# PROJECT- 1_ SYSTEM HACKING

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## Contents

# PASSWORD ATTACK

## i. ABSTRACT

This report offers a comprehensive exploration of tools and techniques used in ethical hacking, specifically focusing on system security assessment. It provides insights into five critical components: Hydra for password attacks, auxiliary modules in Metasploit, NSE Scripts in Nmap, John the Ripper for password cracking, and password generation using Crunch.

This report provides a comprehensive exploration of password attacks, a pervasive threat in the realm of cybersecurity. It investigates five key elements central to the art of password manipulation: Hydra, Auxiliary Modules, NSE Scripts, John the Ripper, and password generation using Crunch. Each element is meticulously examined for its role in identifying weak access points, assessing network vulnerabilities, and enhancing password security. By shedding light on the tactics and tools employed in password attacks, this report equips readers with valuable insights into defending against one of the most common and potentially devastating cyber threats.

## ii. OBJECTIVE

a. **Explaining Tools and Techniques**: We want to help people understand important tools and techniques used in ethical hacking, like Hydra, auxiliary modules, NSE Scripts, John the Ripper, and Crunch, in simple terms.

b. **Ethical and Legal Use**: We want to stress the importance of using these tools and techniques responsibly and legally. We aim to make readers aware of ethical and legal considerations when using them.

c. **Understanding Techniques**: Make it easy for readers to understand how ethical hackers use these tools to check if a computer system is secure.

## iii. INTRODUCTION

This report seeks to the world of ethical hacking, offering a comprehensive introduction to the tools and techniques used in the field of system security assessment. By shedding light on these essential components, we aim to empower individuals and organizations to enhance their cybersecurity.

Throughout this report, we will explore five pivotal elements of ethical hacking:

a. **Hydra**: A versatile password-cracking tool that assists in identifying weak points in access control systems.

b. **Auxiliary Modules**: Part of the Metasploit framework, these modules play a crucial role in assessing network vulnerabilities and gathering essential information.

c. **NSE Scripts**: Nmap Scripting Engine scripts enable targeted and thorough network scanning, aiding in the discovery of potential security flaws.

d. **John the Ripper**: A potent password-cracking utility known for its ability to decipher password hashes and evaluate password strength.

e. **Password Generation Using Crunch**: A tool for creating customized wordlists and generating secure passwords, a cornerstone in bolstering digital defences.

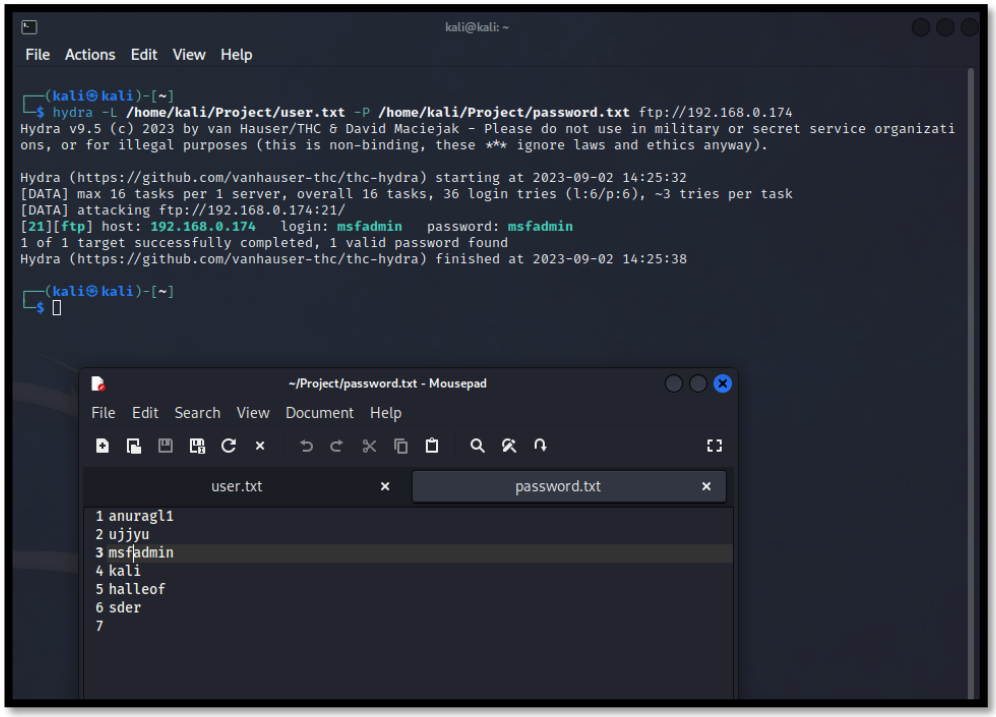
## iv. METHODOLOGY

a. Password attacks are a significant concern, as they can compromise sensitive data and systems. To mitigate such risks, it is crucial to understand the methodologies employed by attackers. The methodology for password attacks typically involves several stages.

