

MIT WORLD PEACE UNIVERSITY

Vulnerability Identification and Penetration Testing
Third Year B. Tech, Semester 6

BRUTEFORCE PASSWORD ATTACK USING
BURPSUITE

ASSIGNMENT 1

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1 Aim

To perform a brute force attack using Burpsuite.

2 Objectives

1. To learn about the Burpsuite tool.
2. To perform a brute force attack using Burpsuite.
3. To understand the concept of brute force attacks.

3 Theory

3.1 Burpsuite

Burp Suite is a leading cybersecurity tool that provides web application security testing. It is developed by PortSwigger, an IT security company based in the UK. Burp Suite is widely used by security professionals to perform various security testing tasks, such as scanning, crawling, and testing web applications for vulnerabilities.

3.2 Advantages

- BurpSuite provides a user-friendly interface, making it accessible to both beginners and experienced users.
- It offers a wide range of features for web application testing, including proxy, scanner, and intruder, among others.
- BurpSuite supports various platforms, including Windows, macOS, and Linux, enhancing its versatility and usability.
- The tool allows for easy customization and extension through the use of plugins, enabling users to tailor their testing environment according to their needs.
- BurpSuite provides detailed reports and logs, facilitating thorough analysis and documentation of test results.

3.3 Disadvantages

- While BurpSuite offers a free version, its full set of features is only available in the paid version, which may be a barrier for some users.
- Due to its extensive functionality, BurpSuite has a steep learning curve, requiring time and effort to master all of its features effectively.
- The tool's reliance on Java may lead to performance issues, especially when dealing with large-scale or complex testing scenarios.
- BurpSuite's automated scanning capabilities may produce false positives or miss certain vulnerabilities, requiring manual verification by users.

- The graphical user interface (GUI) of BurpSuite, while intuitive for many, may not be suitable for users who prefer command-line interfaces or scripted testing approaches.

