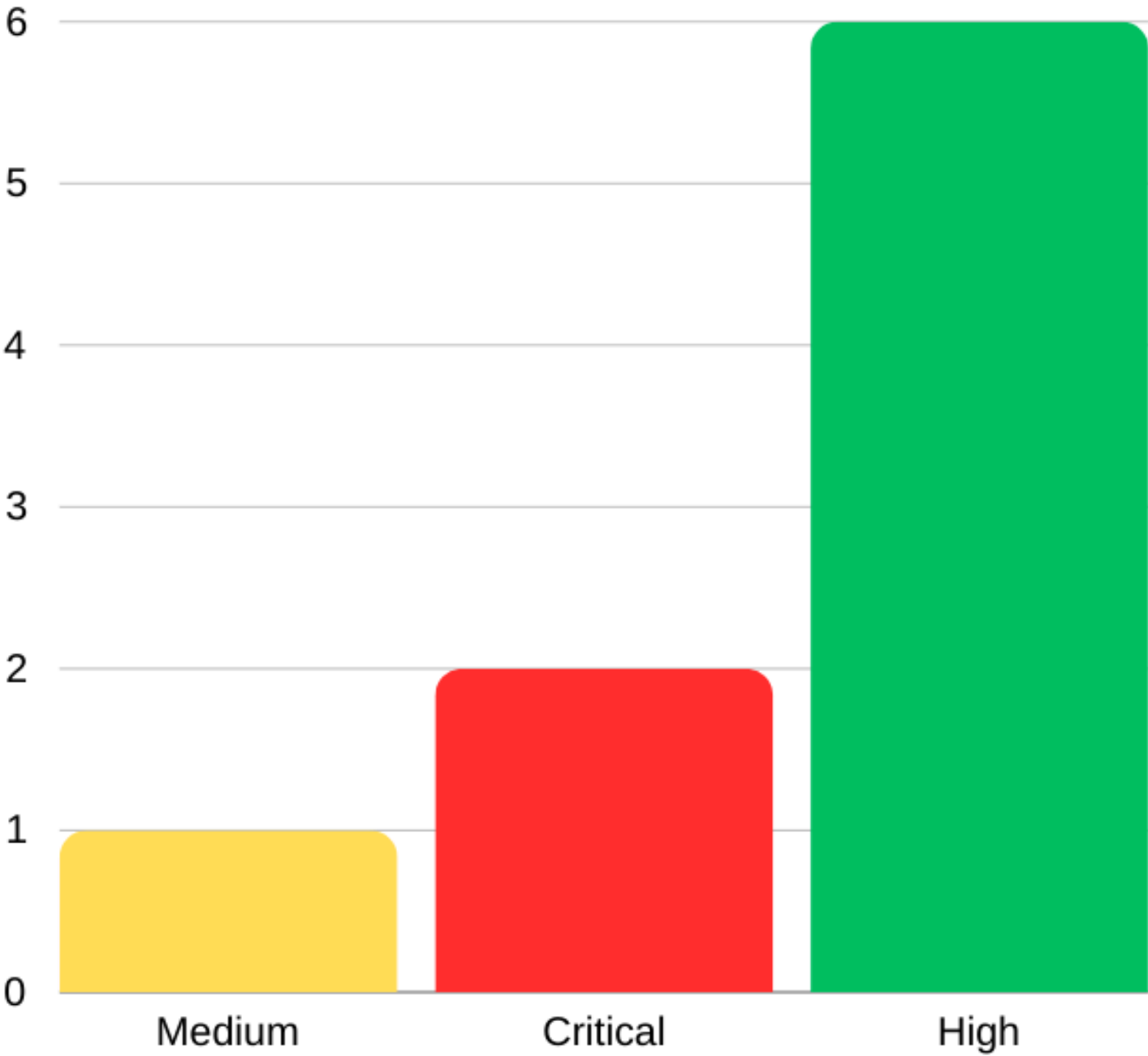




**MADE BY
FARAH MOHAMED SALAMA**

VULNERABILITY	SEVERITY
1. SQL INJECTION (LOGIN ADMIN).	CRITICAL
2.UNAUTHORIZED PRIVILEGE ESCALATION.	CRITICAL
3.API-ONLY CROSS-SITE SCRIPTING (XSS)	HIGH
4.BROKEN ACCESS CONTROL.	HIGH
5.UNAUTHORIZED MODIFICATION OF DATA.	HIGH
6.UNAUTHORIZED VIEWING OF ANOTHER USER'S BASKET.	HIGH
7.UNAUTHORIZED DELETION OF ITEMS IN ANOTHER USER'S BASKET.	HIGH
8.SENSITIVE INFORMATION EXPOSURE	HIGH
9.DOM-BASED CROSS-SITE SCRIPTING (XSS) VIA SEARCH BAR.	MEDIUM

Overall Risk Rating



1. SQL INJECTION (LOGIN ADMIN). CRITICAL

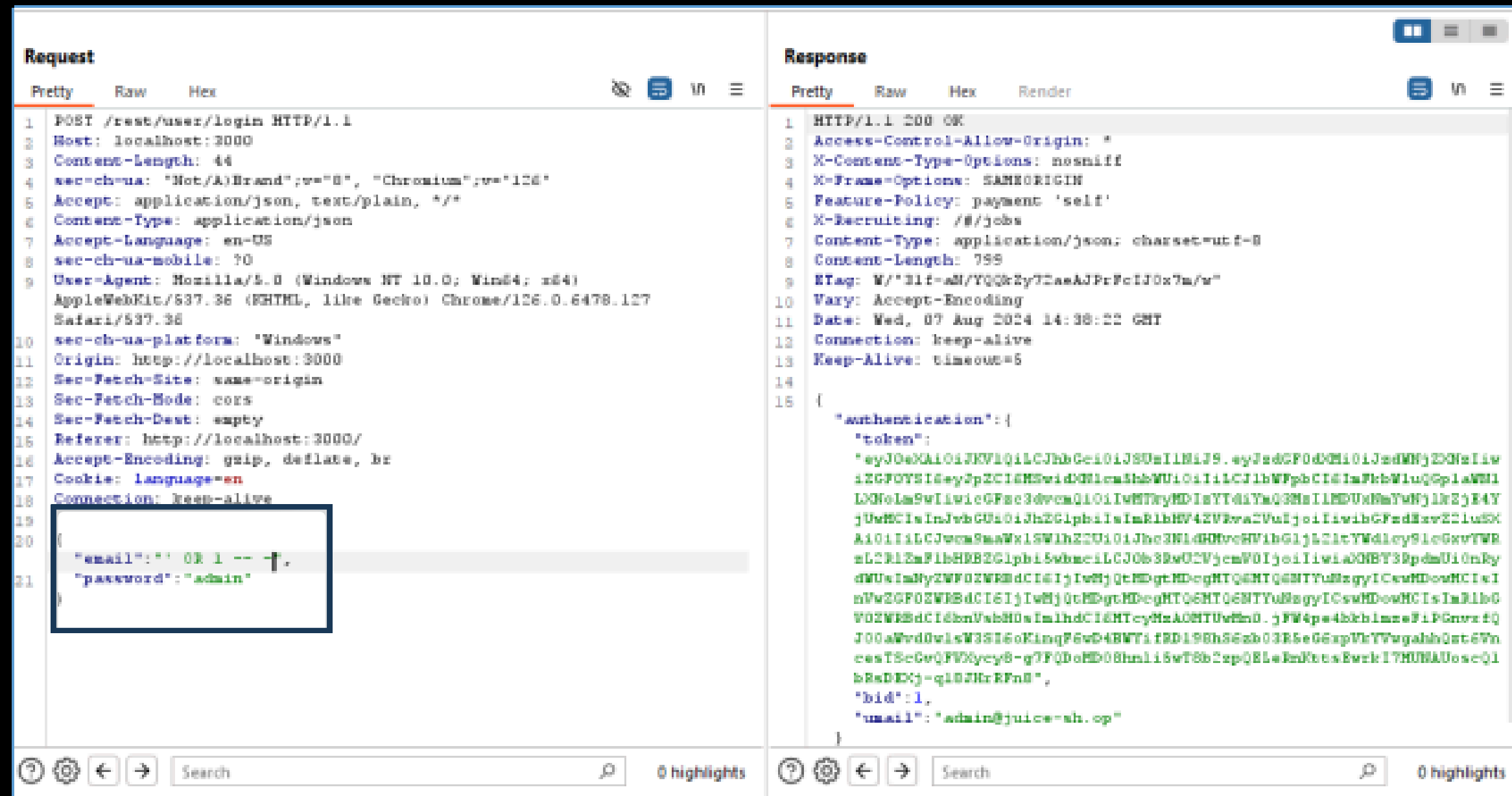
DESCRIPTION:

A CRITICAL SQL INJECTION VULNERABILITY WAS IDENTIFIED IN THE LOGIN FUNCTIONALITY OF THE WEB APPLICATION AT HTTP://LOCALHOST:3000. THE VULNERABILITY EXISTS BECAUSE USER INPUTS ARE NOT PROPERLY SANITIZED BEFORE BEING USED IN SQL QUERIES. AN ATTACKER CAN EXPLOIT THIS FLAW TO BYPASS AUTHENTICATION MECHANISMS AND GAIN UNAUTHORIZED ACCESS TO THE ADMIN PANEL.

