

# Project 2: Strong Password Policy & Password Cracking Demo

## Goal

To demonstrate how weak passwords can be cracked using **John the Ripper** and highlight the importance of using strong passwords in cybersecurity.

## Tools Used

- Kali Linux
- OpenSSL (for generating hashes)
- John the Ripper (for cracking)

## Steps Performed

### 1. Generate a Password Hash

Used OpenSSL to create an MD5 hash of the password `test123`:

```
openssl passwd -1 test123
```

Output:

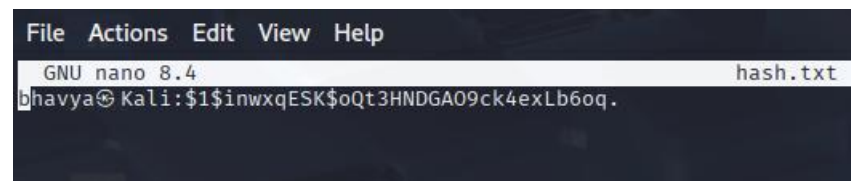
```
$1$inwxqESK$oQt3HNDGA09ck4exLb6oq.
```



```
File Actions Edit View Help
(bhavya@Kali)-[~]
$ openssl passwd -1 test123
$1$inwxqESK$oQt3HNDGA09ck4exLb6oq.
```

### 2. Save the Hash in a File

Created a file `hash.txt` with the following content:



```
File Actions Edit View Help
GNU nano 8.4 hash.txt
bhavya@Kali:$1$inwxqESK$oQt3HNDGA09ck4exLb6oq.
```

### 3. Create a Wordlist

Created a file `mylist.txt` with possible weak passwords:

```
123456
```

```
password
qwerty
welcome
letmein
test123
```

---

## 4. Run John the Ripper

Executed the cracking process:

```
john --wordlist=mylist.txt hash.txt
```

John compared the hash against the wordlist and successfully cracked the password.

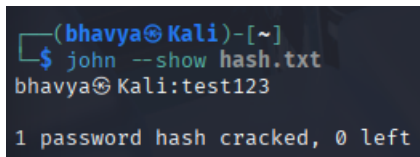
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## 5. Display Cracked Password

To confirm the cracked password:

```
john --show hash.txt
```

Output:

A terminal window screenshot with a dark background. The prompt is '(bhavya@Kali)-[~]'. The command '\$ john --show hash.txt' has been entered. The output shows 'bhavya@Kali:test123' and '1 password hash cracked, 0 left' on the next line.

```
(bhavya@Kali)-[~]
$ john --show hash.txt
bhavya@Kali:test123
1 password hash cracked, 0 left
```

**Password successfully cracked: test123**