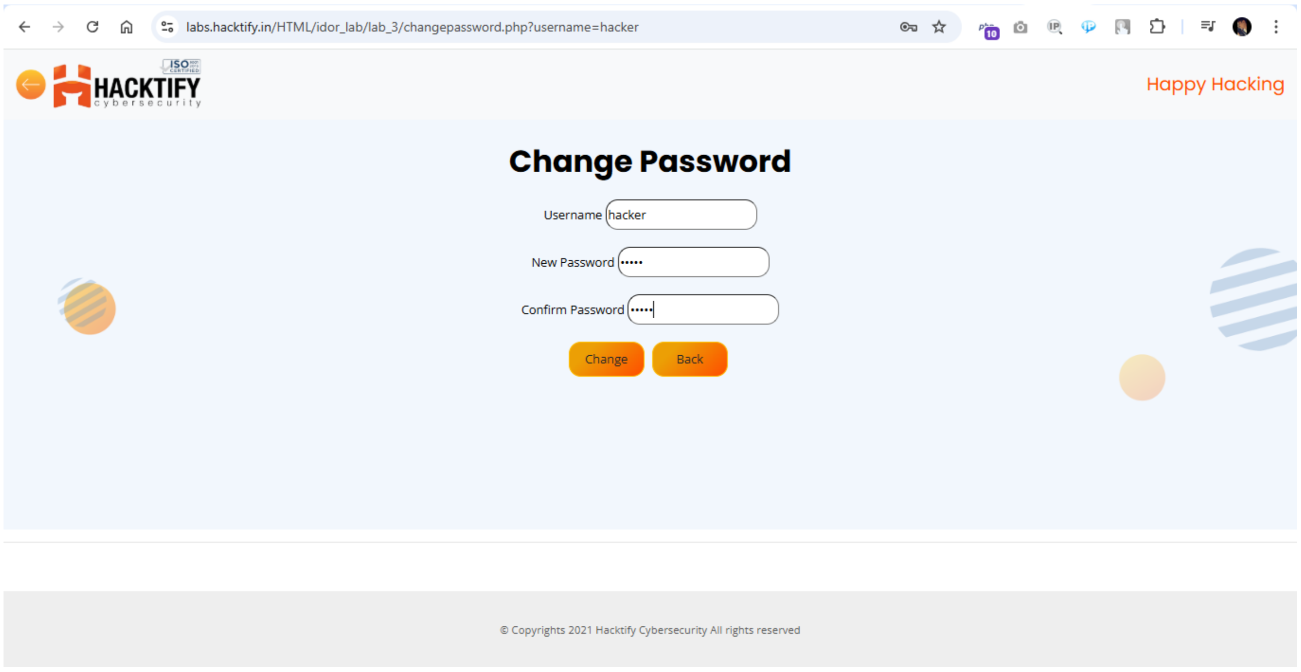
1.3. Someone changed my Password!

Reference	Risk Rating
Someone changed my Password!	**High**
Tools Used	
Google chrome	
Vulnerability Description	
An insecure direct object reference (IDOR) is an access control vulnerability where invalidated user input can be used for unauthorized access to resources or operations. It occurs when an attacker gains direct access by using user supplied input to an object that has no authorization to access. Attackers can bypass the authorization mechanism to access resources in the system directly by exploiting this vulnerability. Every resource instance can be called as an object and often represented with an ID. And if these IDs are easy enough to guess or an object can be used by an attacker to bypass access check somehow, we can talk about an IDOR at this point.	
How It Was Discovered	
I found this vulnerability by manipulating the value of username parameter in the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/idor_lab/lab_3/changepassword.php?username=hacker	
Consequences of not Fixing the Issue	
This vulnerability violates the privacy of a User.	
Suggested Countermeasures	
1. Developers should avoid displaying private object references such as keys or file names. 2. Validation of parameters should be properly implemented. 3. Verification of all the referenced objects should be checked. 4. Tokens should be generated in such a way that they can only be mapped to the user and is not public.	
References	
1. https://portswigger.net/web-security/access-control/idor 2. https://cheatsheetseries.owasp.org/cheatsheets/Insecure_Direct_Object_Reference_Prevention_Cheat_Sheet.html 3. https://www.bugcrowd.com/blog/how-to-find-idor-insecure-direct-object-reference-vulnerabilities-for-large-bounty-rewards/	
Payload Used	
Appending “?username=hacker” at last in the URL	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



labs.hacktify.in/HTML/idor_lab/lab_3/changepassword.php?username=hacker

Happy Hacking

Change Password

Username	hacker
New Password	•••••
Confirm Password	•••••

Change Back

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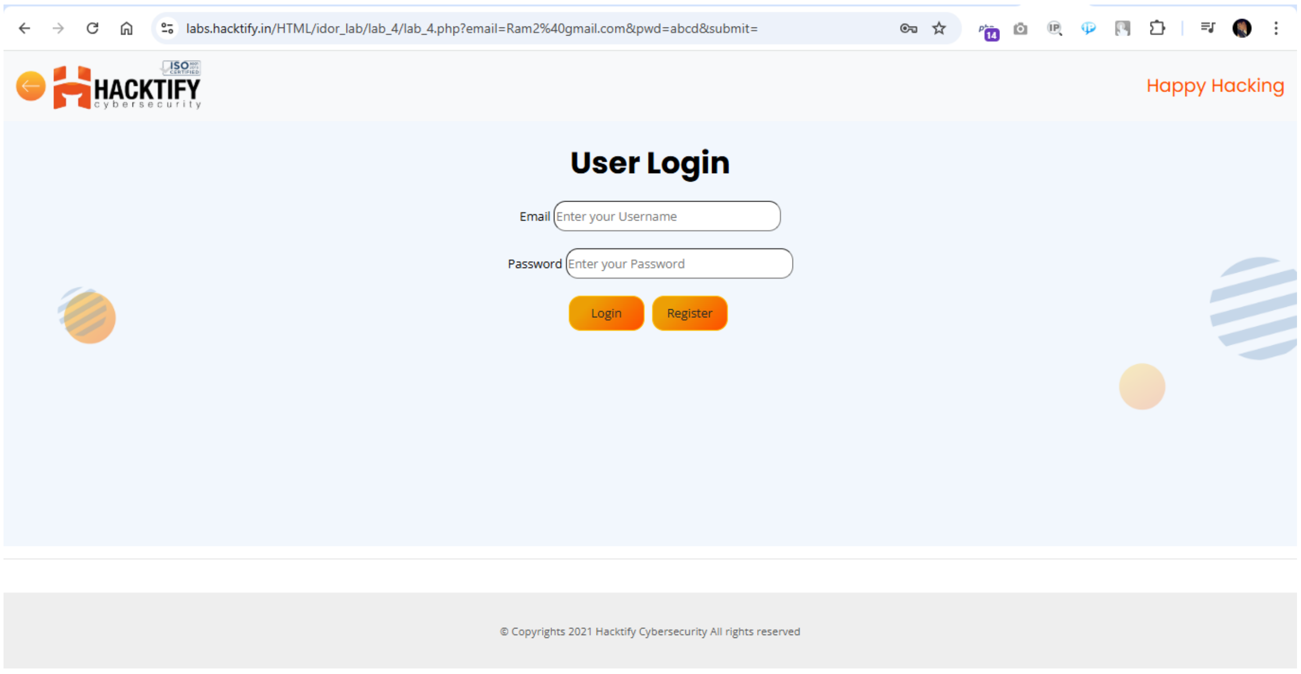
1.4. Change your methods!