4 Implementation

4.1 Launching Burpsuite



Figure 1: Opening Burpsuite

4.2 Opening Browser for Locally hosted Django Project

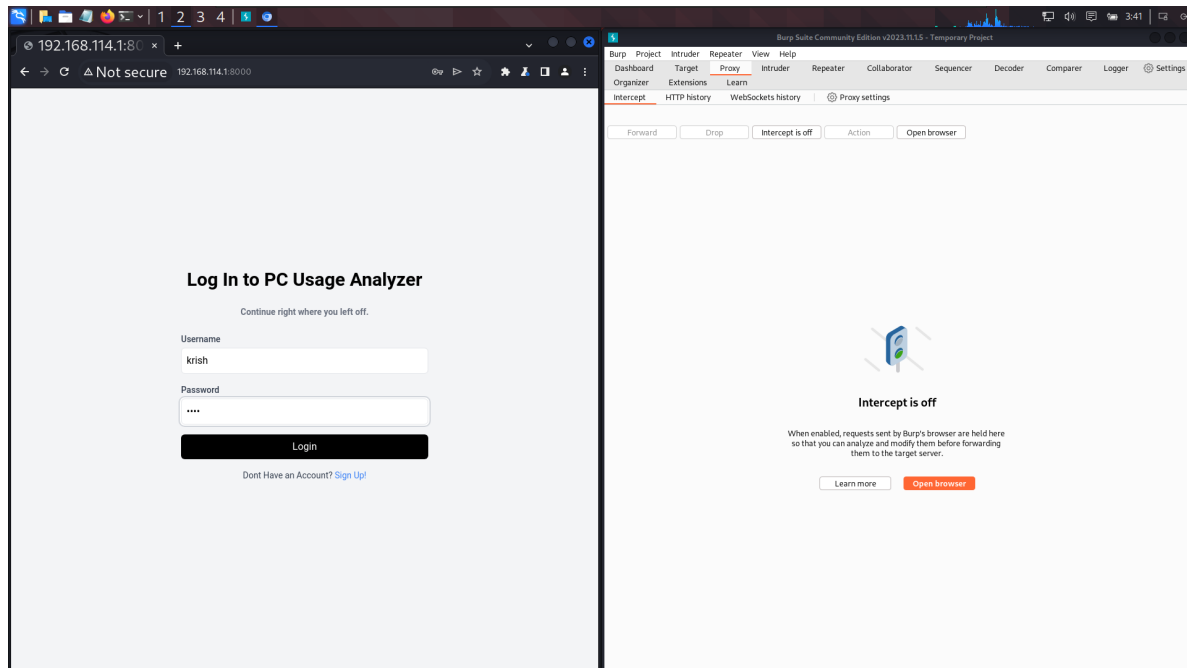


