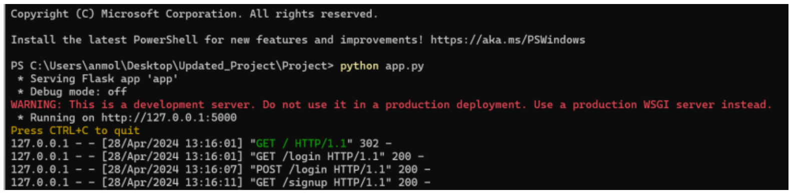
Securing User Browsing: Comparing Browsers and Extensions Effectiveness against XSS Attacks

Content:

- Server
- Website
- Attacks
- Experiments
  - Experiments without browser extensions
  - Experiments with browser extensions
  - Experiments with Content security policy
- Result

Server: To host the website, go to the folder with the website contents and right click, open terminal and type python app.py. Read me the text file holds instructions for setting up the project.



```
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\anmol\Desktop\Updated_Project\Project> python app.py
 * Serving Flask app 'app'
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
127.0.0.1 - - [28/Apr/2024 13:16:01] "GET / HTTP/1.1" 302 -
127.0.0.1 - - [28/Apr/2024 13:16:01] "GET /login HTTP/1.1" 200 -
127.0.0.1 - - [28/Apr/2024 13:16:07] "POST /login HTTP/1.1" 200 -
127.0.0.1 - - [28/Apr/2024 13:16:11] "GET /signup HTTP/1.1" 200 -
```
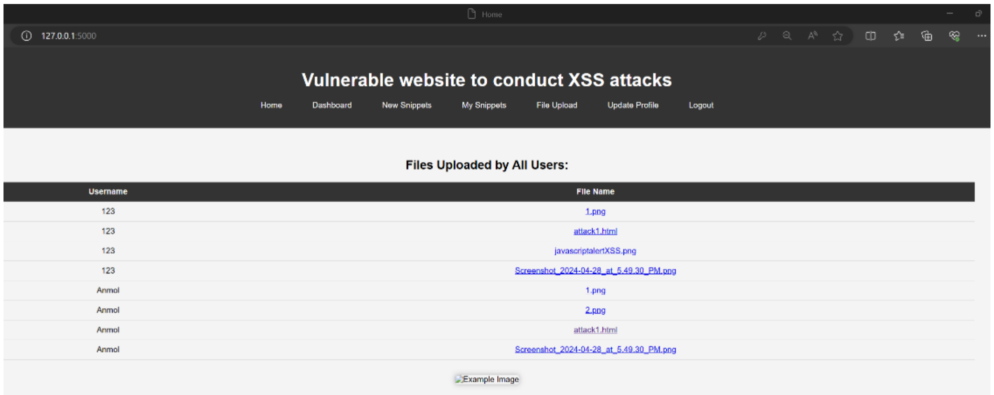

Website: This section gives a go through of how the website looks.

Home Page:

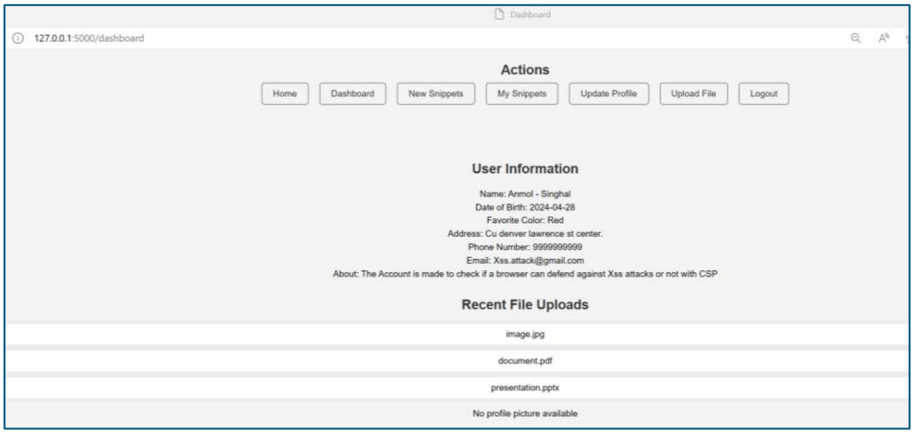


Vulnerable website to conduct XSS attacks

Files Uploaded by All Users:

Username	File Name
123	1.png
123	attack1.html
123	javascriptalertXSS.png
123	Screenshot_2024-04-28_at_5.49.30_PM.png
Anmol	1.png
Anmol	2.png
Anmol	attack1.html
Anmol	Screenshot_2024-04-28_at_5.49.30_PM.png

Dashboard Page:



Actions

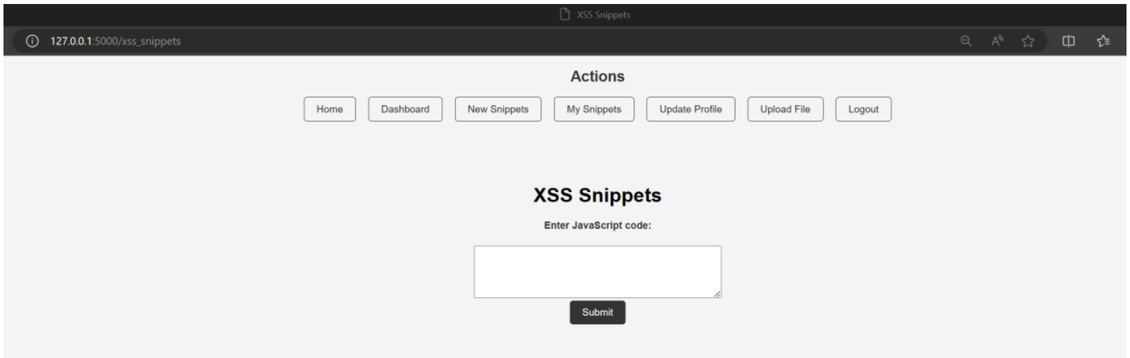
User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: Red
Address: Cu denver lawrence st center.
Phone Number: 9999999999
Email: Xss.attack@gmail.com
About: The Account is made to check if a browser can defend against Xss attacks or not with CSP

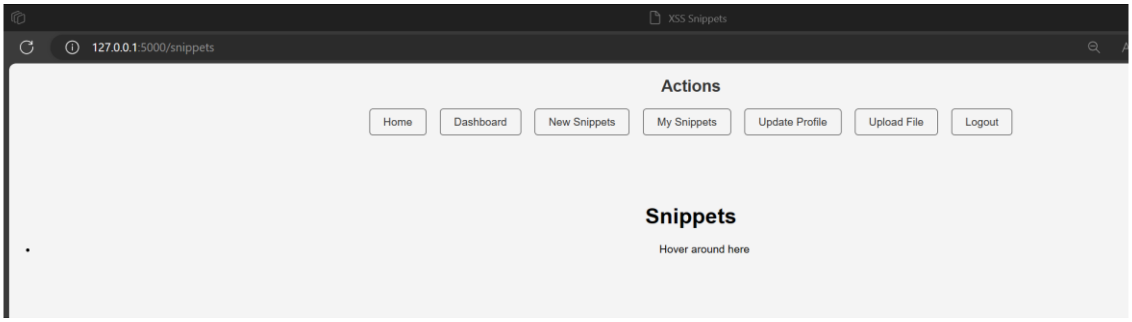
Recent File Uploads

image.jpg
document.pdf
presentation.pptx
No profile picture available

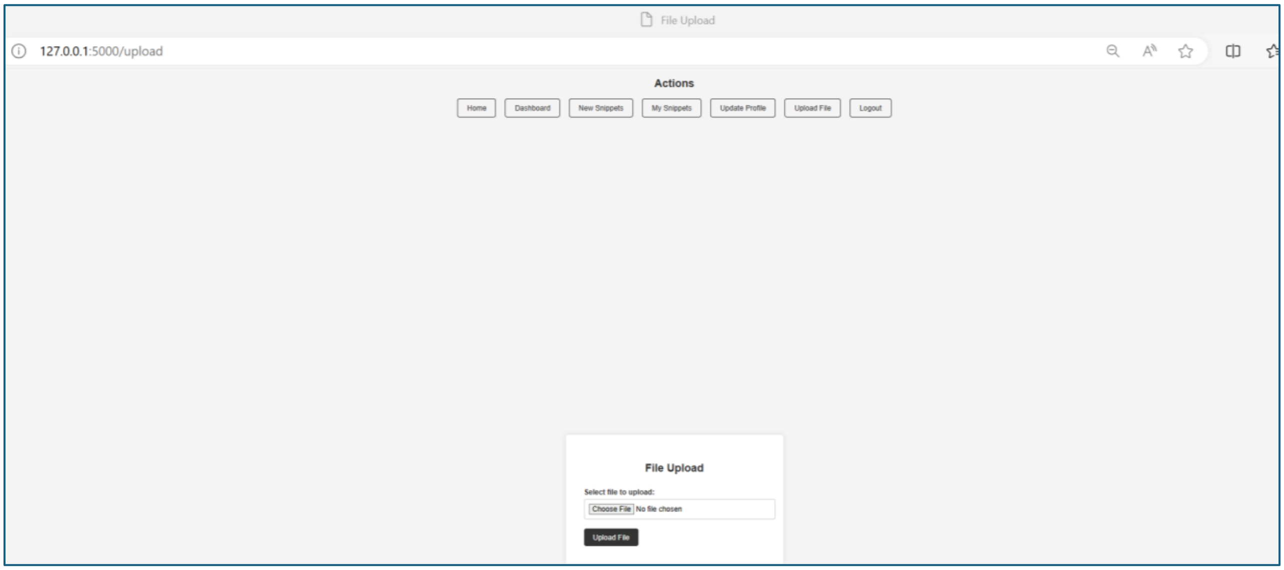
New Snippets Page:



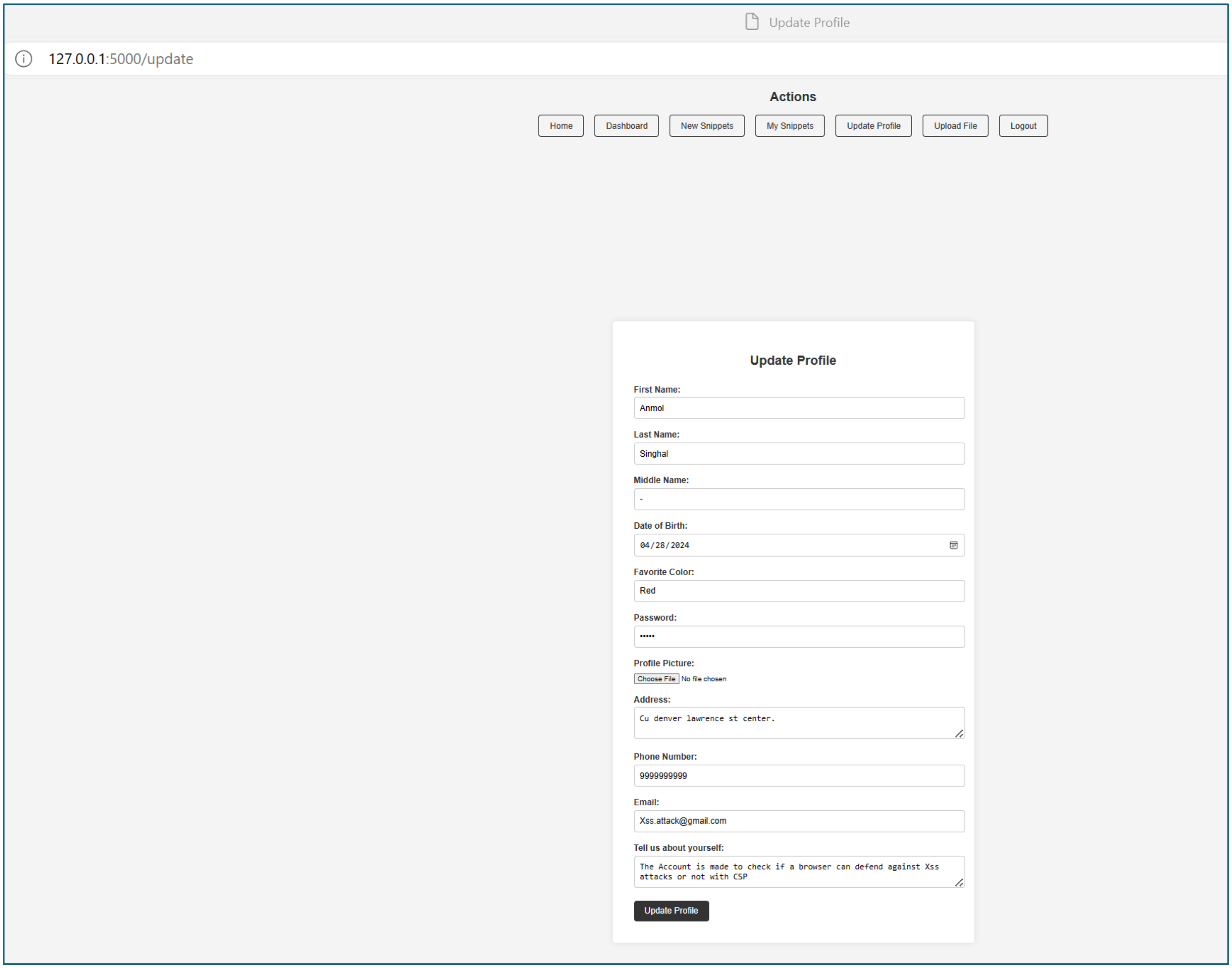
My Snippets Page:



File Upload Page:



Update Profile Page:



Update Profile

First Name: Anmol

Last Name: Singhal

Middle Name: -

Date of Birth: 04/28/2024

Favorite Color: Red

Password: •••••

Profile Picture: Choose File No file chosen

Address: Cu denver lawrence st center.

Phone Number: 9999999999

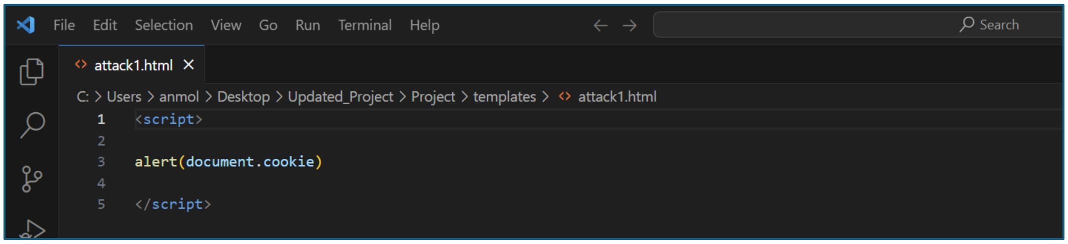
Email: Xss.attack@gmail.com

Tell us about yourself: The Account is made to check if a browser can defend against Xss attacks or not with CSP

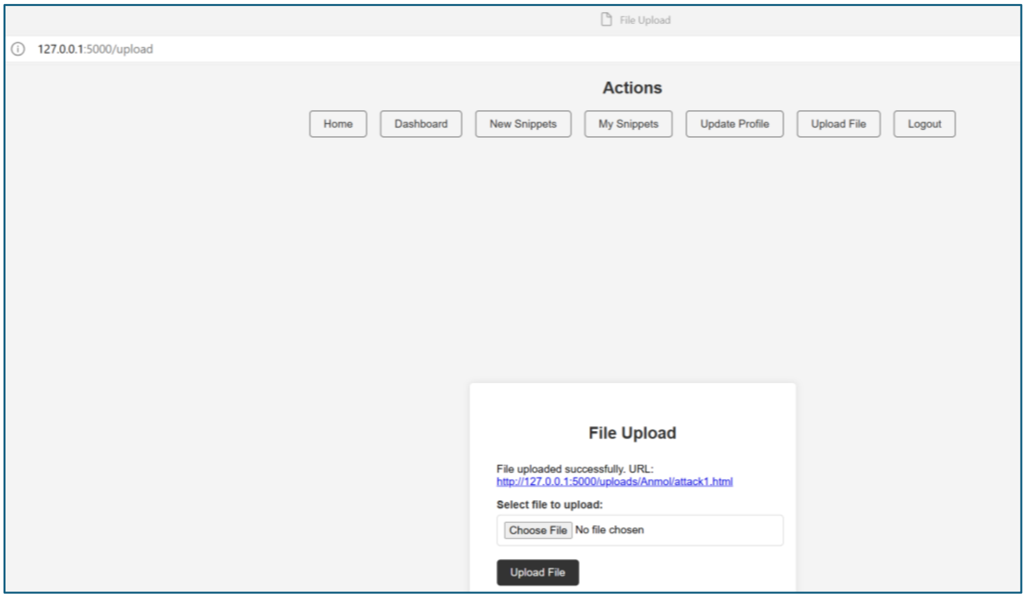
Attacks: This is a vulnerable website; it has 5 vulnerabilities in it which we can exploit to do XSS attacks. Below is the description of all the attacks one by one.

Attack1: File Upload: Once the file uploads it gives a URL, when we click this URL, it opens the file and malicious script is executed on the user's system.

Attack1.html is the file we will use for each file upload attack throughout the experiments.


