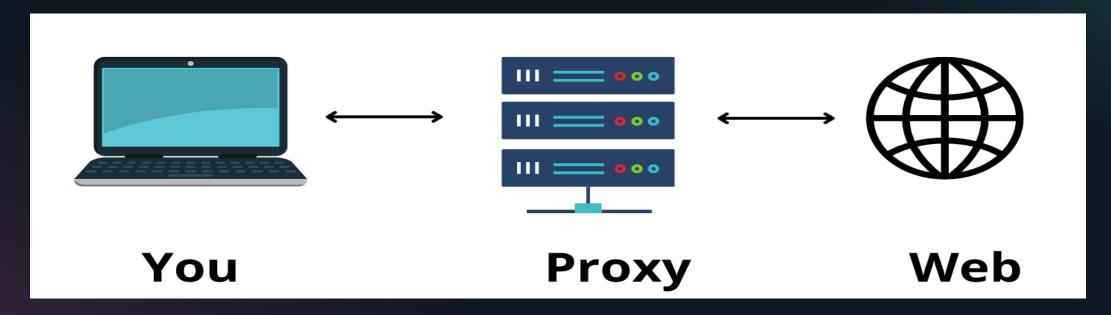
Introduction to Burp Suite

```
    □ 1703310201375 (Afroza Sultana Riya)
    □ 1703310201410 (Tanjibul Hasan Rafi)
    □ 1703310201411 (Sabrina Yesmin)
    □ 1703310201421 (Pallabi Rudra)
    □ 1703310201423 (Mehedi Hasan Ovi)
```

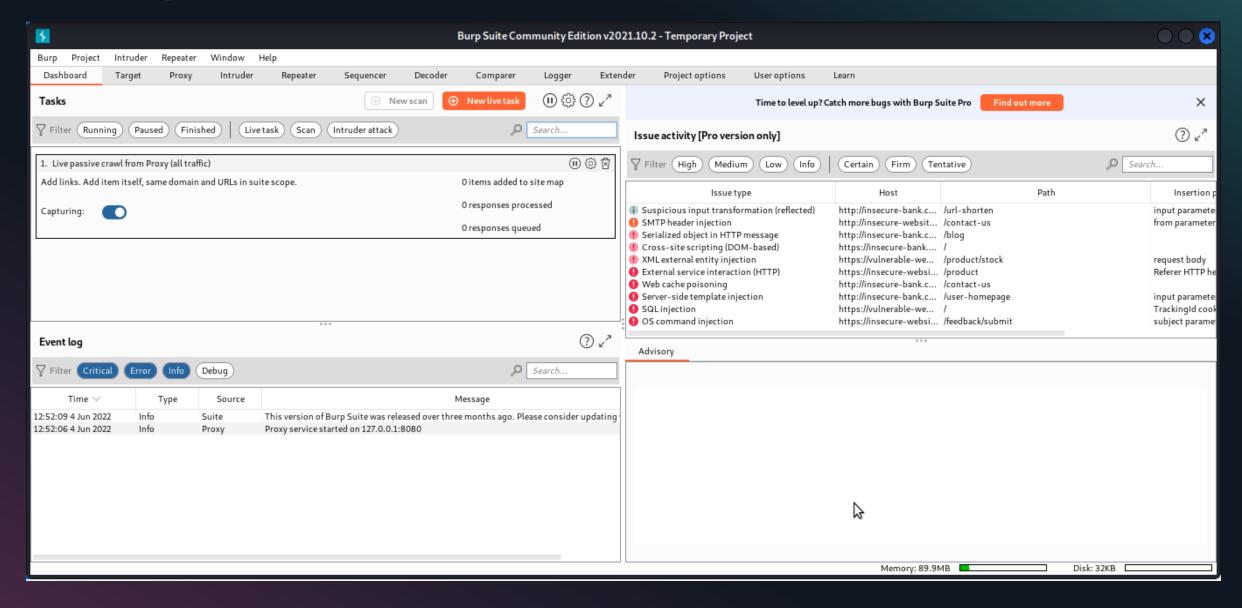
What is Burp Suite?

✓ Burp Suite is an integrated platform/graphical tool for performing security testing of web applications.



✓ The tool is written in java and developed by PortSwigger.

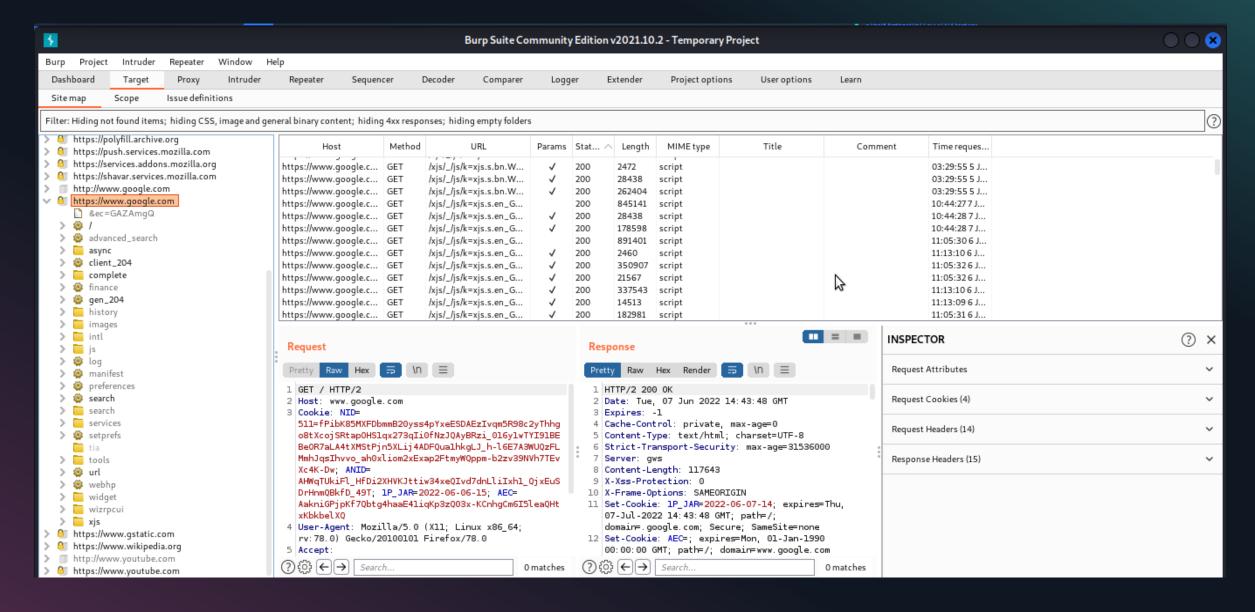
Burp-Suite Dashboard

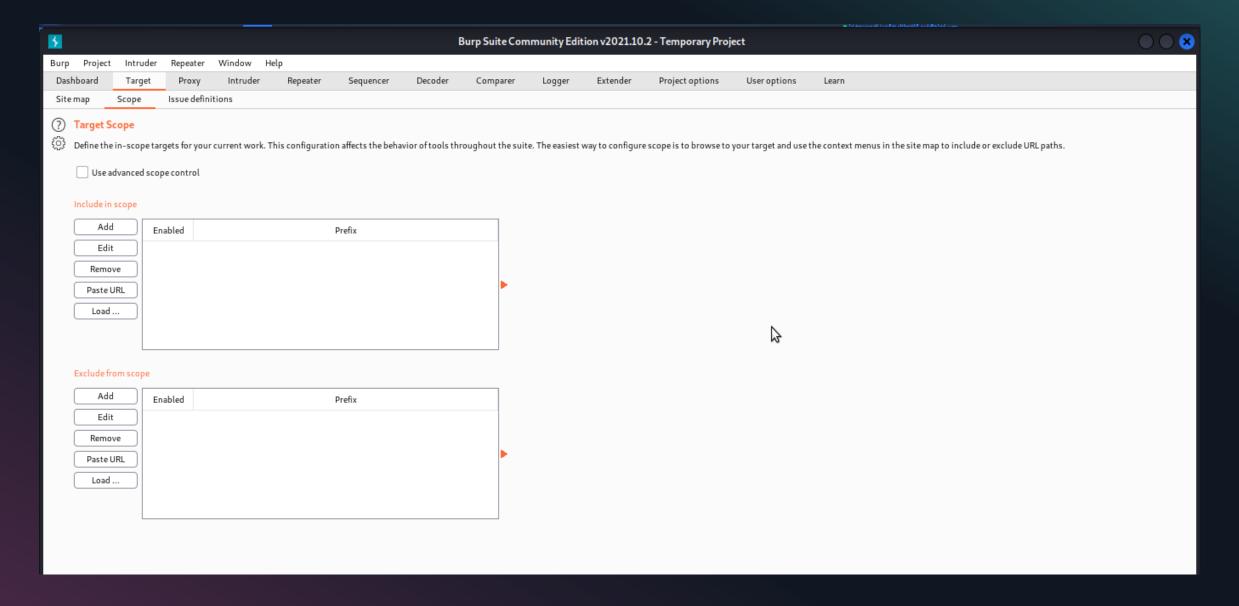


Burp-Suite Modules

- Target
- Proxy
- Intruder
- Repeater
- Sequencer
- Decoder
- Comparer
- Extender
- Spider
- Scanner

- ✓ The Target tool gives you an overview of your target application's content and functionality, and lets you drive key parts of your testing workflow.
- ✓ The key steps that are typically involved in using the Target tab are described below.





Burp Suite Community Edition v2021.10.2 - Temporary Project











Sequencer Decoder

Comparer

Extender

Project options

User options

0

Issue Definitions

Dashboard

Site map

Project

Intruder

Target

Scope

This listing contains the definitions of all issues that can be detected by Burp Scanner.

Window

Intruder

Repeater

Repeater

Proxv

Issue definitions

Name	Typical severity	Type index
OS command injection	High	0x00100100
SQLinjection	High	0x00100200
SQL injection (second order)	High	0x00100210
ASP.NET tracing enabled	High	0x00100280
File path traversal	High	0x00100300
XML external entity injection	High	0x00100400
LDAP injection	High	0x00100500
XPath injection	High	0x00100600
XMLinjection	Medium	0x00100700
ASP.NET debugging enabled	Medium	0x00100800
HTTP PUT method is enabled	High	0x00100900
Out-of-band resource load (HTTP)	High	0x00100a00
File path manipulation	High	0x00100b00
PHP code injection	High	0x00100c00
Server-side JavaScript code injection	High	0x00100d00
Perl code injection	High	0x00100e00
Ruby code injection	High	0x00100f00
Python code injection	High	0x00100f10
Expression Language injection	High	0x00100f20
Unidentified code injection	High	0x00101000
Server-side template injection	High	0x00101080
SSI injection	High	0x00101100
Cross-site scripting (stored)	High	0x00200100
HTTP request smuggling	High	0x00200140
Web cache poisoning	High	0x00200180
HTTP response header injection	High	0x00200200
Cross-site scripting (reflected)	High	0x00200300
Client-side template injection	High	0x00200308
Cross-site scripting (DOM-based)	High	0x00200310
Cross-site scripting (reflected DOM-based)	High	0x00200311
Cross-site scripting (stored DOM-based)	High	0x00200312

Cross-site scripting (stored)

Description

Stored cross-site scripting vulnerabilities arise when user input is stored and later embedded into the application's responses in an unsafe way. An attacker can use the vulnerability to inject malicious JavaScript code into the application, which will execute within the browser of any user who views the relevant application content.

The attacker-supplied code can perform a wide variety of actions, such as stealing victims' session tokens or login credentials, performing arbitrary actions on their behalf, and logging their keystrokes.

Methods for introducing malicious content include any function where request parameters or headers are processed and stored by the application, and any out-of-band channel whereby data can be introduced into the application's processing space (for example, email messages sent over SMTP that are ultimately rendered within a web mail application).

Stored cross-site scripting flaws are typically more serious than reflected vulnerabilities because they do not require a separate delivery mechanism in order to reach target users, and are not hindered by web browsers' XSS filters. Depending on the affected page, ordinary users may be exploited during normal use of the application. In some situations this can be used to create web application worms that spread exponentially and ultimately exploit all active users.

Note that automated detection of stored cross-site scripting vulnerabilities cannot reliably determine whether attacks that are persisted within the application can be accessed by any other user, only by authenticated users, or only by the attacker themselves. You should review the functionality in which the vulnerability appears to determine whether the application's behavior can feasibly be used to compromise other application users.