Figure 2: Opening Burpsuite

4.3 Entering Credentials and Interecepting

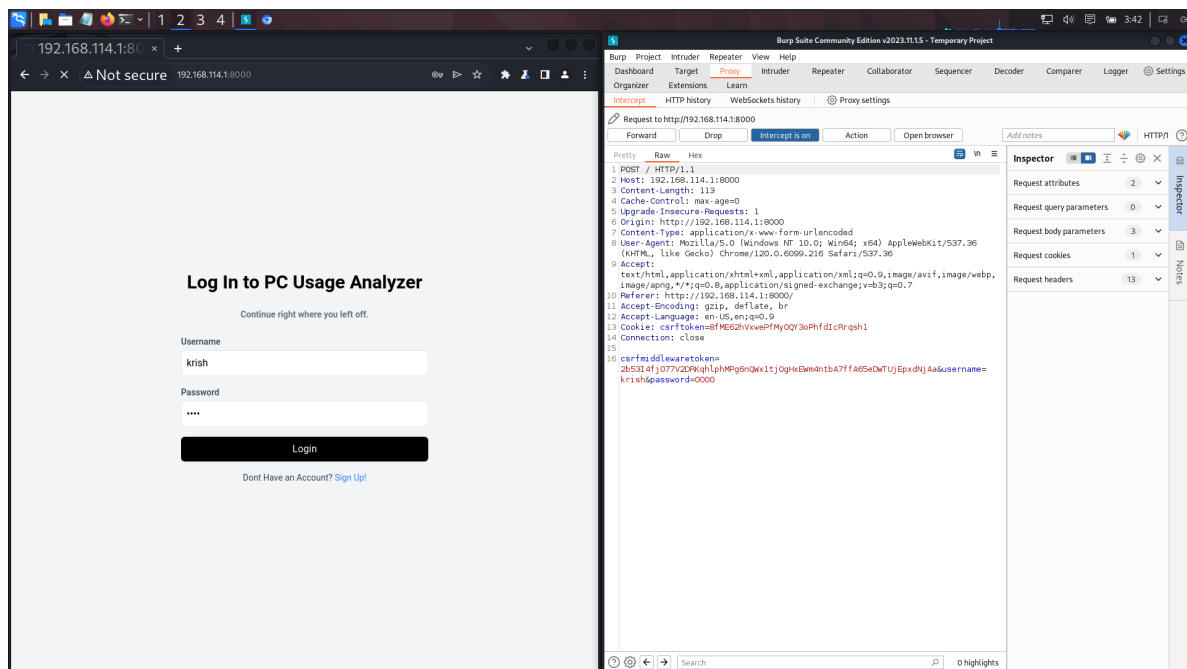


Figure 3: Opening Burpsuite