File
Edit
Selection
View
Go
Run
Terminal
Help
Search
attack1.html
C: > Users > anmol > Desktop > Updated_Project > Project > templates > attack1.html

```
<script>

alert(document.cookie)

</script>
```



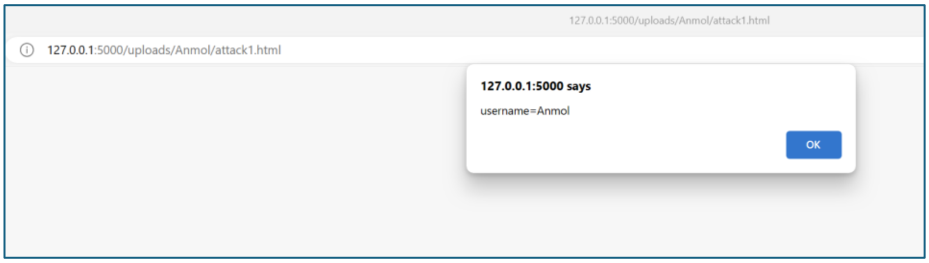
127.0.0.1:5000/upload

File Upload

File uploaded successfully. URL: http://127.0.0.1:5000/uploads/Anmol/attack1.html

Select file to upload:

No file chosen

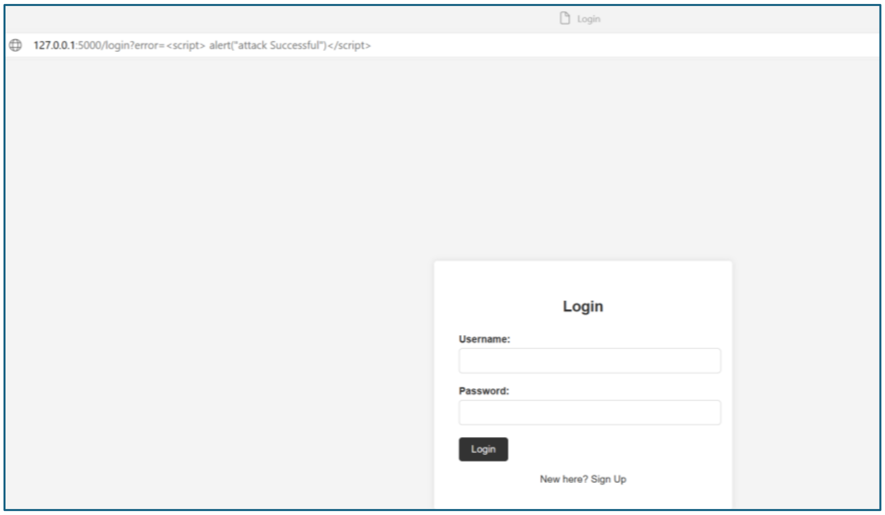


127.0.0.1:5000/uploads/Anmol/attack1.html

127.0.0.1:5000 says

username=Anmol

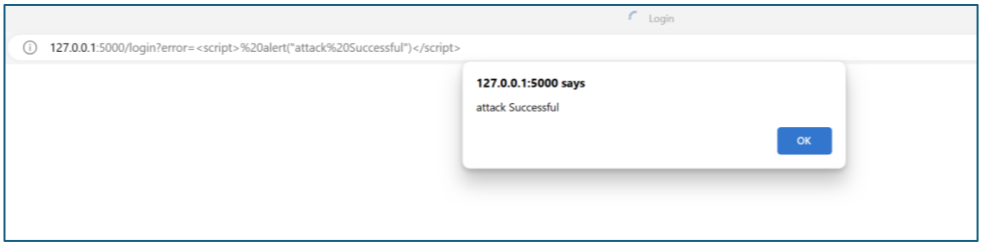
Attack2: URL: If you go to login page and add this script? error=<script>alert ("Attack Happened") </script> in the URL or any other script where the current text of URL ends, and press enter the malicious script will be executed.



127.0.0.1:5000/login?error=<script> alert("attack Successful")</script>

Username:

Password:

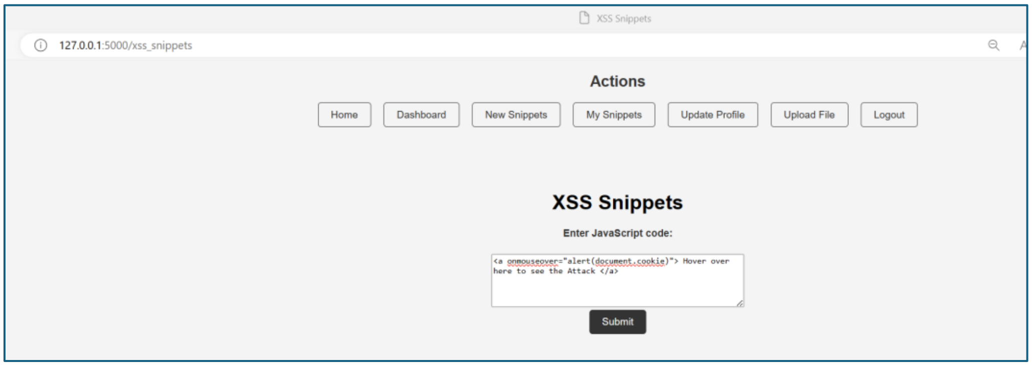


127.0.0.1:5000/login?error=<script>%20alert("attack%20Successful")</script>

127.0.0.1:5000 says

attack Successful

Attack3: Snippets: If you go to new snippets page and add script like <a onmouseover="alert(document.cookie)"> Hover around here...</a> in the text box, or any other script, and press submit, Post this if we go to my snippet page and hover on the text we will the malicious script is executed.

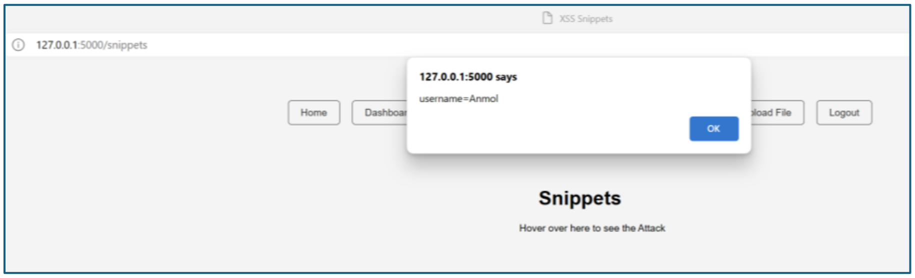


Actions

XSS Snippets

Enter JavaScript code:

```
<a onmouseover="alert(document.cookie)"> Hover over
here to see the Attack </a>
```



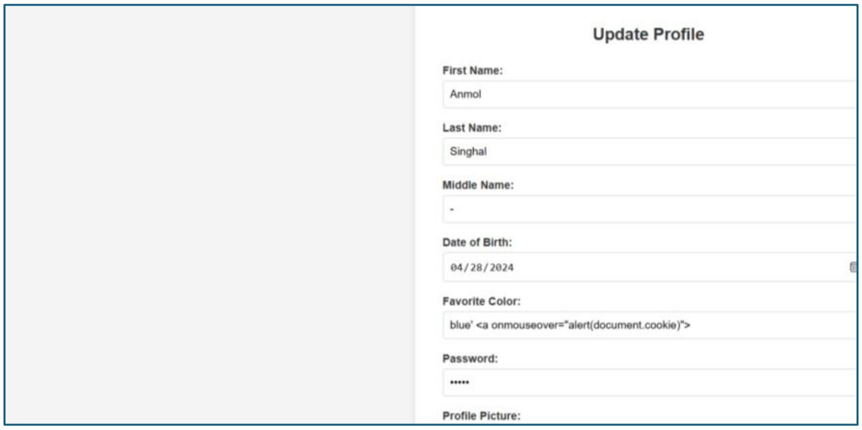
127.0.0.1:5000 says

username=Anmol

Snippets

Hover over here to see the Attack

Attack4: Text Box: If you go to update profile page and add script in the favorite color text box after writing the color blue' <a onmouseover="alert(document.cookie)"> and click on update and then go to dashboard.html page and Hover around where the favorite color blue is written, we will the malicious script is executed.



Update Profile

First Name: Anmol

Last Name: Singhal

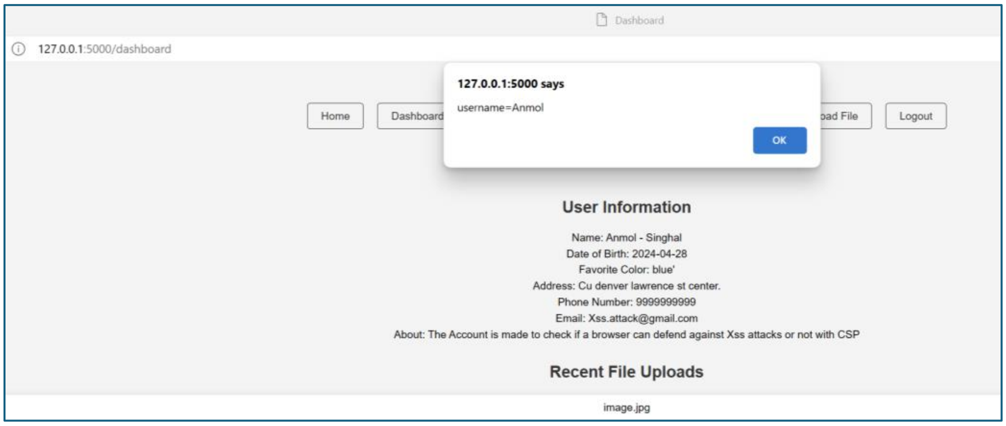
Middle Name: -

Date of Birth: 04/28/2024

Favorite Color: blue' <a onmouseover="alert(document.cookie)">

Password: •••••

Profile Picture:



127.0.0.1:5000 says

username=Anmol

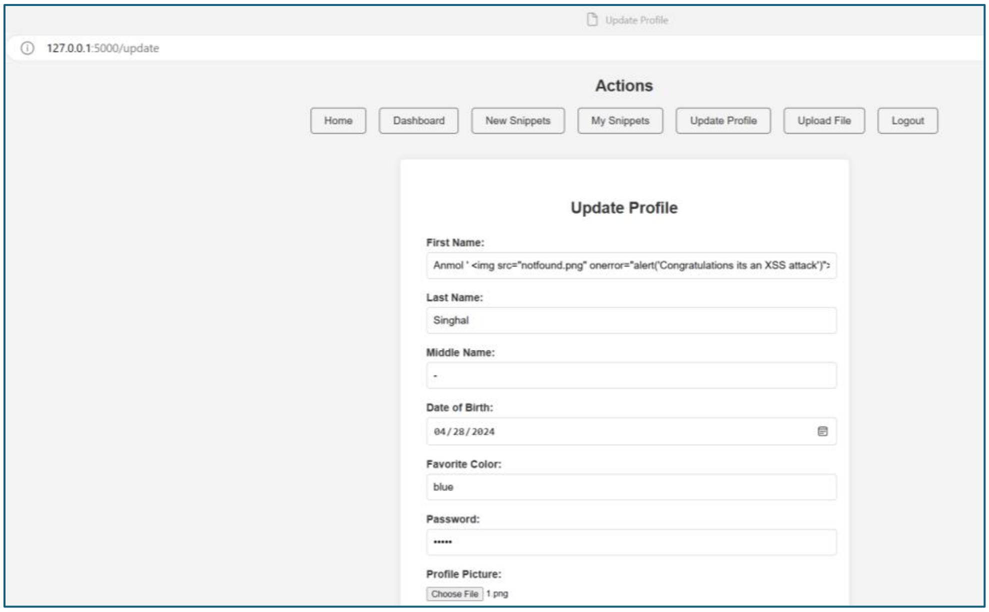
User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: Cu denver lawrence st center.
Phone Number: 9999999999
Email: Xss.attack@gmail.com
About: The Account is made to check if a browser can defend against Xss attacks or not with CSP

Recent File Uploads

image.jpg

Attack5: Image: If you go to update profile page and add script in the First name text box after writing the name '<img src="notfound.png" onerror="alert('Congratulations, XSS attack')" and put any other image in profile picture make sure that the notfound.png does not exist click on update and then go to dashboard.html page and when you open the page there will be an error and you will see the malicious script is executed.



Actions

Update Profile

First Name: Anmol ' <img src="notfound.png" onerror="alert('Congratulations its an XSS attack')">

Last Name: Singhal

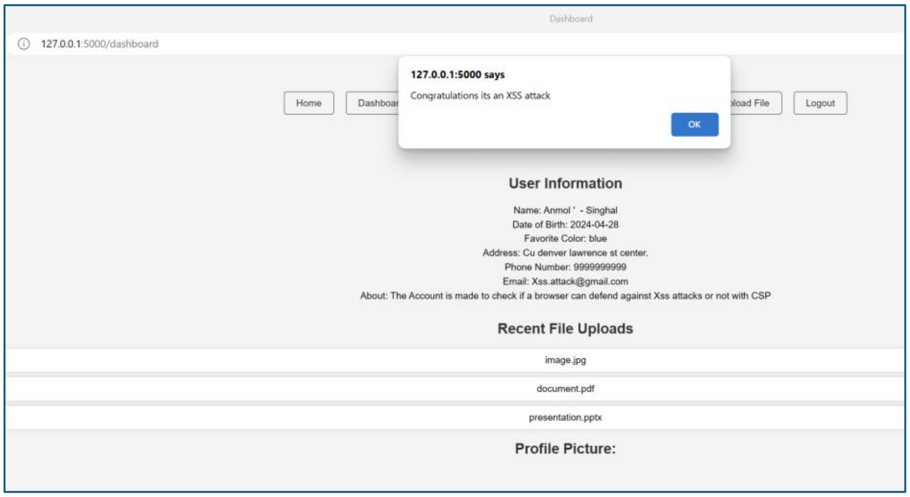
Middle Name: -

Date of Birth: 04/28/2024

Favorite Color: blue

Password: •••••

Profile Picture: 1.png



127.0.0.1:5000 says

Congratulations its an XSS attack

User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue
Address: Cu denver lawrence st center.
Phone Number: 9999999999
Email: Xss.attack@gmail.com
About: The Account is made to check if a browser can defend against Xss attacks or not with CSP

Recent File Uploads

image.jpg
document.pdf
presentation.pptx

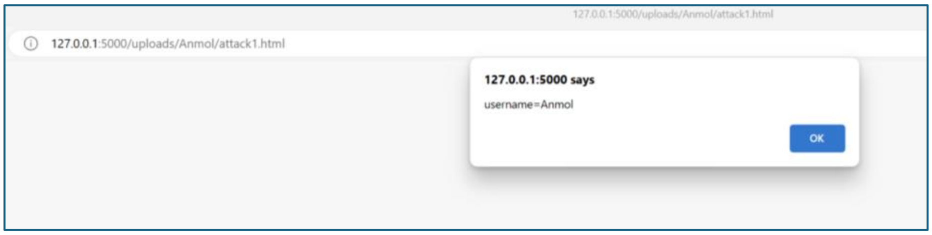
Profile Picture:

Experiments: In this section we will do our experiment attacks which will be divided into 3 sections. The description screenshot of each attack is in the earlier section, In the below section we will put only the final screenshot to see whether the attack was successful or not.

Section 1: Experiments without browser extensions: We have added no security in the code and no extension for this part to check if any browser is safe against Xss attack.

Edge: All the attacks happened successfully

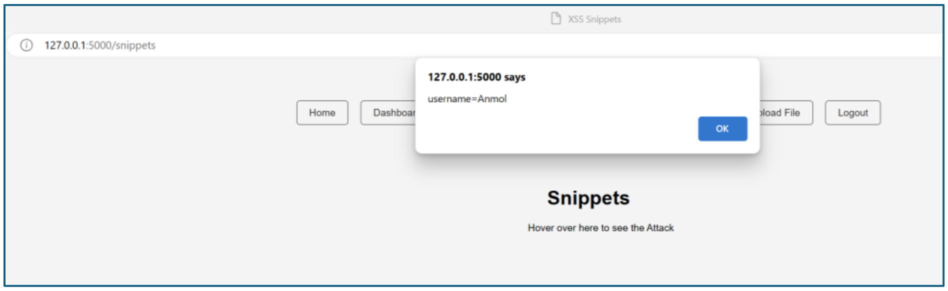
- File Upload


127.0.0.1:5000/uploads/Anmol/attack1.html
127.0.0.1:5000/uploads/Anmol/attack1.html
OK

127.0.0.1:5000 says

username=Anmol

- Snippets



127.0.0.1:5000/snippets

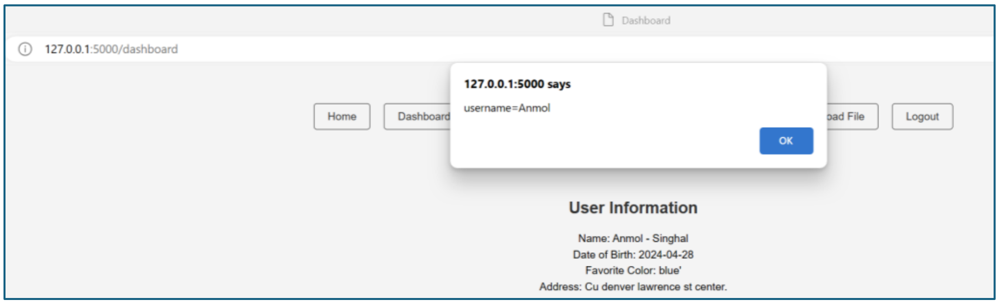
127.0.0.1:5000 says

username=Anmol

Snippets

Hover over here to see the Attack

- Text Box



127.0.0.1:5000/dashboard

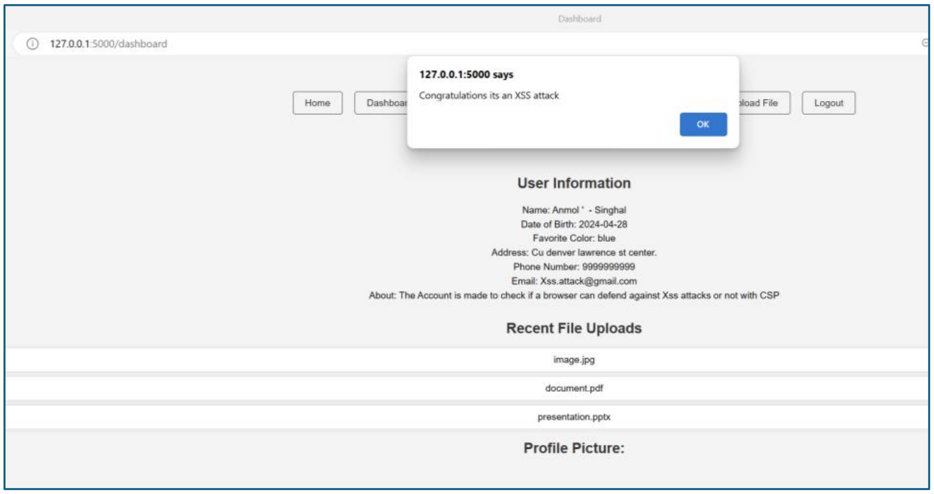
127.0.0.1:5000 says

username=Anmol

User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: Cu denver lawrence st center.