Reference	Risk Rating
Change your methods!	**Medium**
Tools Used	
Google chrome	
Vulnerability Description	
An insecure direct object reference (IDOR) is an access control vulnerability where invalidated user input can be used for unauthorized access to resources or operations. It occurs when an attacker gains direct access by using user supplied input to an object that has no authorization to access. Attackers can bypass the authorization mechanism to access resources in the system directly by exploiting this vulnerability. Every resource instance can be called as an object and often represented with an ID. And if these IDs are easy enough to guess or an object can be used by an attacker to bypass access check somehow, we can talk about an IDOR at this point.	
How It Was Discovered	
I found this vulnerability by manipulating the value of id parameter in the URL followed by updating random details in the profile section of different user.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/idor_lab/lab_4/lab_4.php?email=Ram2%40gmail.com&pwd=abcd&submit=	
Consequences of not Fixing the Issue	
This vulnerability violates the privacy of a User.	
Suggested Countermeasures	
1. Developers should avoid displaying private object references such as keys or file names. 2. Validation of parameters should be properly implemented. 3. Verification of all the referenced objects should be checked. 4. Tokens should be generated in such a way that they can only be mapped to the user and is not public.	
References	
1. https://portswigger.net/web-security/access-control/idor 2. https://cheatsheetseries.owasp.org/cheatsheets/Insecure_Direct_Object_Reference_Prevention_Cheat_Sheet.html 3. https://www.bugcrowd.com/blog/how-to-find-idor-insecure-direct-object-reference-vulnerabilities-for-large-bounty-rewards/	
Payload Used	
Appending "?id=2157" at last in the URL followed by updating random details in the profile section of different user.	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab


labs.hacktify.in/HTML/idor_lab/lab_4/lab_4.php?email=Ram2%40gmail.com&pwd=abcd&submit=

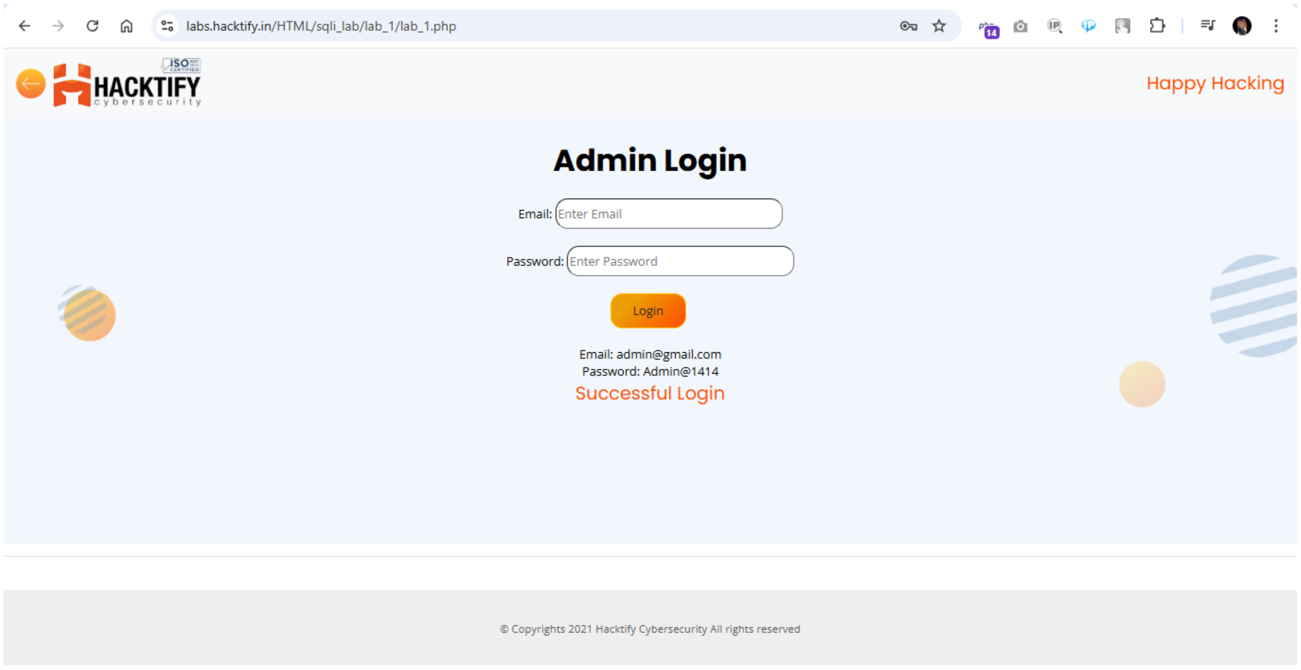
2. SQL Injection

2.1. Strings and Errors Part1!

Reference	**Risk Rating**
Strings and Errors Part1!	Low
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into user input fields, i.e., Email and Password.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_1/lab_1.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
1" OR "1"="1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab


labs.hacktify.in/HTML/sqli_lab/lab_1/lab_1.php

Email: admin@gmail.com
Password: Admin@1414
Successful Login

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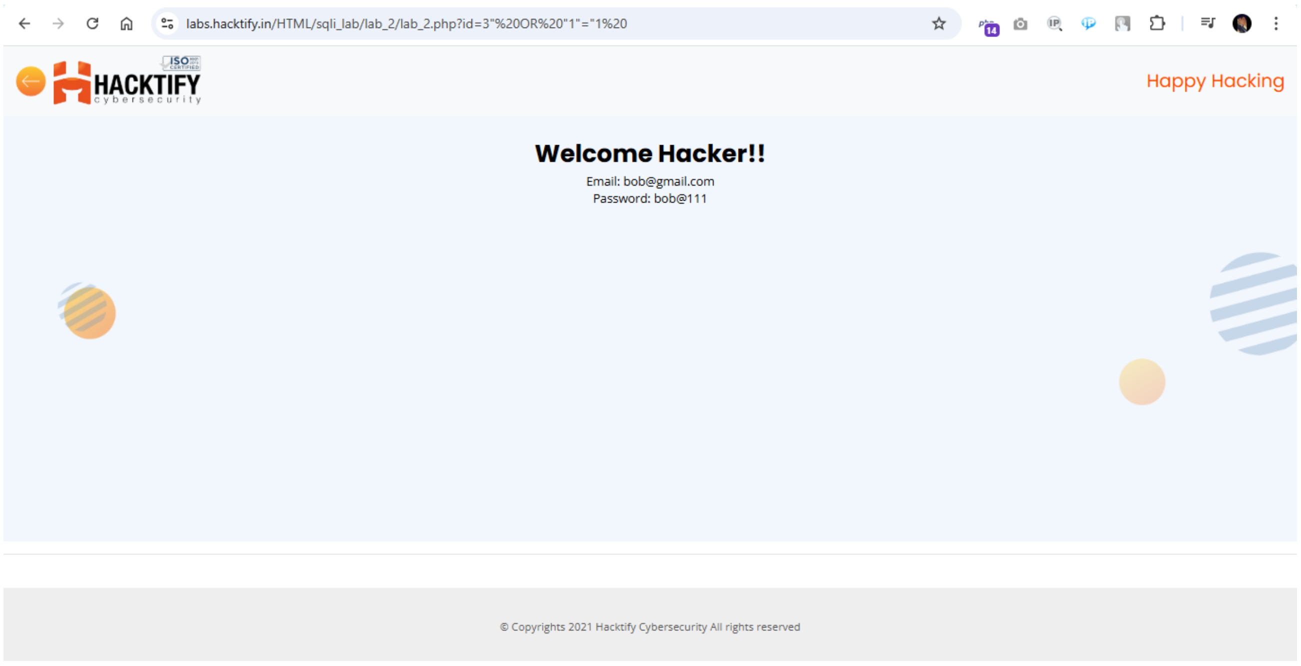
2.2. Strings and Errors Part2!

Reference	Risk Rating
Strings and Errors Part2!	Low
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_2/lab_2.php?id=3%22%20OR%20%221%22=%221%20	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
?id=3"%20OR%20"1"="1%20	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab


labs.hacktify.in/HTML/sqli_lab/lab_2/lab_2.php?id=3"%20OR%20"1"="1%20

Welcome Hacker!!

Email: bob@gmail.com
Password: bob@111

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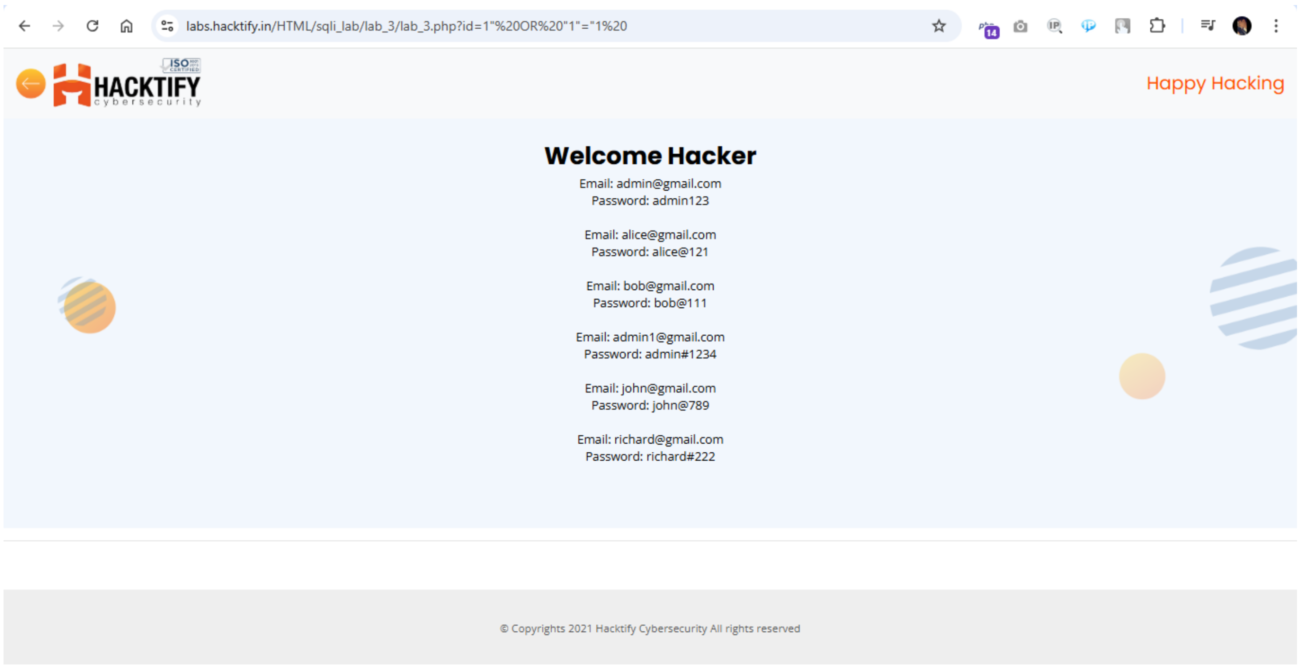
2.3. Strings and Errors Part3!