4.4 Setting Payloads by selecting Username and Password

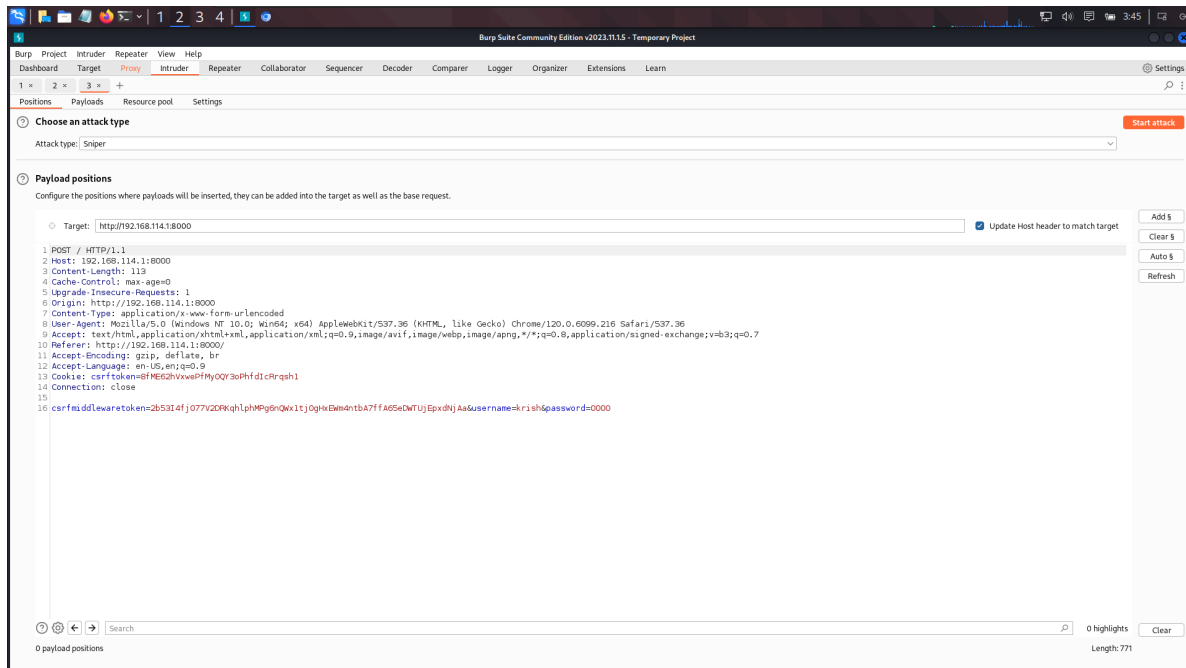


Figure 4: Opening Burpsuite

4.5 Choosing Cluster Bomb

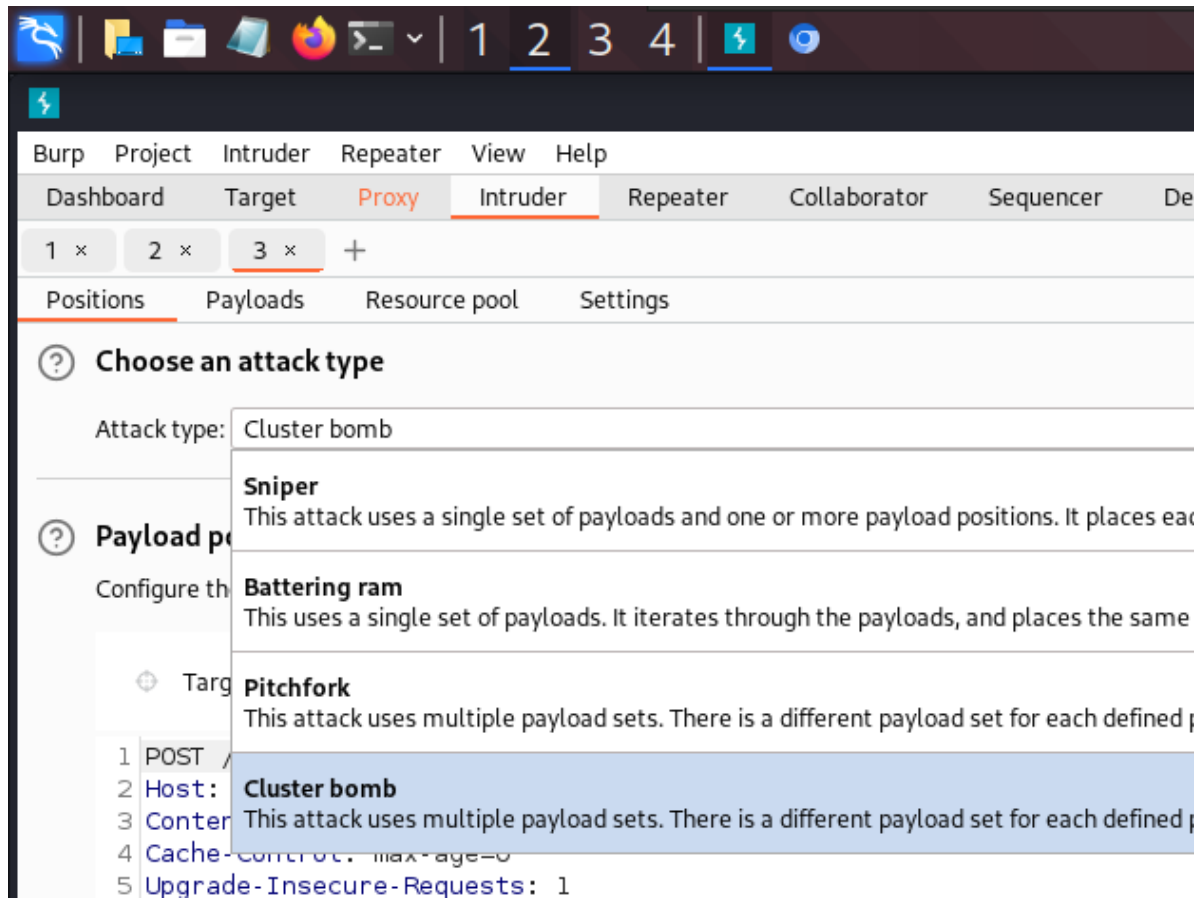