INJECT THE SQL PAYLOAD:

IN THE USERNAME FIELD OF THE LOGIN FORM, INPUT THE FOLLOWING PAYLOAD:

' OR 1 -- -



User Profile



Email:
admin@juice-sh.op

Username:
e.g. SuperUser

Set Username

File Upload:

Choose File No file chosen

Upload Picture

or

Image URL:

e.g. <https://www.gravatar.com/avatar/506702ac7bd7c0871>

IMPACT:

EXPLOITING THIS VULNERABILITY ALLOWS AN ATTACKER TO BYPASS AUTHENTICATION AND GAIN ADMINISTRATIVE ACCESS TO THE APPLICATION. THIS COULD LEAD TO COMPLETE COMPROMISE OF THE APPLICATION, INCLUDING THE ABILITY TO VIEW, MODIFY, OR DELETE SENSITIVE DATA, AND POTENTIALLY EXECUTE ARBITRARY COMMANDS ON THE SERVER.

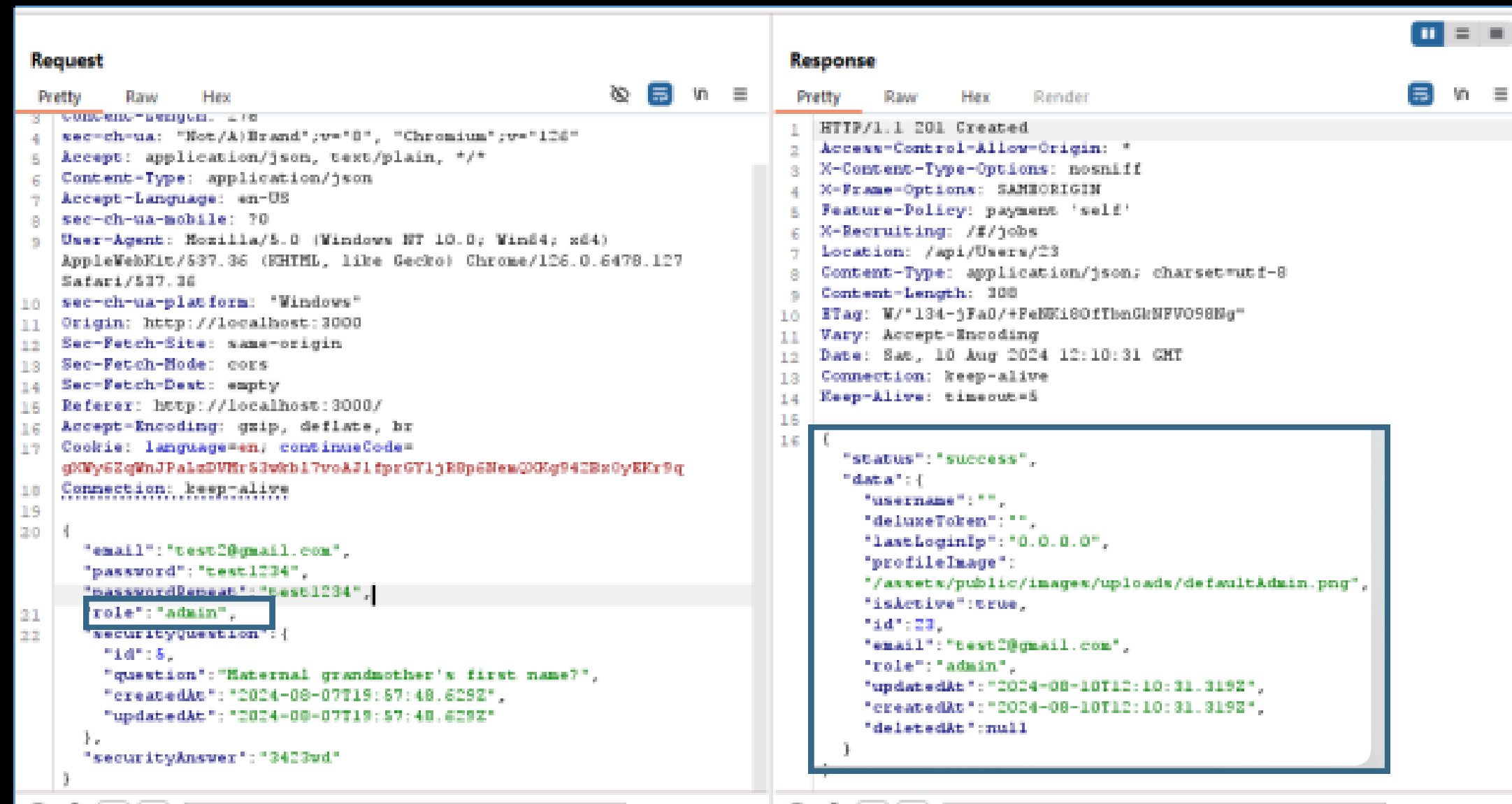
2.UNAUTHORIZED PRIVILEGE ESCALATION. CRITICAL

DESCRIPTION:

A CRITICAL VULNERABILITY IN THE ADMIN REGISTRATION PROCESS OF THE WEB APPLICATION AT [HTTP://LOCALHOST:3000](http://localhost:3000) ALLOWS UNAUTHORIZED USERS TO ESCALATE THEIR PRIVILEGES BY EXPLOITING IMPROPER INPUT VALIDATION. THE VULNERABILITY EXISTS BECAUSE THE APPLICATION DOES NOT ADEQUATELY VALIDATE USER INPUTS WHEN ASSIGNING ROLES DURING THE REGISTRATION PROCESS, ALLOWING ATTACKERS TO ASSIGN THEMSELVES AN ADMIN ROLE.

MODIFY THE ROLE PARAMETER:

- IN THE INTERCEPTED REQUEST, FIND THE SECTION WHERE THE USER'S ROLE IS DEFINED.
- MODIFY THE ROLE PARAMETER TO "ROLE":"ADMIN".



IMPACT:

EXPLOITING THIS VULNERABILITY ENABLES AN ATTACKER TO GAIN ADMINISTRATIVE PRIVILEGES WITHOUT PROPER AUTHORIZATION. THIS COULD LEAD TO A COMPLETE COMPROMISE OF THE APPLICATION, INCLUDING UNAUTHORIZED ACCESS TO SENSITIVE DATA, MODIFICATION OF CRITICAL SETTINGS, AND POTENTIAL DISRUPTION OF SERVICES.

3.API-ONLY CROSS-SITE SCRIPTING (XSS).HIGH

DESCRIPTION:

IN THIS SPECIFIC CASE, THE VULNERABILITY IS EXPLOITABLE BY AN AUTHENTICATED ADMIN USER AND CAN BE TRIGGERED BY MODIFYING CERTAIN CONTENT VIA THE API. ALTHOUGH THE XSS IS CONFINED TO API RESPONSES, IT POSES A SIGNIFICANT RISK AS IT CAN BE LEVERAGED TO COMPROMISE ADMIN ACCOUNTS OR PERFORM UNAUTHORIZED ACTIONS ON BEHALF OF THE ADMIN USER.

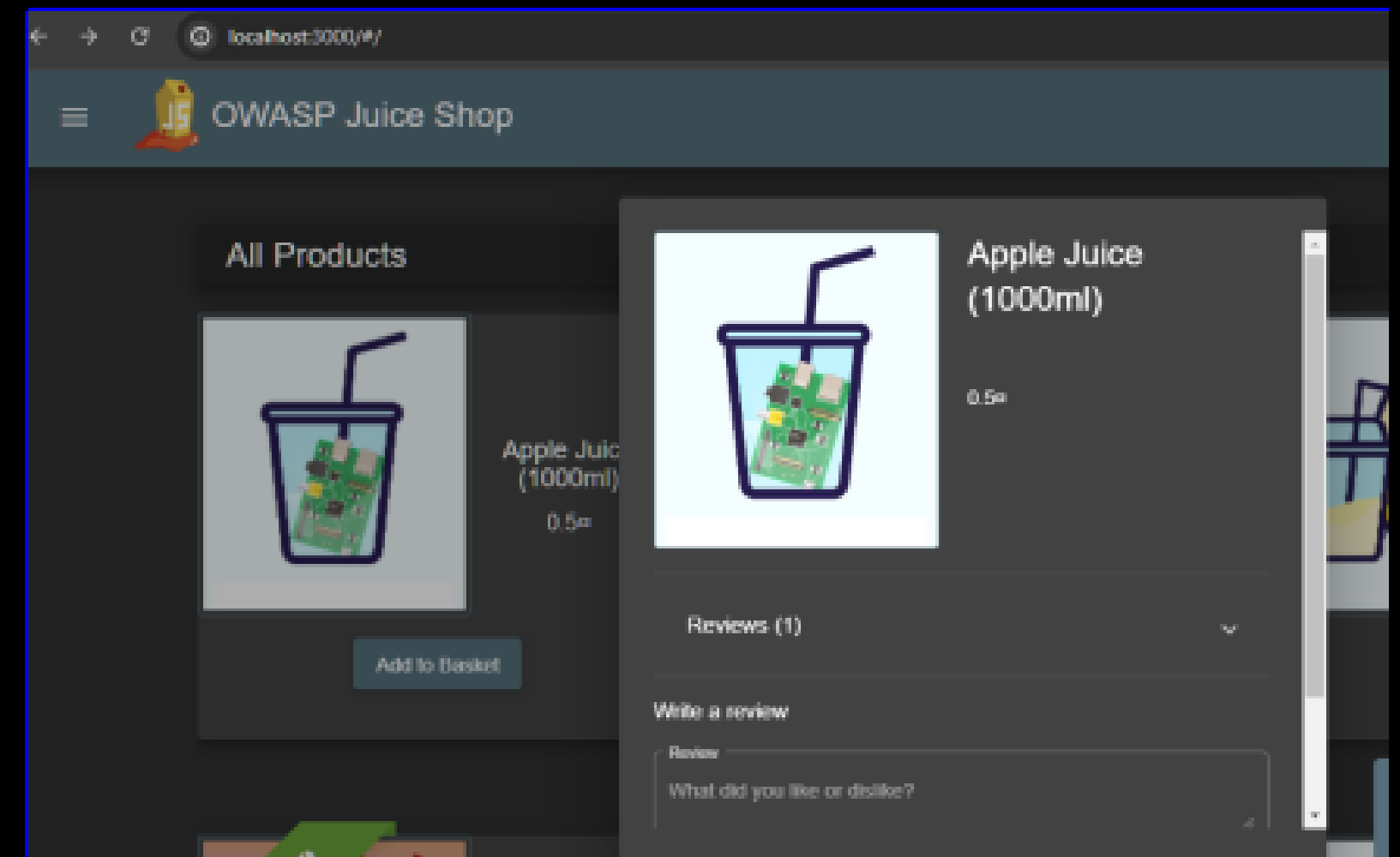
SEND A PUT REQUEST TO THE API ENDPOINT THAT ALLOWS CONTENT MODIFICATION.

