most cookies

In this challenge we are given a website that displays information about types of cookies. We are also given a server file that uses flask.

On the website I noticed there was a session cookie stored by the browser that looked encrypted in some way.

I then looked online for tools to decrypt flask session cookies and found a tutorial on hacktricks showing the flask-unsign command line tool.

https://book.hacktricks.xyz/network-services-pentesting/pentesting-web/flask

After installing the tool, I kept getting the error 'command not found'.

In the error message it displayed the file location for the command was not in my PATH environment variable.

I did not know how to append to my PATH at the time, but found a tutorial online showing how to do so. After appending the file location to PATH, the command now worked and I could now begin investigating the cookie.

https://unix.stackexchange.com/questions/26047/how-to-correctly-add-a-path-to-path

```
(kali⊕kali)-[~]
__$ cookie=eyJ2ZXJ5X2F1dGgi0iJibGFuayJ9.ZVGvNA.RHqQAV12RFXx0Y4WqsRgcStZnng
  –(kali⊕kali)-[~]
_s echo $cookie
eyJ2ZXJ5X2F1dGgi0iJibGFuayJ9.ZVGvNA.RHqQAV12RFXx0Y4WqsRgcStZnng
  -(kali⊕kali)-[~]
$ flask-unsign --decode --cookie $cookie {'very_auth': 'blank'}
  —(kali⊕kali)-[~]
s vim cookielist.txt
  —(kali⊛kali)-[~]
$ flask-unsign --wordlist ./cookielist.txt --unsign --cookie $cookie --no-literal-eval
[*] Session decodes to: {'very_auth': 'blank'}
[*] Starting brute-forcer with 8 threads..
[+] Found secret key after 28 attemptscadamia
b'peanut butter
(kali⊕ kali)-[~]
$ flask-unsign --sign --cookie "{'very_auth': 'admin'}" --secret 'peanut butter'
eyJ2ZXJ5X2F1dGgi0iJhZG1pbiJ9.ZVGwDw.a0Ln5PSffMrusw9e9DCr4PlybVg
  -(kali⊛kali)-[~]
```

I first saved the session cookie to a temporary variable in my terminal so that I would not need to copy and paste it in each command.

Using the flask-unsign --decode --cookie method, I saw that the plaintext data of the cookie stored a 'very-auth' variable initialized to a value 'blank'.

In the given python source code for the server, I noticed that the server was checking to see if the 'very-auth' cookie was set to the value 'admin'.

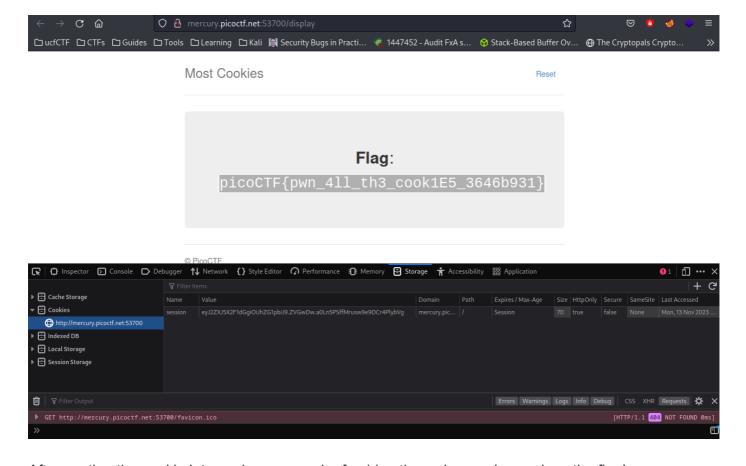
The cookie was also being signed with a random value from the array of accepted cookie flavors, so I created a word list of all the cookie types.

Because there were much fewer than 100 flavors I thought it might be efficient to bruteforce the secret of the given session cookie.

After almost no delay, the flask-unsign command was able to decipher the session cookie's signed secret to be 'peanut butter'.

With this knowledge, I could now attempt to create a forged session cookie with the desired 'very-auth' value and known signed secret to see if the value would be accepted by the server to give me authenticated access.

I used the flask-unsign --sign --cookie --secret flags to forge a new session cookie with the 'very-auth' variable set to admin and the signed secret to be 'peanut butter' to mimic the known session cookie and bypass the authentication check.



After pasting the cookie into my browser and refreshing the webpage, I was given the flag!