Reference	**Risk Rating**
Strings and Errors Part3!	Low
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_3/lab_3.php?id=1%22%20OR%20%221%22=%221%20	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
?id=3" OR "1"="1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



labs.hacktify.in/HTML/sqli_lab/lab_3/lab_3.php?id=1"%20OR%20"1"="1%20

Welcome Hacker

Email: admin@gmail.com
Password: admin123

Email: alice@gmail.com
Password: alice@121

Email: bob@gmail.com
Password: bob@111

Email: admin1@gmail.com
Password: admin#1234

Email: john@gmail.com
Password: john@789

Email: richard@gmail.com
Password: richard#222

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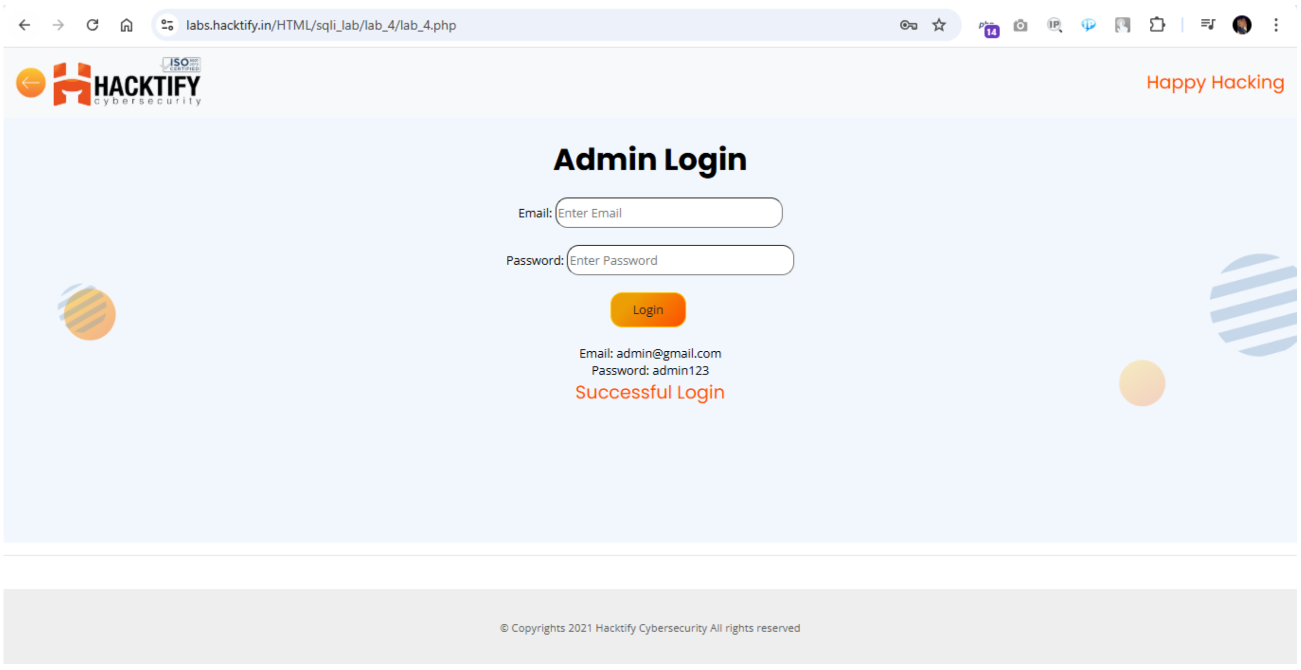
2.4. Let’s Trick ‘Em!

Reference	**Risk Rating**
Let’s Trick ‘Em!	**Medium**
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into user input fields, i.e., Email and Password.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_4/lab_4.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
1' || '1'= '1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



Admin Login

Email: Enter Email

Password: Enter Password

Email: admin@gmail.com
Password: admin123
Successful Login

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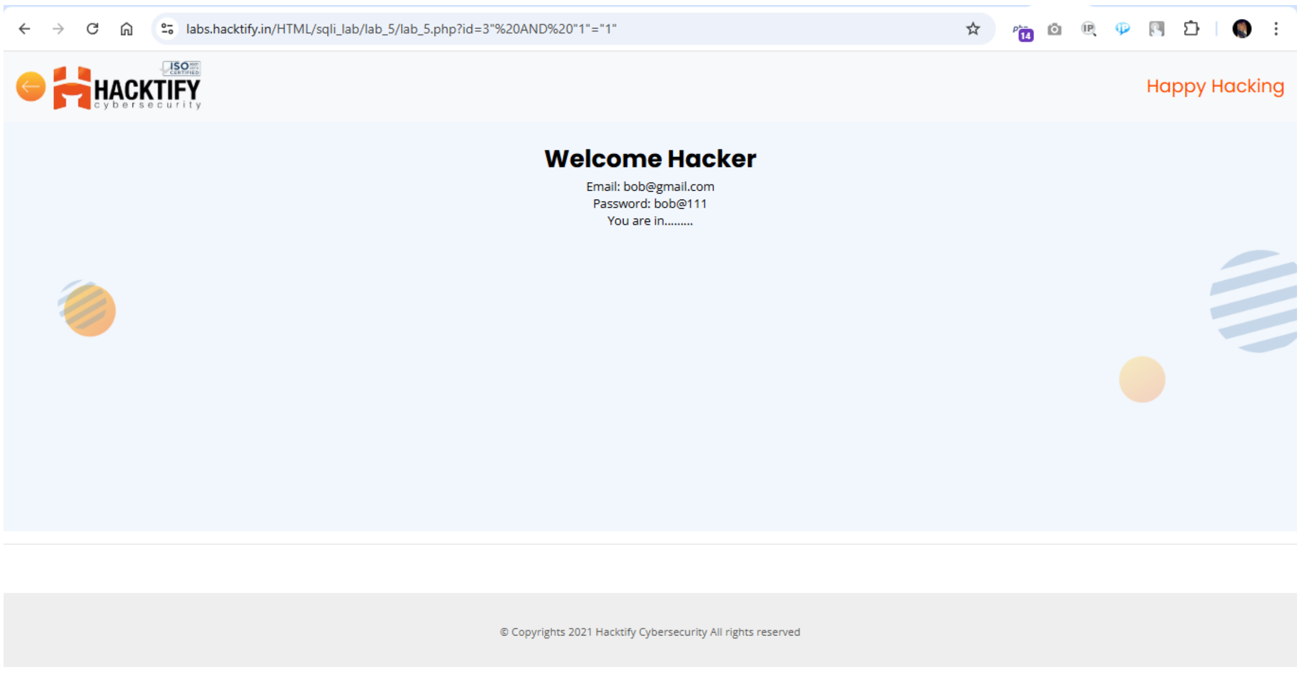
2.5. Booleans and Blind!

