247CTF Web Challenge: TRUSTED CLIENT

Description

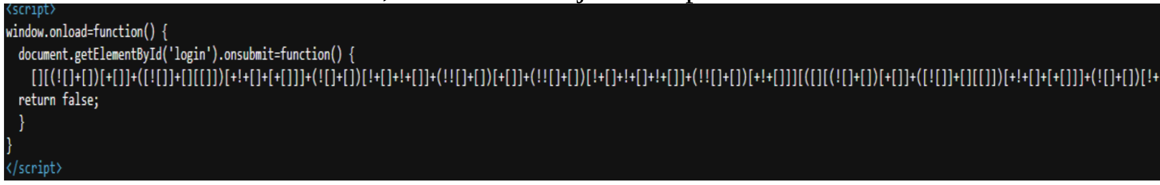
Developers often prototype code quickly, sometimes storing credentials or sensitive data on the client side, assuming obfuscation alone will protect this information. This challenge explores the implications of such practices.

Challenge Details

The task is to assess a web application where credentials are stored on the client side. The challenge involves finding and accessing these credentials, which have been obfuscated.

Steps to Solve

1. **Access the Application:**
   - Start by accessing the web application provided for the challenge.
2. **View source code :**
   - Ctrl + U to view source code , as we can the java script code is obfuscated



```
<script>
window.onload=function() {
  document.getElementById('login').onsubmit=function() {
    [][(![]+[])[+[]]+([![]]+[][[]])[+!+[]+[+[]]]+(![]+[])[!+[]+!+[]]+(!![]+[])[+[]]+(!![]+[])[!+[]+!+[]+!+[]]+(!![]+[])[+!+[]]][([][(![]+[])[+[]]+([![]]+[][[]])[+!+[]+[+[]]]+(![]+[])[!+
  return false;
  }
}
</script>
```

3. **Look for Obfuscated Data:**
   - By copyin a part of the code and sending it to https://www.dcode.fr/ for the auto **Cipher Identifier** , found that the language name is “JSFuck” .
   - The script is too large to be decoded by an online tool , so researching how this obfuscation works might help to create a decoder script but I’ve found a written code , I used https://chatgpt.com/ to help me understand how the script works by adding comments :
   - //The python code explained :
   - import subprocess
   - import os
   -
   - def unjsfuck(jsfuck_code):
   -     """
   -     Decodes JSFuck code using Node.js.
   -
   -     Parameters:
   -     - jsfuck_code (str): The obfuscated JSFuck code to decode.
   -
   -     Returns:

```
    - str: The decoded JavaScript code, or None if an error occurred.
    """
    try:
        # Write the JSFuck code to a temporary JavaScript file.
        # The code will use `eval` and `String.fromCharCode` to decode the JSFuck code.
        with open('temp.js', 'w') as temp_js_file:
            temp_js_file.write(f"console.log(eval(String.fromCharCode.apply(null, {jsfuck_code})))")

        # Run the temporary JavaScript file using Node.js.
        # `subprocess.check_output` executes the command and captures its output.
        decoded_js = subprocess.check_output(["node", "temp.js"])

        # Decode the output from bytes to string and remove any leading/trailing whitespace.
        return decoded_js.decode('utf-8').strip()
    except subprocess.CalledProcessError as e:
        # Handle any errors that occur during the execution of the Node.js script.
        print(f"Error during execution: {e}")
        return None
    finally:
        # Clean up by removing the temporary JavaScript file.
        if os.path.exists('temp.js'):
            os.remove('temp.js')

if __name__ == "__main__":
    # Path to the input file containing the JSFuck code.
    input_file = "/path_to/jsfucked/file.txt"

    try:
        # Open and read the JSFuck code from the input file.
        with open(input_file, 'r') as file:
            jsfuck_code = file.read()

        # Decode the JSFuck code using the `unjsfuck` function.
        result = unjsfuck(jsfuck_code)

        if result:
            # Print the decoded JavaScript code.
            print("Decoded JavaScript code:")
            print(result)
        else:
            print("Failed to decode the JSFuck code.")
```

- except FileNotFoundError:
-     # Handle the case where the input file is not found.
-     print(f"File not found: {input_file}")
- except Exception as e:
-     # Handle any other exceptions that may occur.
-     print(f"An error occurred: {e}")

Just create a file and paste the obfuscated script and save it as .txt and replace the path in the code to decode it , heres the result : `if (this.username.value == 'the_flag_is' && this.password.value == '247CTF{xxxx}'){ alert('Valid username and password!'); } else { alert('Invalid username and password!'); }`