Figure 5: Opening Burpsuite

4.6 Setting Password Brute Force Attack lists

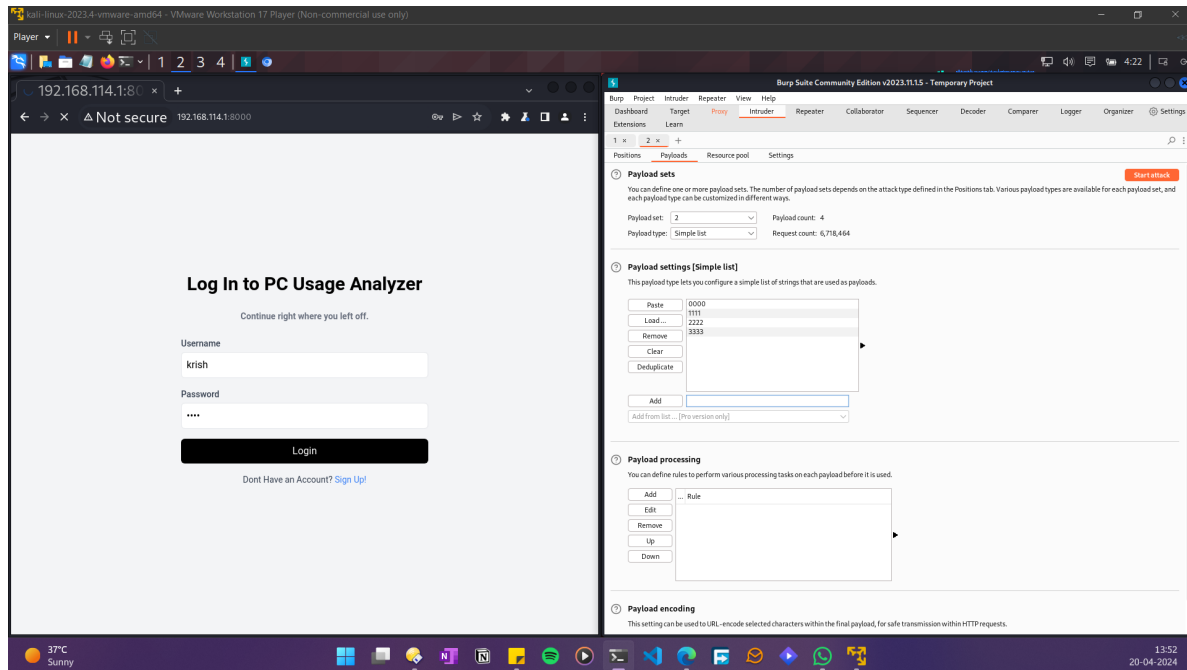
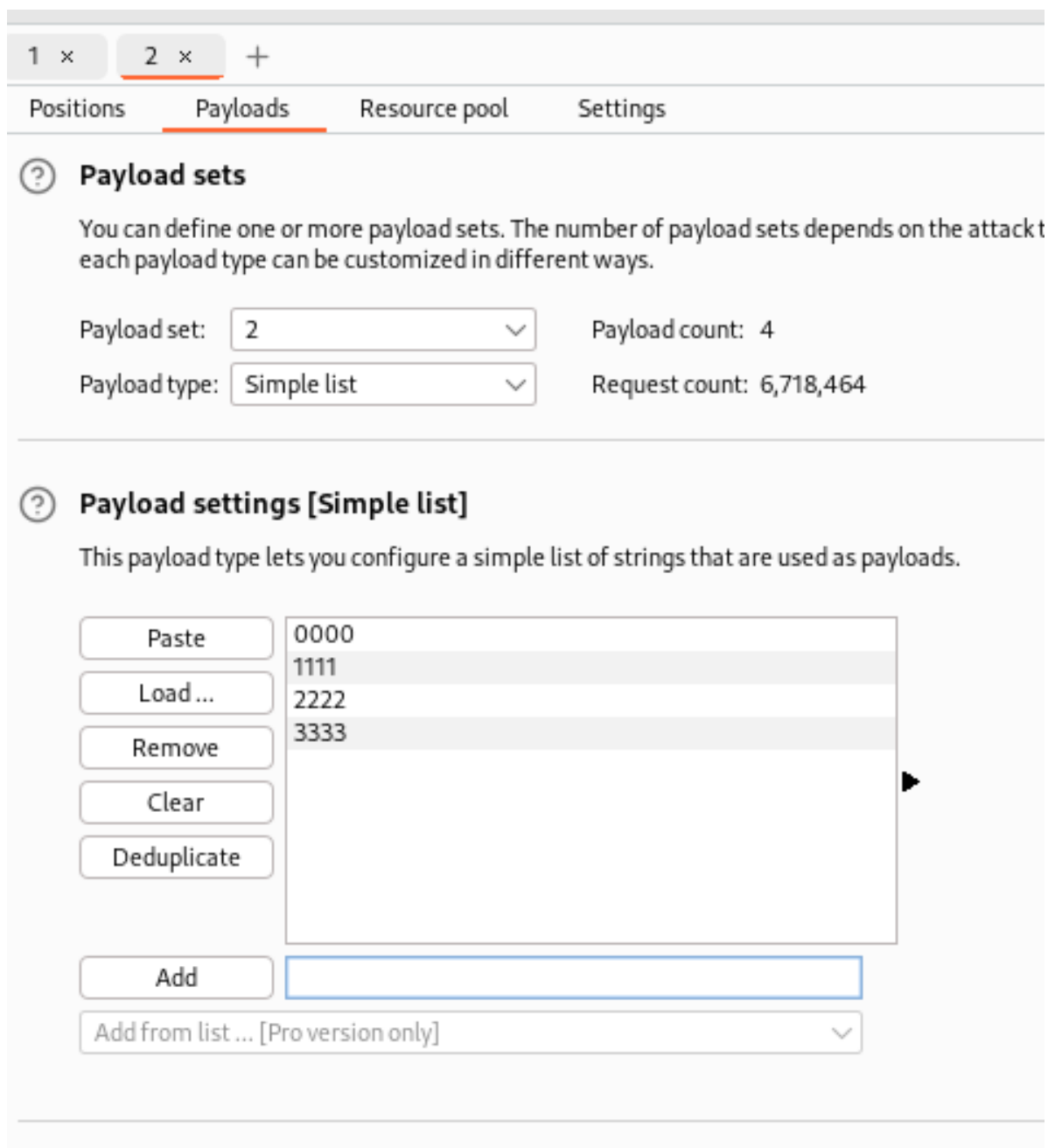