[illegible]

BEFORE



AFTER



IMPACT:

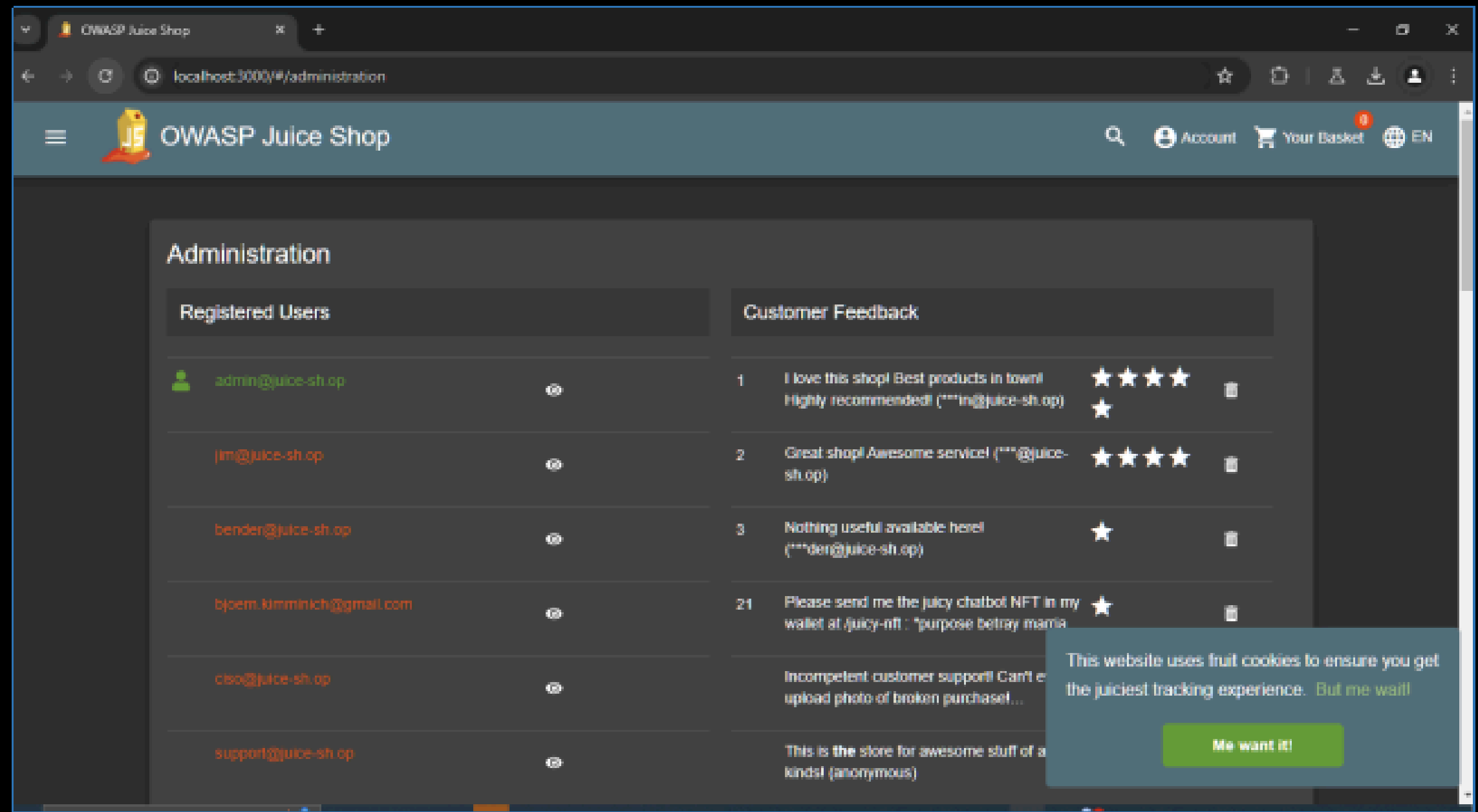
PERFORM UNAUTHORIZED ACTIONS ON BEHALF OF THE ADMIN, SUCH AS MODIFYING OR DELETING CRITICAL APPLICATION DATA.

4.BROKEN ACCESS CONTROL. HIGH








DESCRIPTION:





A CRITICAL BROKEN ACCESS CONTROL VULNERABILITY WAS IDENTIFIED IN THE WEB APPLICATION AT [HTTP://LOCALHOST:3000](http://localhost:3000). THE ISSUE LIES IN THE [/ADMINISTRATION](#) ENDPOINT, WHICH ALLOWS UNAUTHORIZED USERS TO ACCESS THE ADMINISTRATION PANEL WITHOUT PROPER AUTHENTICATION OR AUTHORIZATION CHECKS. THIS VULNERABILITY OCCURS DUE TO THE APPLICATION FAILING TO ENFORCE ACCESS CONTROL MEASURES ON SENSITIVE RESOURCES.

OPEN YOUR WEB BROWSER AND GO TO THE FOLLOWING URL:
HTTP://LOCALHOST:3000/ADMINISTRATION



The screenshot shows the OWASP Juice Shop Administration interface. The browser address bar displays `localhost:3000/#/administration`. The page header includes the OWASP Juice Shop logo and navigation links for Account, Your Basket, and EN. The main content area is divided into two sections: Registered Users and Customer Feedback.

Registered Users	
 admin@juice-sh.op	
jim@juice-sh.op	
bender@juice-sh.op	
bjoern.kimminich@gmail.com	
cbo@juice-sh.op	
support@juice-sh.op	

Customer Feedback	
1	I love this shop! Best products in town! Highly recommended! (***in@juice-sh.op) 
2	Great shop! Awesome service! (***@juice-sh.op) 
3	Nothing useful available here! (***den@juice-sh.op) 
21	Please send me the juicy chatbot NFT in my wallet at /juicy-nft : *purpose betray maria 
	Incompetent customer support! Can't upload photo of broken purchase...
	This is the store for awesome stuff of a kinds! (anonymous)

A cookie consent banner is visible at the bottom right, stating: "This website uses fruit cookies to ensure you get the juiciest tracking experience. But me wait! [Me want it!](#)"

IMPACT:

EXPLOITING THIS VULNERABILITY ALLOWS AN ATTACKER TO ACCESS THE ADMINISTRATION PANEL WITHOUT VALID CREDENTIALS. THIS CAN LEAD TO UNAUTHORIZED ACCESS TO SENSITIVE DATA, THE ABILITY TO MODIFY APPLICATION SETTINGS, AND POTENTIAL CONTROL OVER CRITICAL FUNCTIONS OF THE APPLICATION.