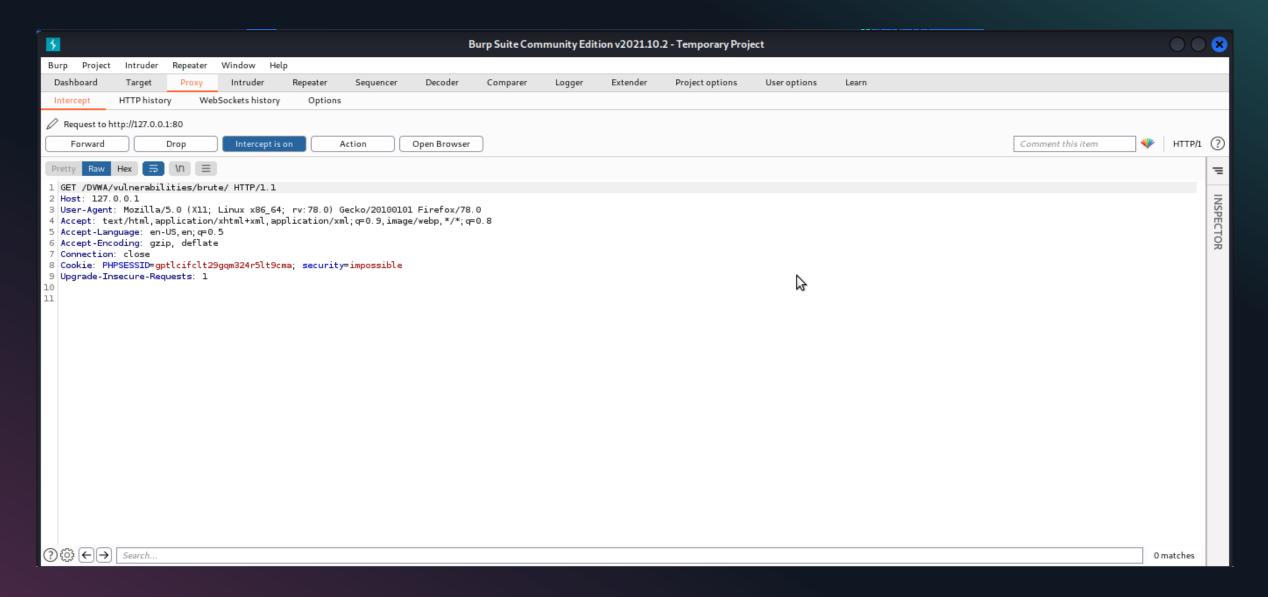
Remediation

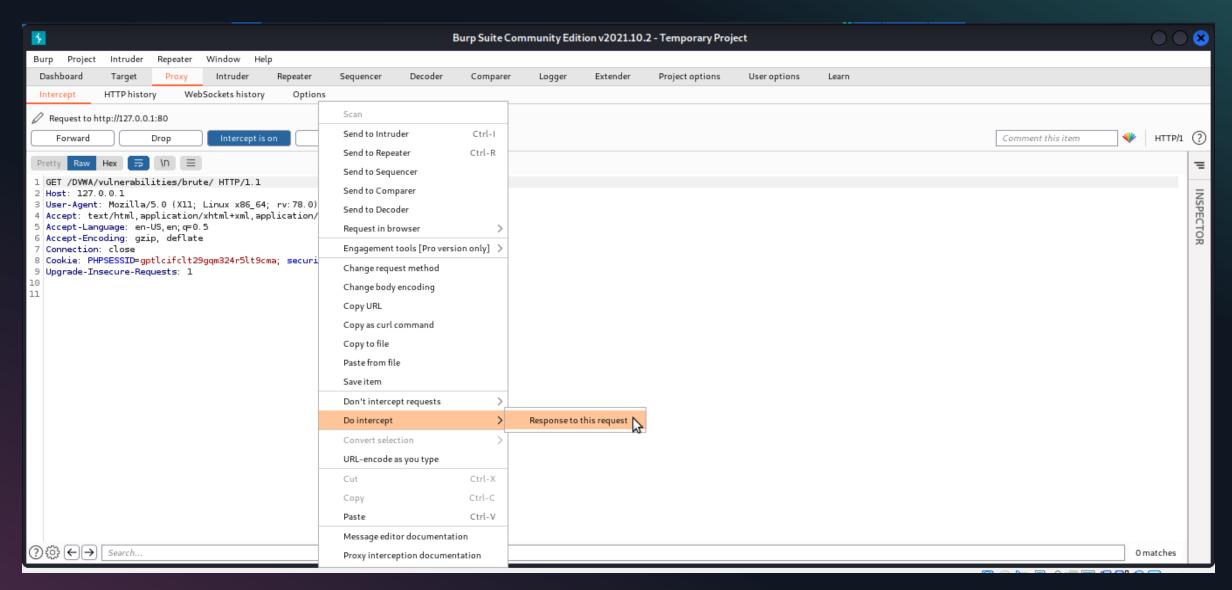
In most situations where user-controllable data is copied into application responses, cross-site scripting attacks can be prevented using two layers of defenses:

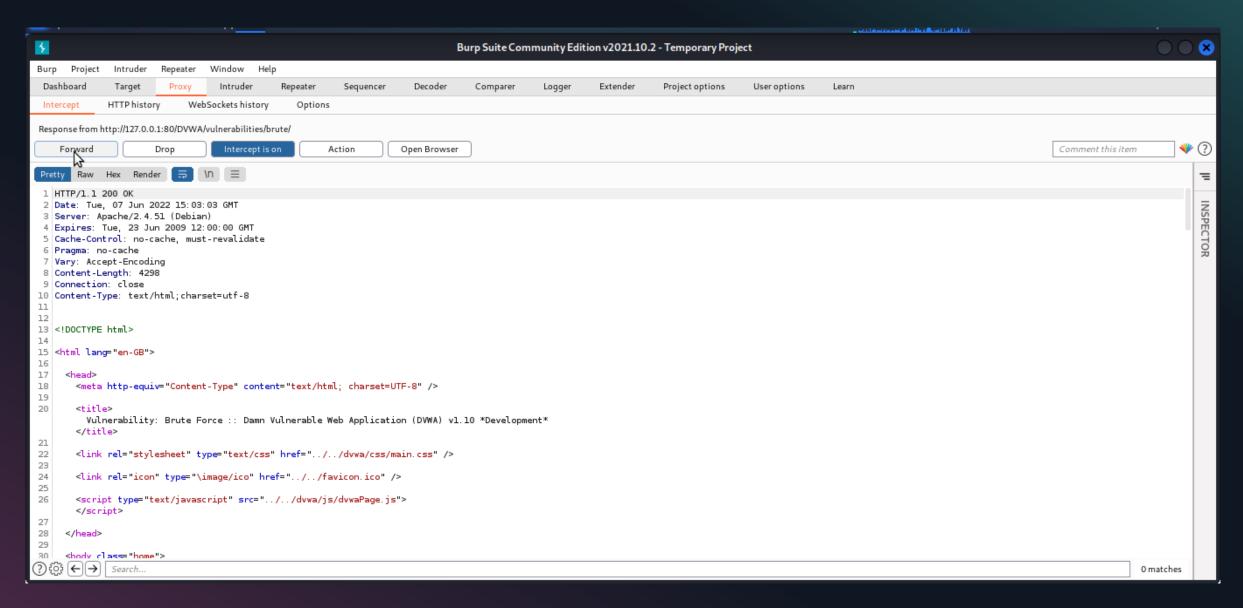
- Input should be validated as strictly as possible on arrival, given the kind of content that it is expected to contain. For example, personal names should consist of alphabetical and a small range of typographical characters, and be relatively short; a year of birth should consist of exactly four numerals; email addresses should match a well-defined regular expression. Input which fails the validation should be rejected, not sanitized.
- User input should be HTML-encoded at any point where it is copied into application responses. All HTML metacharacters, including < > " ' and =, should be replaced with the corresponding HTML entities (< > etc).

In cases where the application's functionality allows users to author content using a restricted subset of HTML tags and attributes (for example, blog comments which allow limited formatting and linking), it is necessary to parse the supplied HTML to validate that it does not use any dangerous syntay; this is a non-trivial task

- ✓ Burp Proxy lies at the heart of Burp's user-driven workflow.
- ✓ It operates as a web **proxy** server between the browser and target applications, and lets you intercept, inspect, and modify the raw traffic passing in both directions.



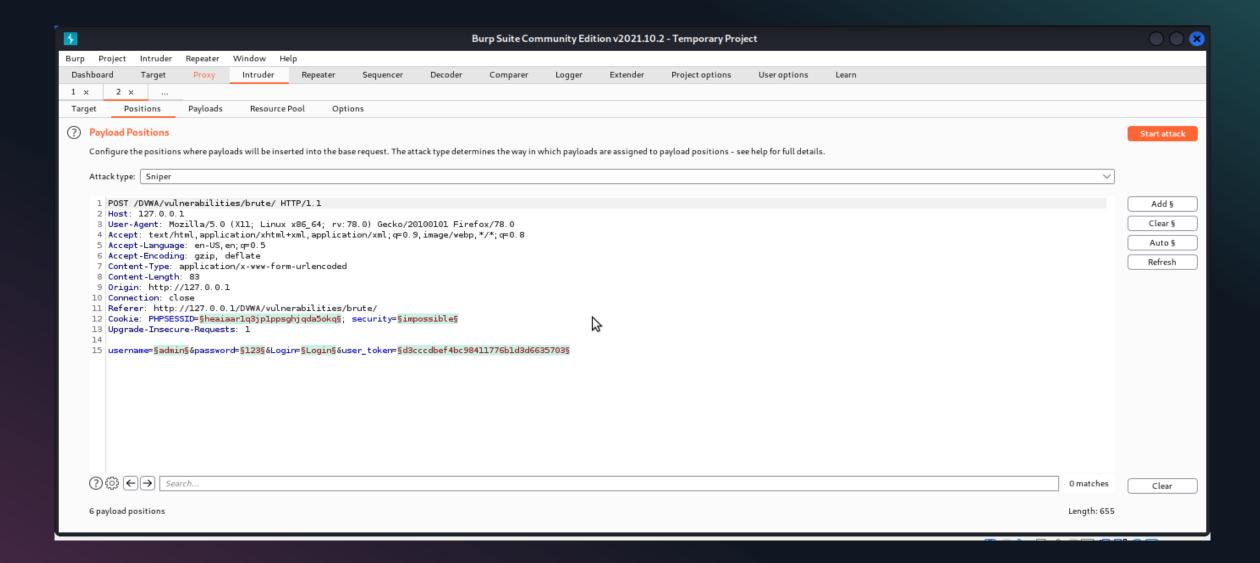




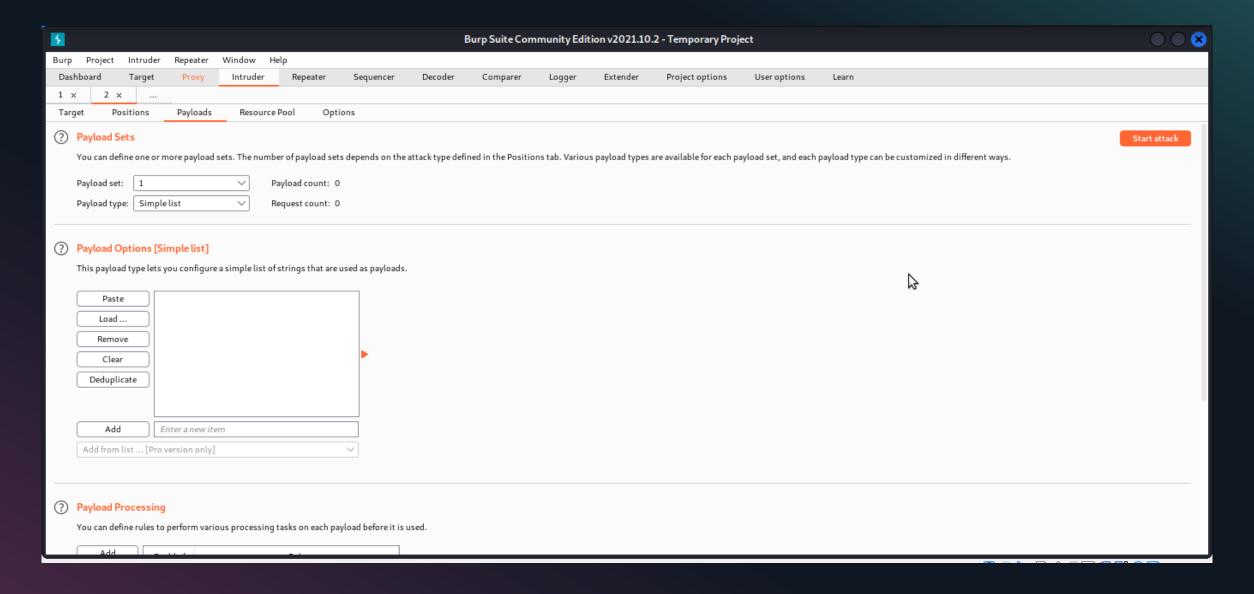
Intruder Module

- ✓ Burp Intruder is a tool for automating customized attacks against web applications.
- ✓ It is extremely powerful and configurable, and can be used to perform a huge range of tasks, from simple brute-force guessing of web directories through to active exploitation of complex blind SQL injection vulnerabilities.