- Image



127.0.0.1:5000/dashboard

127.0.0.1:5000 says

Congratulations its an XSS attack

User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue
Address: Cu denver lawrence st center.
Phone Number: 9999999999
Email: Xss.attack@gmail.com
About: The Account is made to check if a browser can defend against Xss attacks or not with CSP

Recent File Uploads

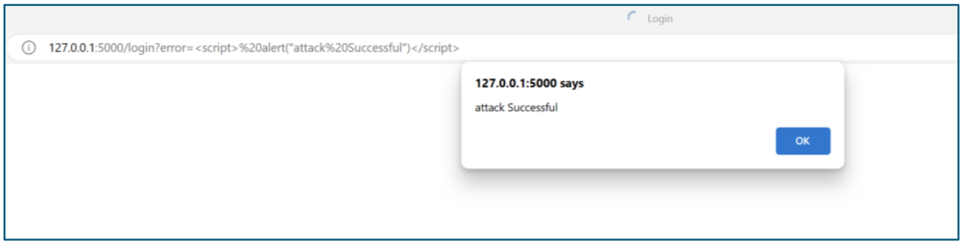
image.jpg

document.pdf

presentation.pptx

Profile Picture:

- URL



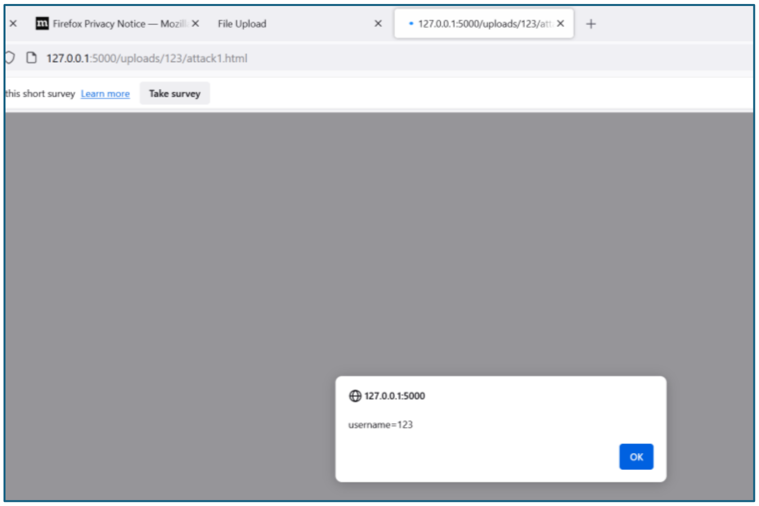
127.0.0.1:5000/login?error=<script>%20alert("attack%20Successful")</script>

127.0.0.1:5000 says

attack Successful

Firefox: All the attacks happened successfully.

- File Upload



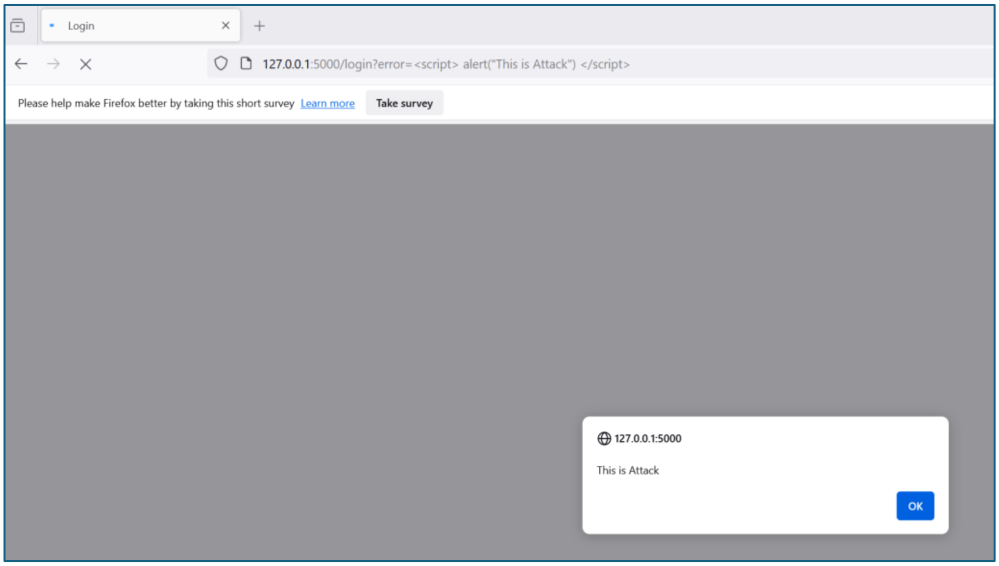
Firefox Privacy Notice — Mozil
File Upload
127.0.0.1:5000/uploads/123/att
this short survey Learn more
Take survey

127.0.0.1:5000/uploads/123/attack1.html

127.0.0.1:5000

username=123

- URL



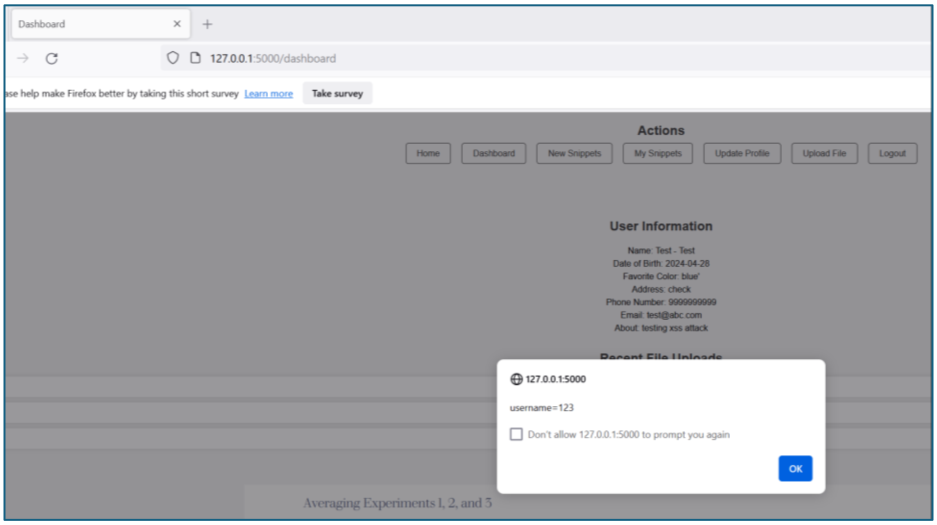
Login
Please help make Firefox better by taking this short survey Learn more
Take survey

127.0.0.1:5000/login?error=<script> alert("This is Attack") </script>

127.0.0.1:5000

This is Attack

- Text Box



127.0.0.1:5000/dashboard

User Information

Name: Test - Test
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: check
Phone Number: 9999999999
Email: test@abc.com
About: testing xss attack

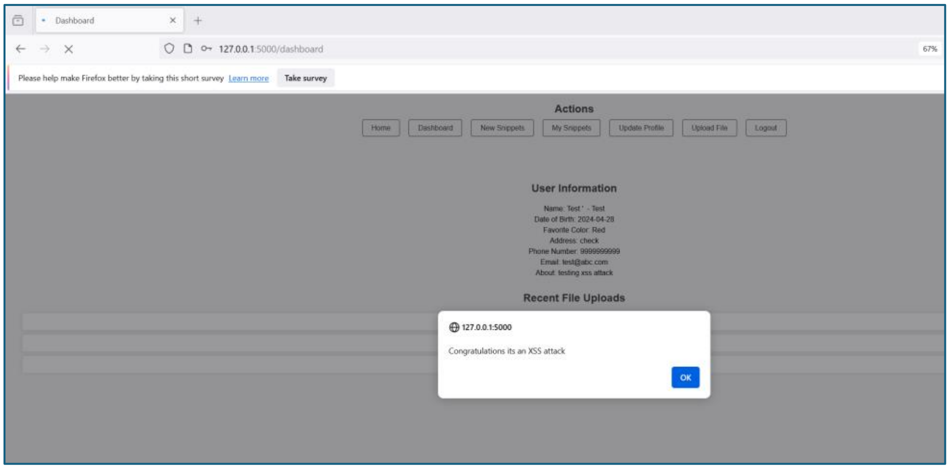
Recent File Uploads

127.0.0.1:5000

username=123

□ Don't allow 127.0.0.1:5000 to prompt you again

- Image



User Information

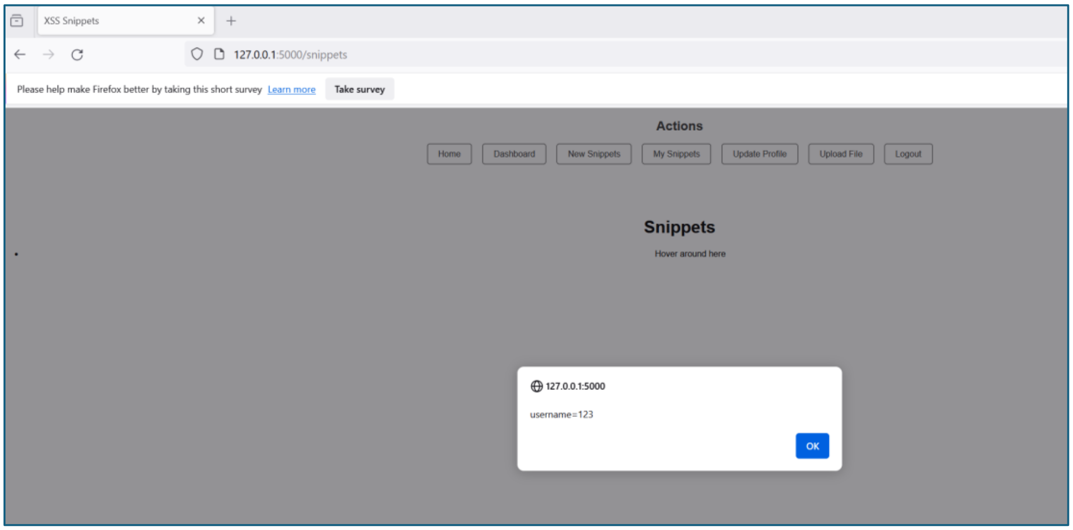
Name: Test ' - Test
Date of Birth: 2024-04-28
Favorite Color: Red
Address: check
Phone Number: 9999999999
Email: test@abc.com
About: testing xss attack

Recent File Uploads

127.0.0.1:5000

Congratulations its an XSS attack

- Snippets



Snippets

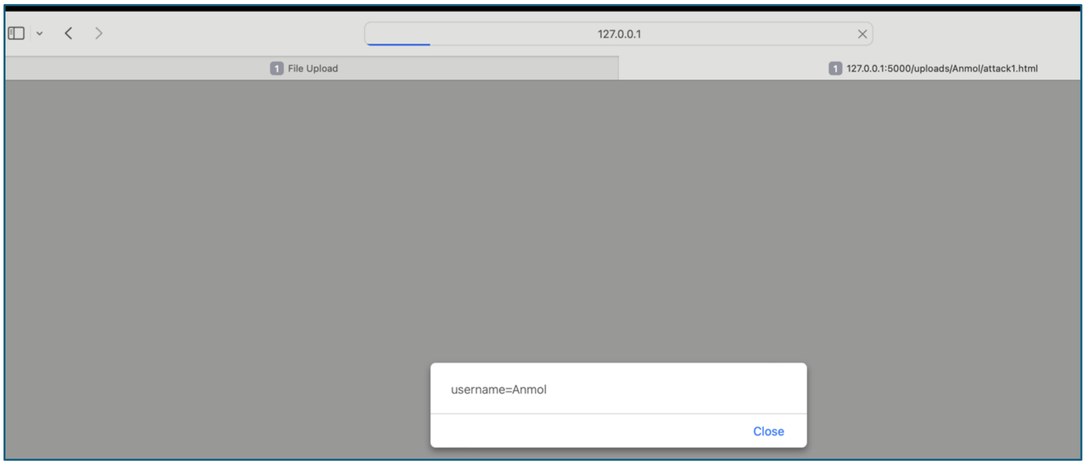
Hover around here

127.0.0.1:5000

username=123

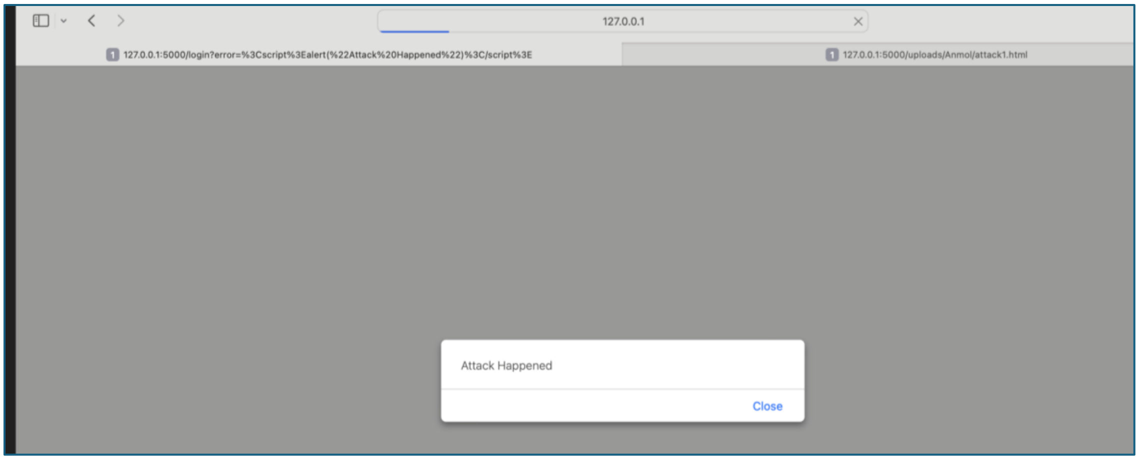
Safari: All the attacks happened successfully.

- File Upload



username=Anmol

- URL:



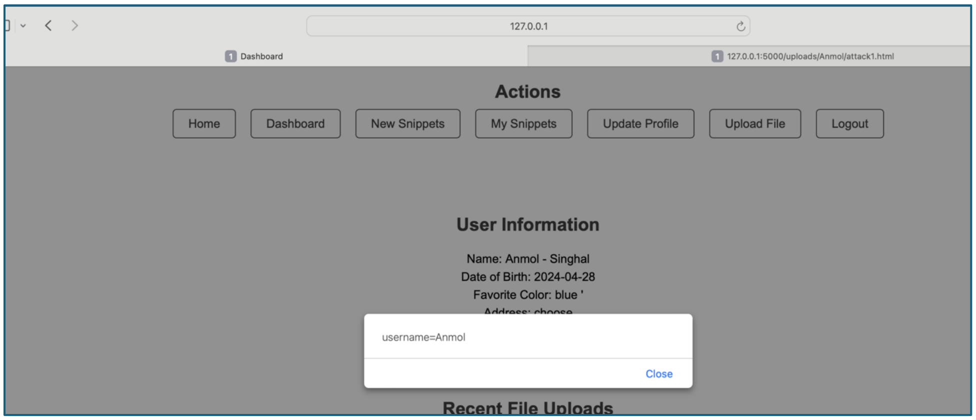
127.0.0.1

127.0.0.1:5000/login?error=%3Cscript%3Ealert(%22Attack%20Happened%22)%3C/script%3E

127.0.0.1:5000/uploads/Anmol/attack1.html

Attack Happened

- Text Box:



127.0.0.1

Dashboard

127.0.0.1:5000/uploads/Anmol/attack1.html

Actions

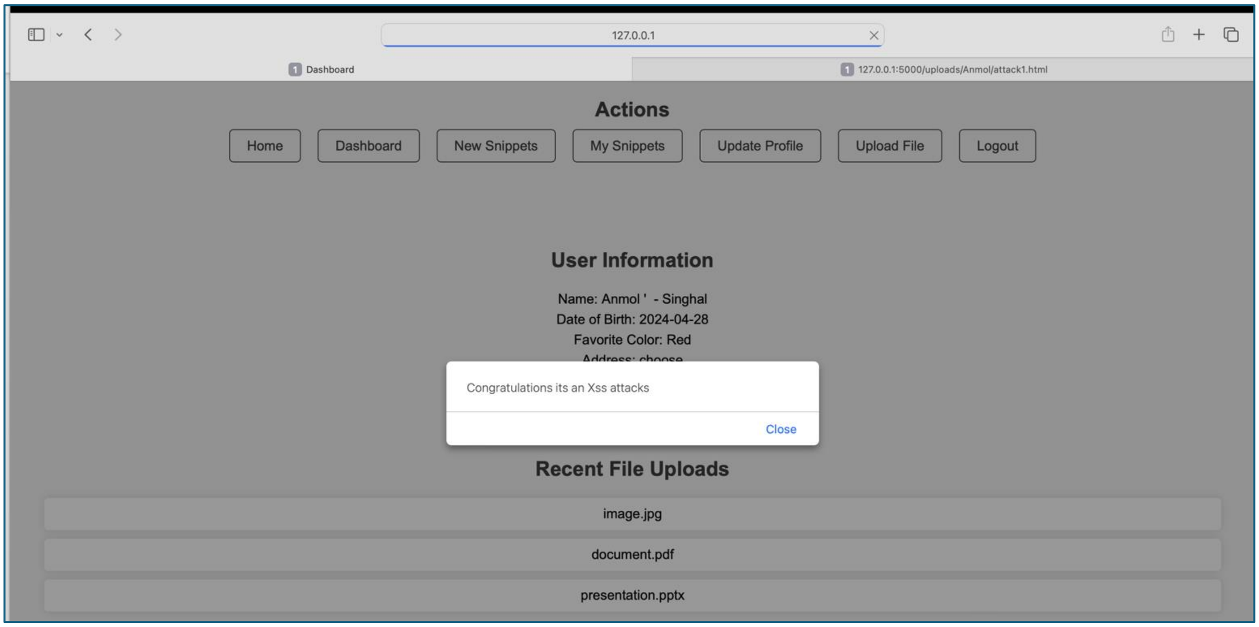
User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue '
Address: choose

username=Anmol

Recent File Uploads

- Image:



127.0.0.1

Dashboard

127.0.0.1:5000/uploads/Anmol/attack1.html

Actions

User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: Red
Address: choose

Congratulations its an Xss attacks

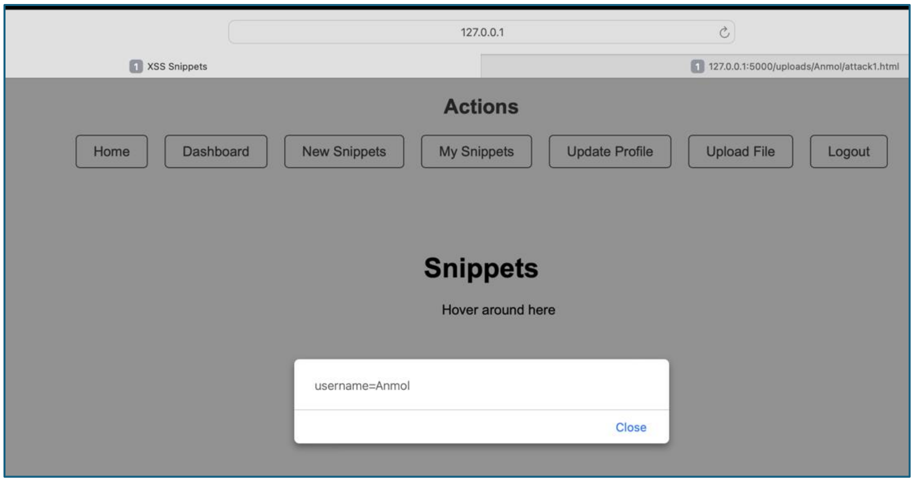
Recent File Uploads

image.jpg

document.pdf

presentation.pptx

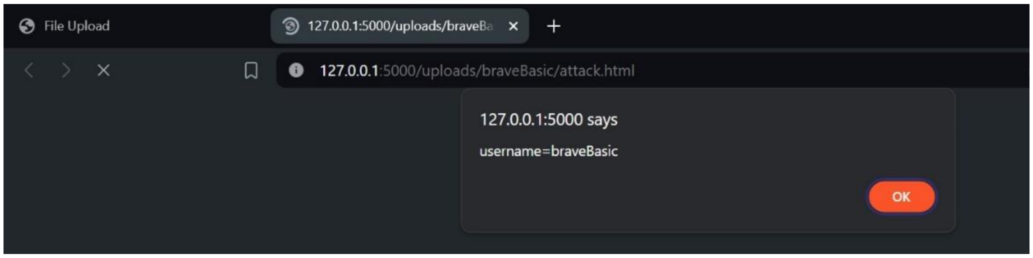
- Snippets:



username=Anmol

Brave: All the attacks happened successfully.