5.UNAUTHORIZED MODIFICATION OF DATA. HIGH

DESCRIPTION:

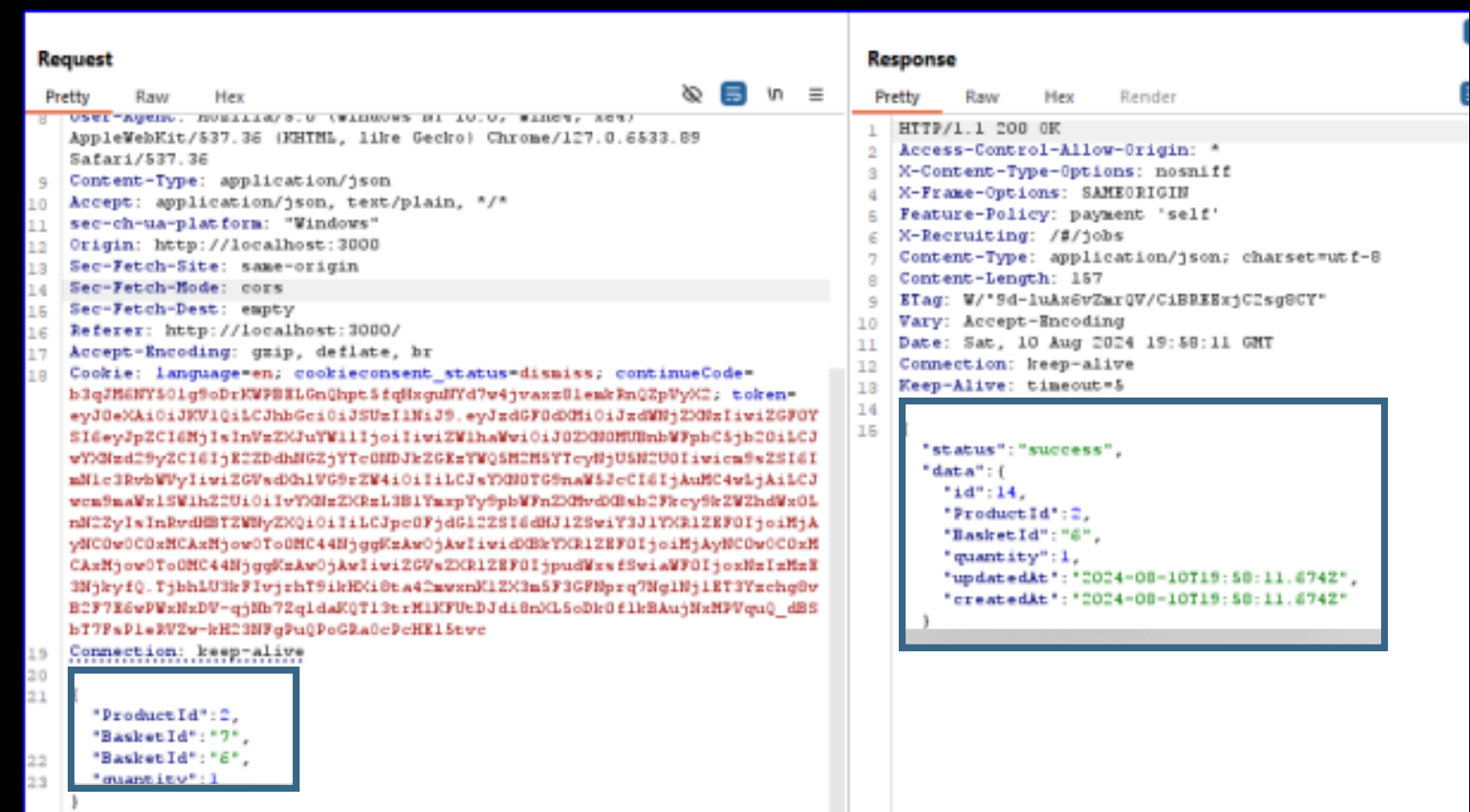
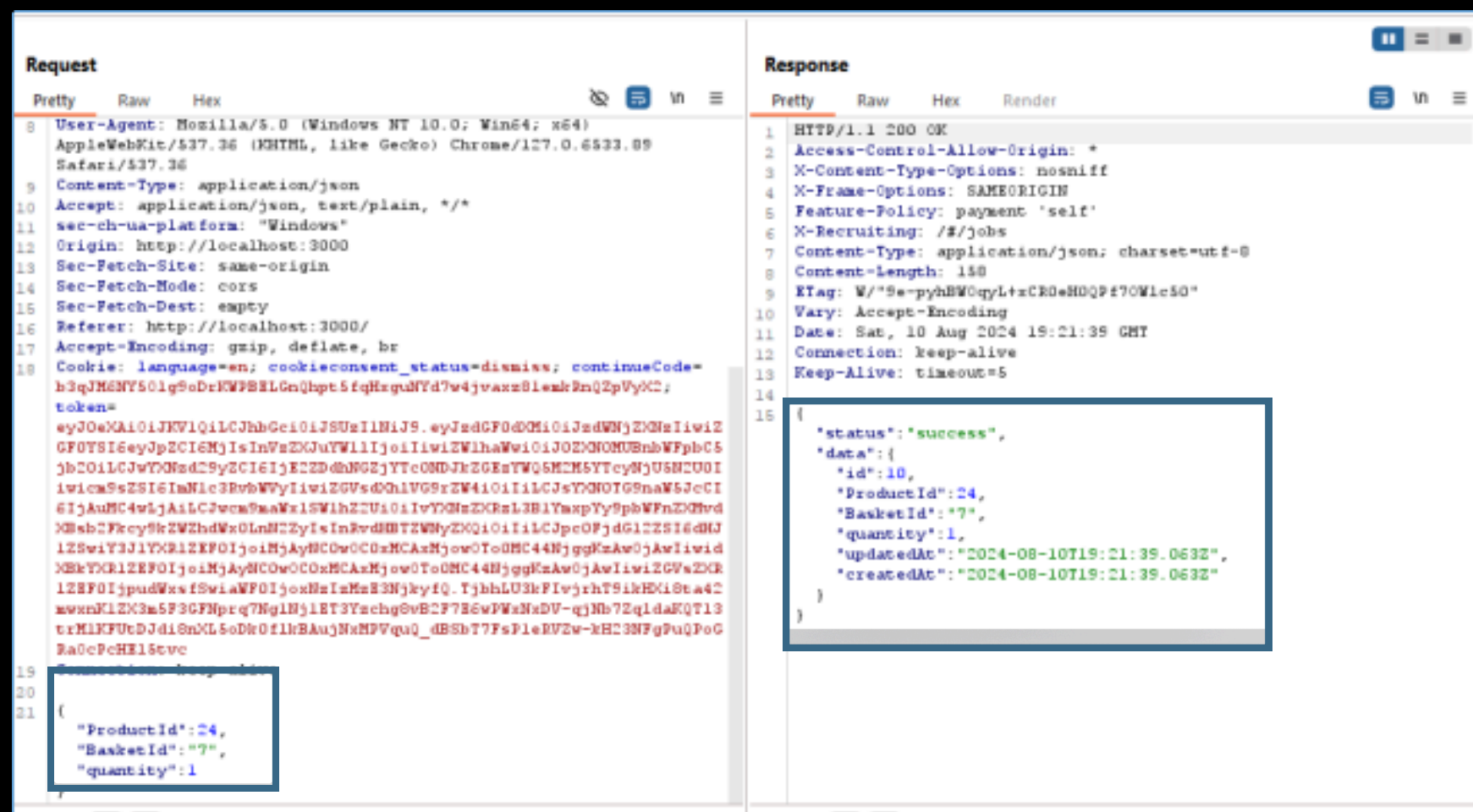
A CRITICAL ACCESS CONTROL VULNERABILITY WAS IDENTIFIED IN THE WEB APPLICATION AT [HTTP://LOCALHOST:3000](http://localhost:3000). THE ISSUE ALLOWS AN AUTHENTICATED USER TO ADD ITEMS TO ANOTHER USER'S BASKET BY DIRECTLY INTERACTING WITH THE [/API/BASKETITEMS/](#) ENDPOINT. THIS VULNERABILITY EXISTS BECAUSE THE APPLICATION DOES NOT PROPERLY VALIDATE OR ENFORCE OWNERSHIP OF BASKET ITEMS, ENABLING UNAUTHORIZED MODIFICATION OF ANOTHER USER'S DATA.

ADD AN ITEM TO YOUR BASKET AND INTERCEPT THE REQUEST TO `/API/BASKETITEMS/` USING A WEB PROXY TOOL LIKE BURP SUITE.

IN THE INTERCEPTED REQUEST, CHANGE THE USERID OR ANY PARAMETER THAT IDENTIFIES THE BASKET TO ANOTHER USER'S ID.

