Cookie Monster

"C is for cookie, and cookie is for me." – Cookie Monster

Background

What are Cookies?

Cookies are small text files stored on a user's device by a web browser. They are used to store information about the user's session, preferences, and activities on a website.

Why are Cookies Important?

- **Session management**: Keep users logged in across multiple pages.
- **Personalization**: Store user preferences and settings.
- **Tracking and analytics**: Collect data on user behavior and interactions.

Today we'll look at some cookies by browsing to a small website called `amazon.com`. We'll use the browsers developer tools to look at requests instead of Wireshark, because Amazon - like most modern websites - uses secure connection (HTTPS), which is encrypted and can't be inspected on Wireshark.

Steps

Step 1 - Capturing Initial Request

1. **Open Browser Developer Tools**:
    - Open a web browser of your choice, for example: Google Chrome / Firefox (It's highly recommended to use Chrome "Incognito" mode).
    - Press F12 or right-click on the page and select "Inspect" to open the developer tools.
2. **Navigate to the Network Tab**:
    - In the developer tools, go to the "Network" tab.
3. **Browse to Amazon**:
    - Go to `https://www.amazon.com`.
4. **Identify Set-Cookie Header**:
    - Find the initial network request to Amazon.
        - There are many subseqent requests to different sources - scroll all the way up to the initial one - marked `www.amazon.com`.
    - Look at the response headers (sent by the server) for a `Set-Cookie` header.

5. **Record the Cookie**:
    - What is the content of the `Set-Cookie` header? What information is stored in the cookie? Write your findings down in a text file.
        - Note that cookies are saved as "key=value".
        - If you don't know what a particular bit of information is for, it's OK - search it on Google. If you can't find anything on it, try to make an educated guess.

Step 2 - Capturing Subsequent Request

6. **Refresh the Website**:
    - Refresh the website by pressing F5. This will send another request to Amazon's home page.
7. **Navigate to the Network Tab**:
    - If you quitted it, go again to the "Network" tab. Notice how it starts capturing from scratch once you refresh.
8. **Identify Cookie Header**:
    - Find the subsequent network request related to your action.
        - There are many subseqent requests to different sources. Again, scroll all the way up to the initial one - marked `www.amazon.com`.
    - Look at the *request* headers (sent by the client - your browser) for a `Cookie` header.
9. **Record the Cookie**:

Step 3 - Changing Language and Currency

10. **Change Language and Currency**:
    - On Amazon, go to the top right menu and change the language to Spanish (Español) and the currency to Euro (EUR).
11. **Refresh the Website**:
    - Refresh `https://www.amazon.com` and ensure the new preferences are saved.
12. **Capture the New Request**:
    - In the Network tab, capture the new request after refreshing the page.
    - Compare this request with the initial request.
13. **Identify Language and Currency Cookies**:
    - What cookies are responsible for storing the language and currency preferences? Find them by comparing the ones in the new request to those from the earlier one.

Step 4 - Manually Changing Cookies

14. **Navigate to Application Tab**:
    - In the developer tools, go to the "Application" tab.
    - Under "Storage", select "Cookies" and then `https://www.amazon.com`.
15. **Change Cookies Manually**:
    - Find the cookies responsible for language and currency.
    - Change the language cookie to English (`en_US`) and the currency cookie to USD.

16. **Refresh the Website**:
    - Refresh `https://www.amazon.com` and check if the preferences changed to English and USD.
17. **Take a Screenshot**:
    - Take a screenshot of the manually changed cookies in the Application tab.

To Submit

- A text file containing your answers for:
    - content of the `Set-Cookie` header
    - Breakdown and explaination of what is inside the `Set-Cookie` header
    - content of the `Cookie` header
    - How does the `Cookie` header compare to the `Set-Cookie` header, what are the differences.
    - What cookie is responsible for storing the language and currency preference
- A screenshot of the manually changed cookie