Intruder Module



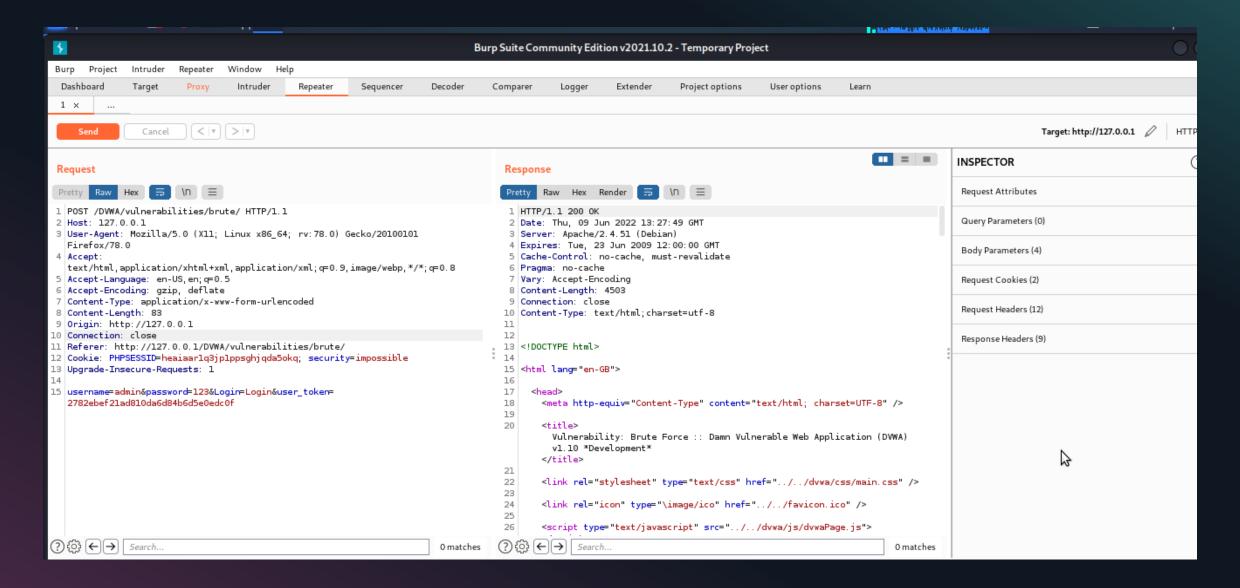
Intruder Module



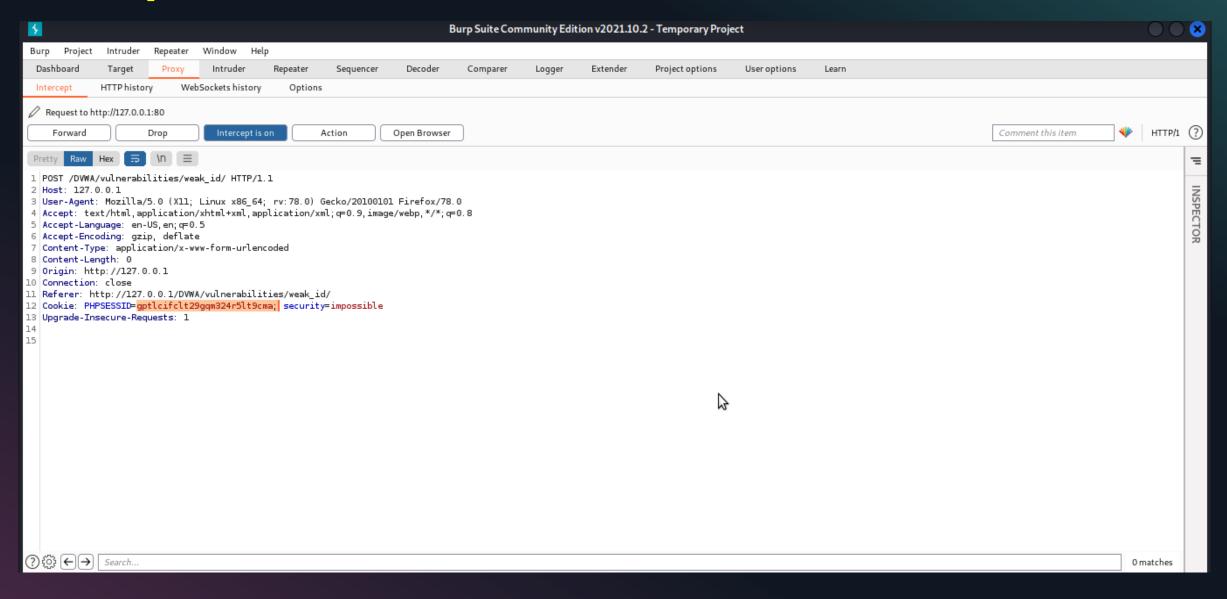
Repeater Module

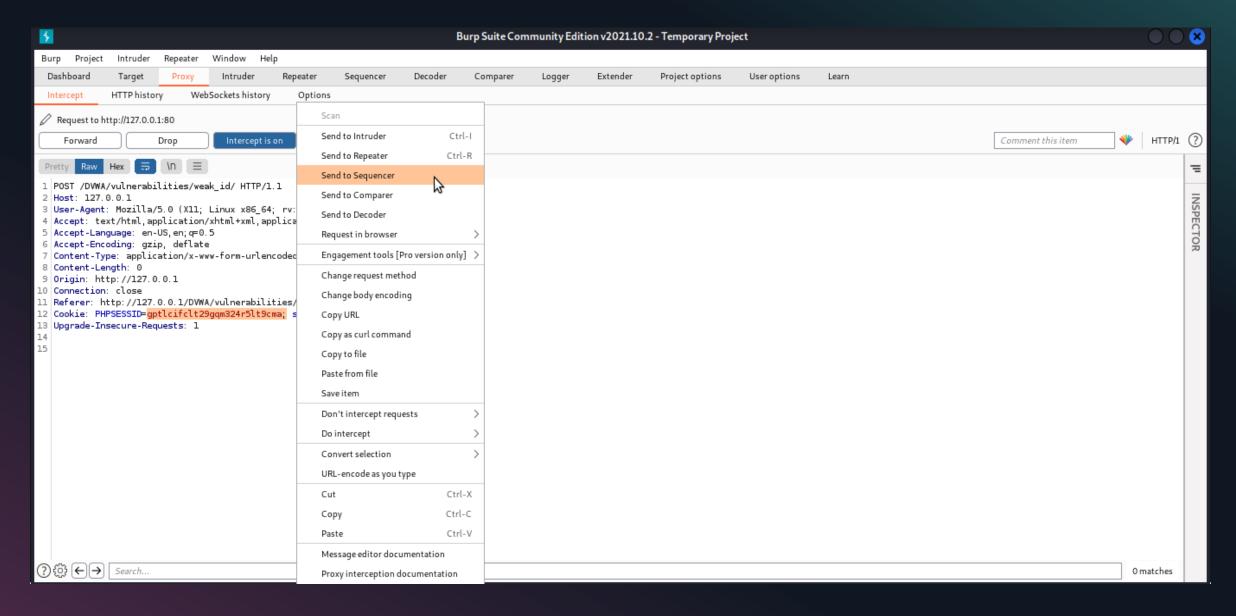
- ✓ Burp Repeater is a tool for manually manipulating and reissuing individual HTTP requests and analyzing the application's responses.
- ✓ Its biggest use is to combine with other Burp Suite tools. You can browse the records from the target site map, from Burp Proxy, or send a request from the Burp Intruder attack result to the Repeater, and manually adjust the request to fine-tune the detection or attack on the vulnerability.

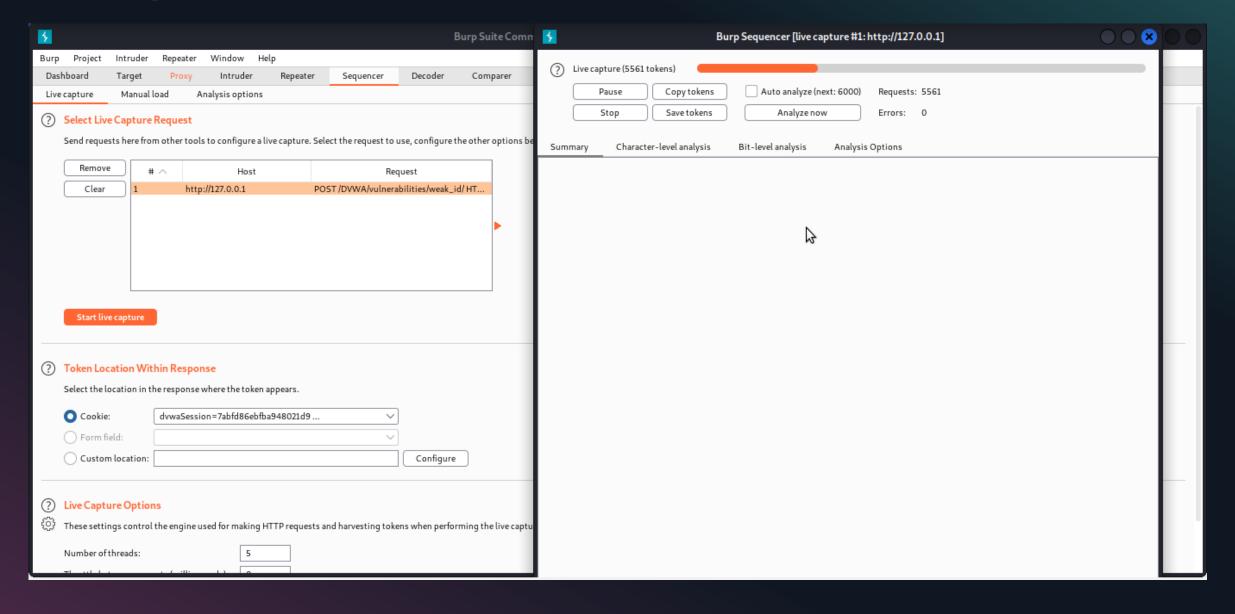
Repeater Module

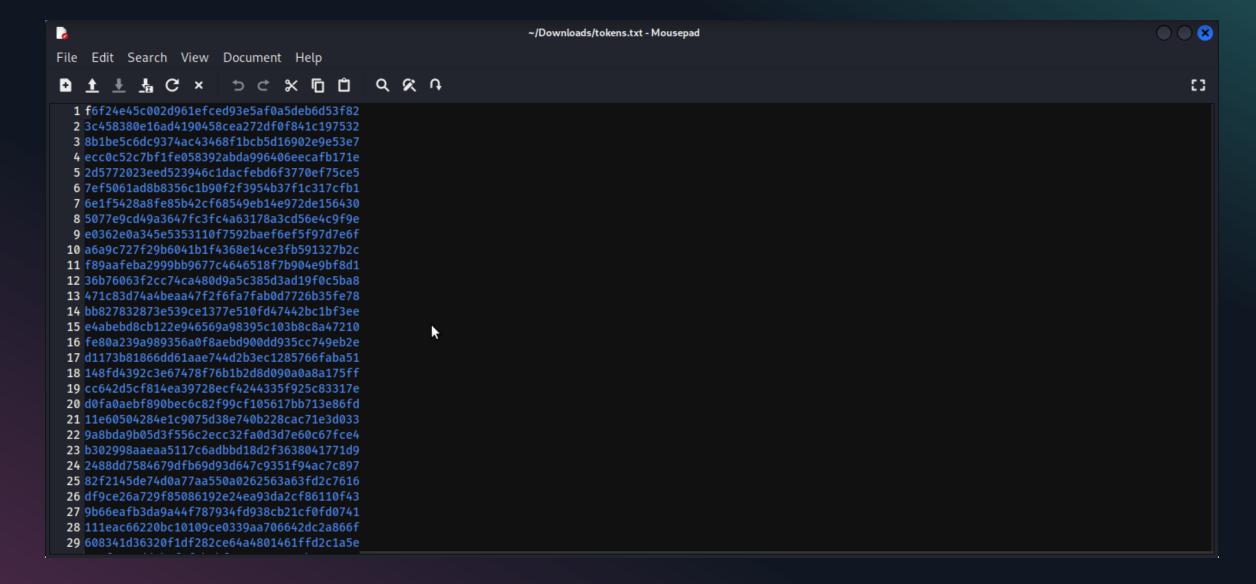


- ✓ Burp Sequencer is a tool for analyzing the quality of randomness in a sample of data items.
- ✓ You can use it to test an application's session tokens or other important data items that are intended to be unpredictable, such as anti-CSRF tokens, password reset tokens, etc.