BEFORE

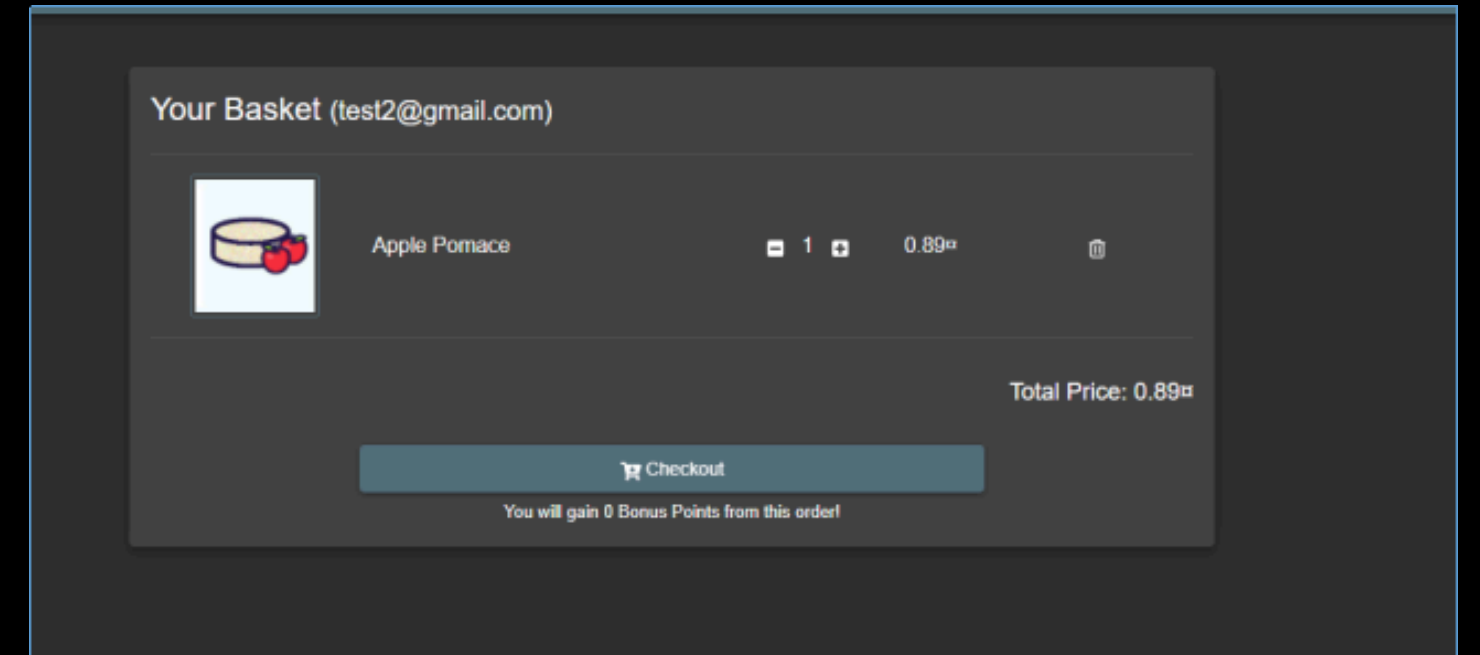
AFTER



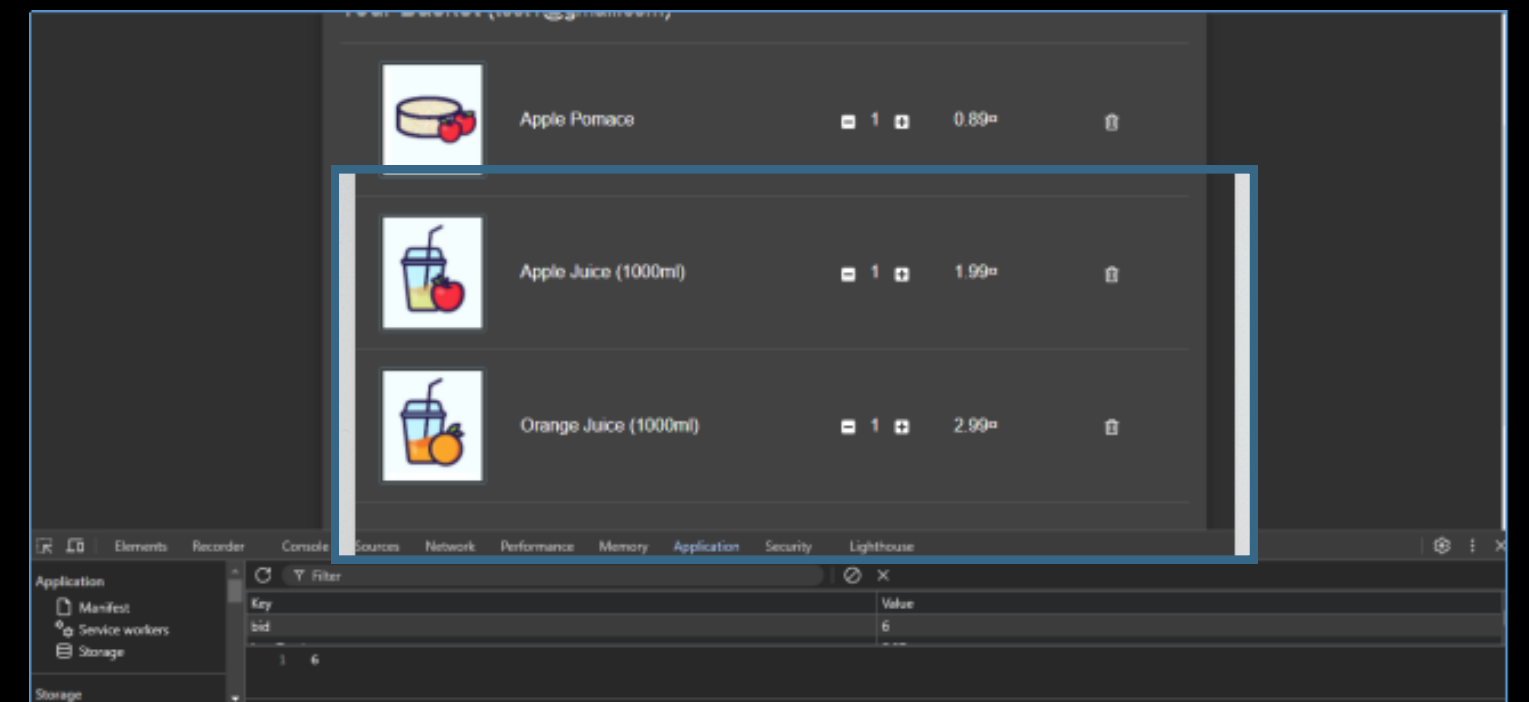
IMPACT:

EXPLOITING THIS VULNERABILITY ALLOWS AN ATTACKER TO ADD OR MODIFY ITEMS IN ANOTHER USER'S BASKET, LEADING TO UNAUTHORIZED ACCESS AND POTENTIAL MANIPULATION OF USER ORDERS. THIS CAN RESULT IN FINANCIAL LOSSES, TRUST ISSUES, AND POTENTIAL LEGAL CONSEQUENCES FOR THE AFFECTED USERS AND THE APPLICATION.