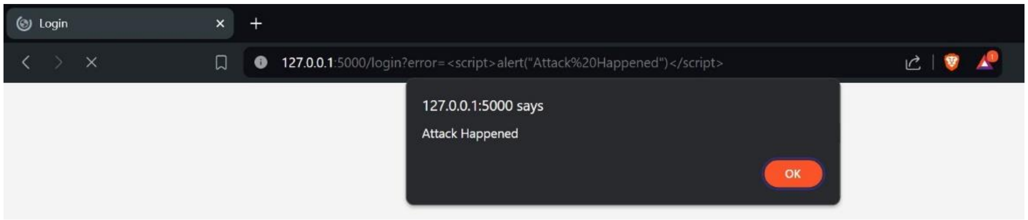
- File Upload


File Upload
127.0.0.1:5000/uploads/braveBa
127.0.0.1:5000/uploads/braveBasic/attack.html
OK

127.0.0.1:5000 says

username=braveBasic

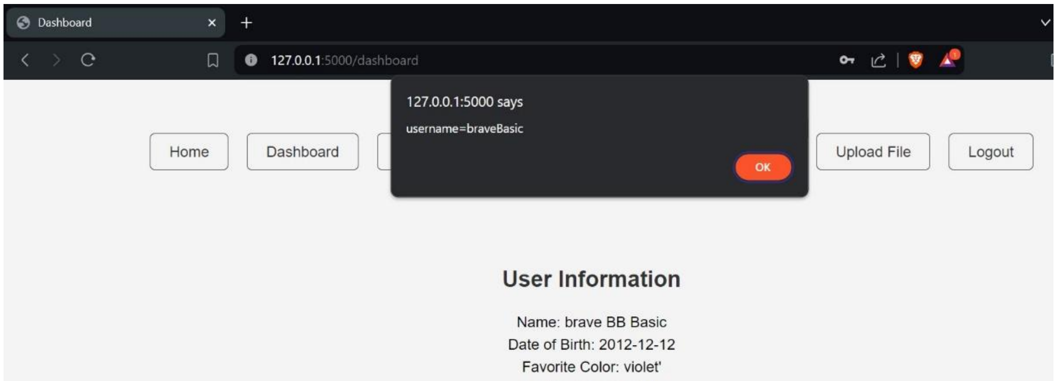
- URL:


Login
127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>
OK

127.0.0.1:5000 says

Attack Happened

- Text Box:



127.0.0.1:5000 says

username=braveBasic

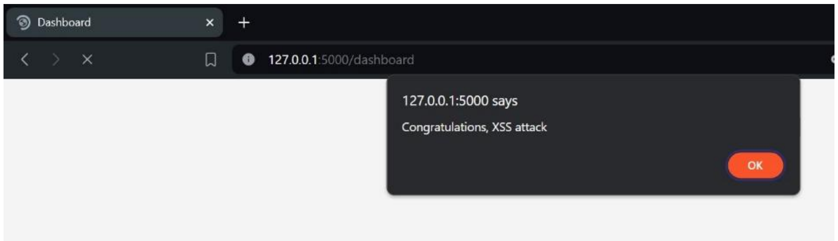
User Information

Name: brave BB Basic

Date of Birth: 2012-12-12

Favorite Color: violet'

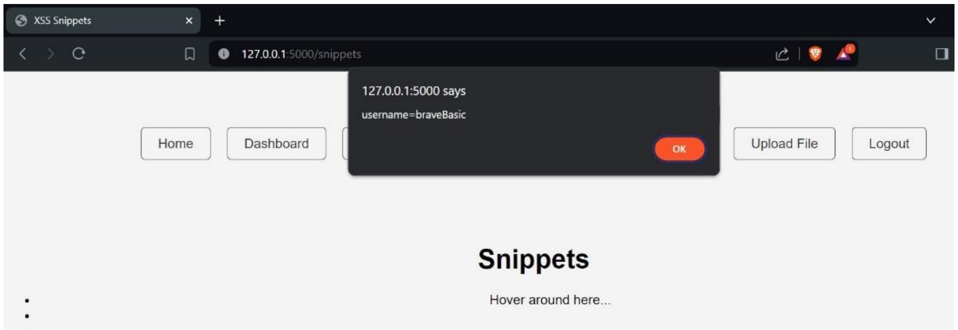
- Image:



127.0.0.1:5000 says

Congratulations, XSS attack

- Snippets:



127.0.0.1:5000 says

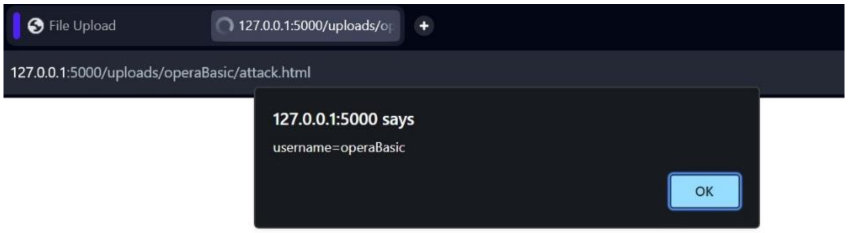
username=braveBasic

Snippets

Hover around here...

Opera: All the attacks happened successfully

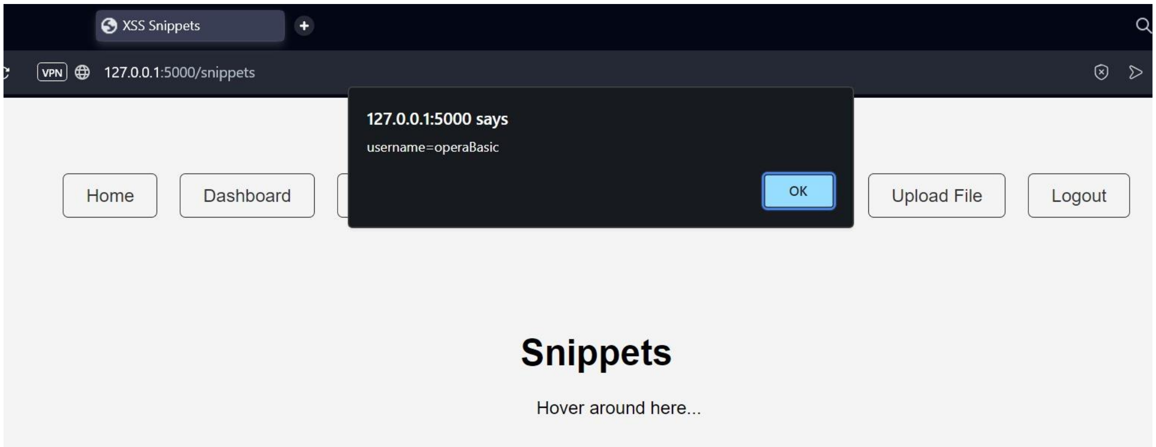
- File Upload



127.0.0.1:5000 says

username=operaBasic

- Snippets



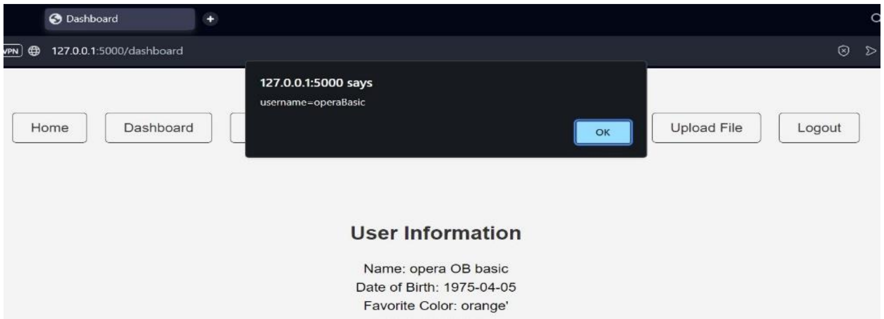
127.0.0.1:5000 says

username=operaBasic

Snippets

Hover around here...

- Text Box



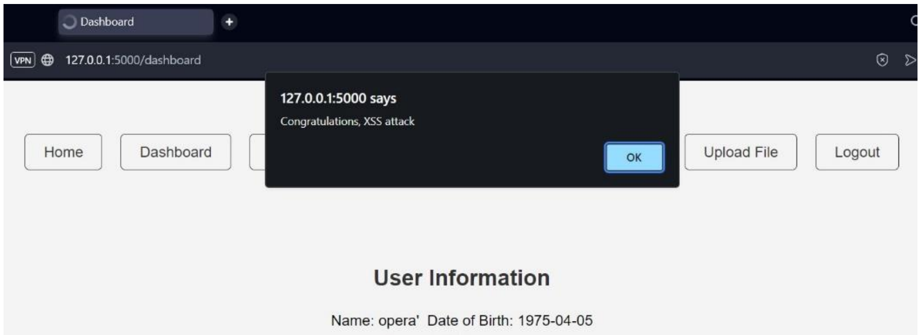
127.0.0.1:5000 says

username=operaBasic

User Information

Name: opera OB basic
Date of Birth: 1975-04-05
Favorite Color: orange'

- Image



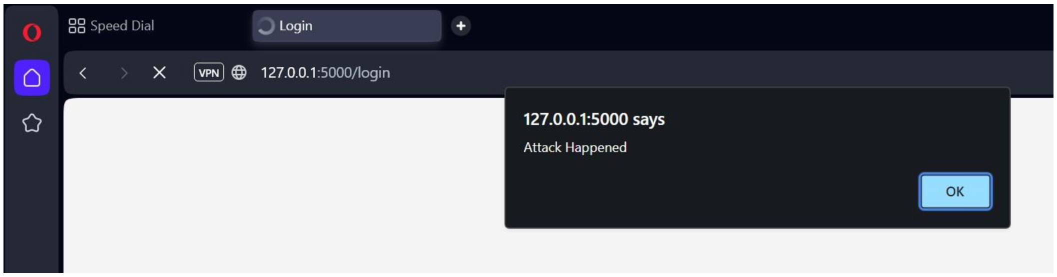
127.0.0.1:5000 says

Congratulations, XSS attack

User Information

Name: opera' Date of Birth: 1975-04-05

- URL

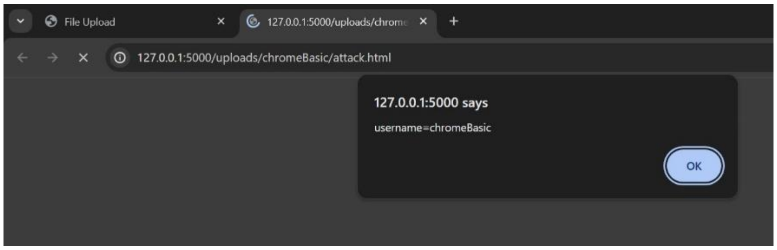


127.0.0.1:5000 says

Attack Happened

Chrome: All the attacks happened successfully

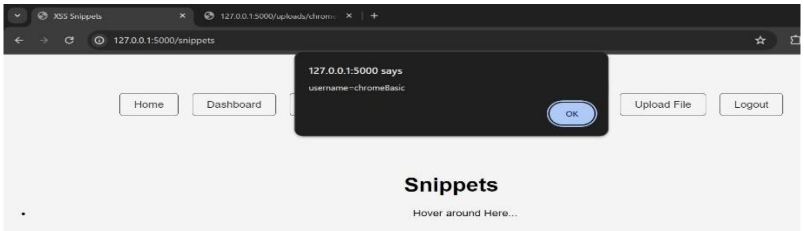
- File Upload


File Upload
127.0.0.1:5000/uploads/chrome
127.0.0.1:5000/uploads/chromeBasic/attack.html
OK

127.0.0.1:5000 says

username=chromeBasic

- Snippets



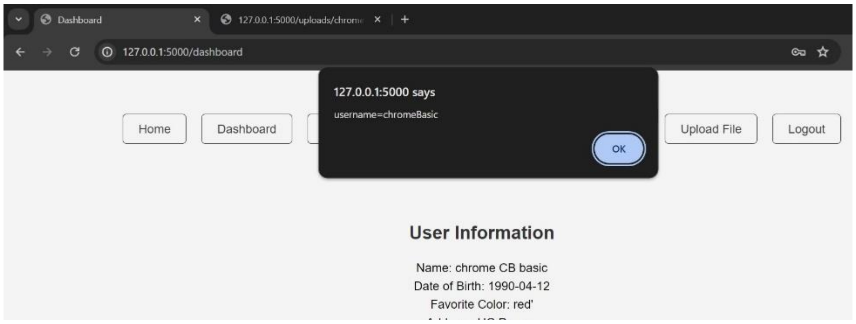
127.0.0.1:5000 says

username=chromeBasic

Snippets

- Hover around Here...

- Text Box



127.0.0.1:5000 says

username=chromeBasic

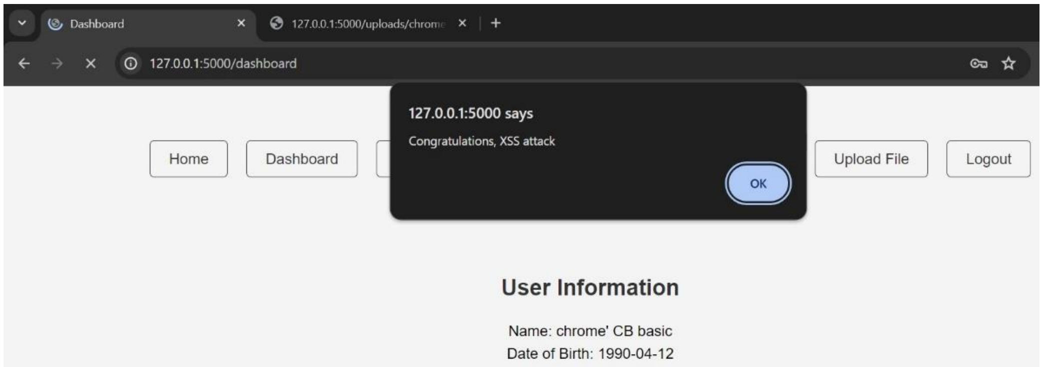
User Information

Name: chrome CB basic

Date of Birth: 1990-04-12

Favorite Color: red'

- Image



127.0.0.1:5000 says

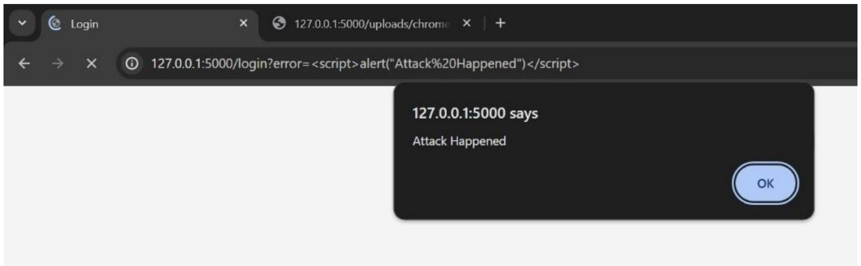
Congratulations, XSS attack

User Information

Name: chrome' CB basic

Date of Birth: 1990-04-12

- URL



127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

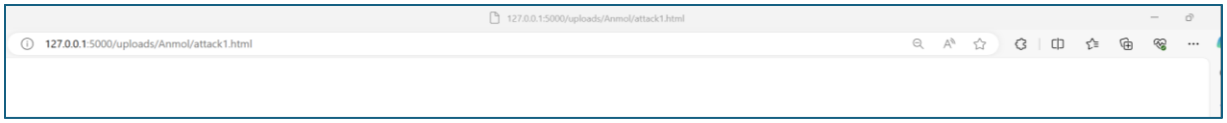
127.0.0.1:5000 says

Attack Happened

Section 2: Experiments without browser extensions: We have added security in the form of extension for this part to check which browsers are safe with which extensions to mitigate XSS attack.

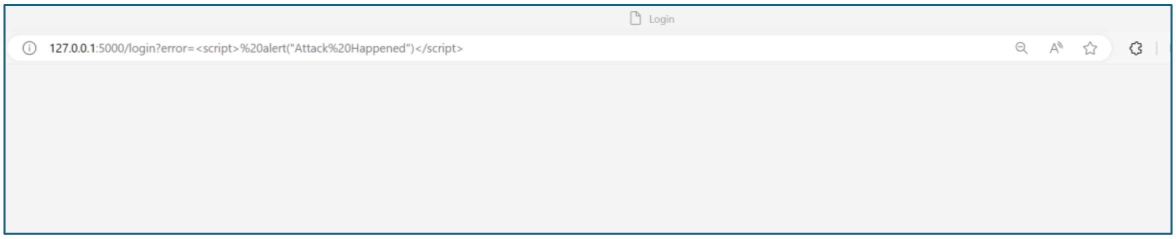
Edge: With extension No script: All the attacks did not happen.