Figure 6: Opening Burpsuite

4.7 Setting Password Brute Force Attack lists



The screenshot shows the Burpsuite interface with the 'Payloads' tab selected. The 'Payload sets' section is active, displaying configuration for a 'Simple list' payload set. The 'Payload set' dropdown is set to '2', 'Payload count' is 4, 'Payload type' is 'Simple list', and 'Request count' is 6,718,464. Below this, the 'Payload settings [Simple list]' section is shown, with a description: 'This payload type lets you configure a simple list of strings that are used as payloads.' A list of strings is displayed: 0000, 1111, 2222, and 3333. To the left of the list are buttons for 'Paste', 'Load ...', 'Remove', 'Clear', and 'Deduplicate'. Below the list is an 'Add' button and a text input field. At the bottom, there is a dropdown menu labeled 'Add from list ... [Pro version only]'.

1 × 2 × +

Positions **Payloads** Resource pool Settings

Payload sets

You can define one or more payload sets. The number of payload sets depends on the attack type. Each payload type can be customized in different ways.

Payload set: 2 Payload count: 4

Payload type: Simple list Request count: 6,718,464

Payload settings [Simple list]

This payload type lets you configure a simple list of strings that are used as payloads.

Paste 0000

Load ... 1111

Remove 2222

Clear 3333

Deduplicate

Add

Add from list ... [Pro version only]