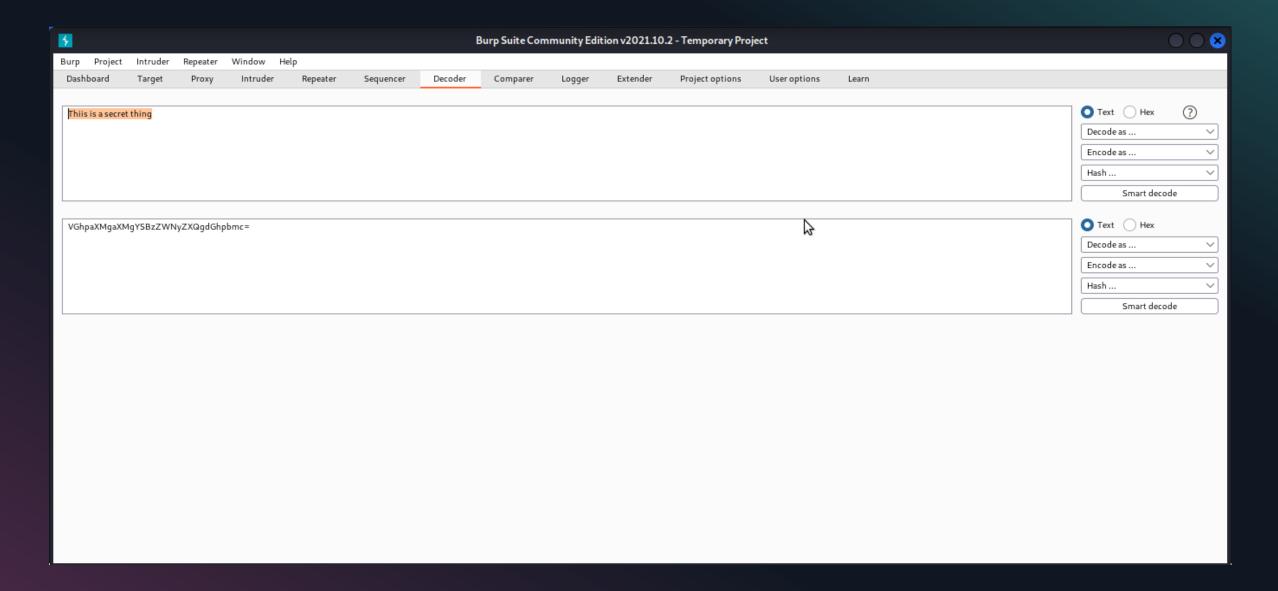




Decoder Module

- ✓ Burp Decoder is a simple tool for transforming encoded data into its canonical form, or for transforming raw data into various encoded and hashed forms.
- ✓ It is capable of intelligently recognizing several encoding formats using heuristic techniques.

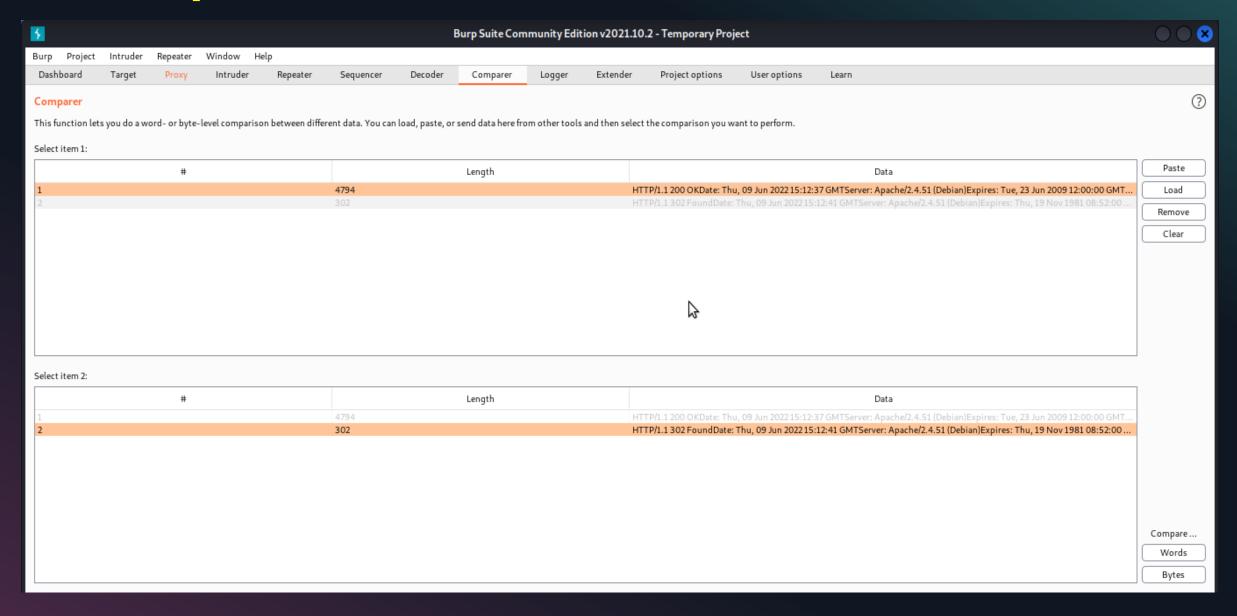
Decoder Module



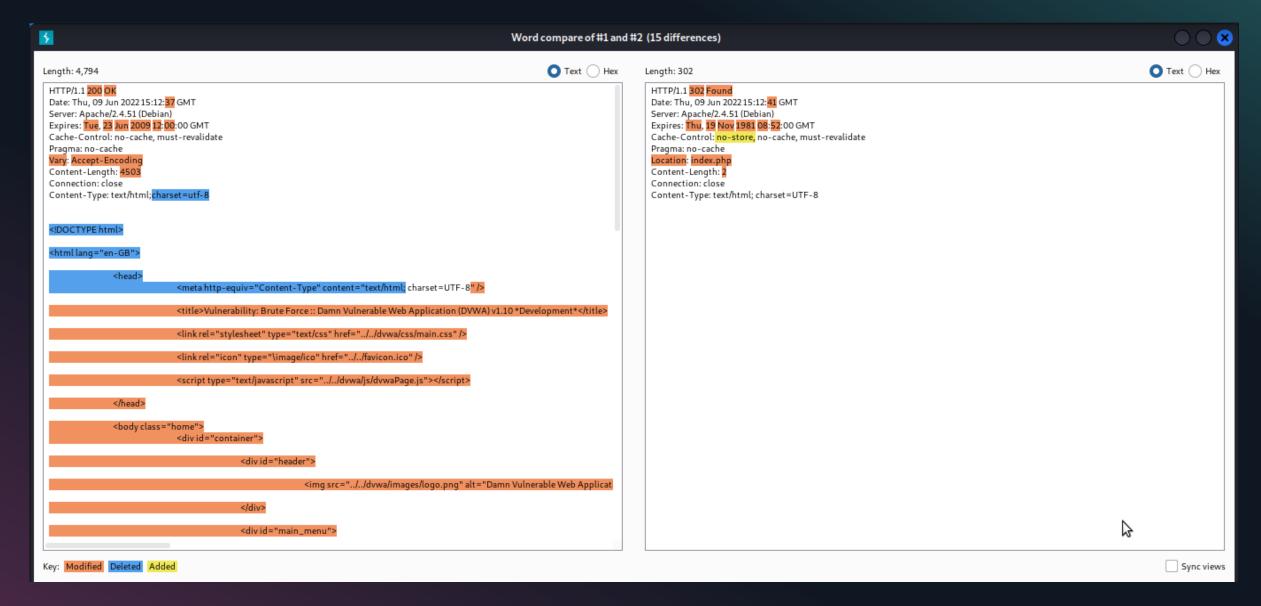
Comparer Module

- Comparer is simply a tool to compare to HTTP requests or responses.
- Comparer is useful when you want to see how different values for parameters and headers enable subtle changes in the responses that you receive.

Comparer Module



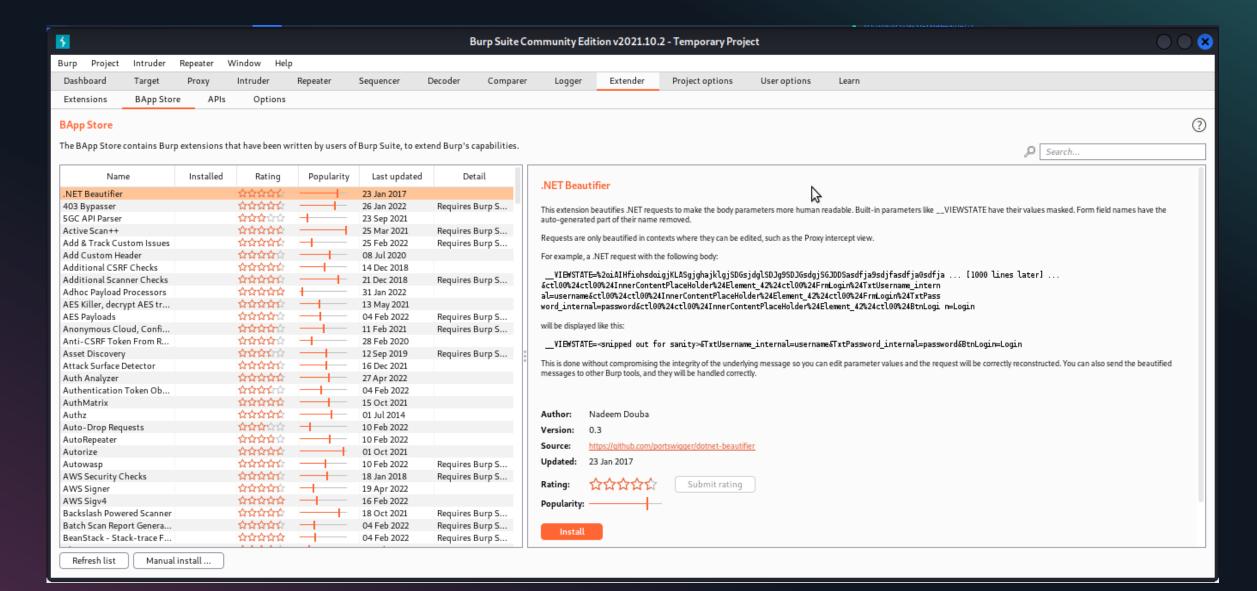
Comparer Module



Extender Module

- ✓ Burp Extender lets you use Burp extensions, to extend Burp's functionality using your own or third-party code.
- ✓ You can load and manage extensions, view details about installed extensions, install extensions from the BApp Store, view the current Burp Extender API, and configure options for how extensions are handled.