Reference	**Risk Rating**
Booleans and Blind!	**High**
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_5/lab_5.php?id=3%22%20AND%20%221%22=%221%22	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
?id=3" OR "1"="1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



labs.hacktify.in/HTML/sqli_lab/lab_5/lab_5.php?id=3"%20AND%20"1"="1"

Welcome Hacker

Email: bob@gmail.com
Password: bob@111
You are in.........

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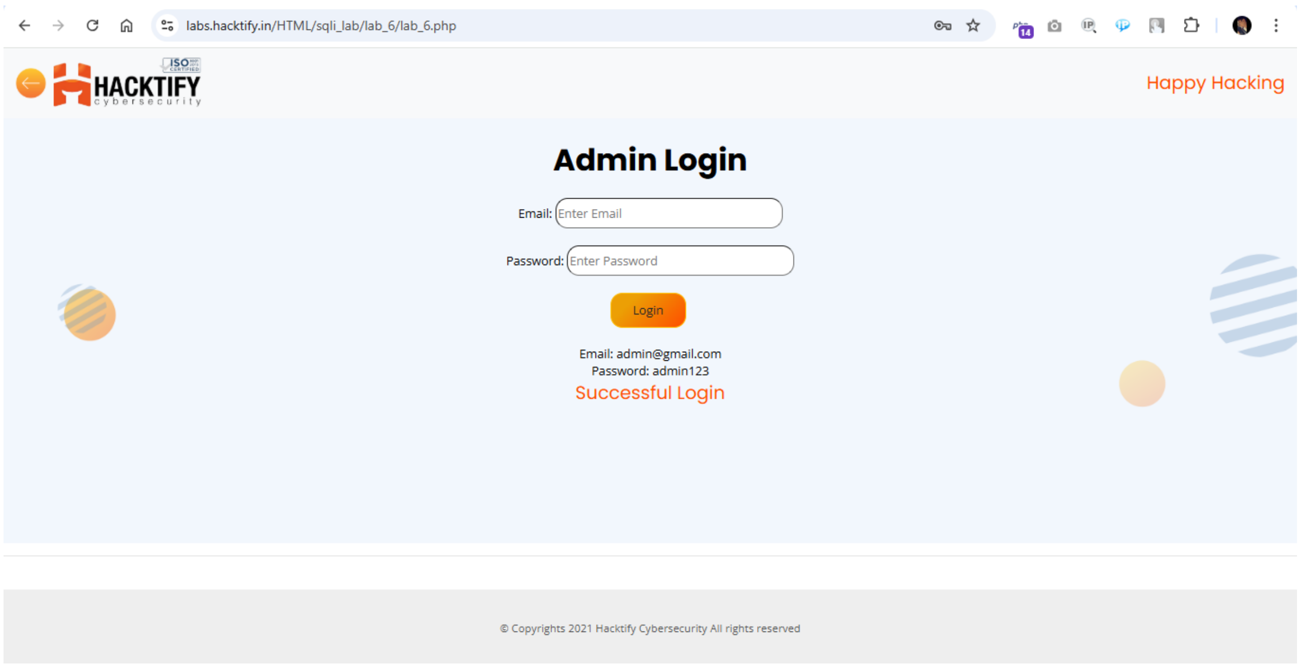
2.6. Error based: Tricked

Reference	**Risk Rating**
Error based: Tricked	Medium
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into user input fields, i.e., Email and Password.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_6/lab_6.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
") or ("1")=("1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab


labs.hacktify.in/HTML/sqli_lab/lab_6/lab_6.php

Email: admin@gmail.com
Password: admin123
Successful Login

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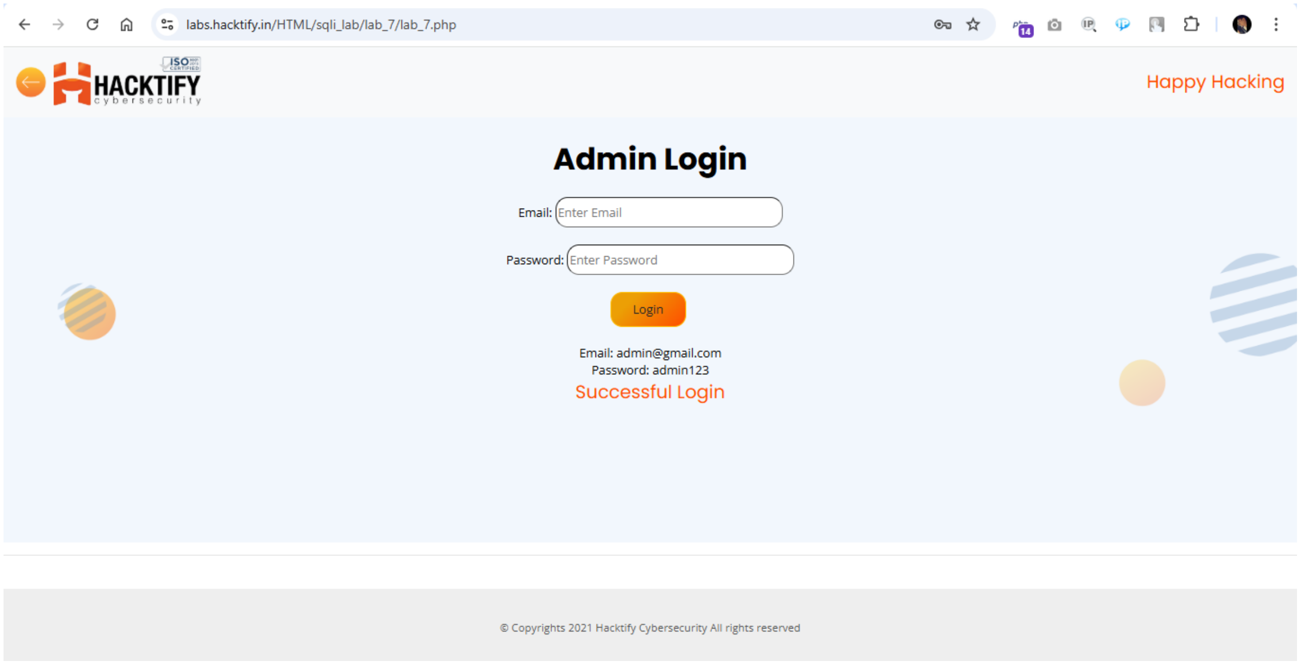
2.7. Errors and Post?