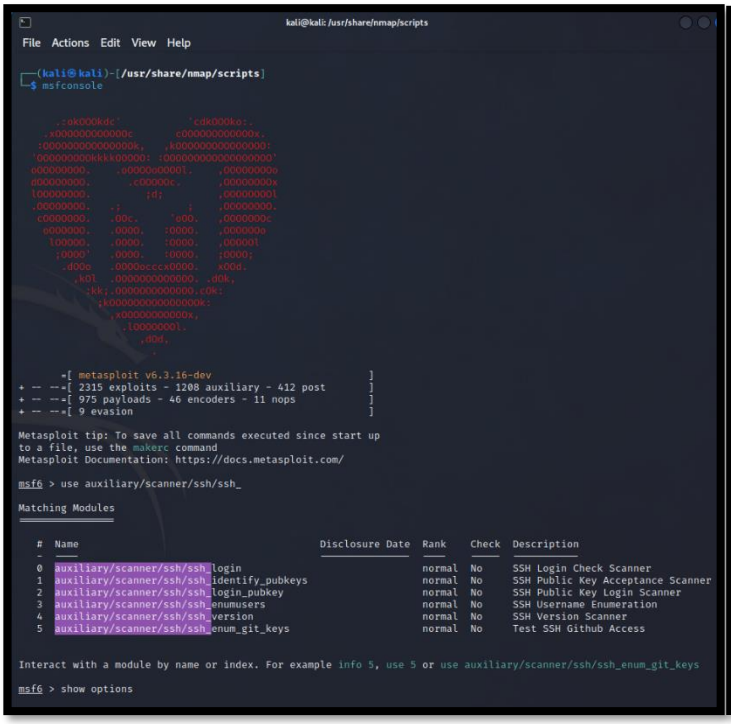
b. Password List Creation: Attackers compile a list of potential passwords that the target might use. This list can be generated using common password dictionaries, brute-force techniques, or by analysing the target's online presence for clues like pet names, birthdays, or favourite sports teams.

c. Password Cracking: Attackers utilize various password cracking techniques to guess the correct password.