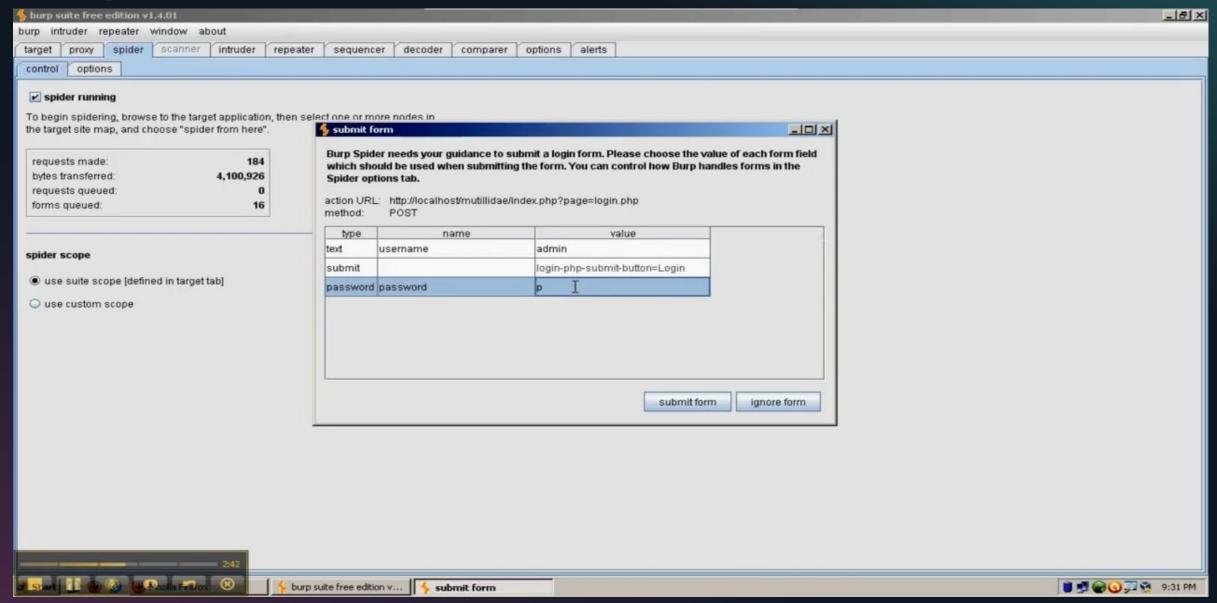
Extender Module



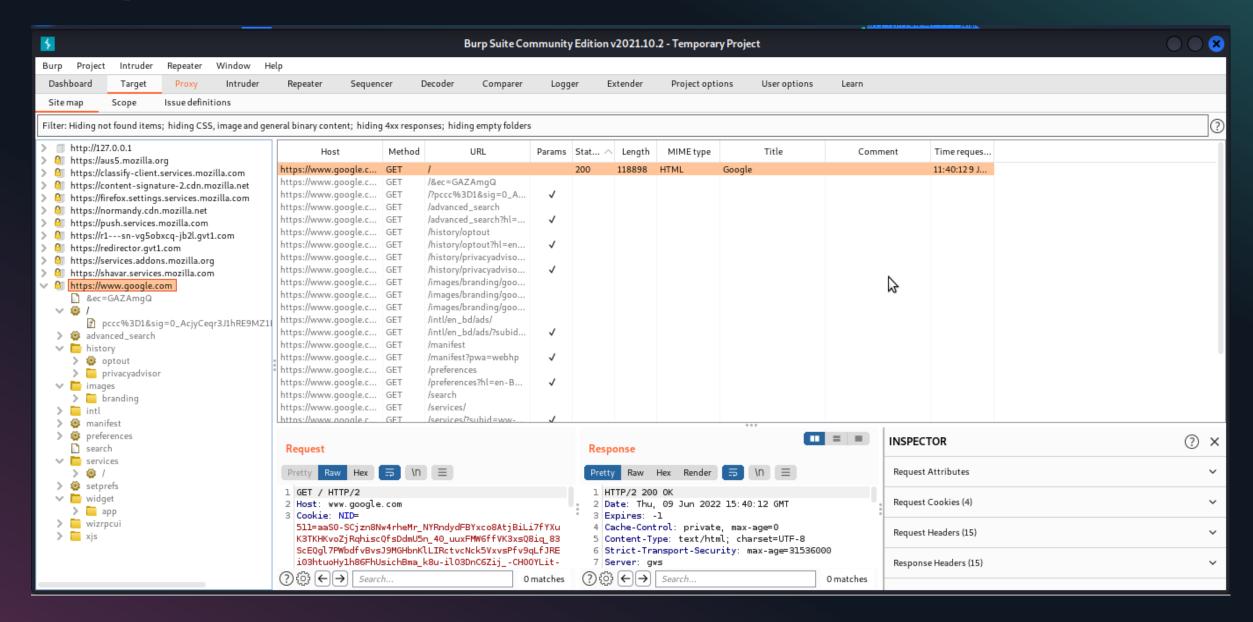
Spider Module

- ✓ Burp Spider is a tool for automatically crawling web applications.
- ✓ While it is generally preferable to map applications manually, you can use Burp Spider to partially automate this process for very large applications, or when you are short of time.

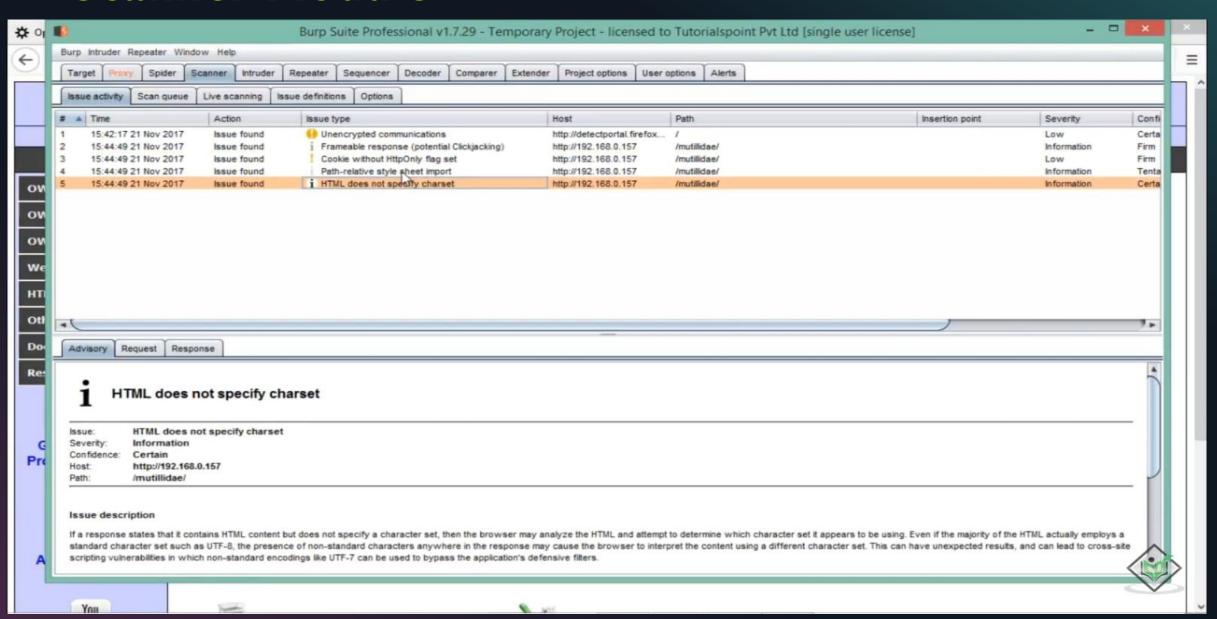
Spider Module

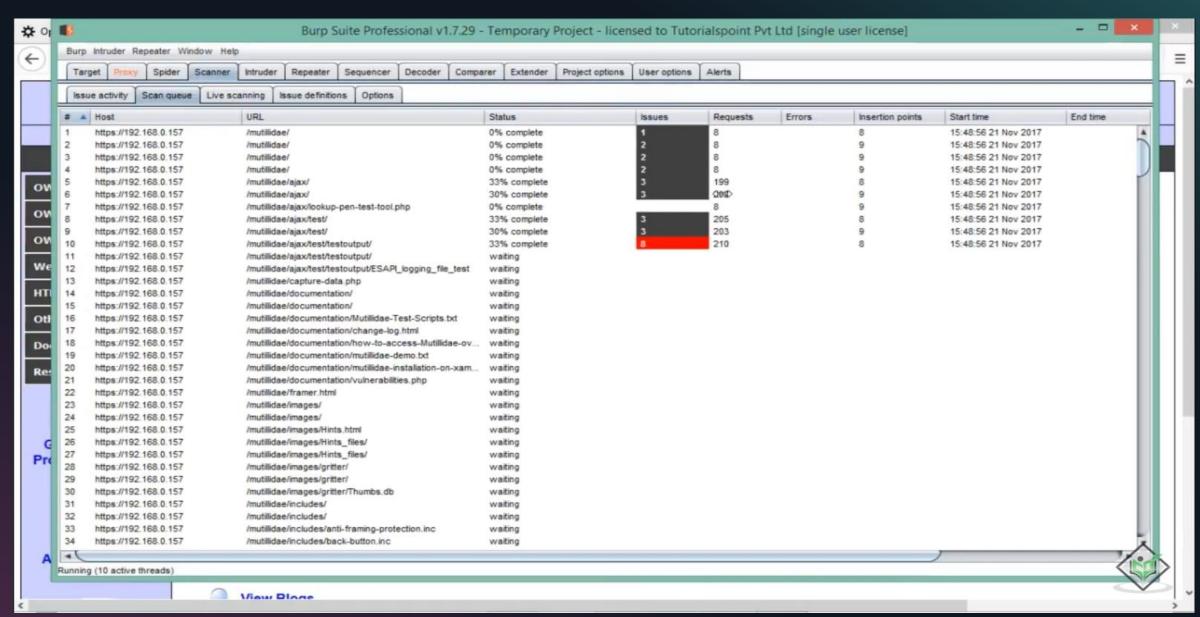


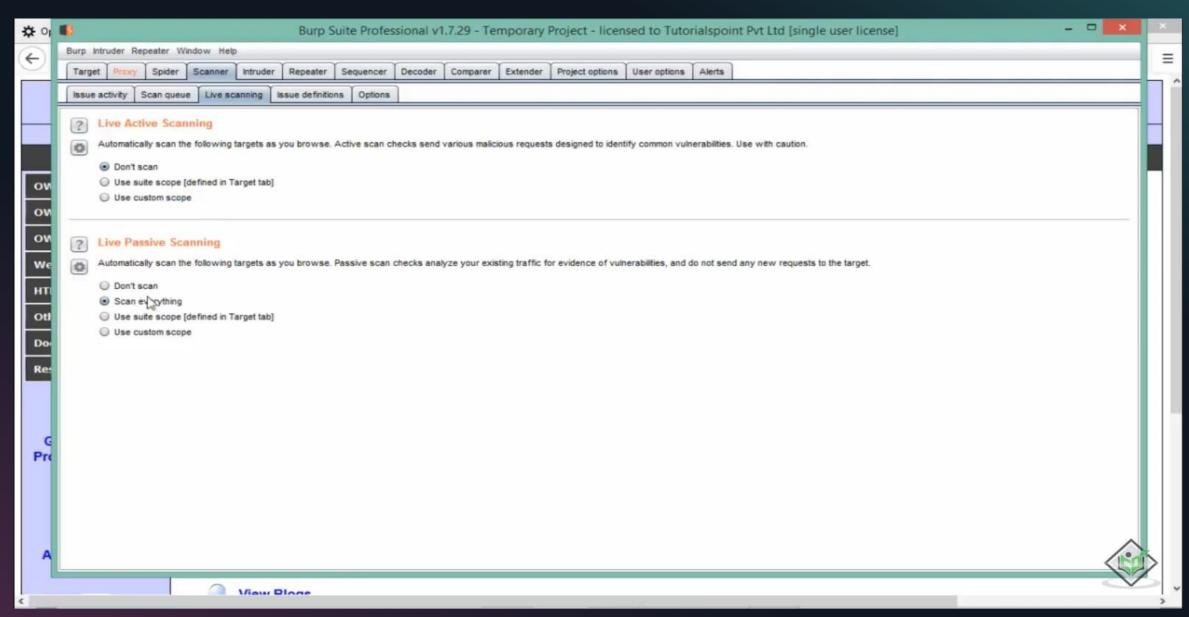
Spider Module



✓ Burp Scanner is a tool for performing automated scans of web sites, to discover content and audit for vulnerabilities.