Figure 7: Opening Burpsuite

4.8 Setting Usernames list from brute forcer

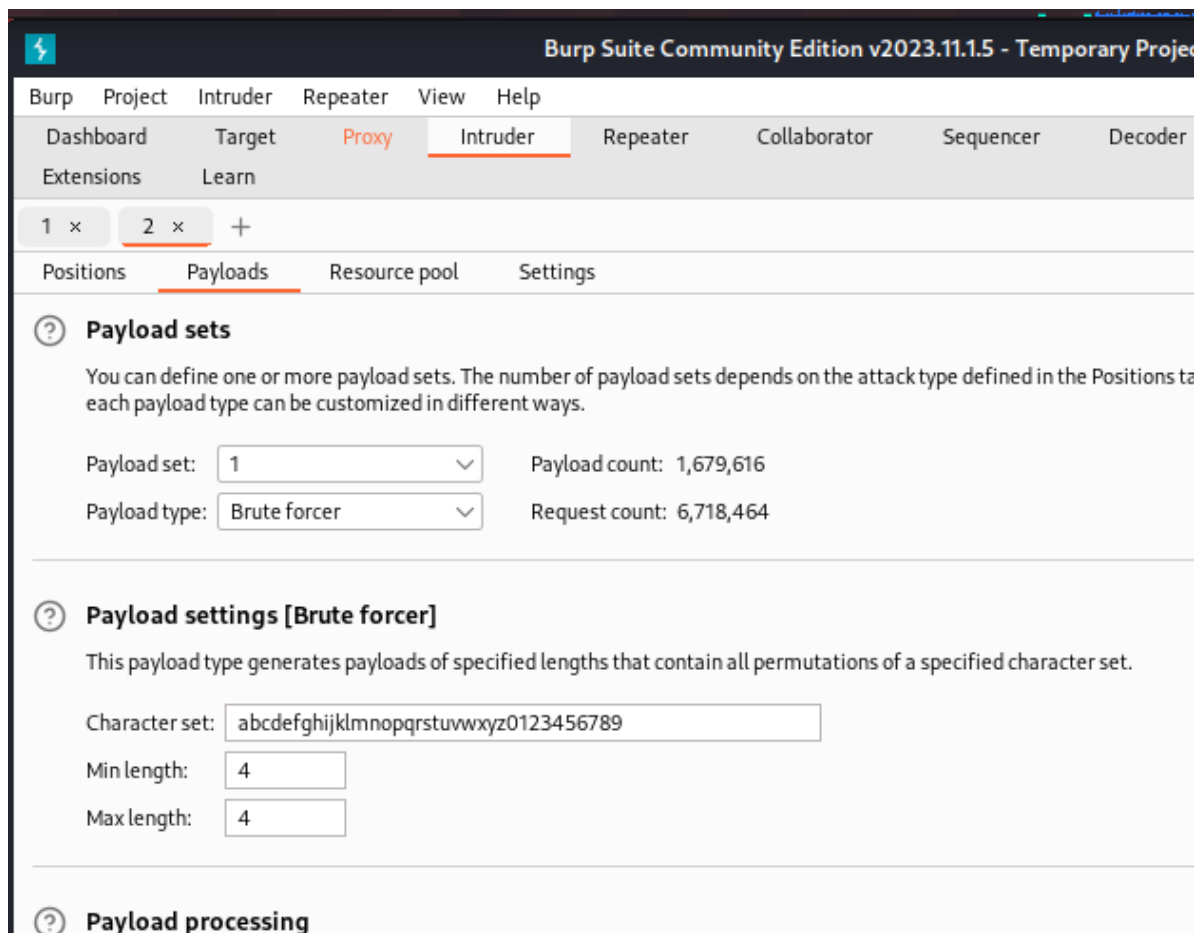


Figure 8: Opening Burpsuite

4.9 Executing Attack

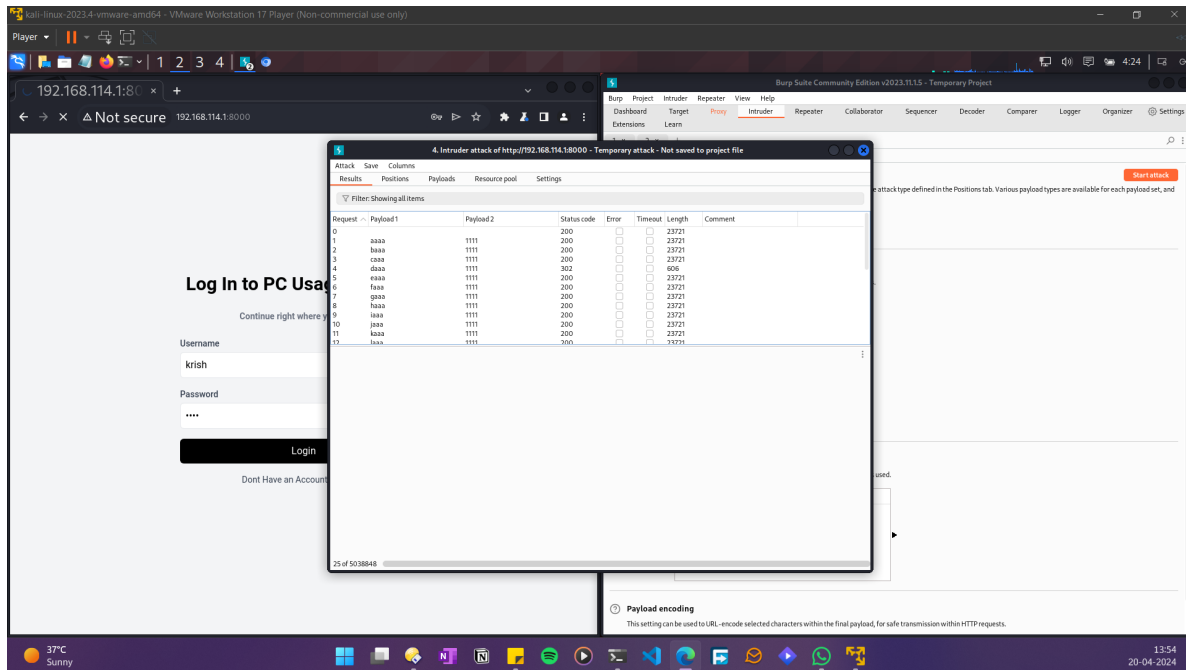


Figure 9: Opening Burpsuite

4.10 Executing Attack, as seen on django server console logs

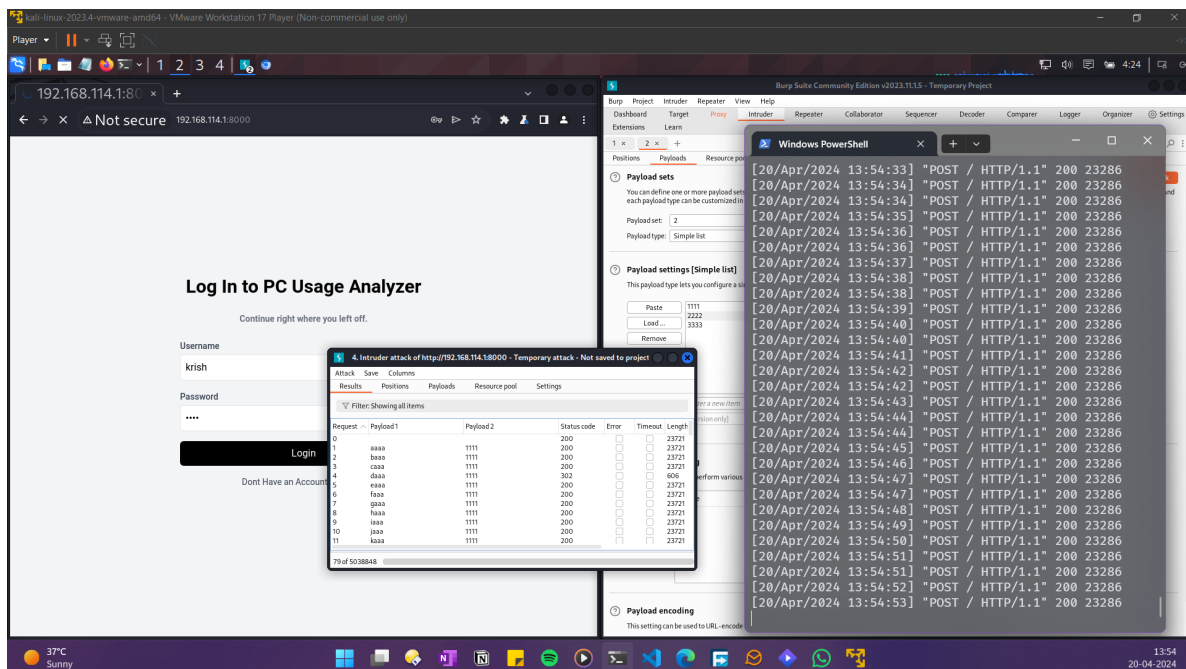


Figure 10: Opening Burpsuite

4.11 Finding Correct password by noticing change in length

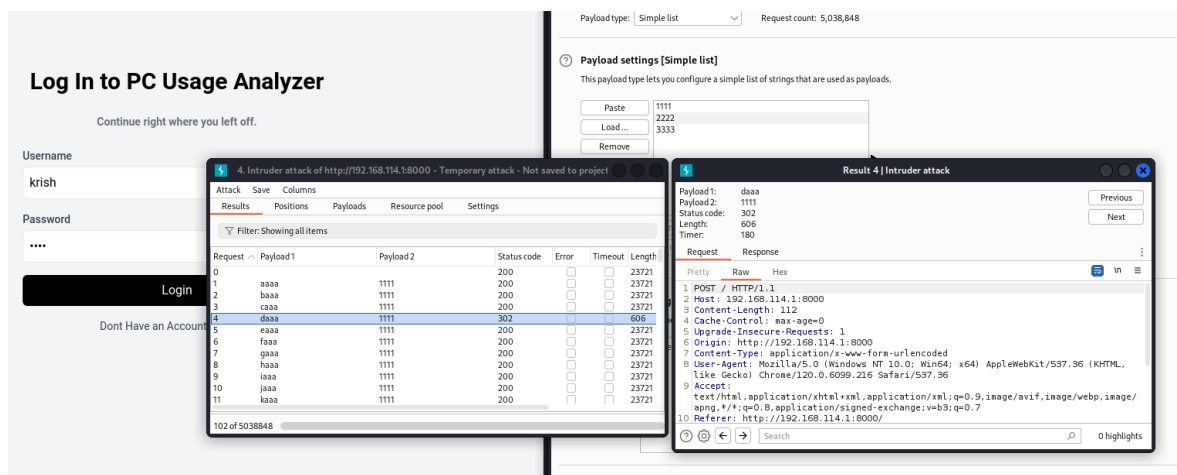


Figure 11: Opening Burpsuite

4.12 Correct password found

4. Intruder attack of http://192.168.114.1:8000 - Temporary attack - Not saved to project							
Attack Save Columns							
Results Positions Payloads Resource pool Settings							
Filter: Showing all items							
Request	Payload 1	Payload 2	Status code	Error	Timeout	Length	
0			200			23721	
1	aaaa	1111	200			23721	
2	baaa	1111	200			23721	
3	caaa	1111	200			23721	
4	daaa	1111	302			606	
5	eaaa	1111	200			23721	
6	faaa	1111	200			23721	
7	gaaa	1111	200			23721	
8	haaa	1111	200			23721	
9	iaaa	1111	200			23721	
10	jaaa	1111	200			23721	
11	kaaa	1111	200			23721	

Figure 12: Opening Burpsuite

5 Platform

Operating System: Arch Linux X8664

IDEs or Text Editors Used: Visual Studio Code

FAQs

1. Features of Burp Suite:

- Web vulnerability scanning
- Intercepting proxy
- Application scanning

2. Three versions of Burp Suite:

- Community Edition (free)
- Professional Edition (paid)
- Enterprise Edition (paid with additional team features)

3. Safety of Burp Suite:

- Burp Suite is safe for ethical hacking and security testing when used responsibly and legally.

4. Purpose of the proxy tab in Burp Suite:

- Allows intercepting and modifying HTTP/S requests and responses for analyzing and manipulating web traffic during security testing.

6 Conclusion

In this assignment, we learned about the Burpsuite tool and performed a brute force attack using Burpsuite. We set up the attack by intercepting the login request, setting up the payloads, and executing the attack. We observed the attack in action and found the correct password by noticing the change in the response length. This exercise helped us understand the concept of brute force attacks and how they can be used to compromise security.