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I have created HoneyWord based system as suggested by Imran Ergular in C language.
The main file is HoneyWordSystem.c.
The partner files are :
F1.txt
F2.txt
HCServer.txt (Acts as HoneyChecker Server)
PasswordFile.txt (Contains 10 very common password)
temp.txt (stores password to hash)
Makefile (contains instruction to make object file)

Assumptions :

1. There are 10 honeypots accounts created at the very beginning of code execution. Common passwords of PasswordFile are used for that. There indices are 1 to 10 respectively.
2. MD5 hashing is used.
3. Username and password have 1 <= length <= 12 .
4. You cannot login first. You need to register to the system first.
5. If 5 wrong passwords (Honeypot password or Honeyword password) is provided, system ends the program.

Instructions to run:

Compile : make
Run : ./HoneyWordSystem

After running,
Program is made in such a way that it will guide you entirely.
Instructions are there to tell you how to login and register.

Screenshots are attached below :

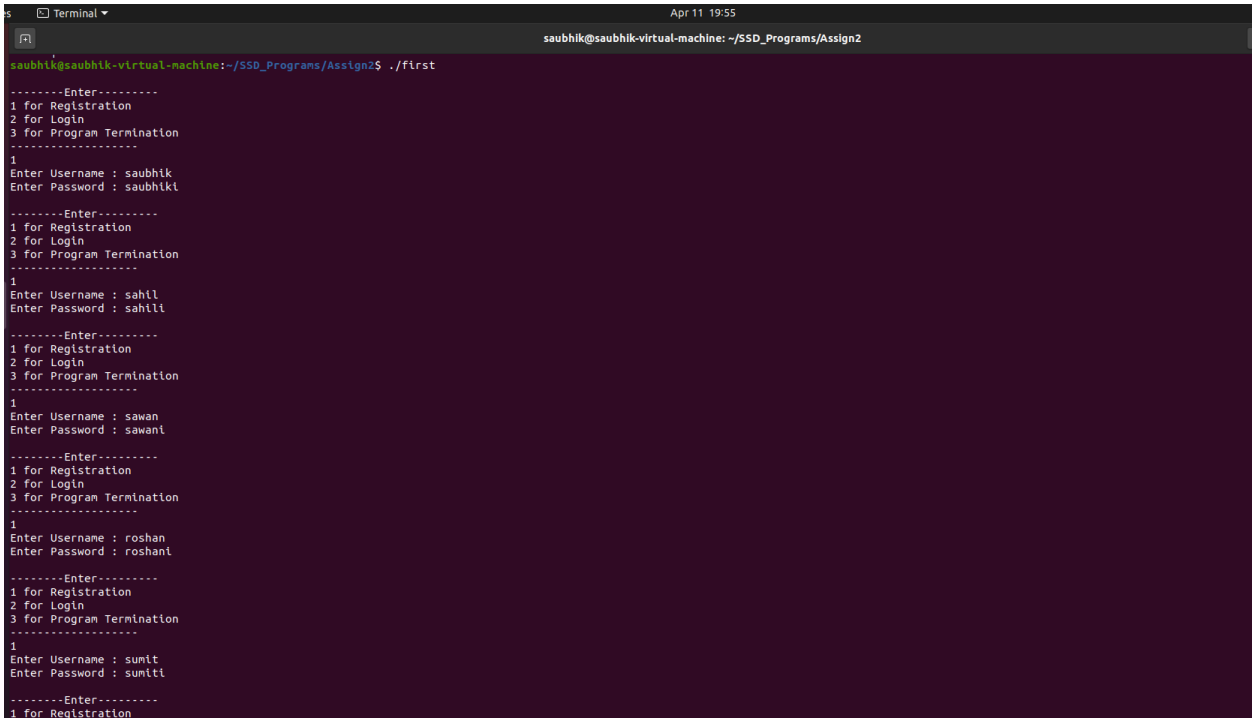

Fig1 : 5 users registered

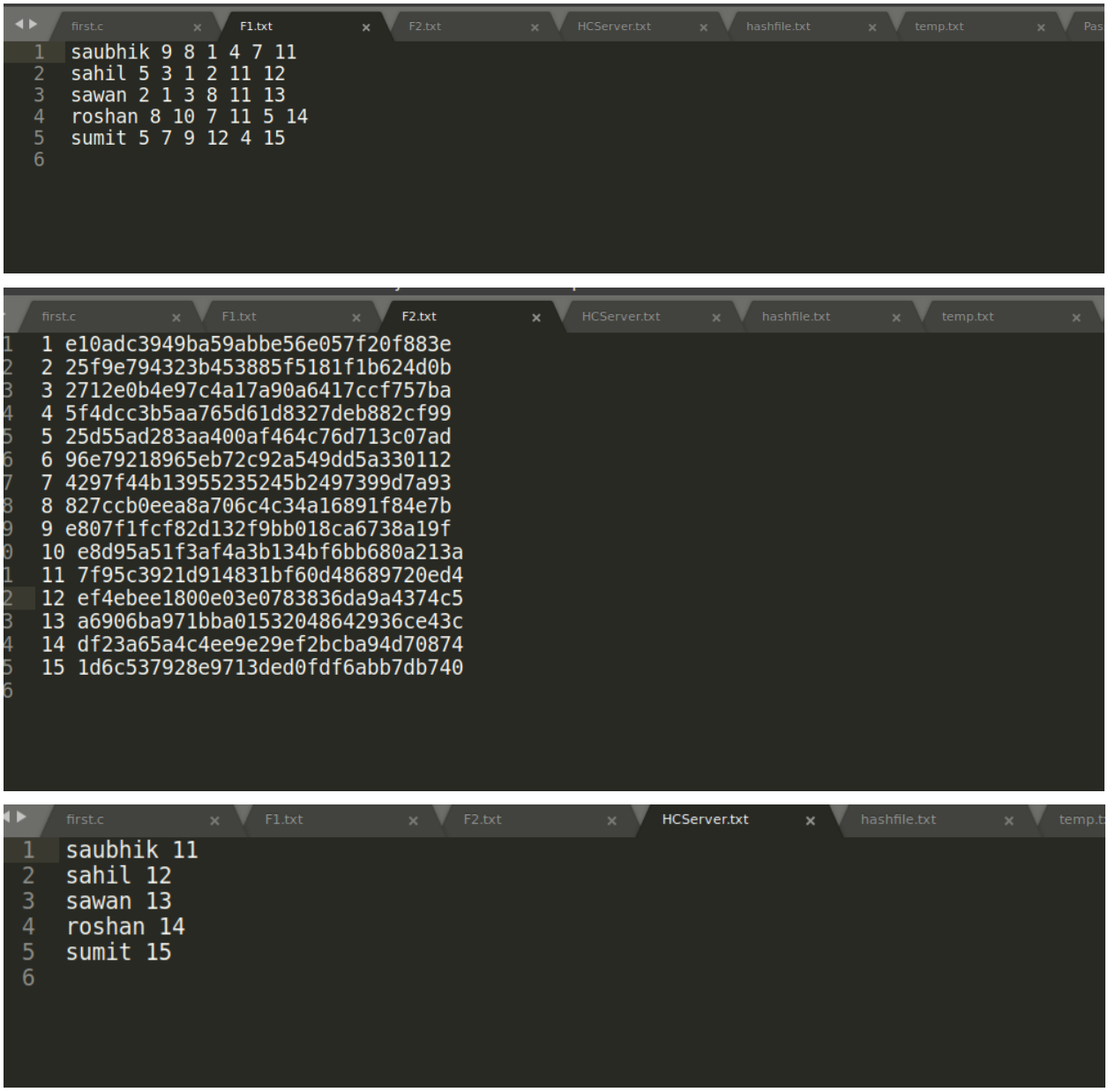

Fig 2,3,4 : F1,F2 and Honeychecker file after 5 registration respectively