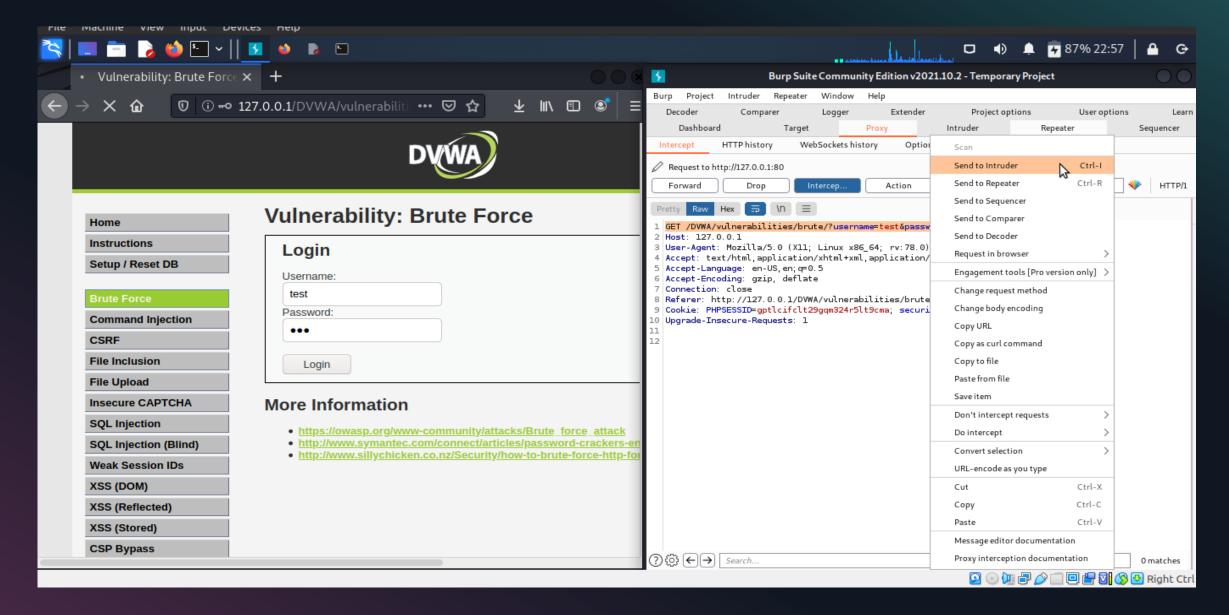


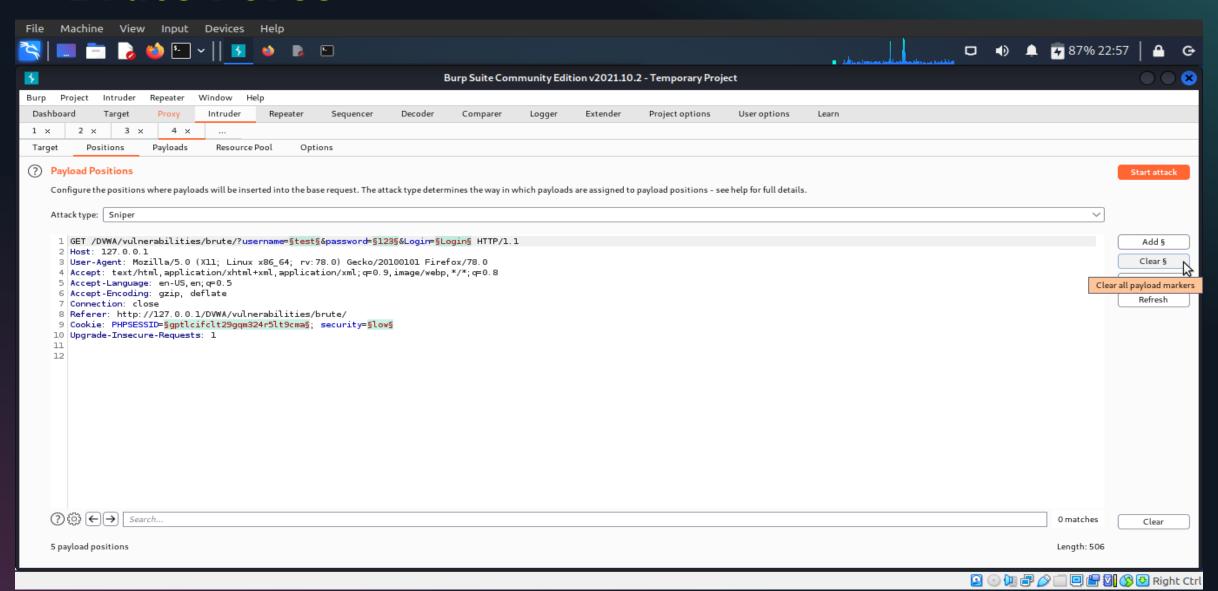


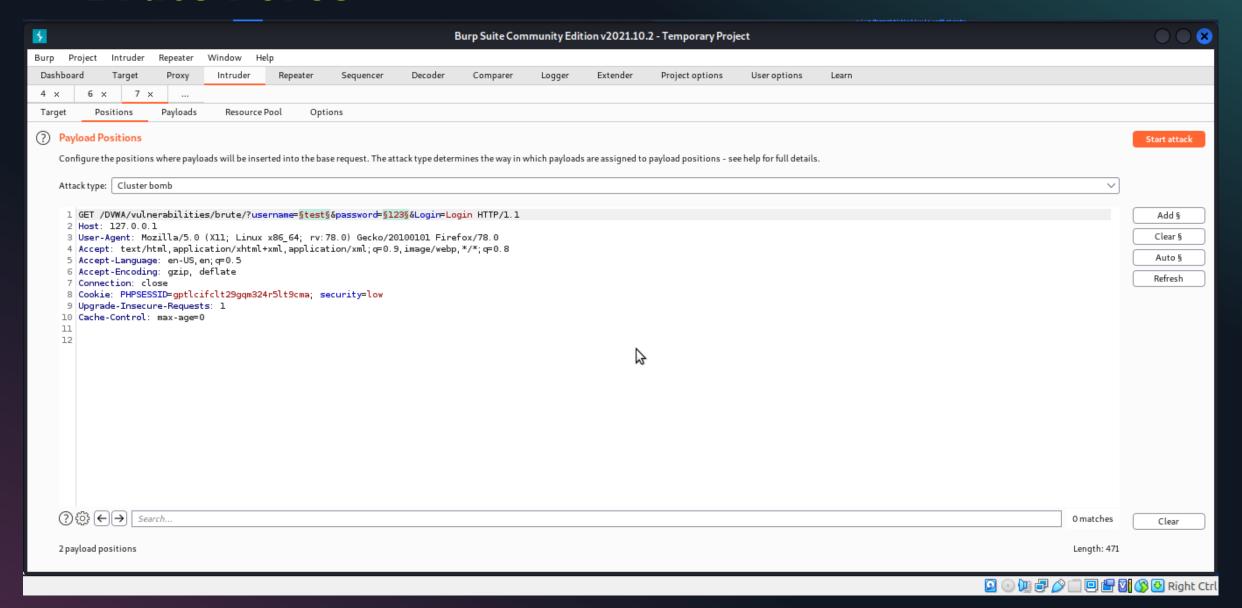
Finding web vulnerabilities using burp suite

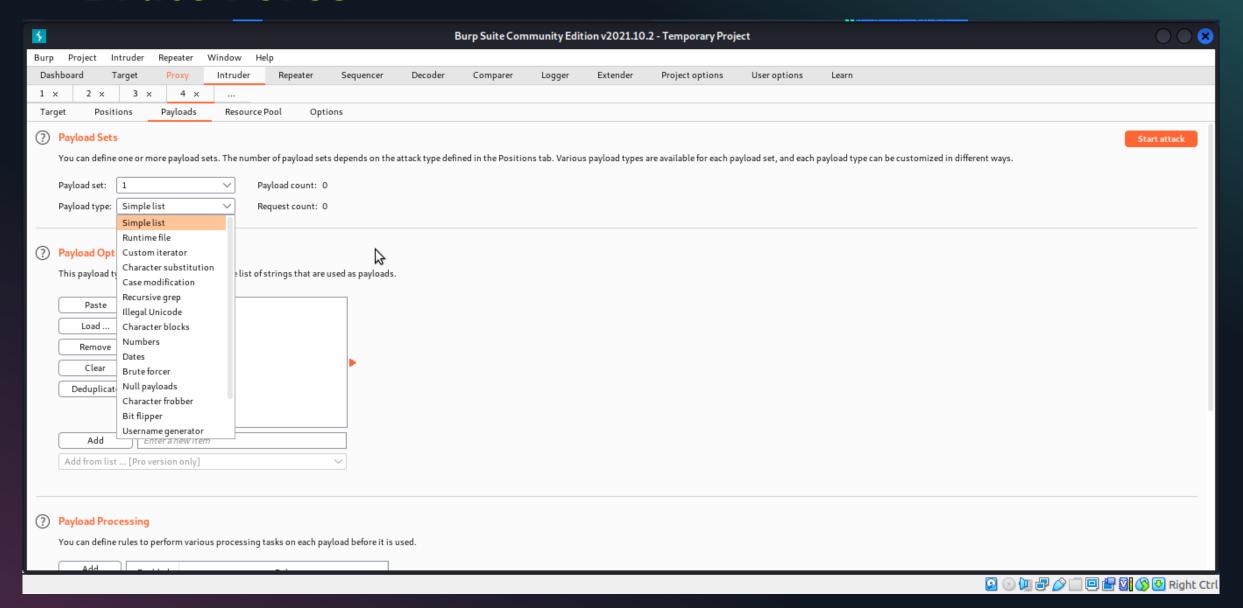
- Brute Force
- Sql Injection
- XSS
- Csrf

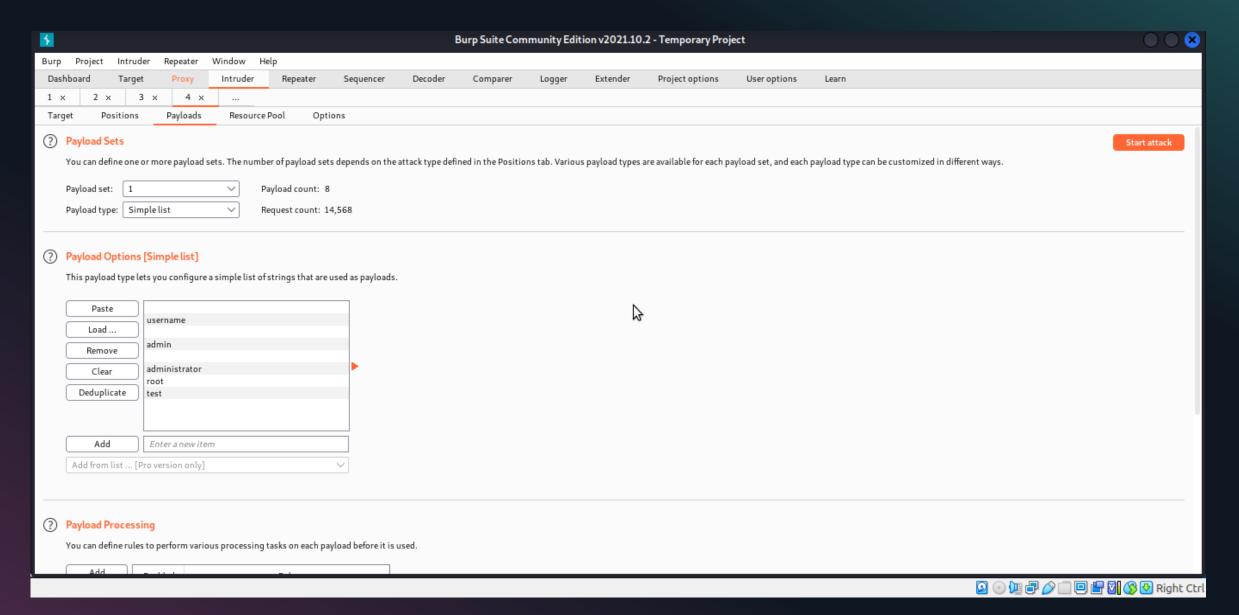
✓ Brute force attacks crack data by trying every possible combination, like a thief breaking into a safe by trying all the numbers on the lock.