- File Upload:



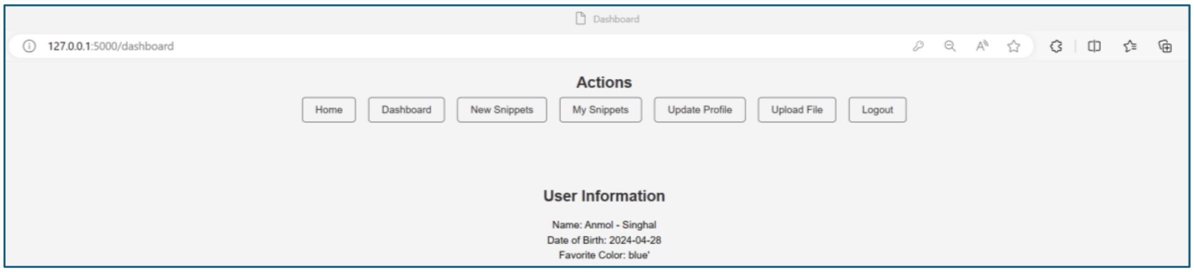
127.0.0.1:5000/uploads/Anmol/attack1.html

- URL:



127.0.0.1:5000/login?error=<script>%20alert("Attack%20Happened")</script>

- Text Box:



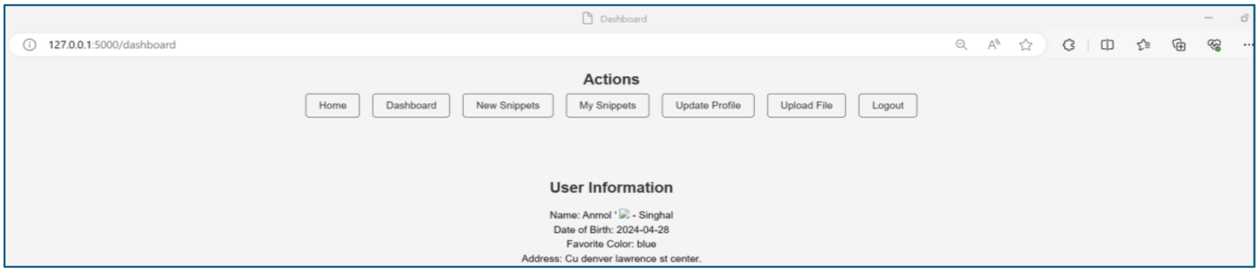
127.0.0.1:5000/dashboard

Actions

User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'

- Image:



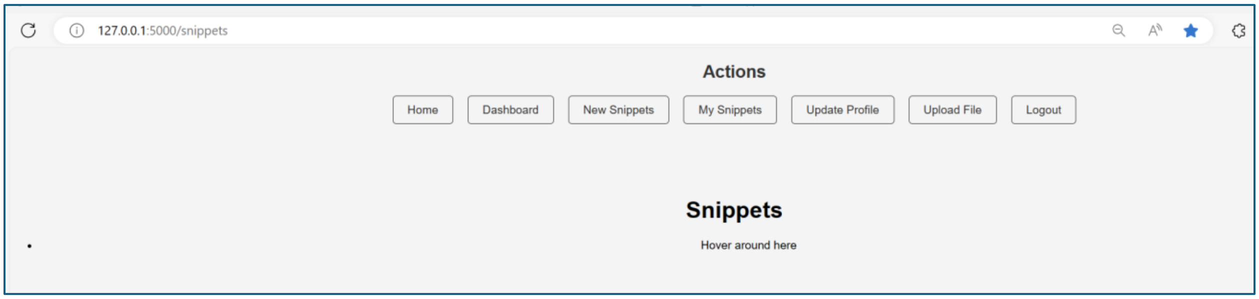
127.0.0.1:5000/dashboard

Actions

User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue
Address: Cu denver lawrence st center.

- Snippets:



127.0.0.1:5000/snippets

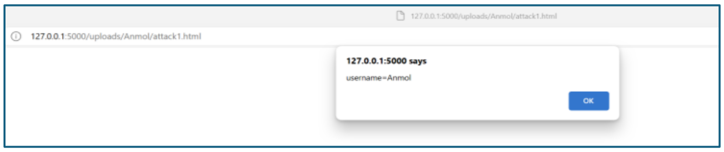
Actions

Snippets

- Hover around here

Edge: With extension Netcraft: All the attacks happened.

- File Upload:

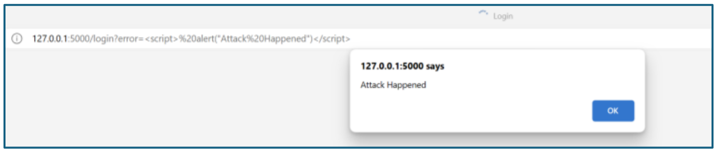


127.0.0.1:5000/uploads/Anmol/attack1.html

127.0.0.1:5000 says

username=Anmol

- URL:

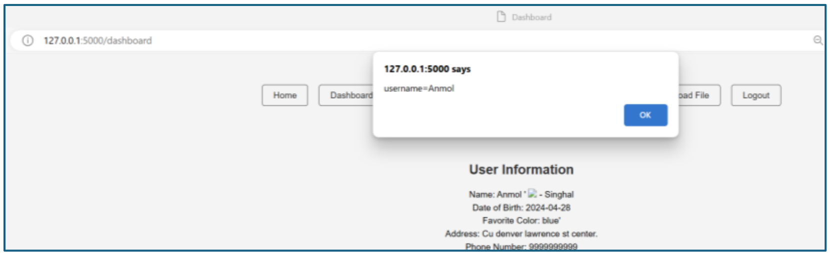


127.0.0.1:5000/login?error=<script>%20alert("Attack%20Happened")</script>

127.0.0.1:5000 says

Attack Happened

- Text Box:



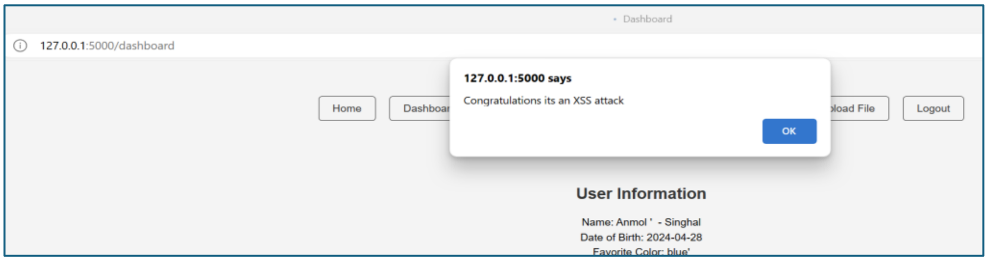
127.0.0.1:5000 says

username=Anmol

User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: Cu denver lawrence st center.
Phone Number: 9999999999

- Image:



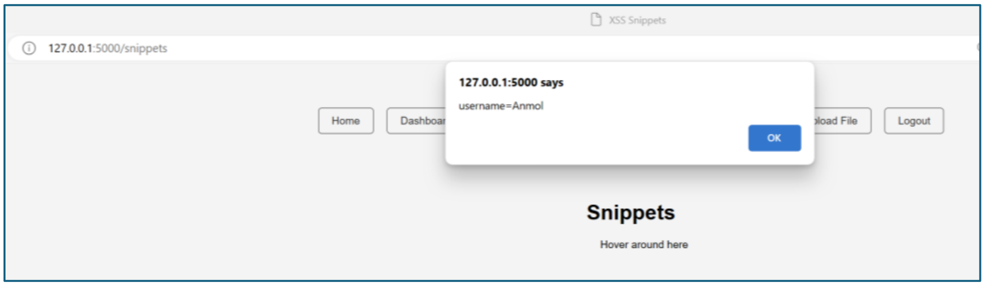
127.0.0.1:5000 says

Congratulations its an XSS attack

User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'

- Snippets:



127.0.0.1:5000 says

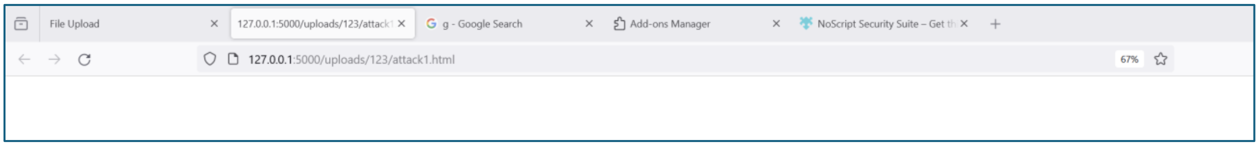
username=Anmol

Snippets

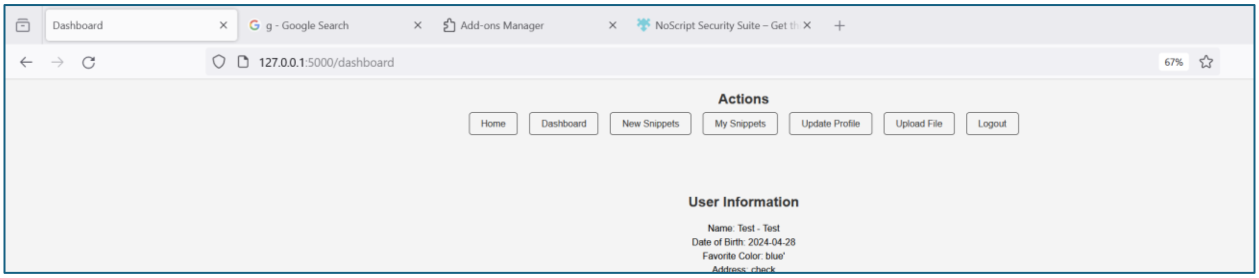
Hover around here

Firefox: With extension No Script: All the attacks did not happen.

- File Upload:


File Upload
127.0.0.1:5000/uploads/123/attack1
g - Google Search
Add-ons Manager
NoScript Security Suite – Get th
127.0.0.1:5000/uploads/123/attack1.html
67%

- Text Box:

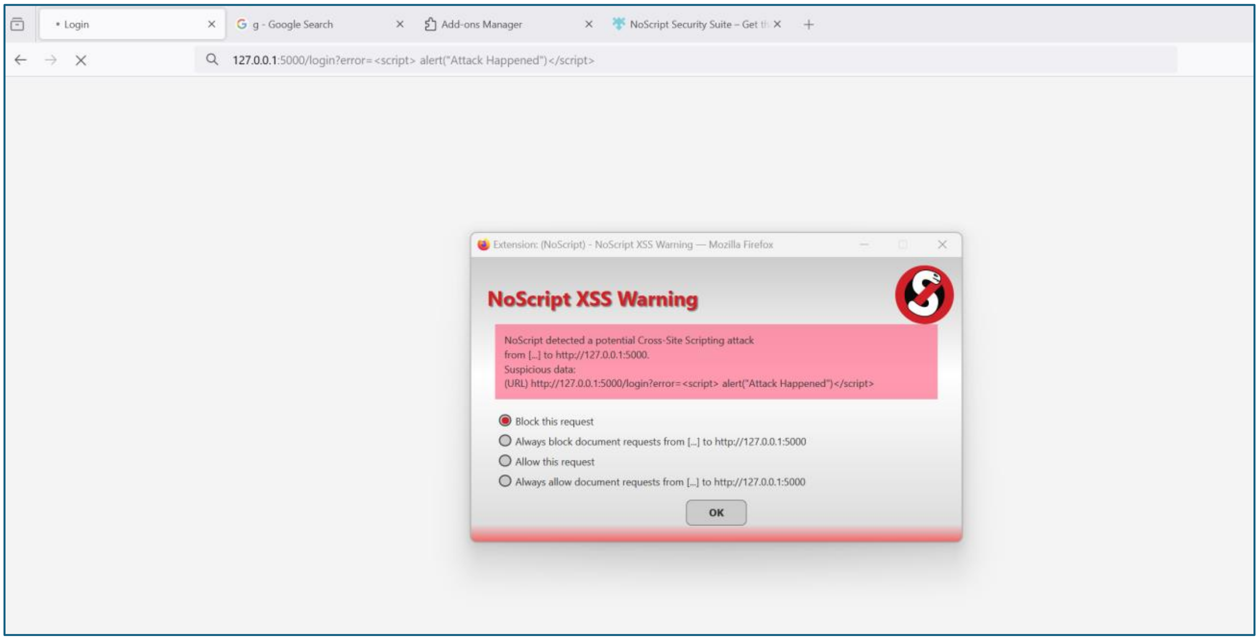


Actions

User Information

Name: Test - Test
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: check

- URL:



127.0.0.1:5000/login?error=<script> alert("Attack Happened")</script>

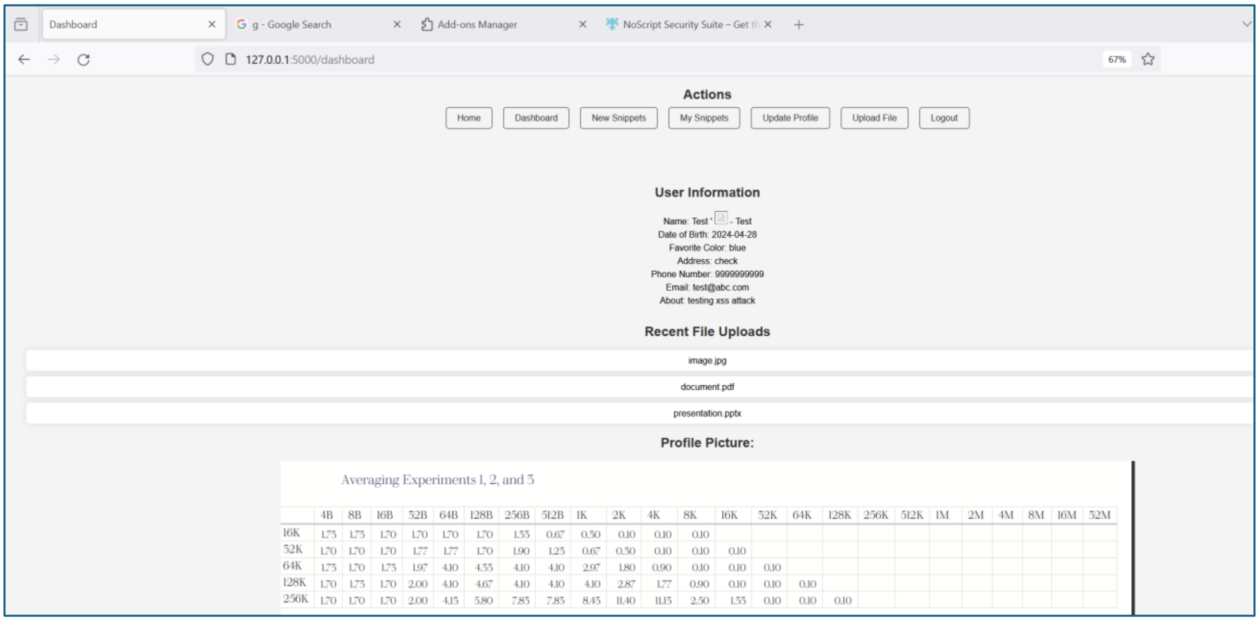
Extension: (NoScript) - NoScript XSS Warning — Mozilla Firefox

NoScript XSS Warning

NoScript detected a potential Cross-Site Scripting attack
from [...] to http://127.0.0.1:5000.
Suspicious data:
(URL) http://127.0.0.1:5000/login?error=<script> alert("Attack Happened")</script>

● Block this request
○ Always block document requests from [...] to http://127.0.0.1:5000
○ Allow this request
○ Always allow document requests from [...] to http://127.0.0.1:5000

- Image:



127.0.0.1:5000/dashboard

Actions

User Information

Name: Test ' - Test
Date of Birth: 2024-04-28
Favorite Color: blue
Address: check
Phone Number: 9999999999
Email: test@abc.com
About: testing xss attack

Recent File Uploads

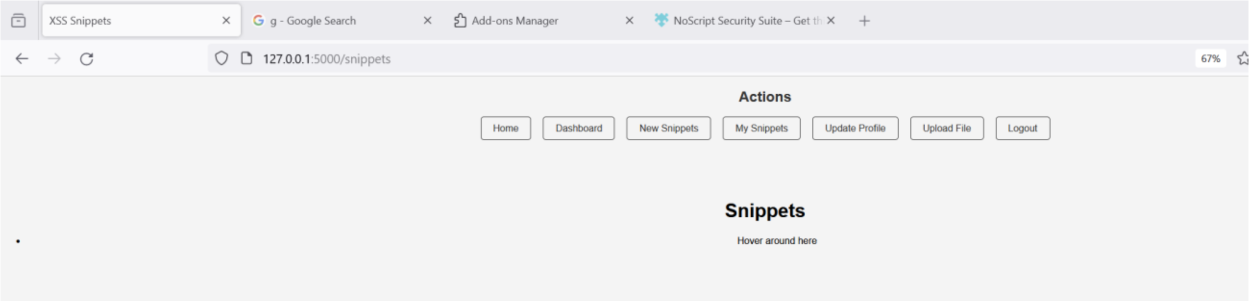
image.jpg
document.pdf
presentation.pptx

Profile Picture:

Averaging Experiments 1, 2, and 3

	4B	8B	16B	32B	64B	128B	256B	512B	1K	2K	4K	8K	16K	32K	64K	128K	256K	512K	1M	2M	4M	8M	16M	32M
16K	1.73	1.73	1.70	1.70	1.70	1.70	1.33	0.67	0.30	0.10	0.10	0.10												
32K	1.70	1.70	1.70	1.77	1.77	1.70	1.90	1.23	0.67	0.30	0.10	0.10	0.10											
64K	1.73	1.70	1.73	1.97	4.10	4.33	4.10	4.10	2.97	1.80	0.90	0.10	0.10	0.10										
128K	1.70	1.73	1.70	2.00	4.10	4.67	4.10	4.10	4.10	2.87	1.77	0.90	0.10	0.10	0.10									
256K	1.70	1.70	1.70	2.00	4.13	5.80	7.83	7.83	8.43	11.40	11.13	2.30	1.33	0.10	0.10	0.10								

- Snippets:



127.0.0.1:5000/snippets

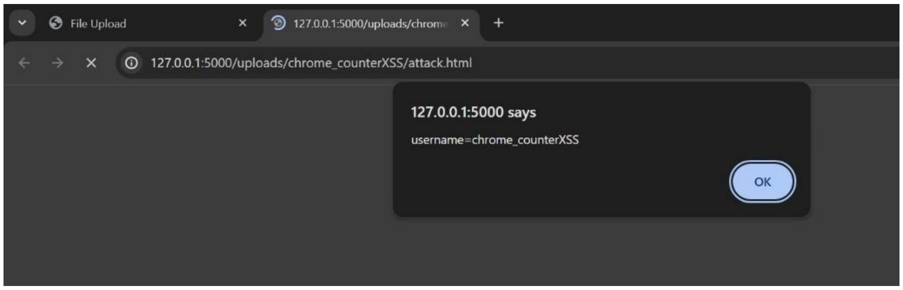
Actions

Snippets

- Hover around here

Chrome: With extension Counter XSS: All the attacks did happen.

