

## CYSE 270 Assignment 4- Task A

### Task A – Password Cracking

Step 1 - Create 6 users in your Linux Terminal, then set the password for each user that meets the following complexity requirement respectively. You should list the passwords created for each user.

user1 pw – rocket

user2 pw – 3654

user3 pw – oil26

user4 pw – tire58!@

user5 pw – computer0978

user 6 pw – hoUSe163#



```
mark@kali:~$ sudo useradd user1
[sudo] password for mark:
mark@kali:~$ sudo passwd user1
New password:
Retype new password:
passwd: password updated successfully
mark@kali:~$ sudo useradd user2
mark@kali:~$ sudo passwd user2
New password:
Retype new password:
passwd: password updated successfully
mark@kali:~$ sudo useradd user3
mark@kali:~$ sudo passwd user3
New password:
Retype new password:
passwd: password updated successfully
mark@kali:~$ sudo useradd user4
mark@kali:~$ sudo passwd user4
New password:
Retype new password:
passwd: password updated successfully
mark@kali:~$ sudo useradd user5
mark@kali:~$ sudo passwd user5
New password:
Retype new password:
passwd: password updated successfully
```

used sudo useradd for six users and sudo passwd to add passwords.

The screenshot shows a Kali Linux desktop environment. A terminal window is open, displaying a root shell prompt. The user has executed the following commands:

```
root@kali:~/home/mark# cat /home/npratt007.hash
root@kali:~/home/mark# cat /home/npratt007.hash
```

The output of the second command is a list of system files and their permissions, including:

```
total 44
-rw-r--r-- 1 mark mark 5332 Sep 11 12:05 copyright
drwxr-xr-x 2 mark mark 4096 Sep 22 17:46 date
drwxr-xr-x 2 mark mark 4096 Aug 22 14:42 desktop
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 documents
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 downloads
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 music
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 pictures
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 public
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 templates
-rw-r--r-- 1 mark 259063 8 Sep 21 17:44 testfile.txt
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 videos
```

The terminal also shows the execution of 'cat /home/npratt007.hash' and the output of the command, which is a list of system files and their permissions, including:

```
root@kali:~/home/mark# cat /home/npratt007.hash
root@kali:~/home/mark# cat /home/npratt007.hash
```

The output of the second command is a list of system files and their permissions, including:

```
total 44
-rw-r--r-- 1 mark mark 5332 Sep 11 12:05 copyright
drwxr-xr-x 2 mark mark 4096 Sep 22 17:46 date
drwxr-xr-x 2 mark mark 4096 Aug 22 14:42 desktop
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 documents
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 downloads
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 music
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 pictures
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 public
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 templates
-rw-r--r-- 1 mark 259063 8 Sep 21 17:44 testfile.txt
drwxr-xr-x 2 mark mark 4096 Aug 27 14:42 videos
```

Step 3 - Keep your john the ripper cracking for 10 minutes. How many passwords have been successfully cracked? Only 3 passwords cracked after 10 minutes. Only one created user. User1

```
used sudo john -wordlist=/usr/share/wordlists/rockyou.txt -format=crypt /root/mprat.hash
```

Step 4 - Find and use the proper format in John the ripper to crack the following MD5 hash.

Show your steps and results.

a. 5f4dcc3b5aa765d61d8327deb882cf99 = password

b. 63a9f0ea7bb98050796b649e85481845 = root

```
(root@kali)~# ls -l
total 12
-rw-r--r-- 1 root root 79 Oct 8 18:20 extrahash.txt
-rw-r--r-- 1 root root 4018 Oct 8 16:51 mprat007.hash
-rw-r--r-- 1 root root 2095 Oct 8 17:05 mprat.hash

(root@kali)~# cat extrahash.txt
user7:5f4dcc3b5aa765d61d8327deb882cf99
user8:63a9f0ea7bb98050796b649e85481845

(root@kali)~# sudo john --wordlist=/usr/share/wordlists/rockyou.txt --format=raw-md5 extrahash.txt
Using default input encoding: UTF-8
Loaded 1 password hash (Raw-MD5 [MD5 256/256 AVX2 8x3])
Press 'q' or Ctrl-C to abort, almost any other key for status
password (user7)
lg 0:00:00:00 DONE (2025-10-08 18:22) 50.00g/s 19200p/s 19200c/s 123456..michael1
Use the "--show --format=Raw-MD5" options to display all of the cracked passwords reliably
Session completed.

(root@kali)~# echo "user8:63a9f0ea7bb98050796b649e85481845" >> extrahash.txt

(root@kali)~# echo "user8:63a9f0ea7bb98050796b649e85481845" > extrahash.txt

(root@kali)~# echo "user8:63a9f0ea7bb98050796b649e85481845" >> extrahash.txt

(root@kali)~# cat extrahash.txt
user7:5f4dcc3b5aa765d61d8327deb882cf99
user8:63a9f0ea7bb98050796b649e85481845
user8:63a9f0ea7bb98050796b649e85481845

(root@kali)~# sudo john --wordlist=/usr/share/wordlists/rockyou.txt --format=raw-md5 extrahash.txt
Using default input encoding: UTF-8
Loaded 2 password hashes with no different salts (Raw-MD5 [MD5 256/256 AVX2 8x3])
Remaining 1 password hash
Press 'q' or Ctrl-C to abort, almost any other key for status
root (user8)
lg 0:00:00:00 DONE (2025-10-08 18:29) 9.090g/s 7337Kp/s 7337Kc/s 7337Kc/s rory17..ronald918
Use the "--show --format=Raw-MD5" options to display all of the cracked passwords reliably
Session completed.

(root@kali)~# echo "user8:63a9f0ea7bb98050796b649e85481845" >> extrahash.txt

(root@kali)~# cat extrahash.txt
user7:5f4dcc3b5aa765d61d8327deb882cf99
user8:63a9f0ea7bb98050796b649e85481845
user8:63a9f0ea7bb98050796b649e85481845
```

used echo to create new users then used

sudo john --wordlist=/usr/share/wordlists/rockyou.txt --format=raw-md5 extrahash.txt to crack provided hashes.