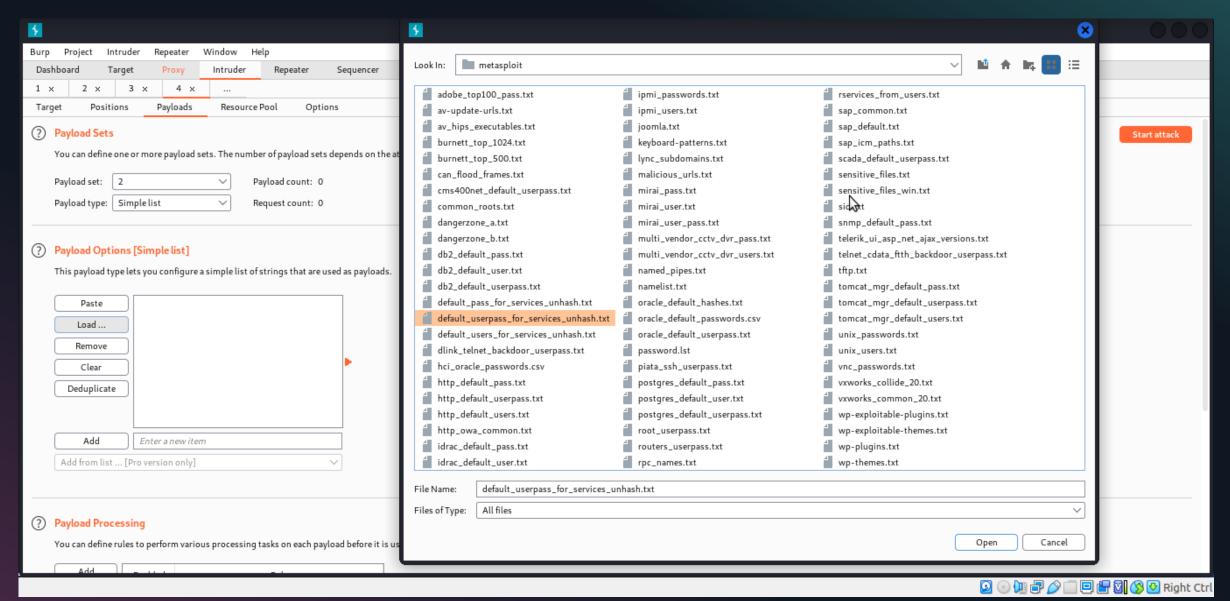


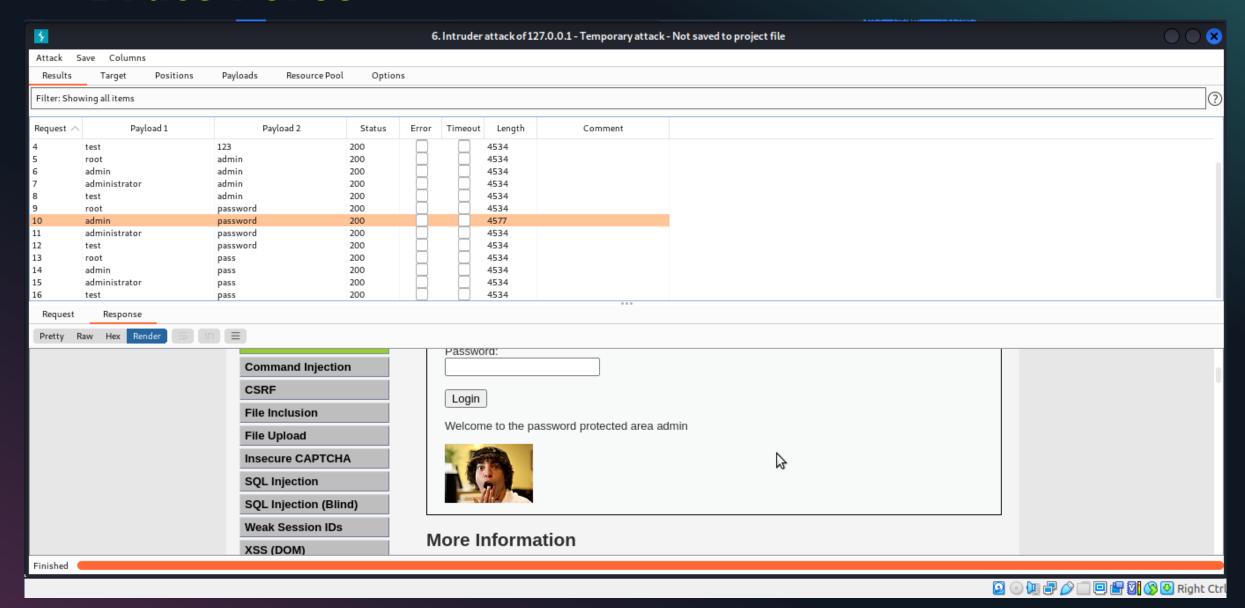






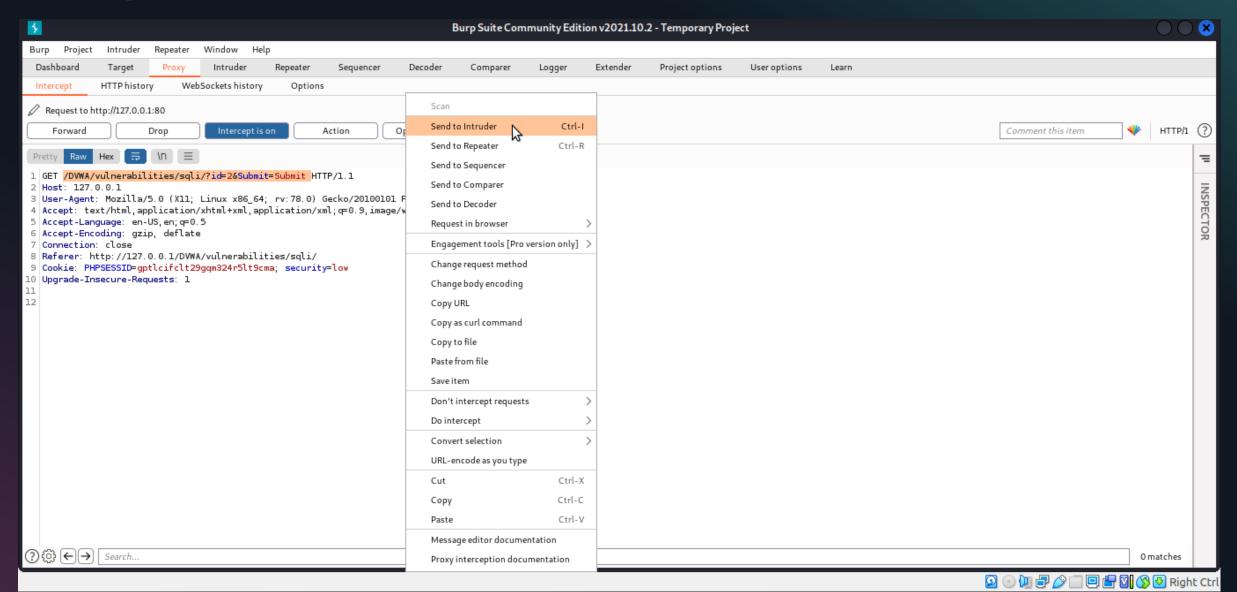


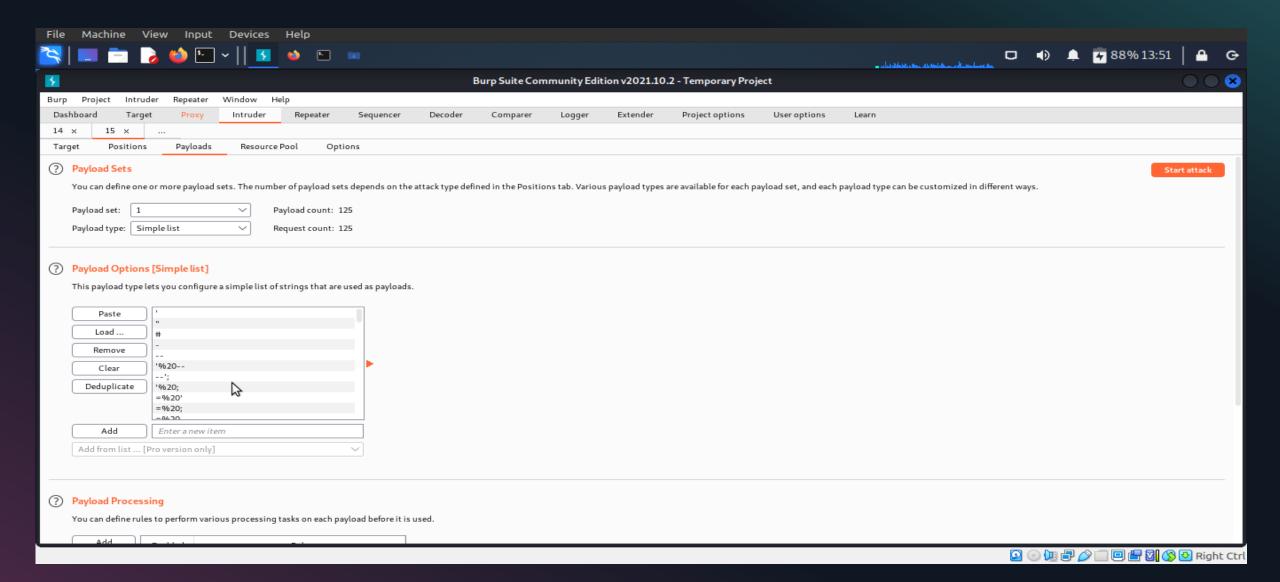


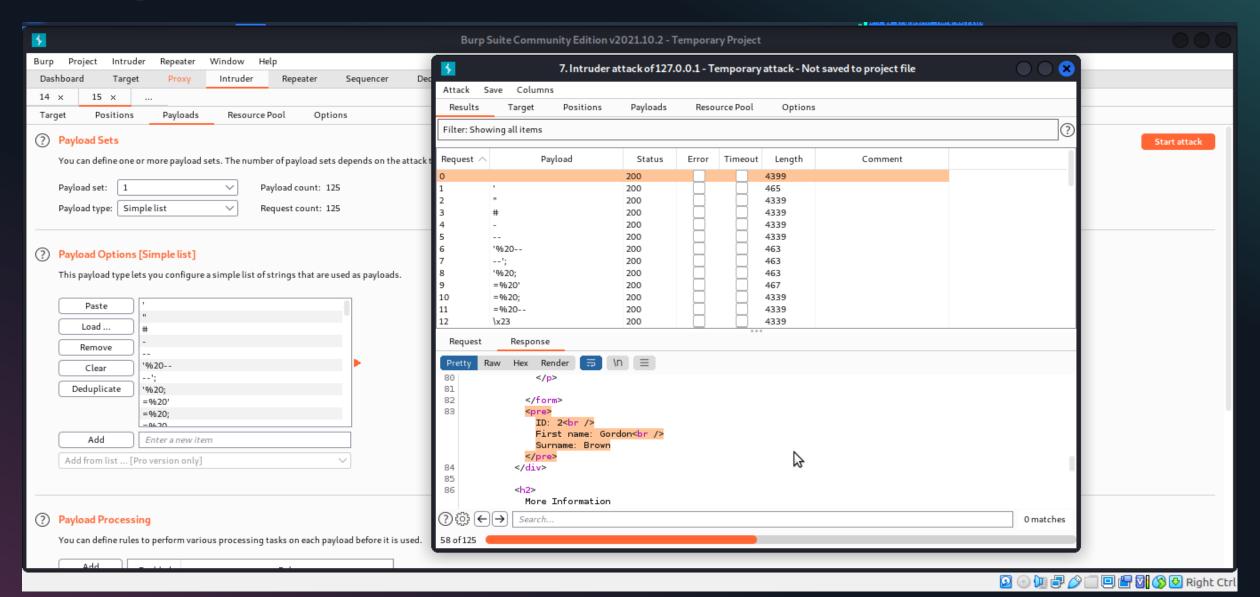


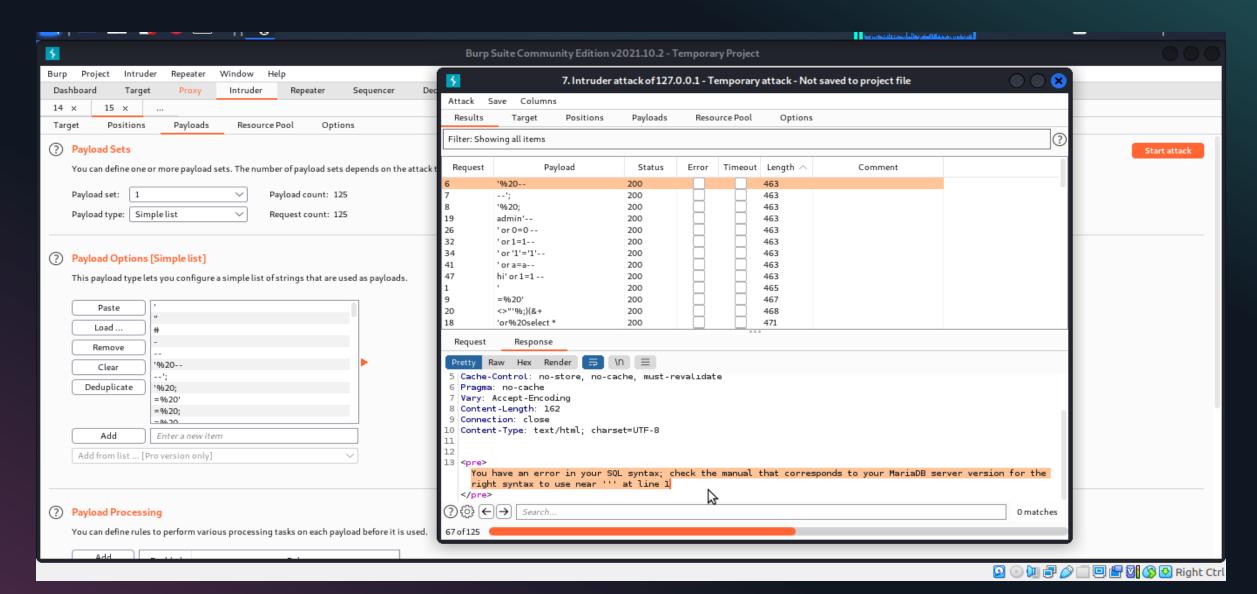
- ✓ SQL injection, also known as SQLI, is a common attack vector that uses malicious SQL code for backend database manipulation to access information that was not intended to be displayed.
- ✓ This information may include any number of items, including sensitive company data, user lists or private customer details.

```
exploits.sql
  SELECT ? FROM ? WHERE ? LIKE '%hammer%';
  SELECT ? FROM ? WHERE ? LIKE '%'%';
5
```