- File Upload:

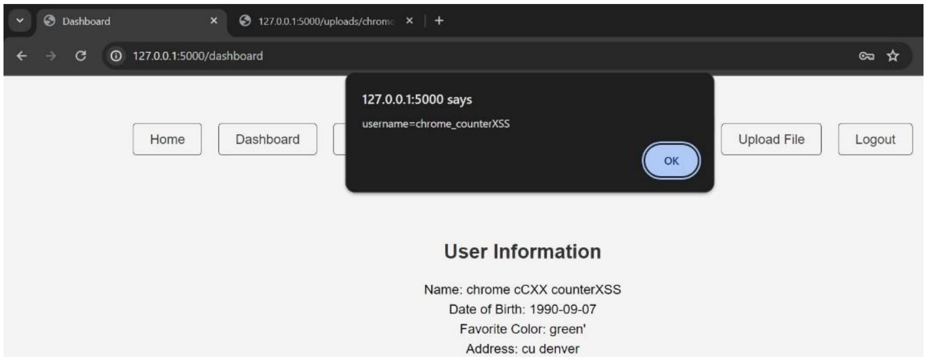


127.0.0.1:5000/uploads/chrome_counterXSS/attack.html

127.0.0.1:5000 says

username=chrome_counterXSS

- Text Box:



127.0.0.1:5000/dashboard

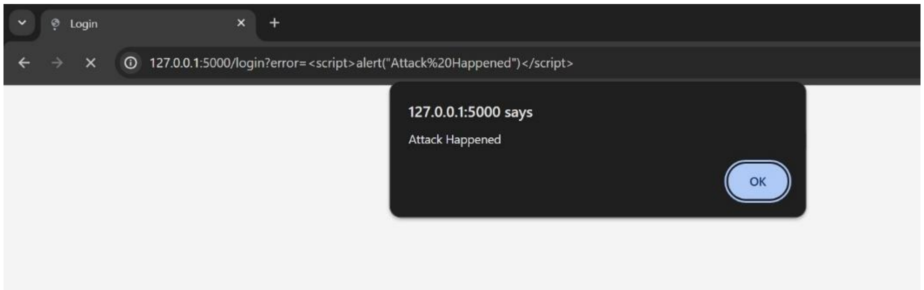
127.0.0.1:5000 says

username=chrome_counterXSS

User Information

Name: chrome cCXX counterXSS
Date of Birth: 1990-09-07
Favorite Color: green'
Address: cu denver

- URL:

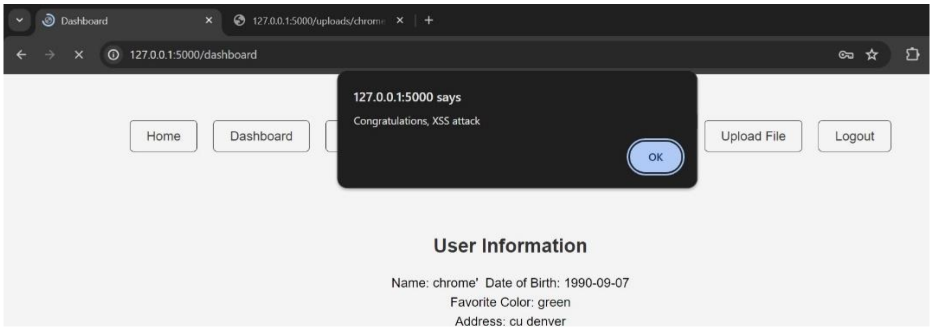


127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

127.0.0.1:5000 says

Attack Happened

- Image:



127.0.0.1:5000/dashboard

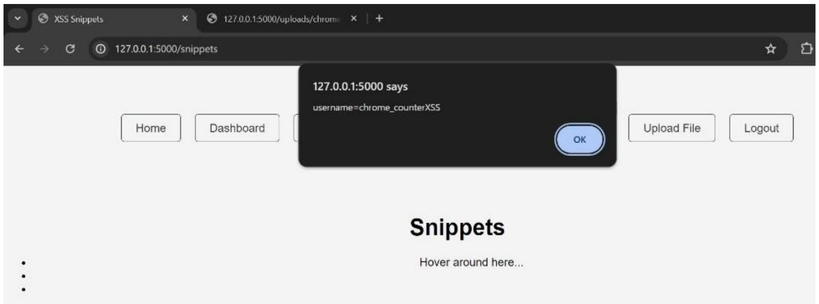
127.0.0.1:5000 says

Congratulations, XSS attack

User Information

Name: chrome' Date of Birth: 1990-09-07
Favorite Color: green
Address: cu denver

- Snippets:



127.0.0.1:5000/snippets

127.0.0.1:5000 says

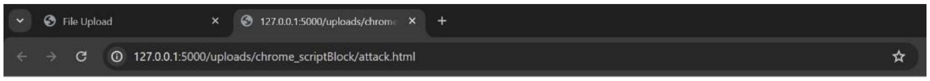
username=chrome_counterXSS

Snippets

Hover around here...

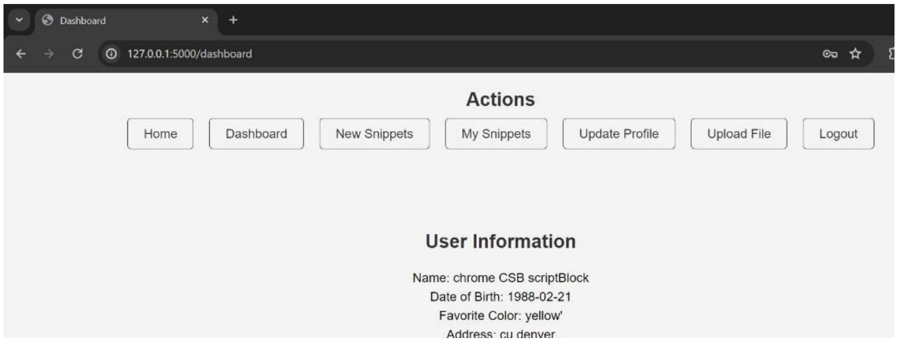
Chrome: With extension Script Block: All the attacks did not happen.

- File Upload:



127.0.0.1:5000/uploads/chrome_scriptBlock/attack.html

- Text Box:



127.0.0.1:5000/dashboard

Actions

User Information

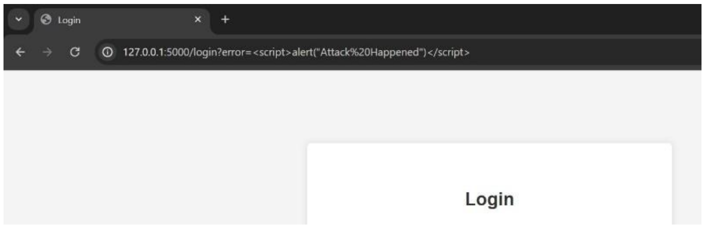
Name: chrome CSB scriptBlock

Date of Birth: 1988-02-21

Favorite Color: yellow'

Address: cu denver

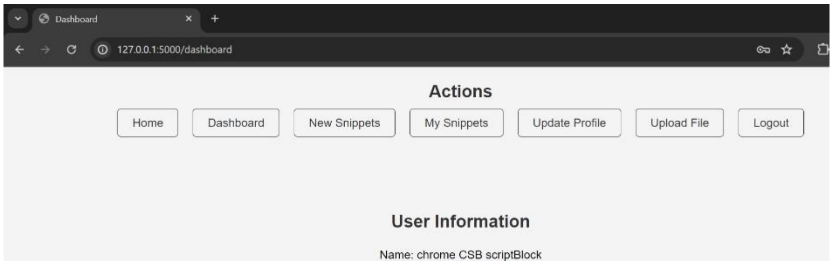
- URL:



127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

Login

- Image:



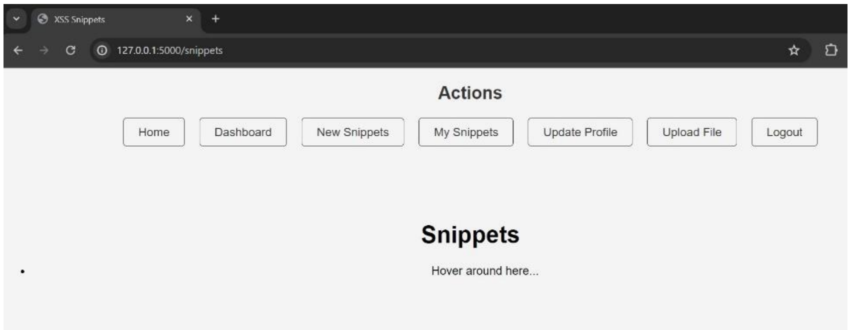
127.0.0.1:5000/dashboard

Actions

User Information

Name: chrome CSB scriptBlock

- Snippets:

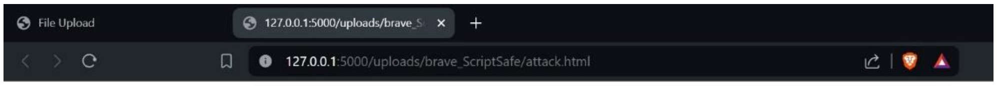


Snippets

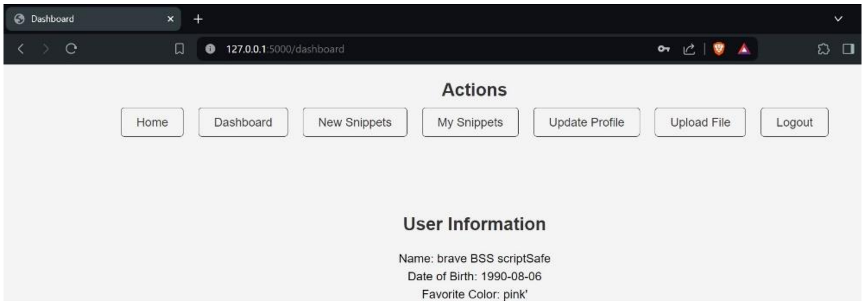
- Hover around here...

Brave: With extension Script Safe: All the attacks did not happen.

- File Upload:


File Upload
127.0.0.1:5000/uploads/brave_S
127.0.0.1:5000/uploads/brave_ScriptSafe/attack.html

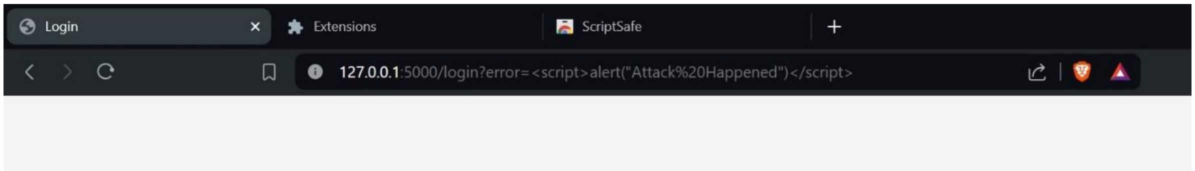
- Text Box:



User Information

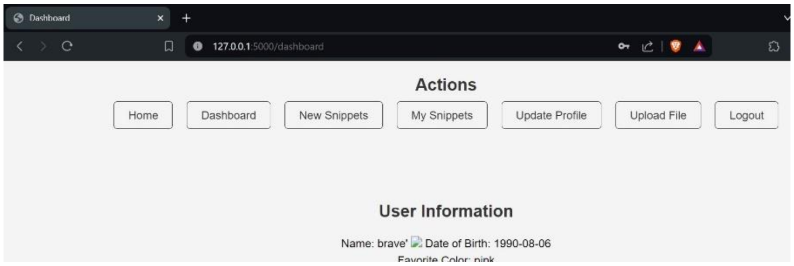
Name: brave BSS scriptSafe
Date of Birth: 1990-08-06
Favorite Color: pink'

- URL:



127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

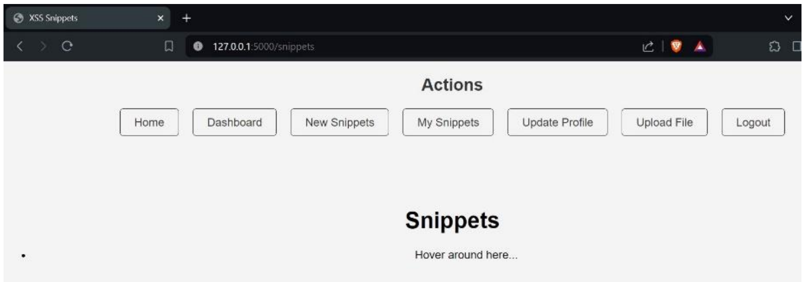
- Image:



User Information

Name: brave' Date of Birth: 1990-08-06
Favorite Color: pink

- Snippets:



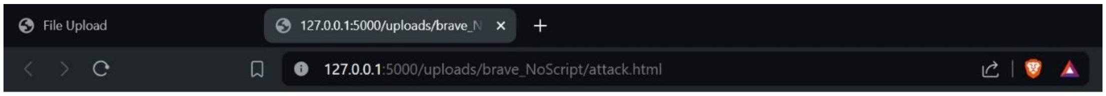
127.0.0.1:5000/snippets

Snippets

- Hover around here...

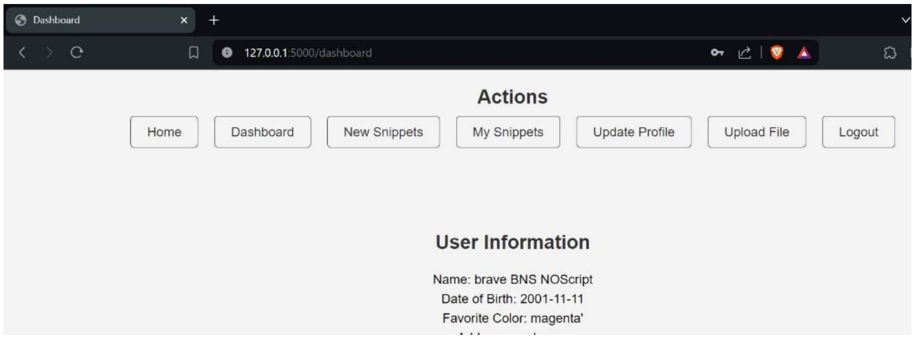
Brave: With extension No Script: All the attacks did not happen.

- File Upload:



127.0.0.1:5000/uploads/brave_NoScript/attack.html

- Text Box:

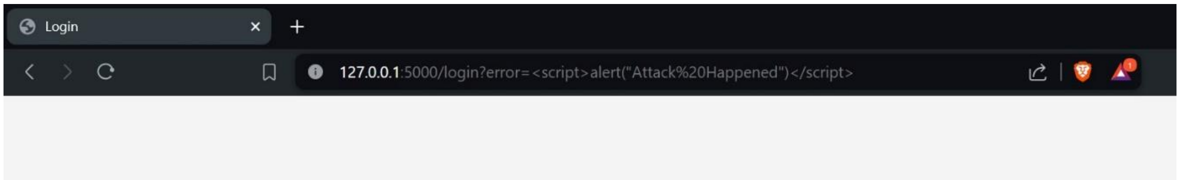


127.0.0.1:5000/dashboard

User Information

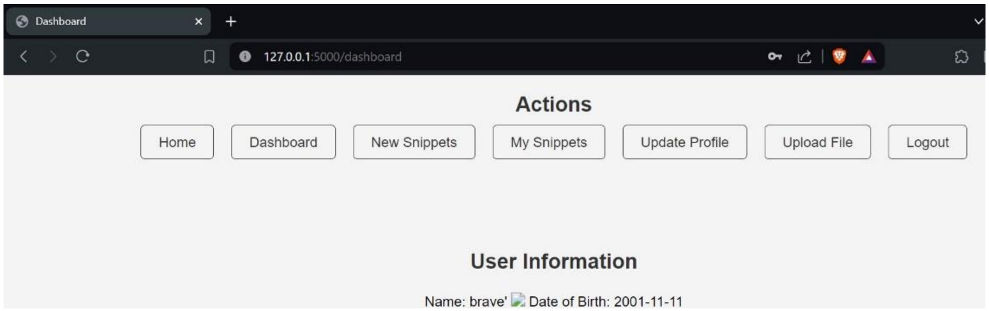
Name: brave BNS NOScript
Date of Birth: 2001-11-11
Favorite Color: magenta'

- URL:



127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

- Image:

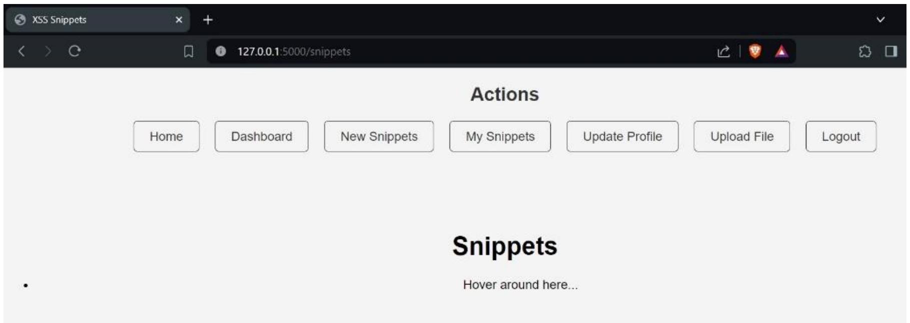


127.0.0.1:5000/dashboard

User Information

Name: brave' Date of Birth: 2001-11-11

- Snippets:



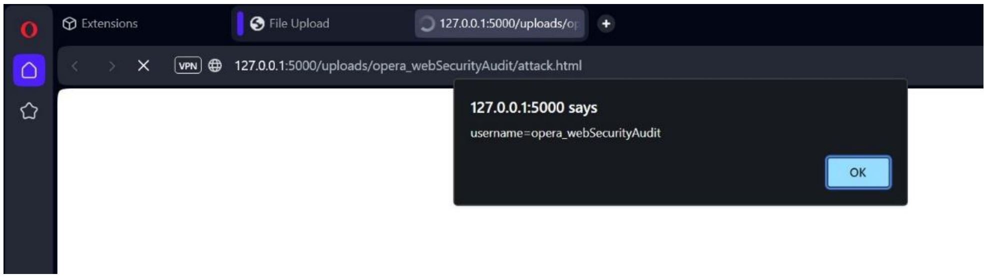
Actions

Snippets

Hover around here...

Opera: With extension Web security Audit: All the attacks did happen.