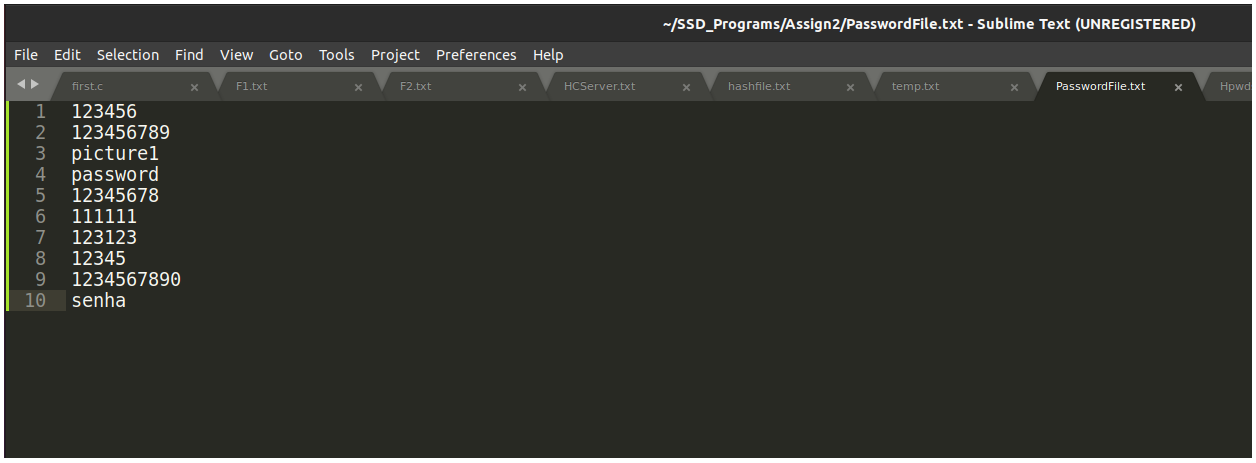

Fig 5. Common Password Files

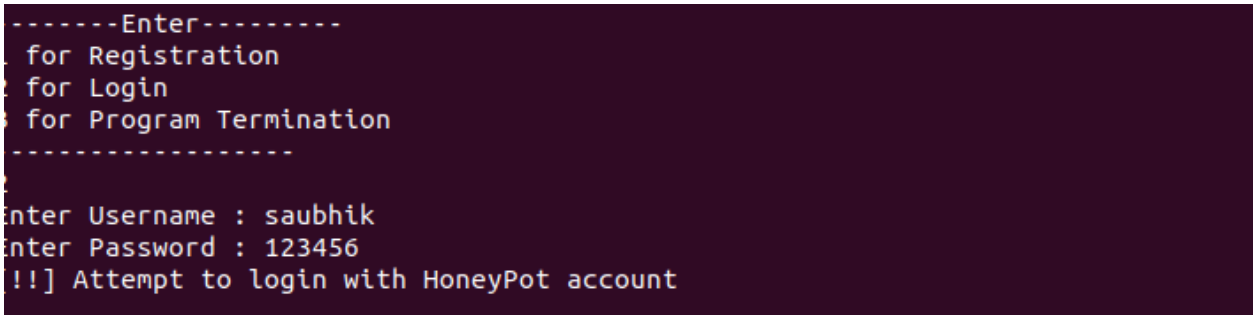

Fig 6. User tries to login with Honeypot account

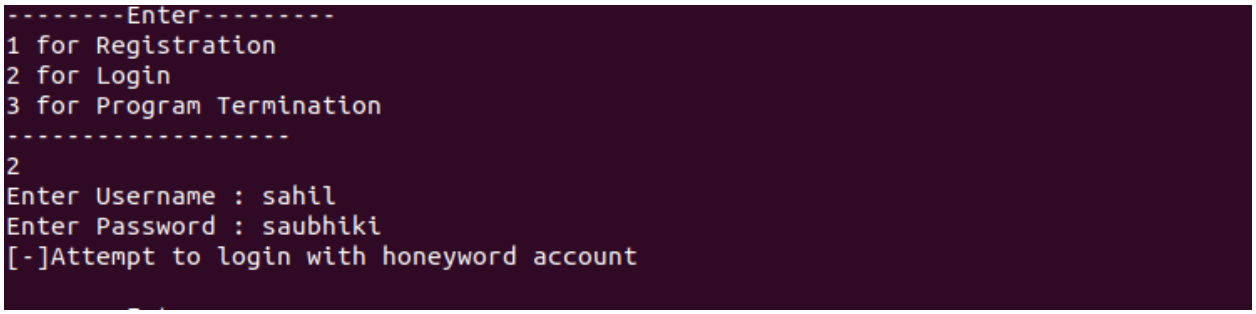

Fig 7. User tries to login with HoneyWord account

```
-------Enter---------
 for Registration
 for Login
 for Program Termination
------------------

nter Username : saubhik
nter Password : sahdjsjks
-]Password Incorrect
```

```
--------Enter---------
1 for Registration
2 for Login
3 for Program Termination
-------------------
2
Enter Username : sjdhfgjs
Enter Password : ashdjgsj

[-]Username and/or Password Not Found
```