BEFORE



AFTER

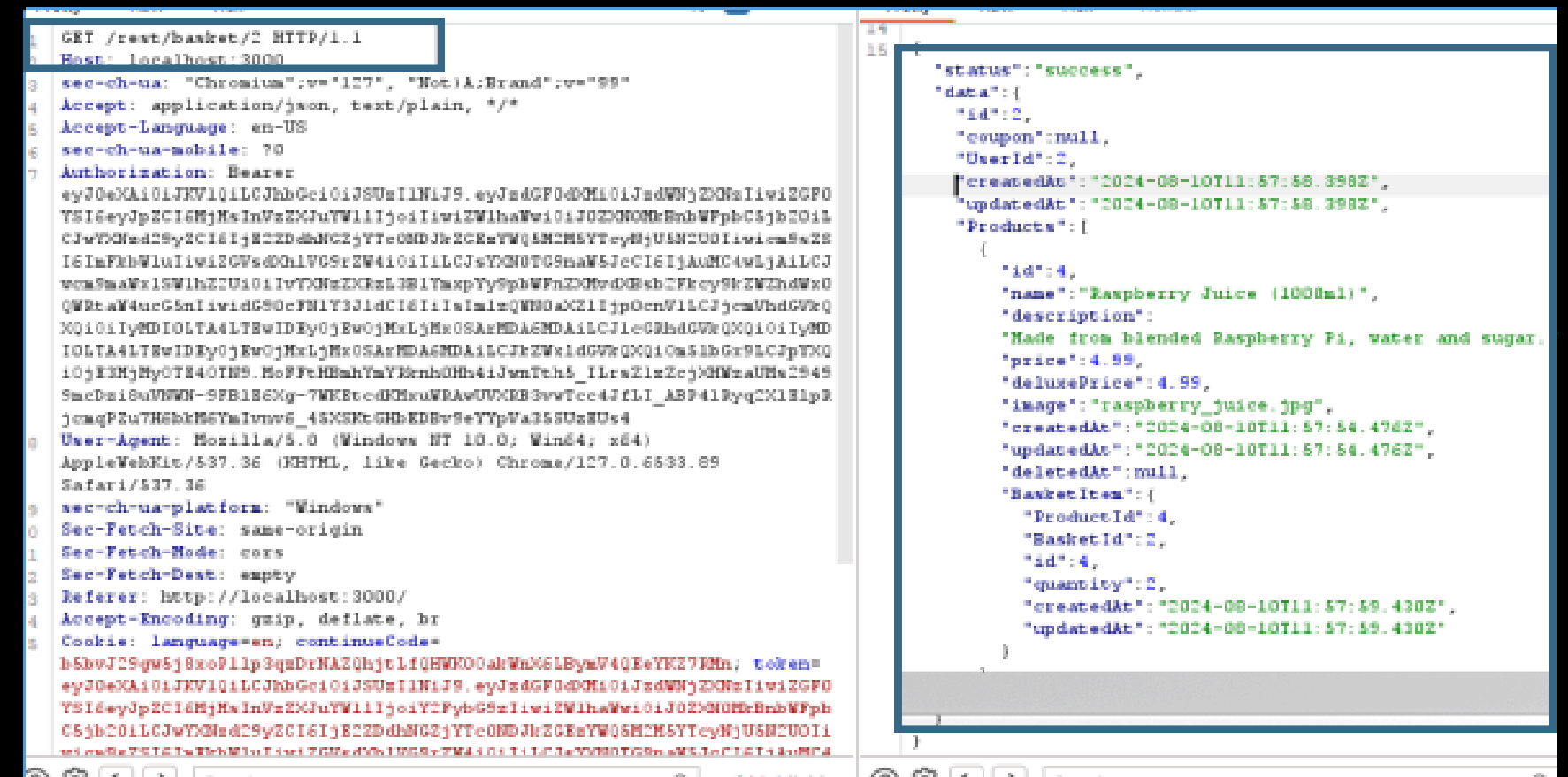
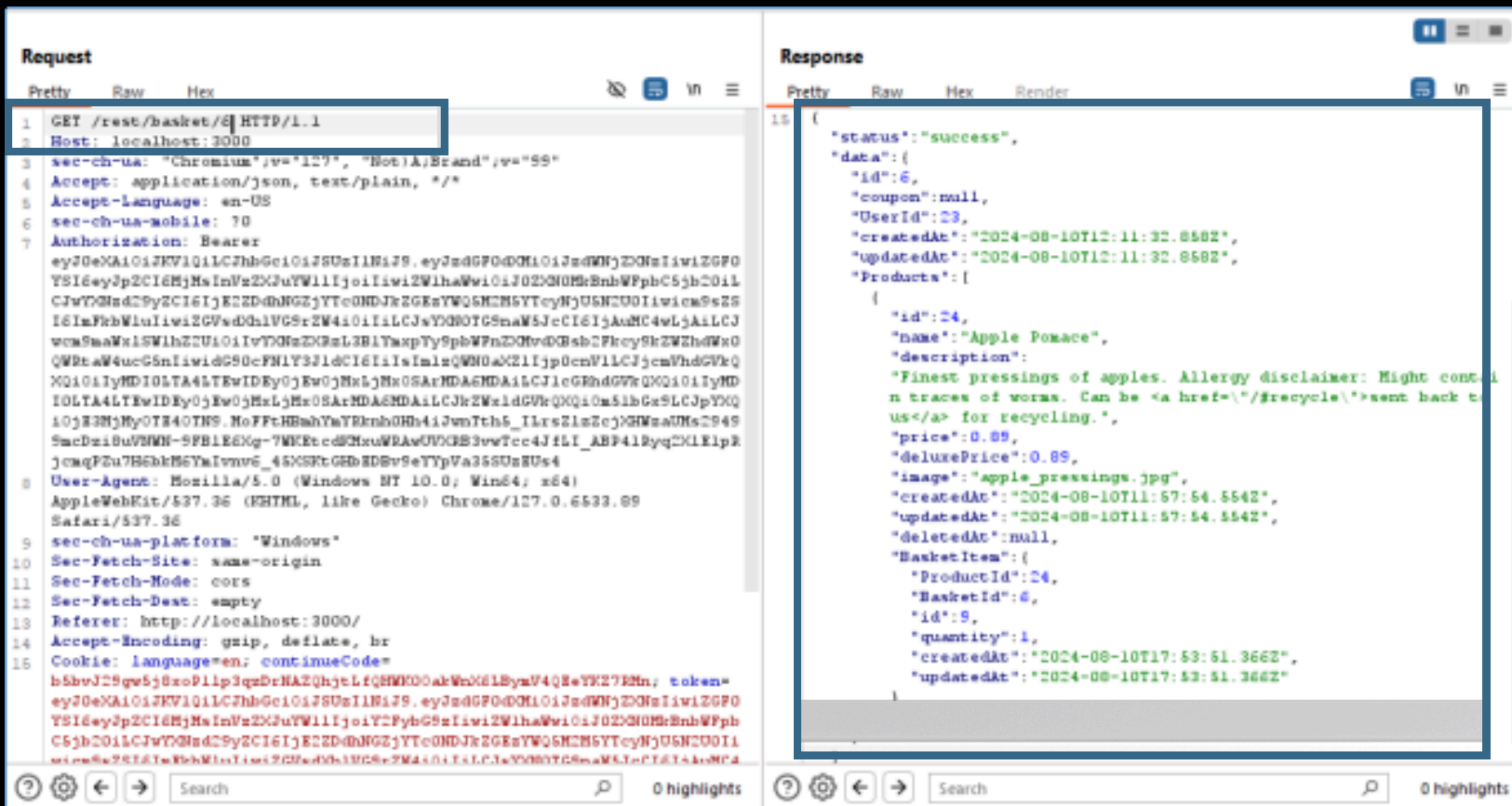


6.UNAUTHORIZED VIEWING OF ANOTHER USER'S BASKET. HIGH

DESCRIPTION:

A CRITICAL INSECURE DIRECT OBJECT REFERENCE (IDOR) VULNERABILITY WAS IDENTIFIED IN THE WEB APPLICATION AT [HTTP://LOCALHOST:3000](http://localhost:3000). THE ISSUE ALLOWS AUTHENTICATED USERS TO VIEW THE CONTENTS OF ANOTHER USER'S BASKET BY MODIFYING THE BASKETID PARAMETER IN THE REQUEST TO THE [/REST/BASKET/](#) ENDPOINT. THE VULNERABILITY EXISTS BECAUSE THE APPLICATION FAILS TO VALIDATE THAT THE USER MAKING THE REQUEST OWNS THE SPECIFIED BASKET, LEADING TO UNAUTHORIZED ACCESS TO OTHER USERS' DATA.

- ADD AN ITEM TO YOUR BASKET AND INTERCEPT THE REQUEST TO **/REST/BASKET/{BASKETID}** USING A WEB PROXY TOOL LIKE BURP SUITE.
 - CHANGE THE BASKETID IN THE REQUEST URL FROM YOUR CURRENT BASKET ID (E.G., 6) TO ANOTHER ID (E.G., 2).
- BEFORE



IMPACT:

EXPLOITING THIS VULNERABILITY ALLOWS AN ATTACKER TO VIEW THE CONTENTS OF ANOTHER USER'S BASKET, POTENTIALLY EXPOSING SENSITIVE INFORMATION SUCH AS PRODUCT SELECTIONS, QUANTITIES, AND PRICES. THIS CAN LEAD TO PRIVACY VIOLATIONS, UNAUTHORIZED DATA ACCESS, AND A BREACH OF USER TRUST.

7.UNAUTHORIZED DELETION OF ITEMS IN ANOTHER USER'S BASKET.HIGH

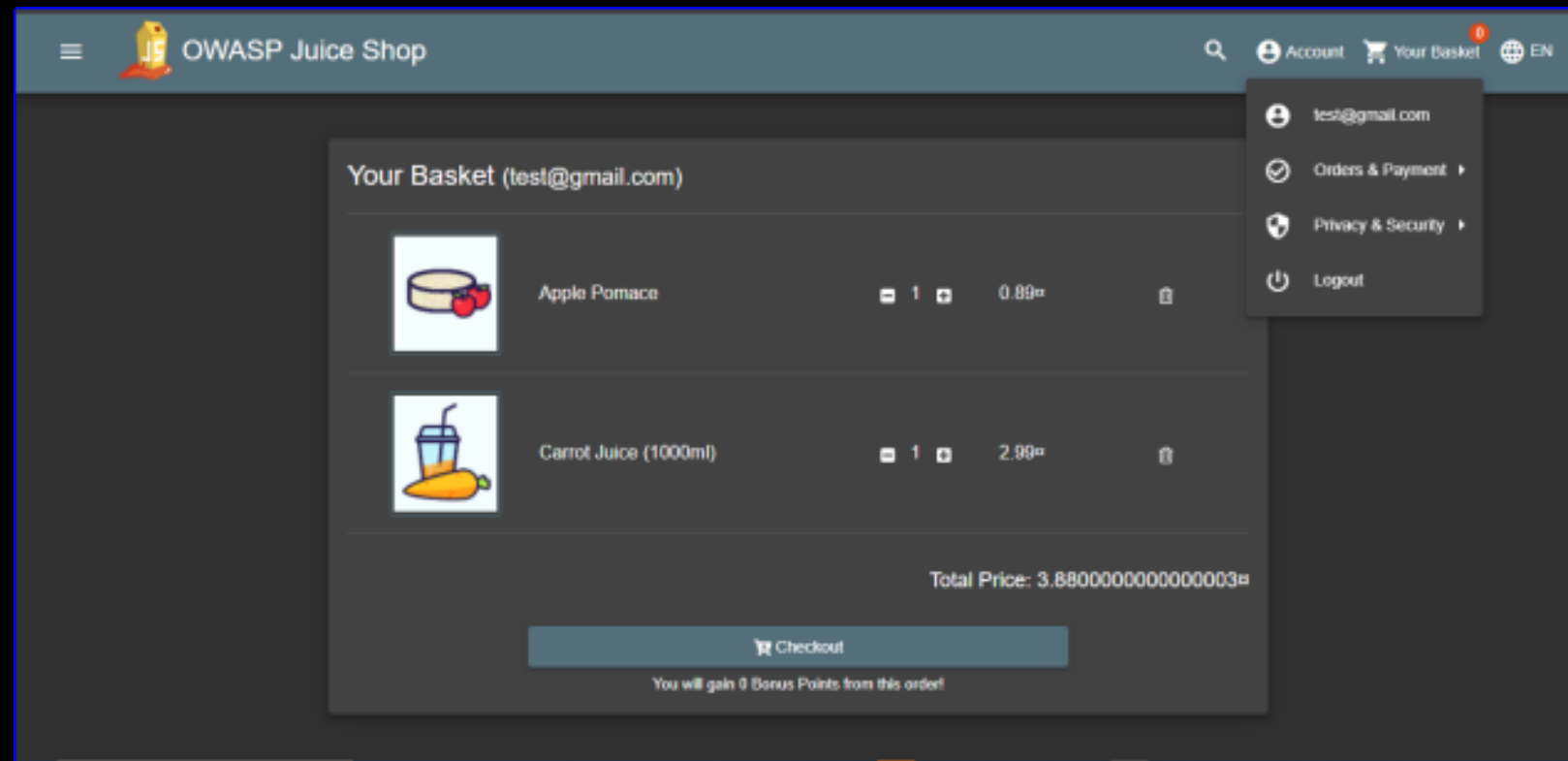
DESCRIPTION:

A CRITICAL INSECURE DIRECT OBJECT REFERENCE (IDOR) VULNERABILITY WAS IDENTIFIED IN THE WEB APPLICATION AT HTTP://LOCALHOST:3000. THE ISSUE ALLOWS AN AUTHENTICATED USER TO DELETE ALL ITEMS FROM ANOTHER USER'S BASKET BY SENDING A SPECIALLY CRAFTED DELETE REQUEST TO THE /API/BASKETITEMS/ ENDPOINT. THE APPLICATION FAILS TO PROPERLY VALIDATE THAT THE USER MAKING THE REQUEST OWNS THE ITEMS IN THE SPECIFIED BASKET, ALLOWING UNAUTHORIZED DELETION OF ITEMS FROM OTHER USERS' PROFILES.

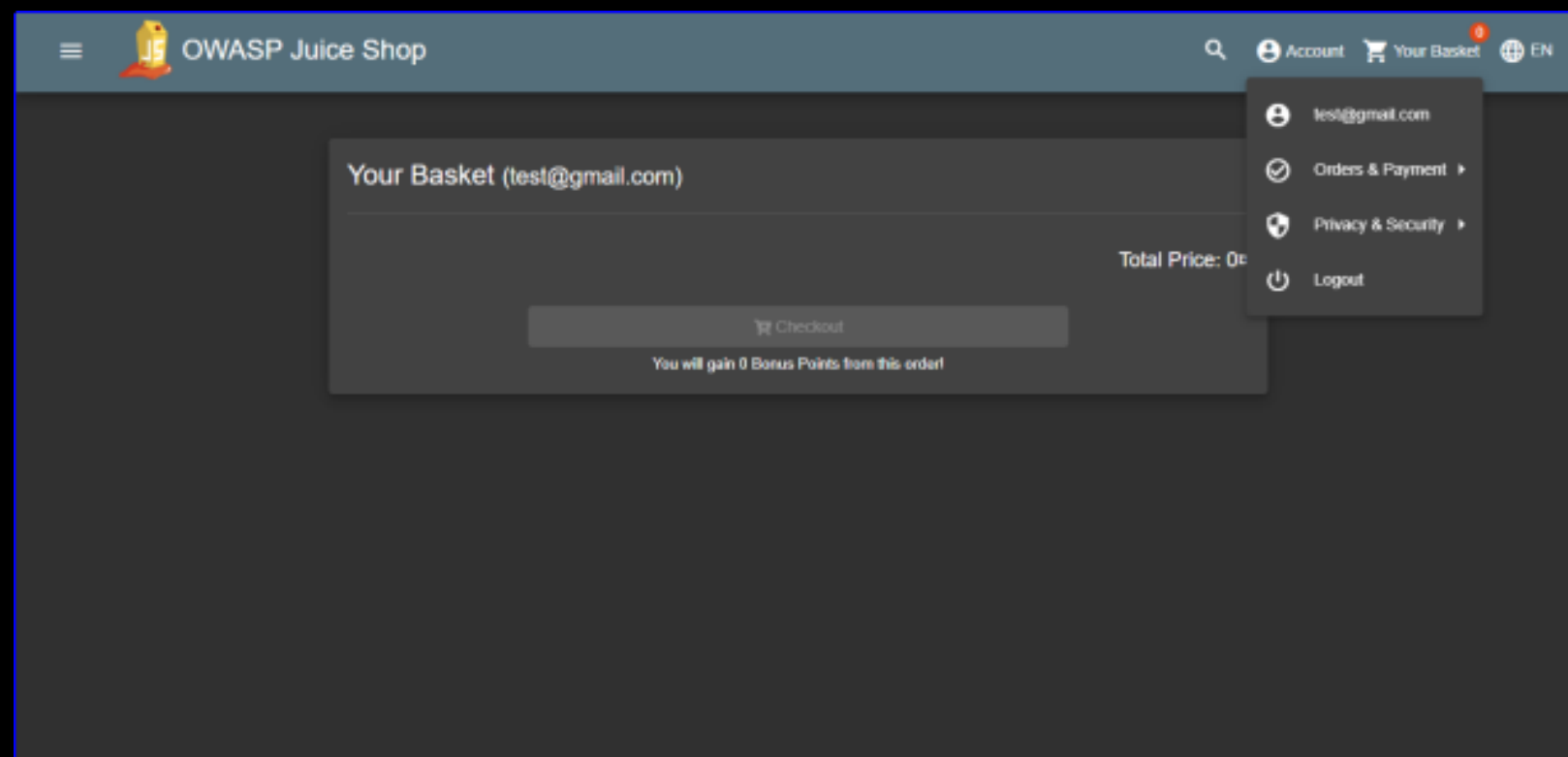
- **ATTEMPT TO DELETE AN ITEM FROM YOUR OWN BASKET AND INTERCEPT THE DELETE REQUEST SENT TO `/API/BASKETITEMS/` USING A WEB PROXY TOOL LIKE BURP SUITE.**
- **CHANGE THE IDENTIFIER FOR THE BASKET OR ITEM TO TARGET ANOTHER USER'S BASKET.**

[illegible]

BEFORE



AFTER



Impact:

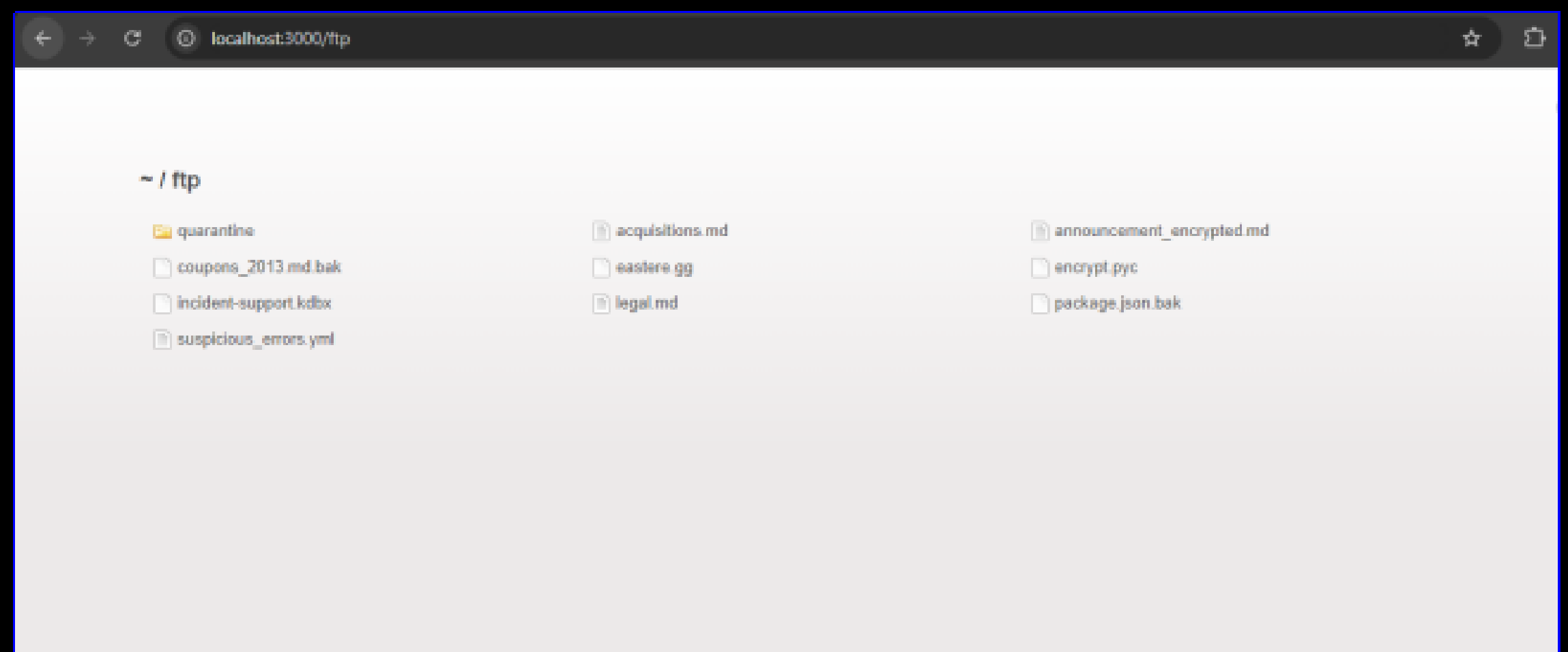
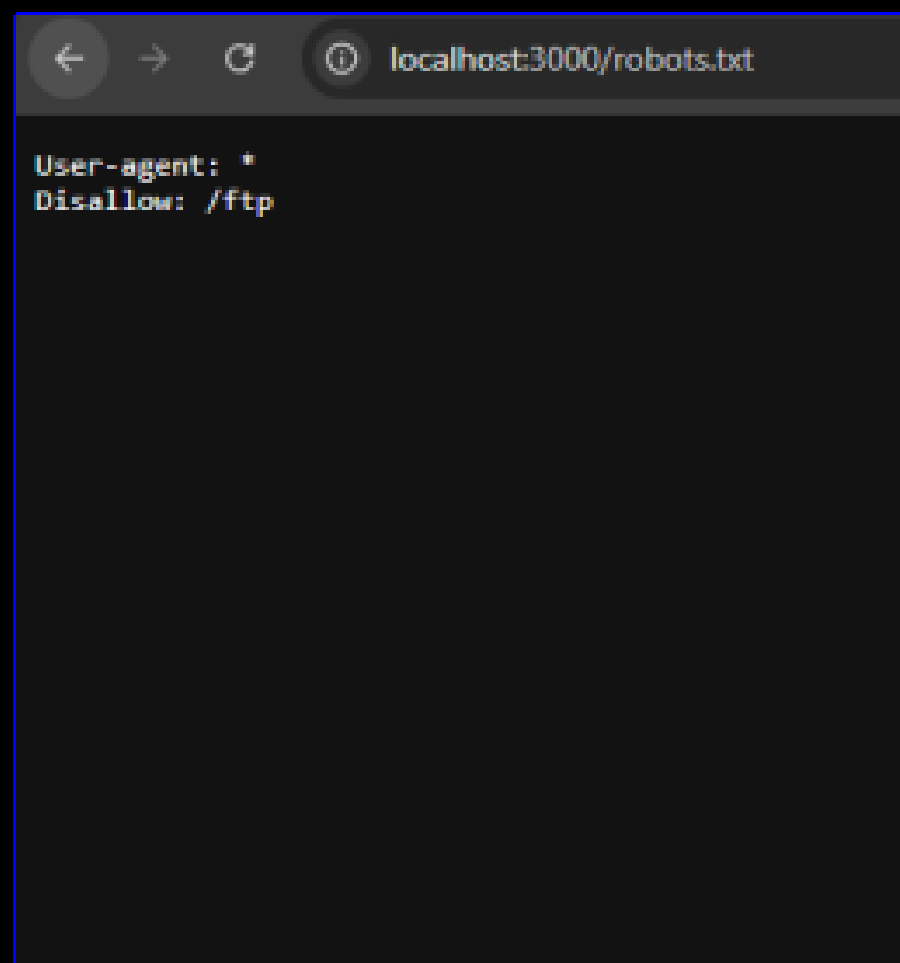
Exploiting this vulnerability enables an attacker to delete all items from another user's basket, leading to unauthorized data manipulation, potential financial loss, and a negative impact on user experience. This could also result in legal consequences for the application if users' data is compromised.

8.Sensitive Information Exposure.HIGH

Description:

The `/robots.txt` file on the target application was found to be publicly accessible and contains a disallowed entry for the `/ftp` directory. This directory can potentially house sensitive files or data that were intended to be restricted. The exposure of this information allows an attacker to directly access the `/ftp` directory, which may contain sensitive or exploitable content.

The browser will display the contents of the `/robots.txt` file, which includes a disallow directive pointing to the `/ftp` directory.



Impact:

The disclosed `/ftp` directory could contain sensitive information such as configuration files, data backups, or other critical resources. Access to this directory can lead to unauthorized information gathering, which might pave the way for further attacks such as data theft, privilege escalation, or even full system compromise if exploitable files are discovered within.

9.DOM-Based Cross-Site Scripting (XSS) via Search

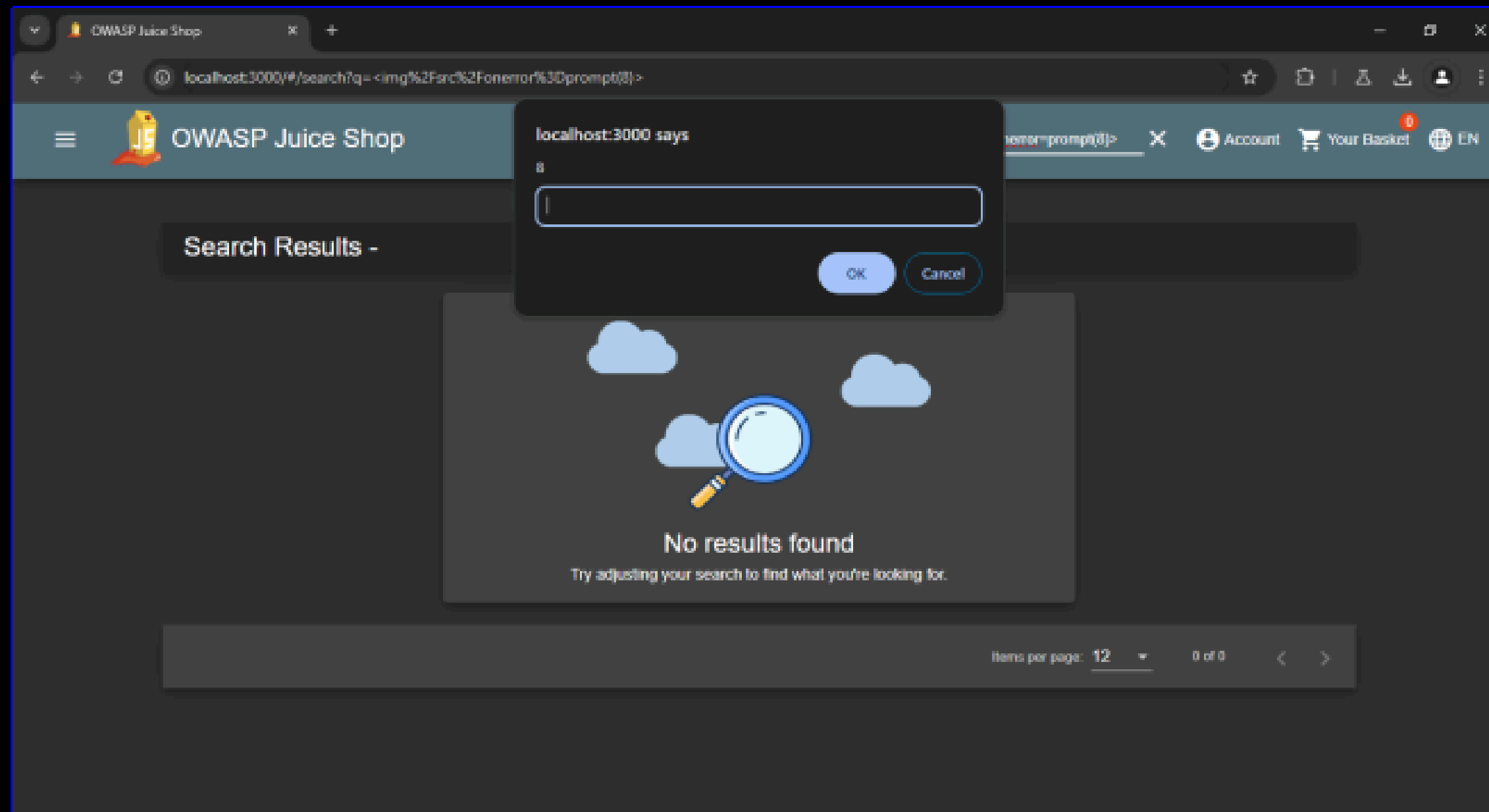
Bar.**MEDIUM**

Description:

The application at <http://localhost:3000/#/> is vulnerable to DOM-Based Cross-Site Scripting (XSS). The vulnerability occurs when user-controlled input is directly manipulated in the DOM without proper sanitization, allowing attackers to inject and execute malicious scripts within the context of the user's browser. This specific vulnerability was identified in the search bar of the application, where an attacker can inject a malicious payload that executes JavaScript code.

In the search bar of the application, enter the following payload and press enter:

`<img/src/onerror=prompt(8)>`



Impact:

Successful exploitation of this vulnerability allows an attacker to execute arbitrary JavaScript code in the context of the user's session. This could lead to unauthorized actions such as stealing session cookies, performing actions on behalf of the user, or displaying fraudulent content. The impact is elevated if sensitive user data or high-privileged user accounts are affected.

THANK YOU