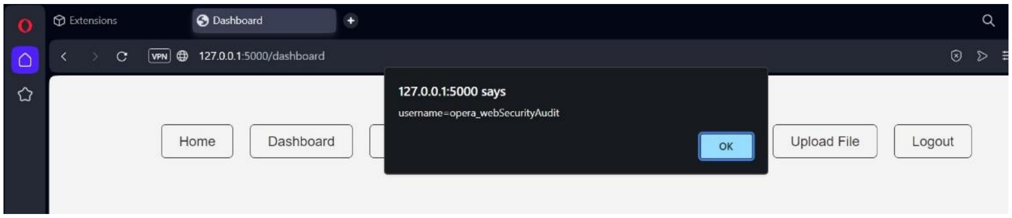
- File Upload:



127.0.0.1:5000 says

username=opera_webSecurityAudit

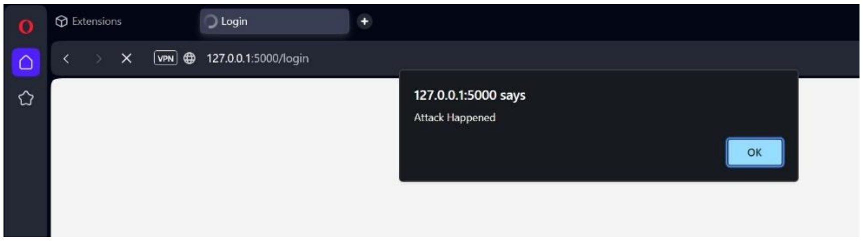
- Text Box:



127.0.0.1:5000 says

username=opera_webSecurityAudit

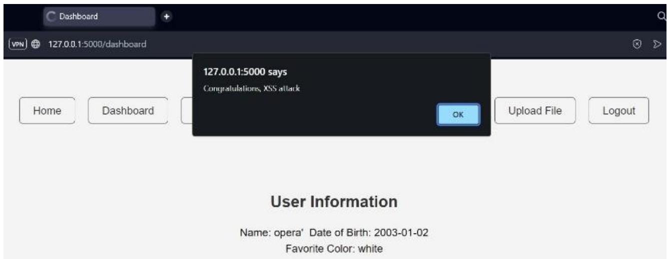
- URL:



127.0.0.1:5000 says

Attack Happened

- Image:



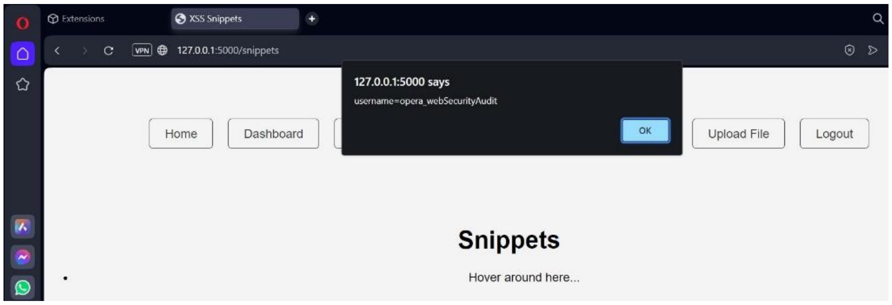
127.0.0.1:5000 says

Congratulations, XSS attack

User Information

Name: opera' Date of Birth: 2003-01-02
Favorite Color: white

- Snippets:



127.0.0.1:5000/snippets

127.0.0.1:5000 says

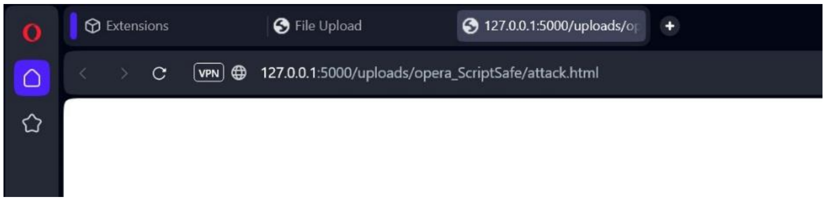
username=opera_webSecurityAudit

Snippets

- Hover around here...

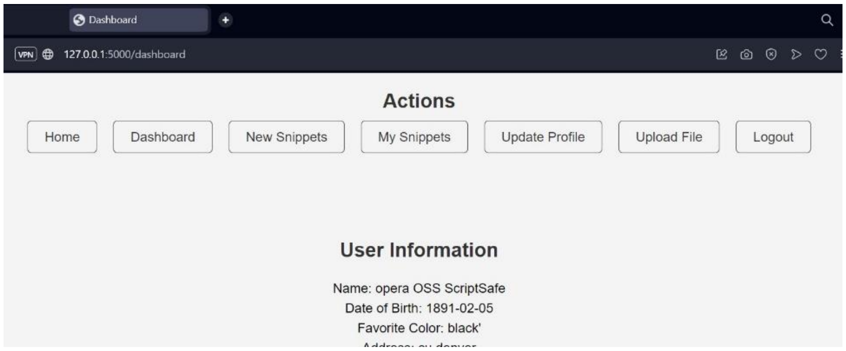
Opera: With extension Script safe: All the attacks did not happen.

- File Upload:



127.0.0.1:5000/uploads/opera_ScriptSafe/attack.html

- Text Box:



127.0.0.1:5000/dashboard

Actions

User Information

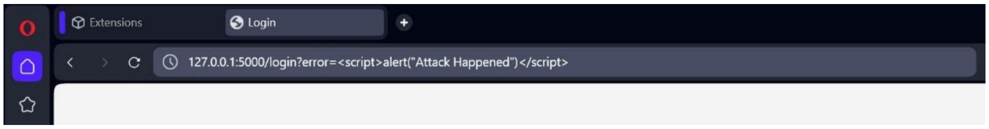
Name: opera OSS ScriptSafe

Date of Birth: 1891-02-05

Favorite Color: black'

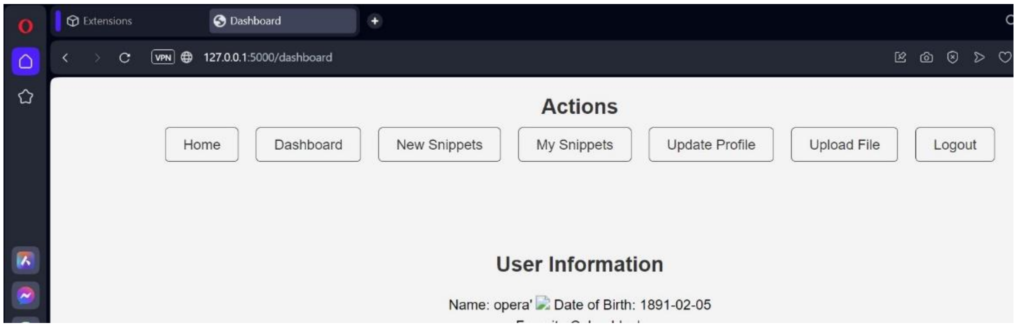
Address: co denver

- URL:



127.0.0.1:5000/login?error=<script>alert("Attack Happened")</script>

- Image:



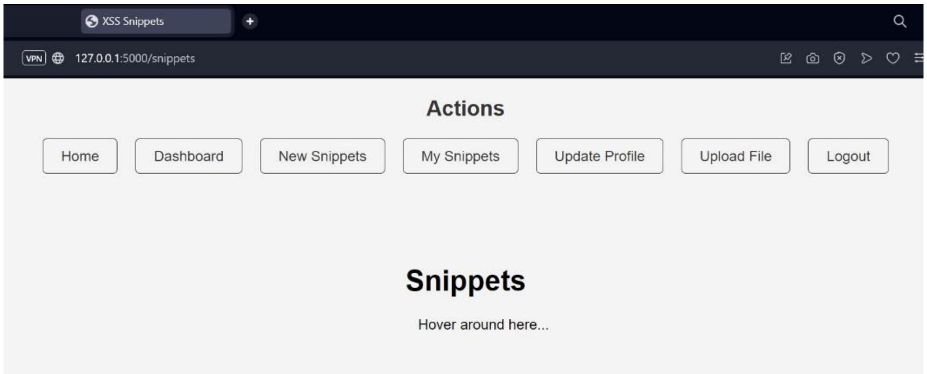
127.0.0.1:5000/dashboard

Actions

User Information

Name: opera' Date of Birth: 1891-02-05

- Snippets:



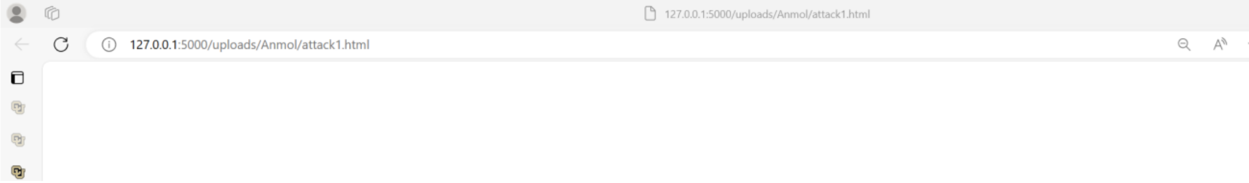
Snippets

Hover around here...

Section 3: Experiments with CSP We have added security in the code by adding content security policy for this part to check if any browser is safer if we added just one simple policy to the website.

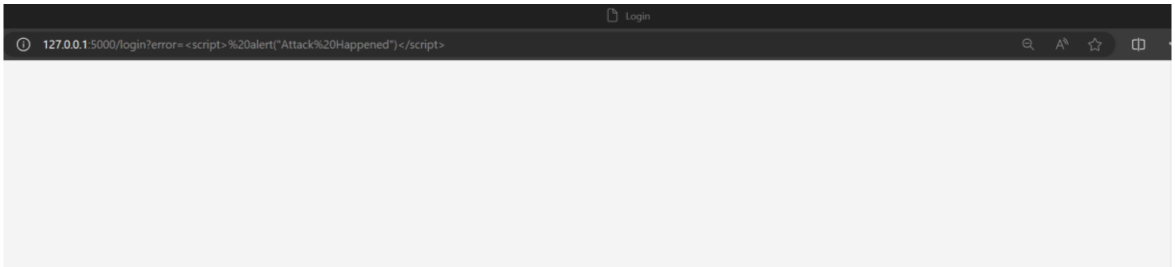
Edge: Attack did not happen.

- File Upload:



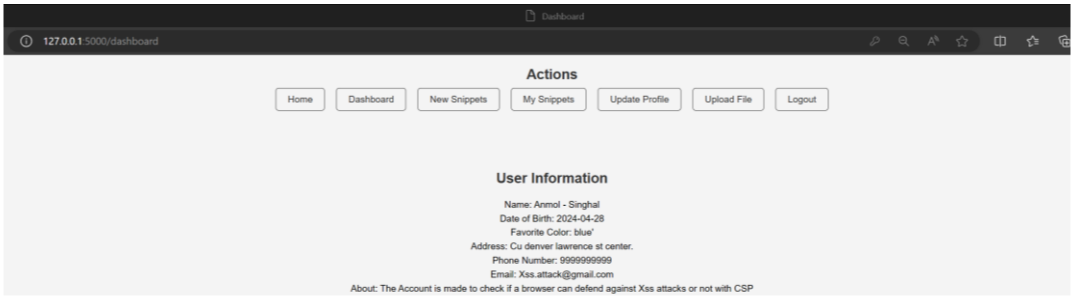
127.0.0.1:5000/uploads/Anmol/attack1.html

- URL:



127.0.0.1:5000/login?error=<script>%20alert("Attack%20Happened")</script>

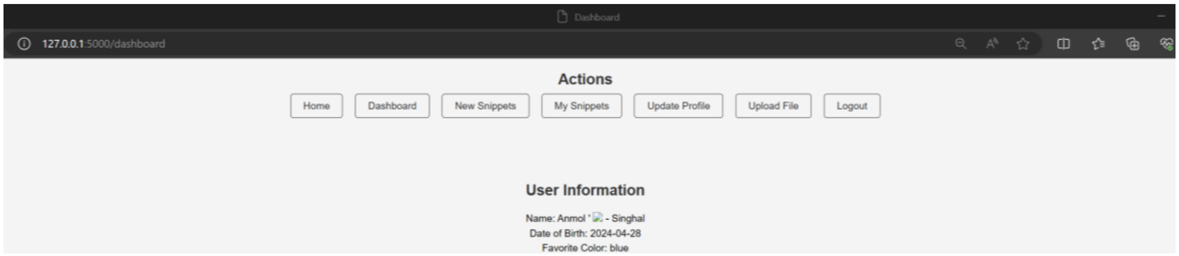
- Text Box:



User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: Cu denver lawrence st center.
Phone Number: 9999999999
Email: Xss.attack@gmail.com
About: The Account is made to check if a browser can defend against Xss attacks or not with CSP

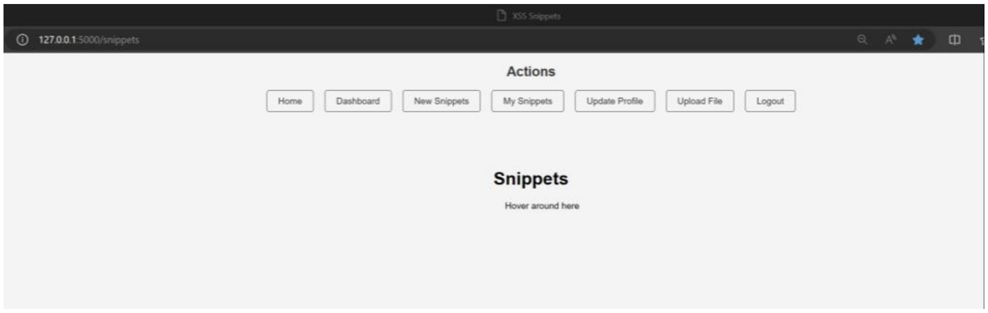
- Image:



User Information

Name: Anmol ' - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue

- Snippets:

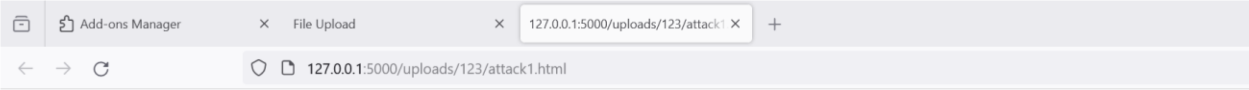


Snippets

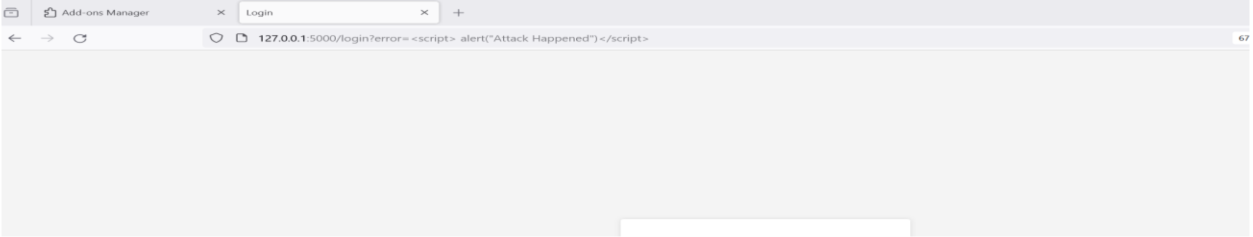
Hover around here

Firefox: Attack did not happen.

- File Upload:

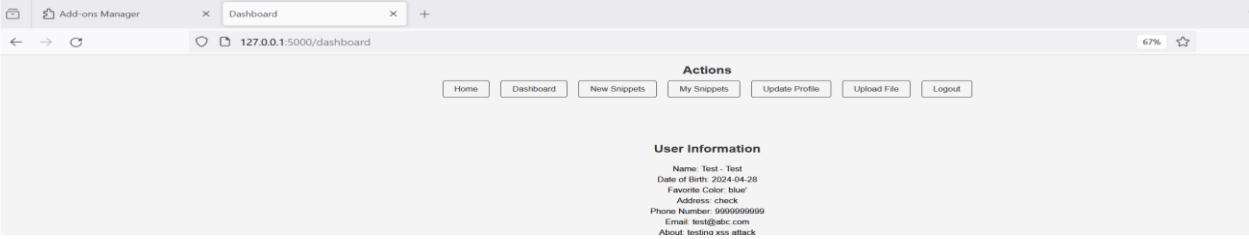

Add-ons Manager
File Upload
127.0.0.1:5000/uploads/123/attack1
127.0.0.1:5000/uploads/123/attack1.html

- URL:



127.0.0.1:5000/login?error=<script> alert("Attack Happened")</script>

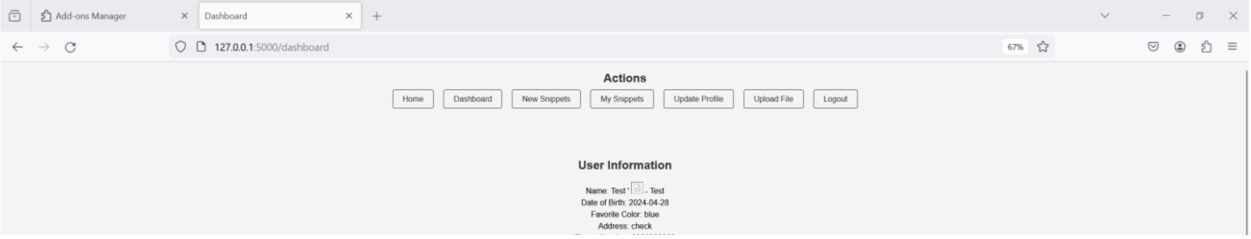
- Text Box:



User Information

Name: Test - Test
Date of Birth: 2024-04-28
Favorite Color: blue'
Address: check
Phone Number: 9999999999
Email: test@abc.com
About: testing xss attack

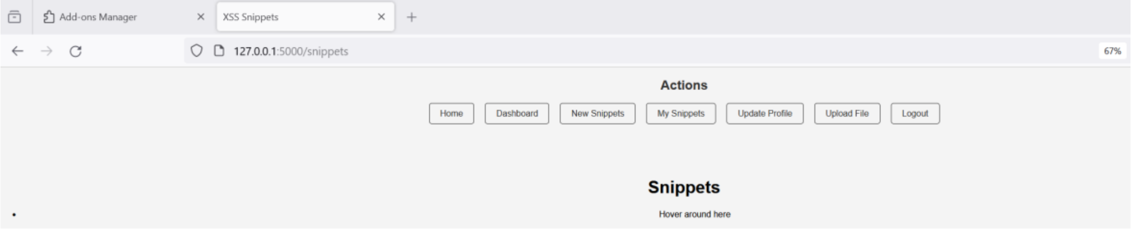
- Image:



User Information

Name: Test ' - Test
Date of Birth: 2024-04-28
Favorite Color: blue
Address: check

- Snippets:



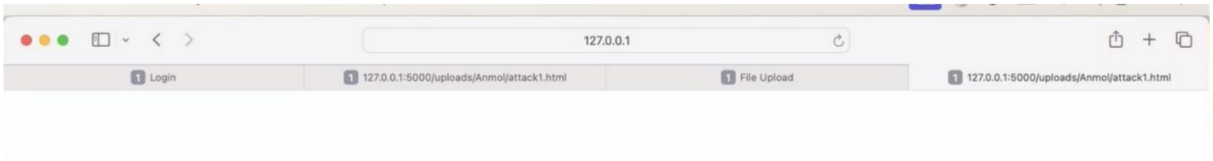
127.0.0.1:5000/snippets

Snippets

- Hover around here

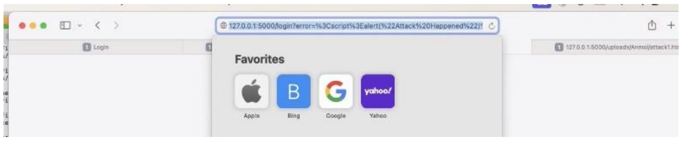
Safari: Attack did not happen.