Reference	**Risk Rating**
Errors and Post!	**Low**
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into user input fields, i.e., Email and Password.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_7/lab_7.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
' or '1'='1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



Email: admin@gmail.com
Password: admin123
Successful Login

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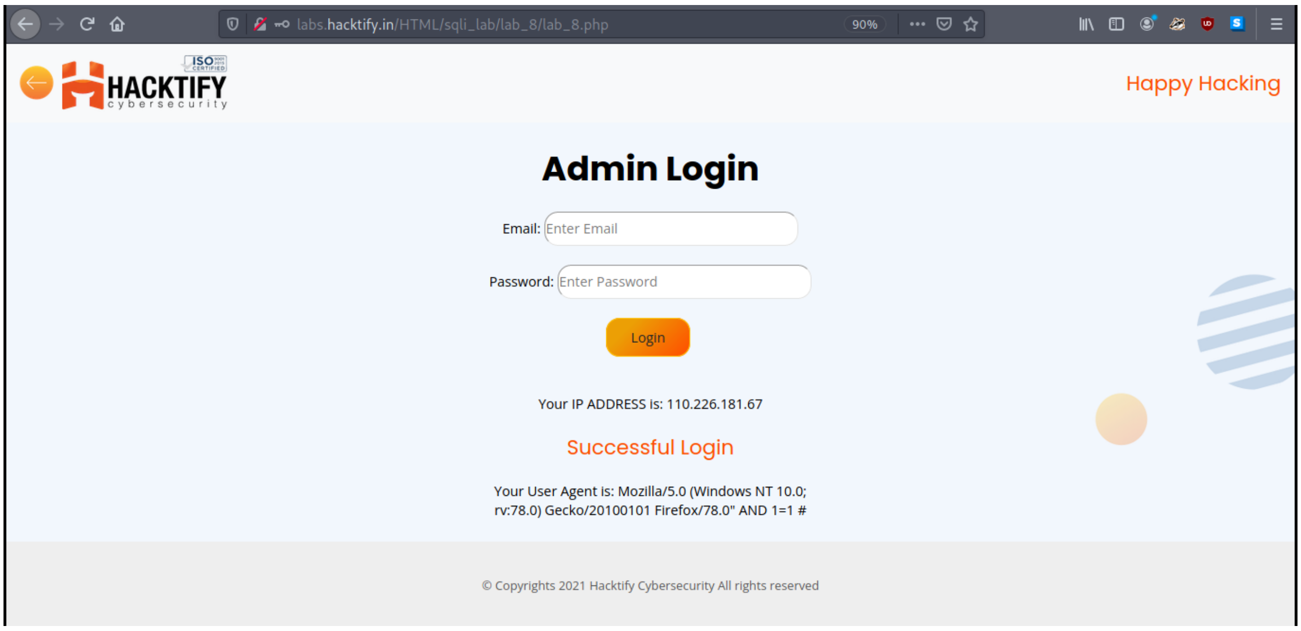
2.8. User agents lead us!

Reference	**Risk Rating**
User agents lead us!	**High**
Tools Used	
Google chrome and Burp suite	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into user agent field by intercepting login request into Burp Suite.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_8/lab_8.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
" AND 1=1 #	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



Admin Login

Email: Enter Email

Password: Enter Password

Your IP ADDRESS is: 110.226.181.67

Successful Login

Your User Agent is: Mozilla/5.0 (Windows NT 10.0; rv:78.0) Gecko/20100101 Firefox/78.0" AND 1=1 #

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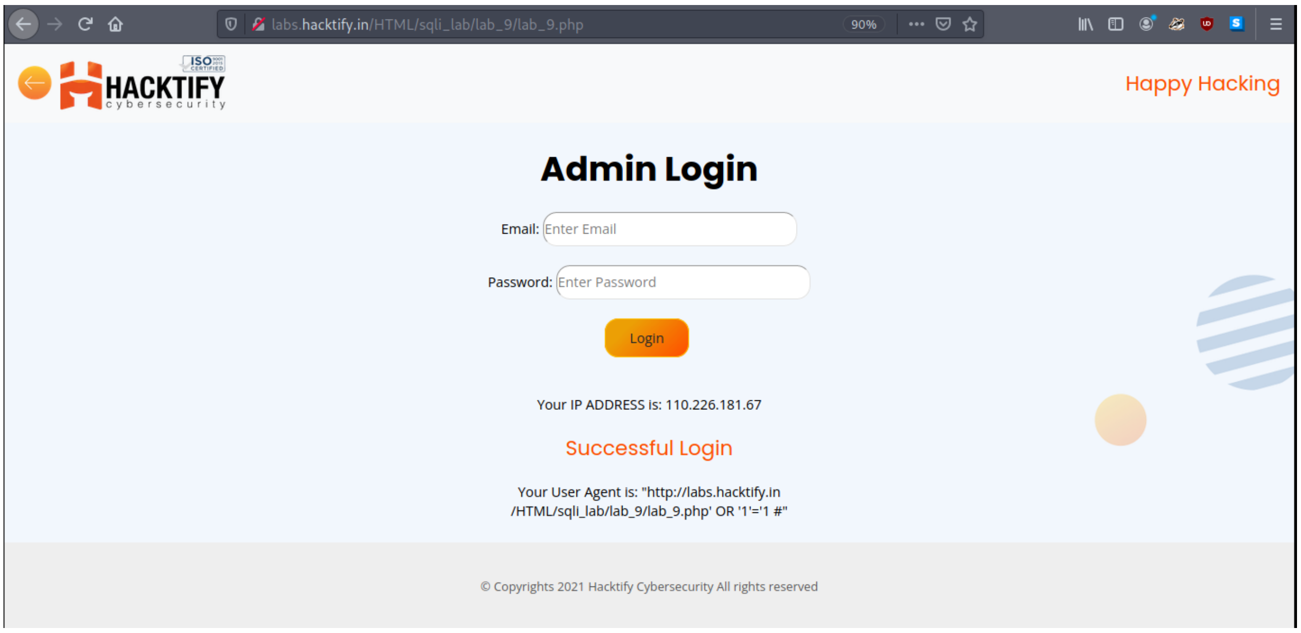
2.9. Referer lead us!