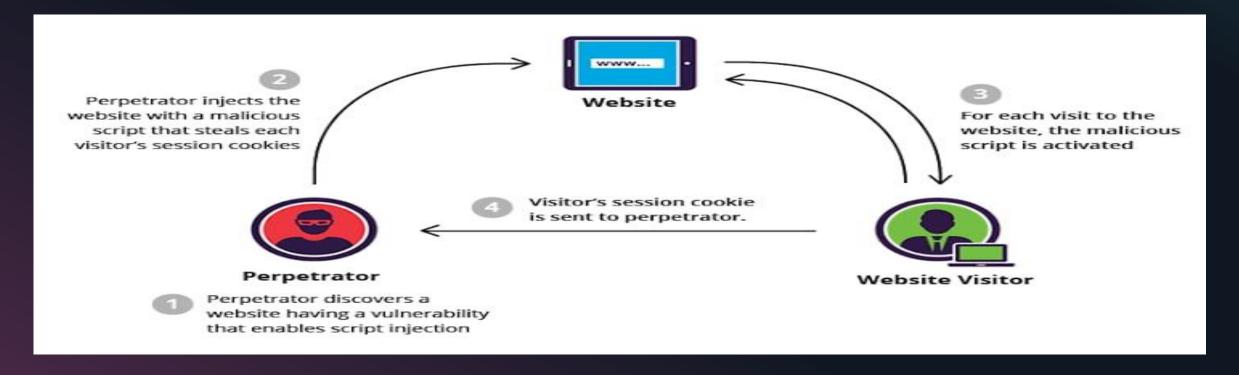




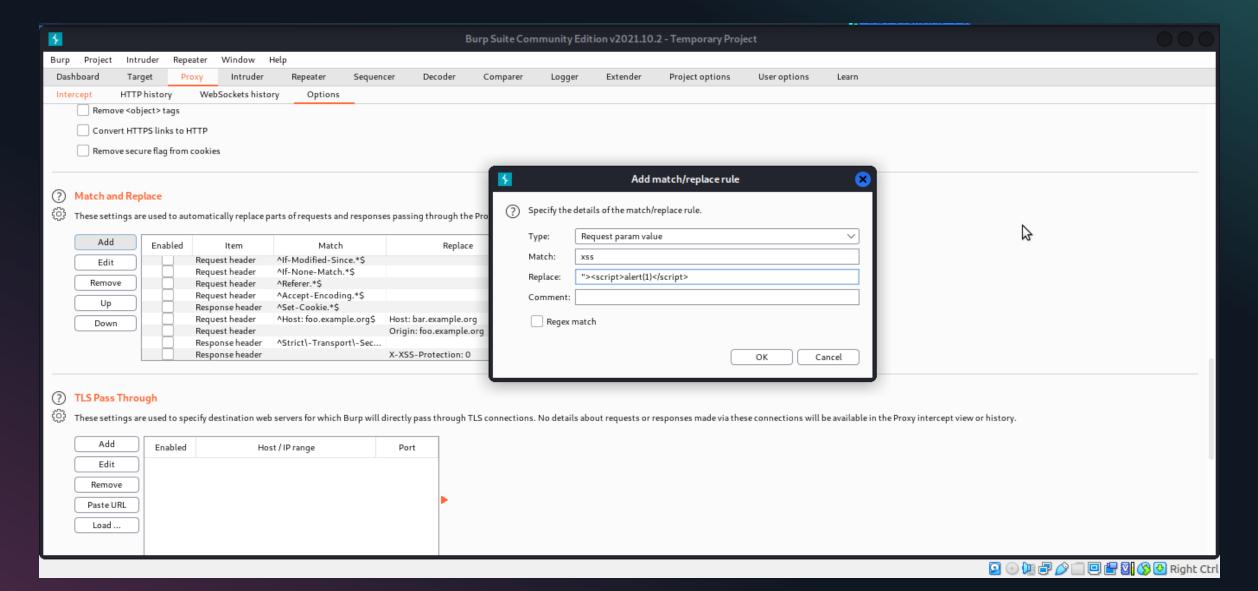


XSS (cross-site scripting)

- Cross-site Scripting (XSS) is a security vulnerability usually found in websites and/or web applications
 that accept user input.
- ✓ Examples of these include search engines, login forms, message boards and comment boxes.
- ✓ Cybercriminals exploit this vulnerability by inputting strings of executable malicious code into these functions.
- ✓ This injects the malicious code into the targeted website's content, making it a part of the website and thus allowing it to affect victims who may visit or view that website.



XSS (cross-site scripting)

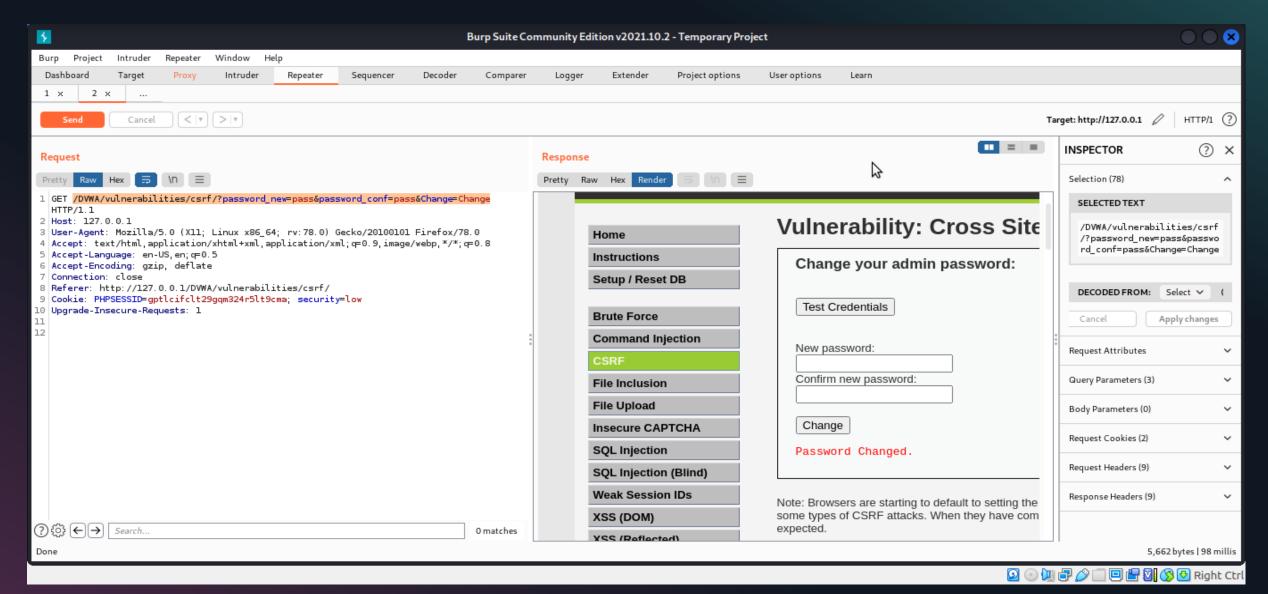


Csrf (Cross-site request forgery)

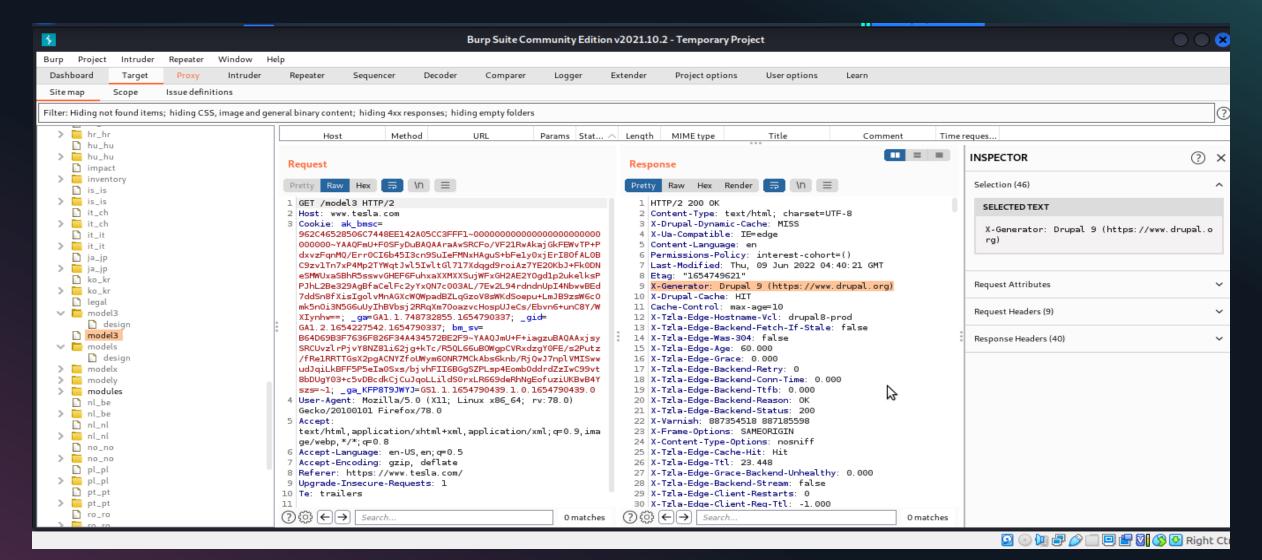
Cross-site request forgery (also known as CSRF) is a web security vulnerability that allows an attacker to induce users to perform actions that they do not intend to perform.



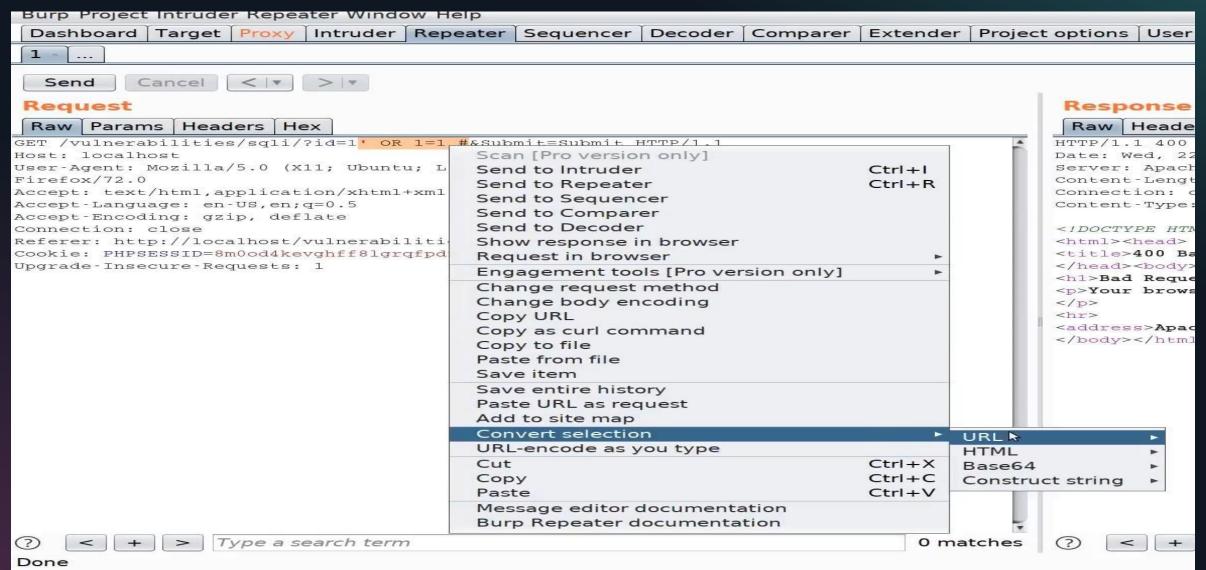
Csrf (Cross-site request forgery)



More with Burp Suite... Information Gathering



More with Burp Suite... Url Encoding



Thank You