- File Upload:


Login
127.0.0.1:5000/uploads/Anmol/attack1.html
File Upload
127.0.0.1:5000/uploads/Anmol/attack1.html

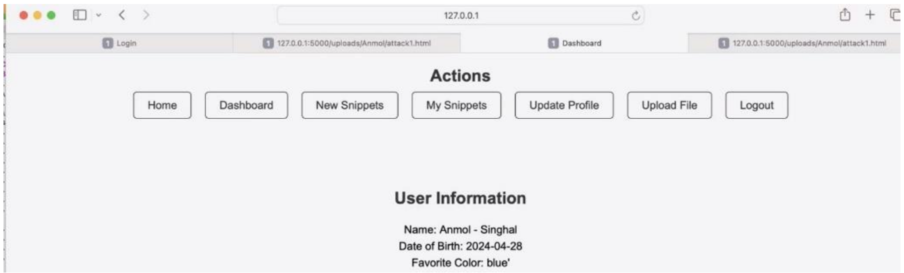
127.0.0.1

- URL:



127.0.0.1:5000/login?error=%3Cscript%3Ealert(%22Attack%20Happened%22)

- Text Box:

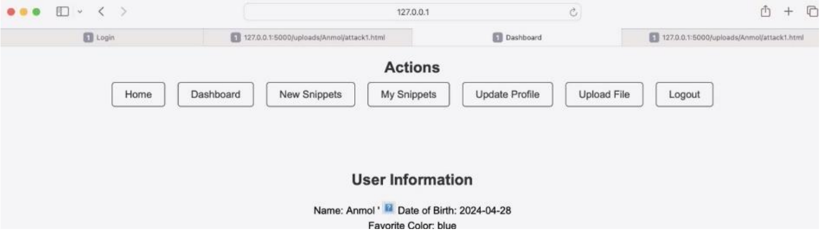


127.0.0.1

User Information

Name: Anmol - Singhal
Date of Birth: 2024-04-28
Favorite Color: blue'

- Image:

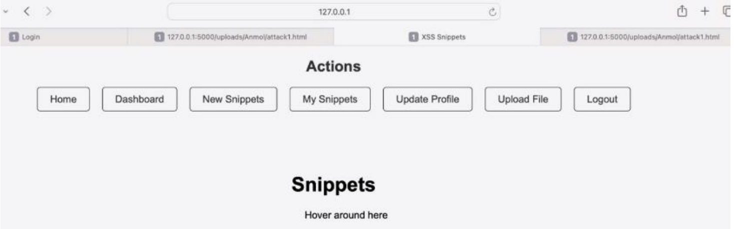


127.0.0.1

User Information

Name: Anmol ' Date of Birth: 2024-04-28
Favorite Color: blue

- Snippets:



127.0.0.1

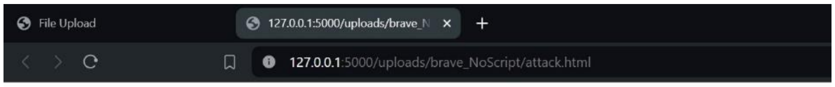
Actions

Snippets

Hover around here

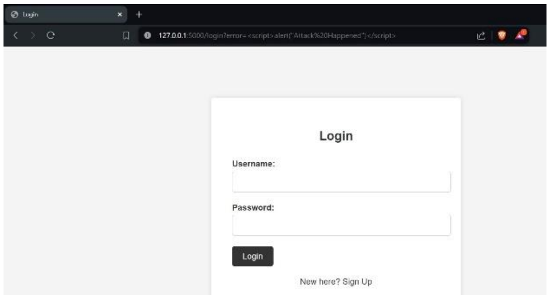
Brave: Attack did not happen.

- File Upload:



127.0.0.1:5000/uploads/brave_NoScript/attack.html

- URL:



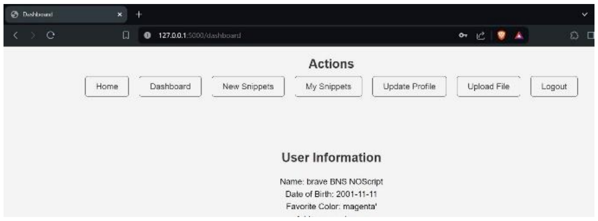
127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

Login

Username:

Password:

- Text Box:



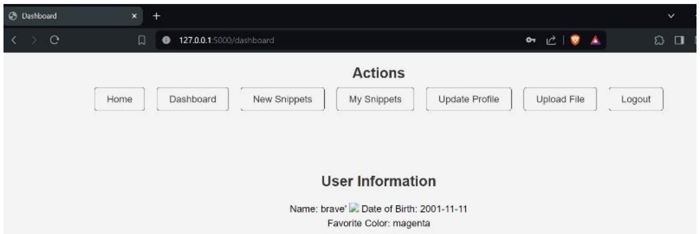
127.0.0.1:5000/dashboard

Actions

User Information

Name: brave BNS NOScript
Date of Birth: 2001-11-11
Favorite Color: magenta'

- Image:



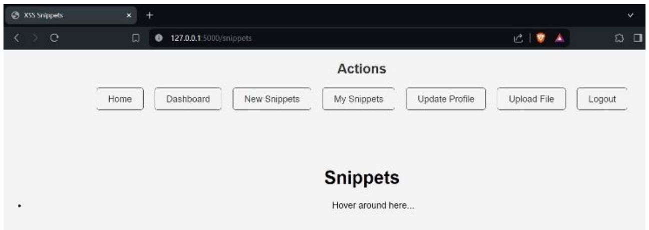
127.0.0.1:5000/dashboard

Actions

User Information

Name: brave' Date of Birth: 2001-11-11
Favorite Color: magenta

- Snippets:



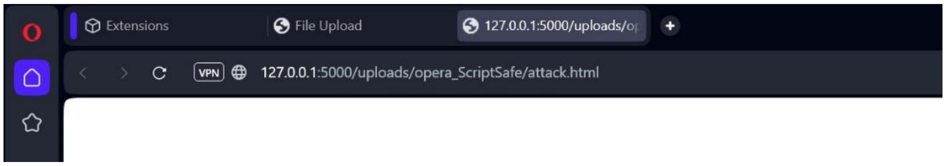
127.0.0.1:5000/snippets

Snippets

- Hover around here...

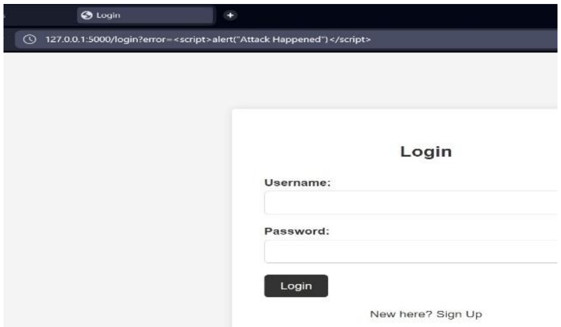
Opera: Attack did not happen.

- File Upload:



127.0.0.1:5000/uploads/opera_ScriptSafe/attack.html

- URL:

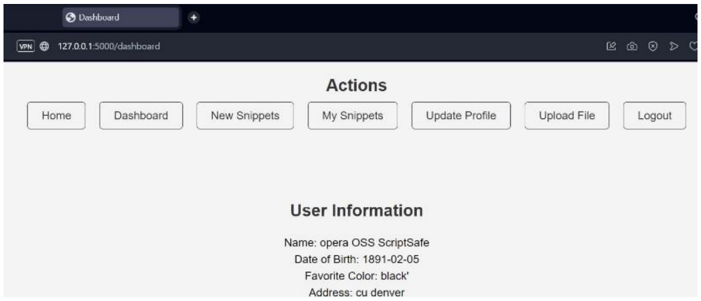


127.0.0.1:5000/login?error=<script>alert("Attack Happened")</script>

Username:

Password:

- Text Box:

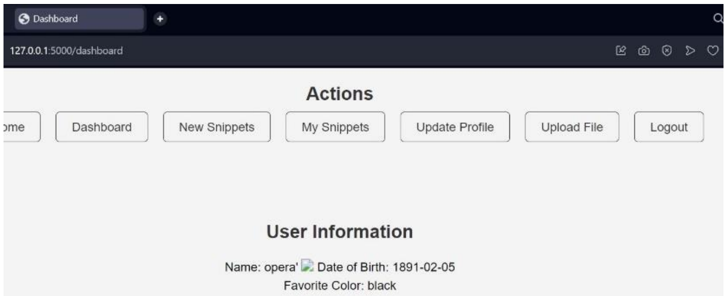


127.0.0.1:5000/dashboard

User Information

Name: opera OSS ScriptSafe
Date of Birth: 1891-02-05
Favorite Color: black'
Address: cu denver

- Image:

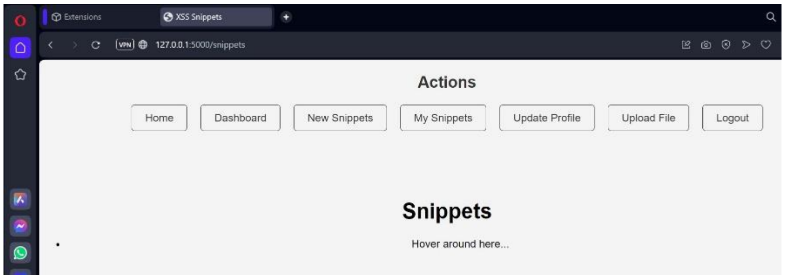


127.0.0.1:5000/dashboard

User Information

Name: opera' Date of Birth: 1891-02-05
Favorite Color: black

- Snippets:



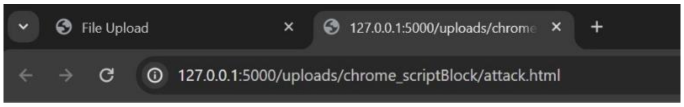
127.0.0.1:5000/snippets

Snippets

Hover around here...

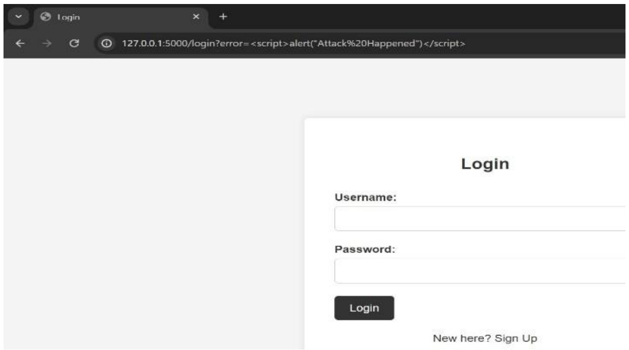
Chrome: Attack did not happen.

- File Upload:



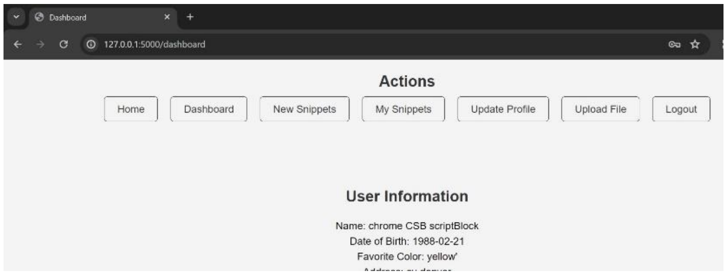
127.0.0.1:5000/uploads/chrome_scriptBlock/attack.html

- URL:



127.0.0.1:5000/login?error=<script>alert("Attack%20Happened")</script>

- Text Box:

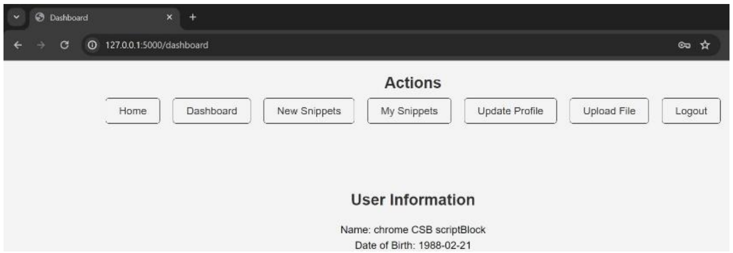


127.0.0.1:5000/dashboard

User Information

Name: chrome CSB scriptBlock
Date of Birth: 1988-02-21
Favorite Color: yellow'

- Image:



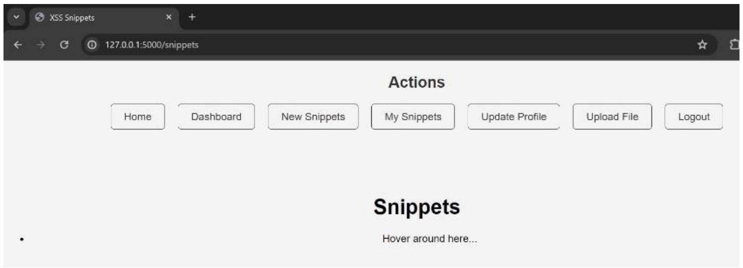
Actions

User Information

Name: chrome CSB scriptBlock

Date of Birth: 1988-02-21

- Snippets:

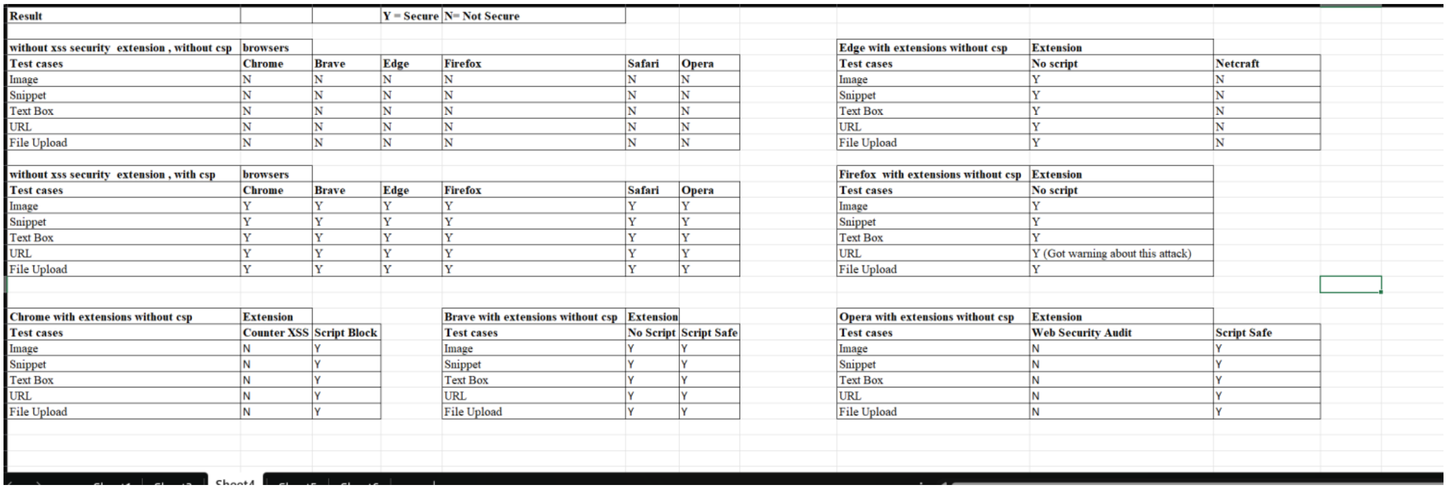


Actions

Snippets

- Hover around here...

Result: This section shows in a tabular format which stands for which browser with which type of setting is secure from XSS attacks.



Result			Y = Secure	N= Not Secure		
without xss security extension , without csp	**browsers**					
Test cases	**Chrome**	**Brave**	**Edge**	**Firefox**	**Safari**	**Opera**
Image	N	N	N	N	N	N
Snippet	N	N	N	N	N	N
Text Box	N	N	N	N	N	N
URL	N	N	N	N	N	N
File Upload	N	N	N	N	N	N

without xss security extension , with csp	**browsers**					
Test cases	**Chrome**	**Brave**	**Edge**	**Firefox**	**Safari**	**Opera**
Image	Y	Y	Y	Y	Y	Y
Snippet	Y	Y	Y	Y	Y	Y
Text Box	Y	Y	Y	Y	Y	Y
URL	Y	Y	Y	Y	Y	Y
File Upload	Y	Y	Y	Y	Y	Y

Chrome with extensions without csp	**Extension**	
Test cases	**Counter XSS**	**Script Block**
Image	N	Y
Snippet	N	Y
Text Box	N	Y
URL	N	Y
File Upload	N	Y

Brave with extensions without csp	**Extension**	
Test cases	**No Script**	**Script Safe**
Image	Y	Y
Snippet	Y	Y
Text Box	Y	Y
URL	Y	Y
File Upload	Y	Y

Edge with extensions without csp	**Extension**	
Test cases	**No script**	**Netcraft**
Image	Y	N
Snippet	Y	N
Text Box	Y	N
URL	Y	N
File Upload	Y	N

Firefox with extensions without csp	**Extension**
Test cases	**No script**
Image	Y
Snippet	Y
Text Box	Y
URL	Y (Got warning about this attack)
File Upload	Y

Opera with extensions without csp	**Extension**	
Test cases	**Web Security Audit**	**Script Safe**
Image	N	Y
Snippet	N	Y
Text Box	N	Y
URL	N	Y
File Upload	N	Y