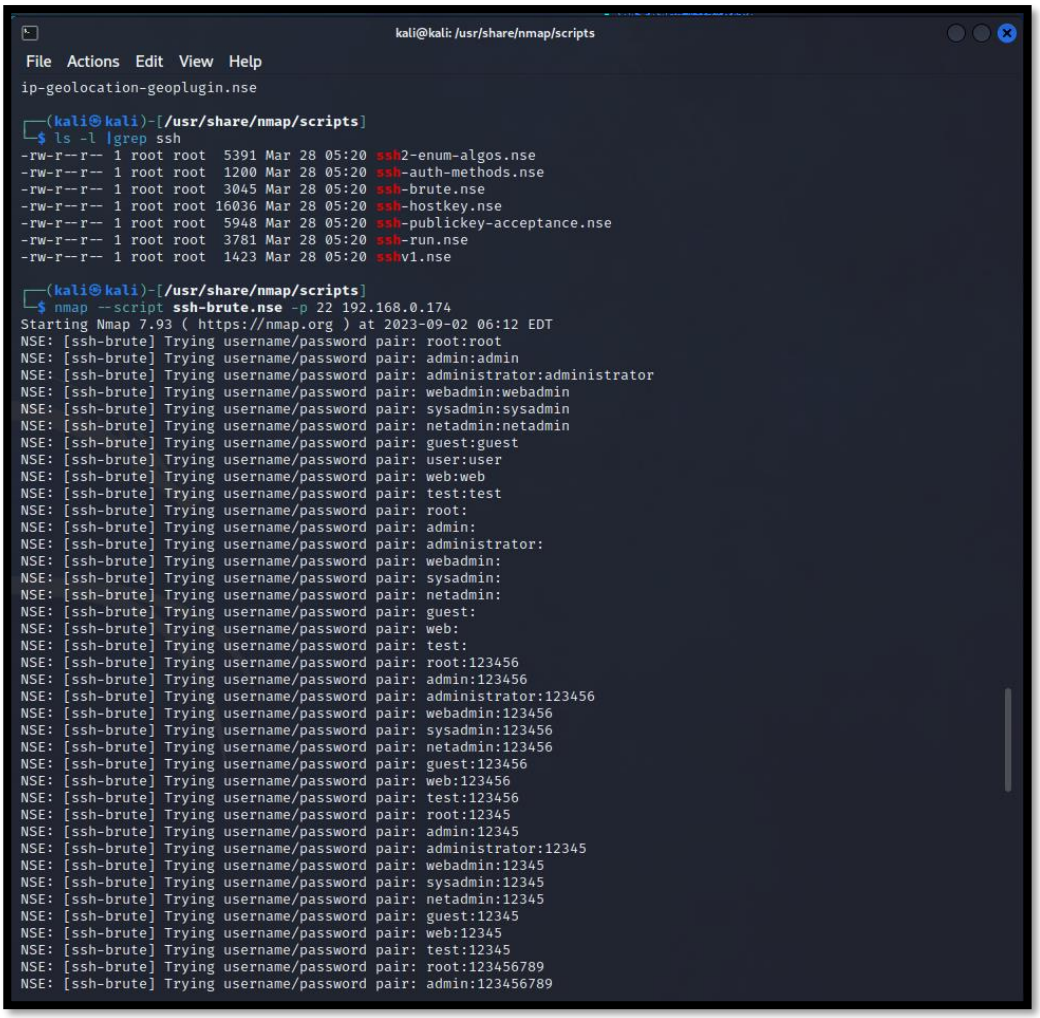
## v. SCREENSHOT OF PASSWORD ATTACK



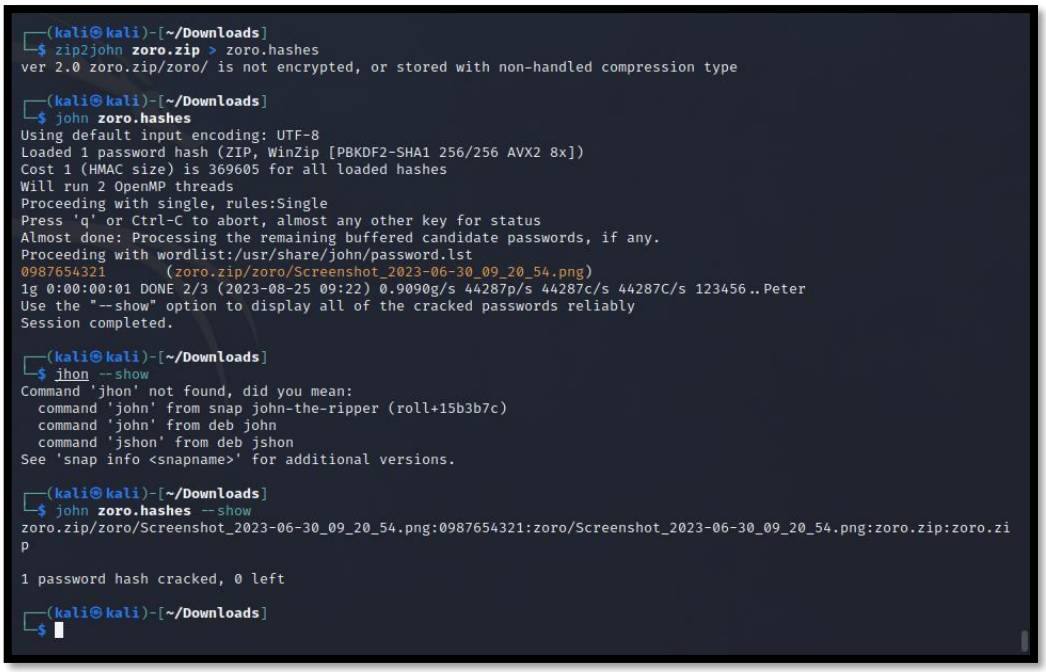

**Task 1: Hydra Tool**



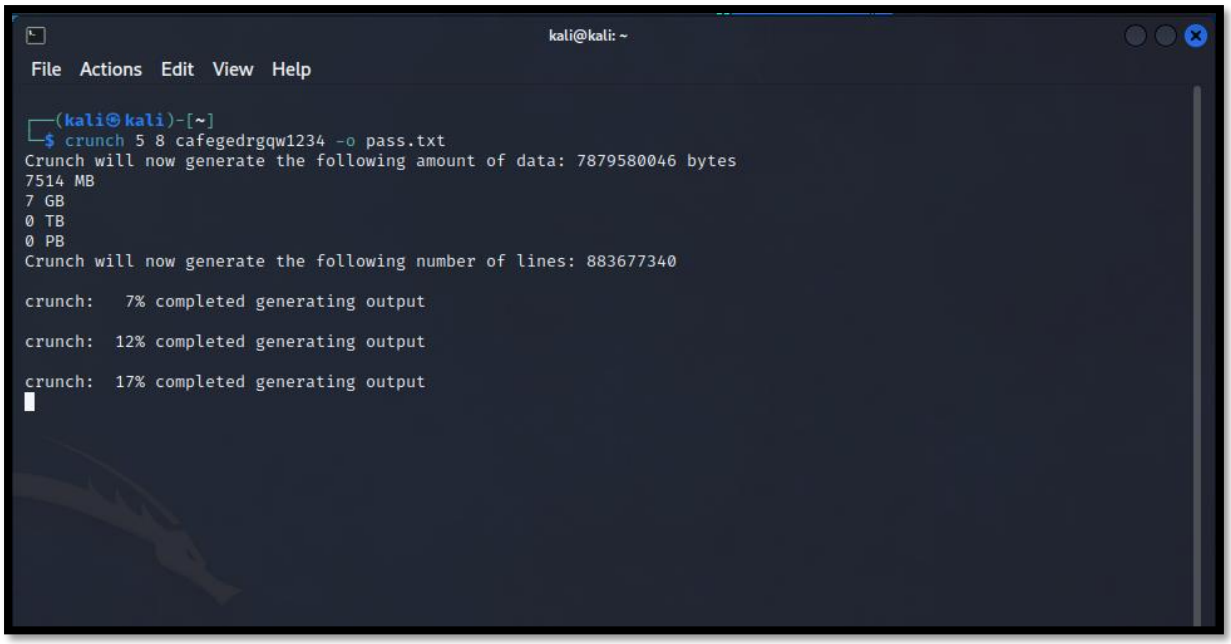

**Task 2:Auxiliary Modules Using Metasploit**

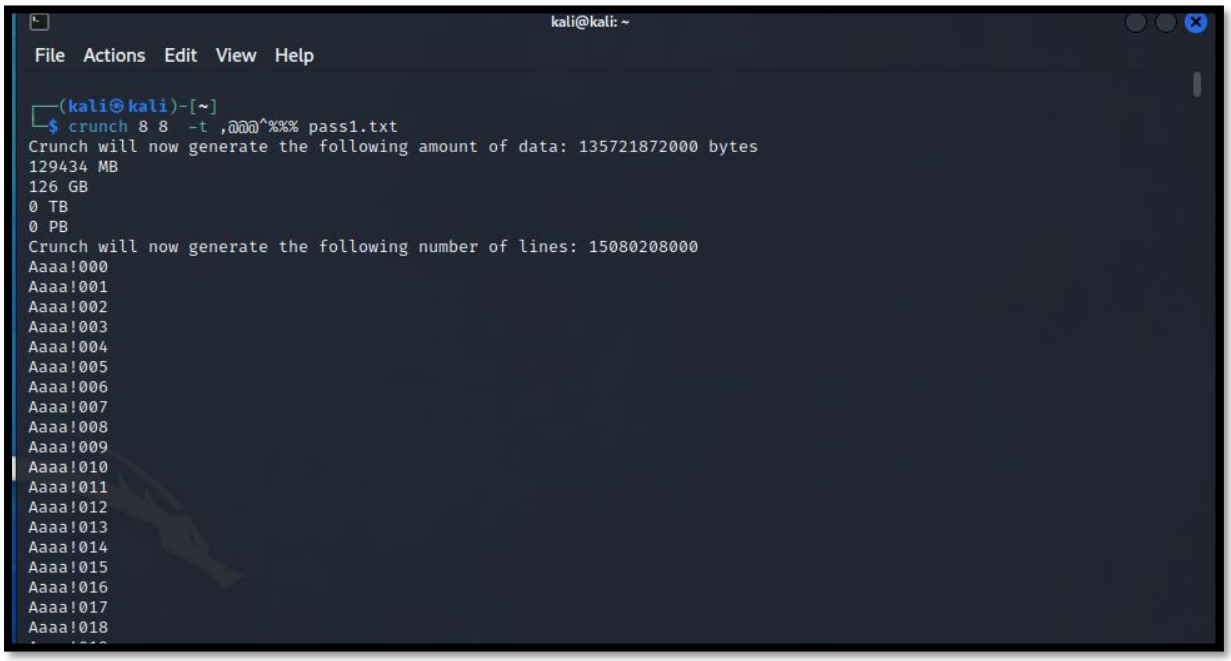



## Task 3: NSE Scripts




## Task 4: John The Ripper




**Task 5: Password Generation Using Crunch**

## vi. CONCLUSION

In summary, this report has explored five crucial elements of ethical hacking: Hydra for password cracking, Auxiliary Modules for network vulnerability assessment, NSE Scripts for targeted network scanning, John the Ripper for password strength evaluation, and Crunch for secure password generation. These tools and techniques collectively strengthen cybersecurity by identifying vulnerabilities, enhancing access control, and promoting robust password security. Ethical hacking, conducted responsibly, is a proactive approach to safeguarding digital assets in an interconnected world.