Reference	**Risk Rating**
Referer lead us!	**Medium**
Tools Used	
Google chrome and Burp suite	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into referrer field by intercepting login request into Burp Suite.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_9/lab_9.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
' OR '1'='1 #	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



Your IP ADDRESS is: 110.226.181.67

Successful Login

Your User Agent is: "http://labs.hacktify.in/HTML/sqli_lab/lab_9/lab_9.php' OR '1'='1 #"

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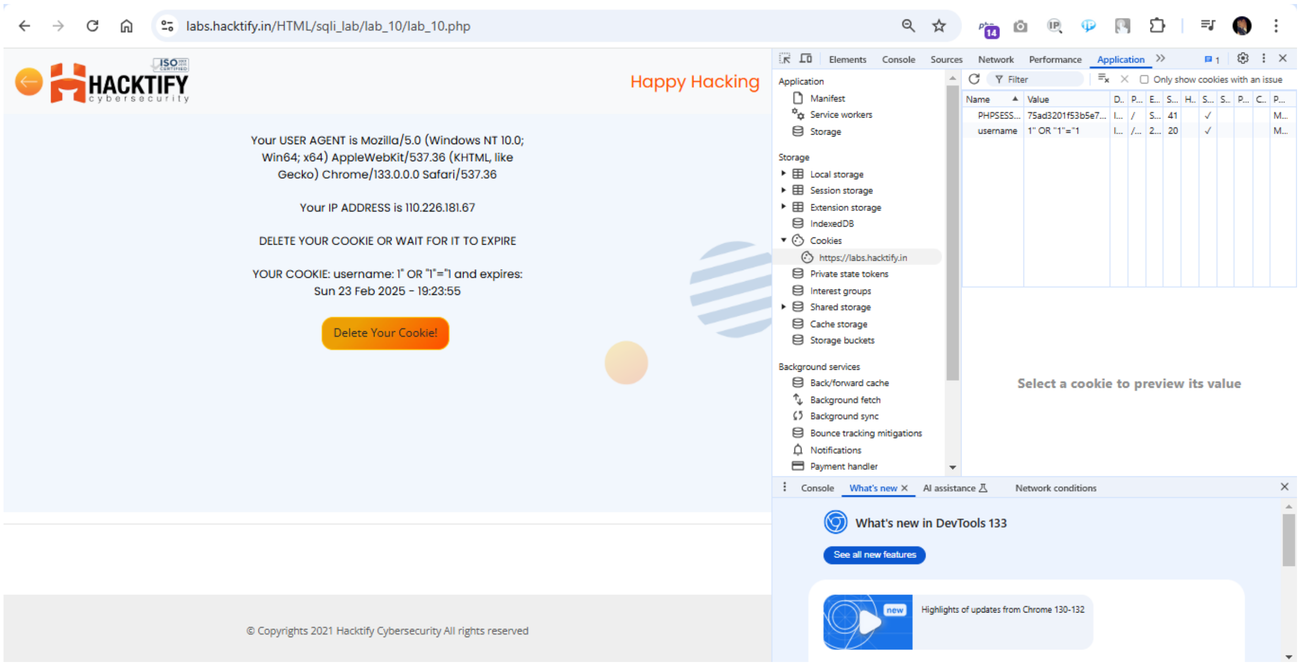
2.10. Oh cookies!

Reference	**Risk Rating**
Oh cookies!	**High**
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into cookie value by inspecting the cookie settings after logging into the sign in page.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_10/lab_10.php	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
1" OR "1"="1	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



labs.hacktify.in/HTML/sqli_lab/lab_10/lab_10.php

Your USER AGENT is Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/133.0.0.0 Safari/537.36

Your IP ADDRESS is 110.226.181.67

DELETE YOUR COOKIE OR WAIT FOR IT TO EXPIRE

YOUR COOKIE: username: 1" OR "1"="1 and expires: Sun 23 Feb 2025 - 19:23:55

Name	Value	D..	P...	E...	S...	H...	S...	S...	P...	C...	P...
PHPSESS...	75ad3201f53b5e7...	l...	/	S...	41		✓				M...
username	1" OR "1"="1	l...	/...	2...	20		✓				M...

Select a cookie to preview its value

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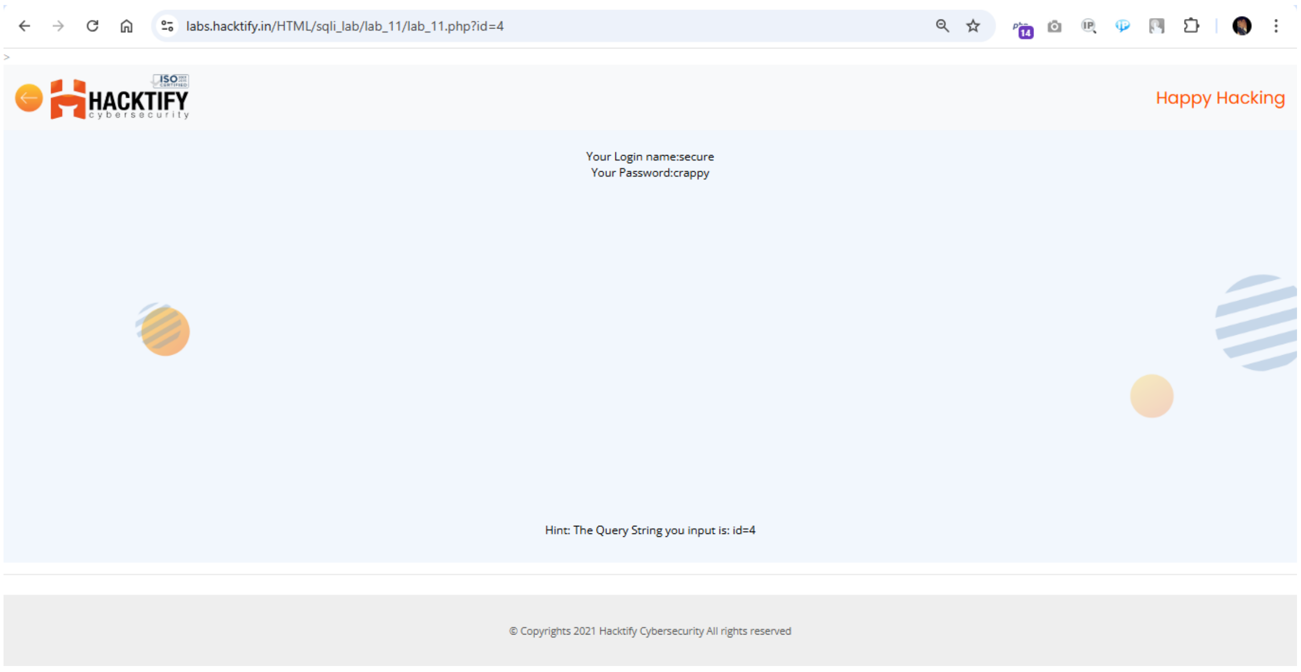
2.11. WAF’s Are Injected!