Fig 8,9 : Username and Password Incorrect

```
--------Enter---------
1 for Registration
2 for Login
3 for Program Termination
-------------------
2
Enter Username : saubhik
Enter Password : saubhiki
11
[+] Login successful. Access Granted
```

Fig. 10 : Successful Login

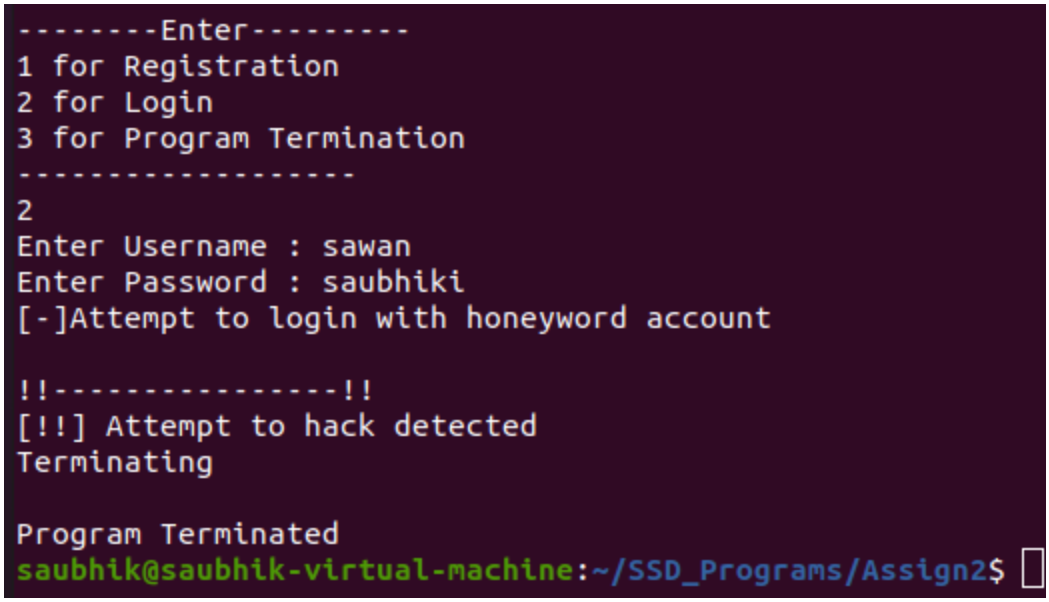

Fig 11 : Program terminates after 5 wrong passwords

Part 2:

As per the instruction provided in assignment doc, I downloaded John the Ripper tool in my system. However, I got to know that the version downloaded (1.8.0) doesn't works with MD5 hashing. Community support over this tool is also not huge.
I also tried alternative of 'John the Ripper' - 'Hashcat'. After downloading it in my system, there were some space issues it encountered and killed the process.
However,
I added user Alice with password Alice in my linux system by adduser command. After adding, I unshadowed both file to passwords.txt by
Unshadow /etc/shadow /etc/passwd > passwords.txt
After downloading rockyou wordlist,
Then I run using 'john --wordlist=rockyou.txt passwords.txt'
2 Cracked passwords were shown using 'john --show passwords.txt' and output is given :

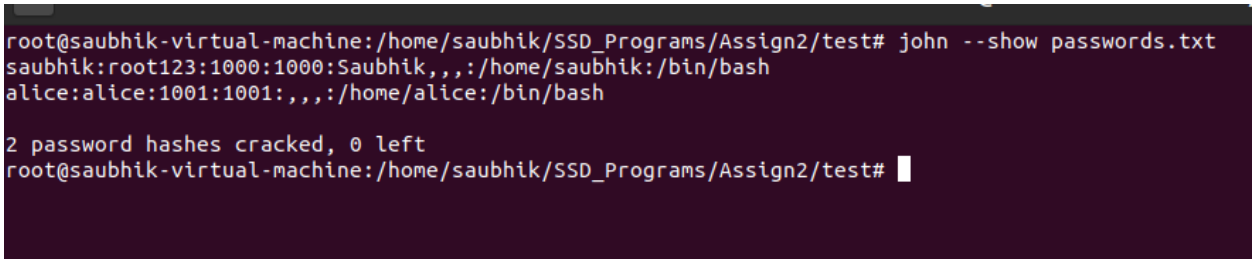

Fig 12 : Both Cracked Passwords