Reference	Risk Rating
WAF’s Are Injected!	**High**
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_11/lab_11.php?id=4	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
?id=4	

Proof of Concept

This section contains the proof of the above vulnerabilities as the screenshot of the vulnerability of the lab



labs.hacktify.in/HTML/sqli_lab/lab_11/lab_11.php?id=4

Your Login name:secure
Your Password:crappy

Hint: The Query String you input is: id=4

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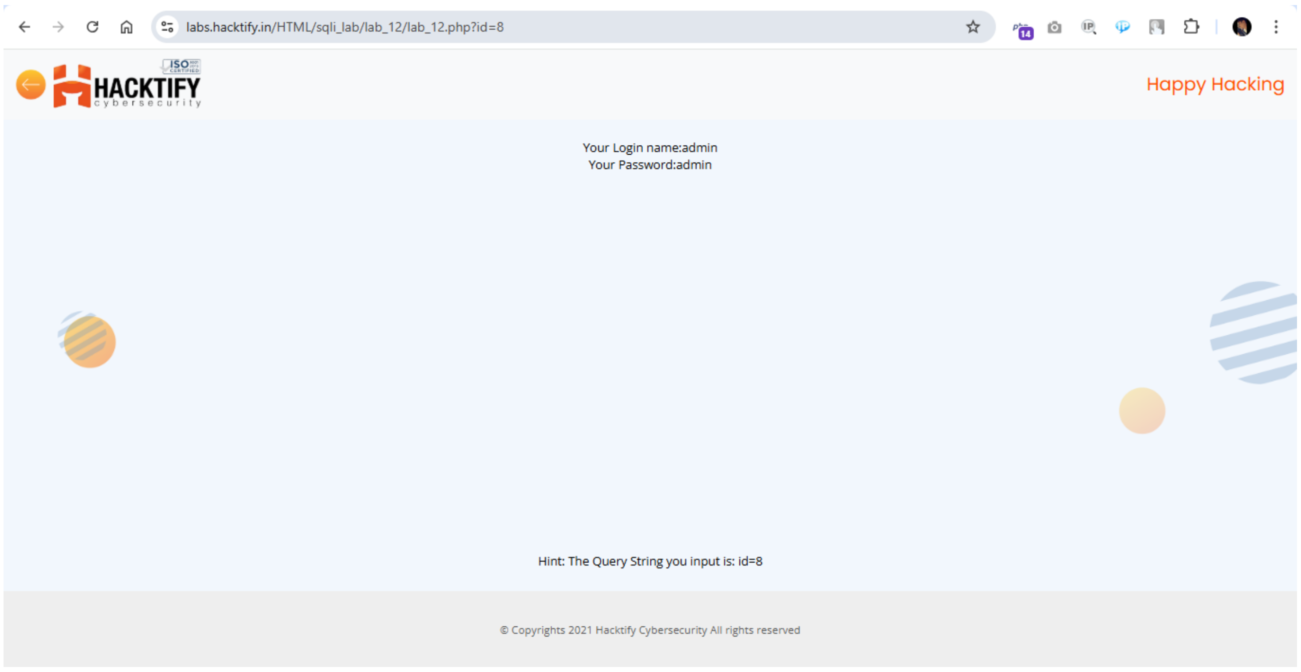
2.12. WAF’s Are Injected Part2!

Reference	**Risk Rating**
WAF’s Are Injected Part2!	**Medium**
Tools Used	
Google chrome	
Vulnerability Description	
SQL Injection allows an attacker to view data that attackers are normally not able to retrieve. Data can be information about users, their credentials, personal details etc. It is the process of inserting or injecting SQL queries through input fields to an application to give the hacker the data he wants! Attackers can modify or delete this data causing persistent changes to the application's content or behavior. SQL Injection can also be escalated to compromise the underlying server (or) other back-end infrastructure, or perform a denial-of-service attack	
How It Was Discovered	
I found this vulnerability by injecting malicious SQL injection code into the URL.	
Vulnerable URLs	
https://labs.hacktify.in/HTML/sqli_lab/lab_12/lab_12.php?id=8	
Consequences of not Fixing the Issue	
Stealing credentials, access to the database, altering or modifying data, access to the network.	
Suggested Countermeasures	
1. Implement Input Validation and Sanitization 2. Using Escaping for User Input 3. Utilize Parameterized Statements (Prepared Statements) 4. Incorporate Stored Procedures 5. Conduct Continuous Scanning and Penetration Testing 6. Adopt the Least Privilege Principle 7. Deploy Web Application Firewalls (WAF)	
References	
1. https://portswigger.net/web-security/sql-injection/cheat-sheet 2. https://portswigger.net/web-security/sql-injection 3. https://owasp.org/www-community/attacks/SQL_Injection	
Payload Used	
?id=8	

Proof of Concept

This section contains proof of the above vulnerabilities as the screenshot of the vulnerability of the lab.



Your Login name:admin
Your Password:admin

Hint: The Query String you input is: id=8

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