RV COLLEGE OF ENGINEERING

Name: Dhanush M **USN**: 1RV18IS011 **Dept/Lab**: ISE/CSDF **Expt. No**.: 7a
Date: 10/12/2021 **Title**: Reporting Tools

---

a. Pipal

Introduction

- In penetration testing it is important to share the results that were produced, to track our world, etc. For this one of the tools used in kali is **Pipal**
- It is a command line tool that gives us the stats and the information to help us analyse the passwords.

Objectives: To get info and stats after analysis of of passwords

Installation

If pipal is not installed on your version of Kali Linux, install it by typing the command

```
# sudo apt install pipal
```

Execution Steps

- It is necessary to have a file containing passwords in order for us to use this tool. The file may be of any extension like .txt, .lst etc.
- No we can run various commands

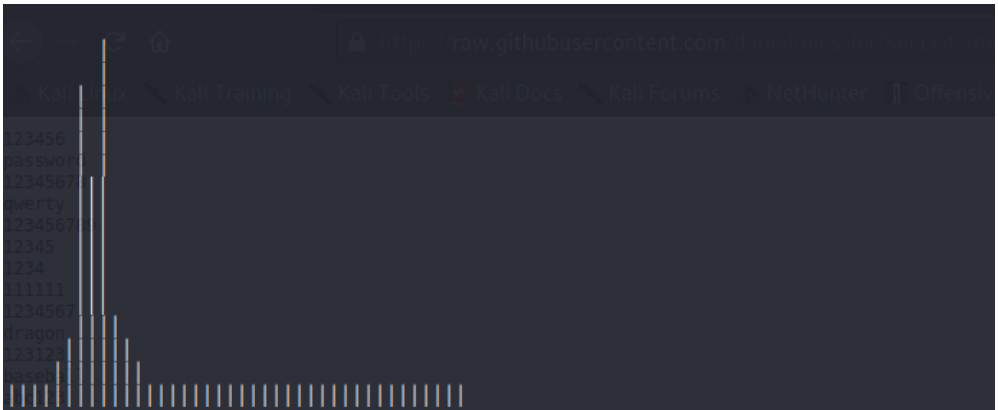
1. To show summary of options
   `pipal -h`

2. To show top (-t or --top) 10 results after analysis of password file (passwords.txt is the name of the file containing passwords)
   `pipal -t 10 passwords.txt`

```
┌──(kali㉿kali)-[~/Desktop]
└─$ pipal -t 10 passwords.txt
Generating stats, hit CTRL-C to finish early and dump stats on words already processed.
Please wait...
Processing:    100% |oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo

Basic Results

Total entries = 999998
Total unique entries = 999998

Top 10 passwords
123456 = 1 (0.0%)
password = 1 (0.0%)
12345678 = 1 (0.0%)
qwerty = 1 (0.0%)
123456789 = 1 (0.0%)
12345 = 1 (0.0%)
1234 = 1 (0.0%)
111111 = 1 (0.0%)
1234567 = 1 (0.0%)
dragon = 1 (0.0%)

Top 10 base words
vlad = 738 (0.07%)
vova = 638 (0.06%)
alex = 424 (0.04%)
wolf = 394 (0.04%)
mike = 336 (0.03%)
yfcnz = 336 (0.03%)
qwerty = 329 (0.03%)
pass = 318 (0.03%)
love = 308 (0.03%)
yana = 293 (0.03%)
```

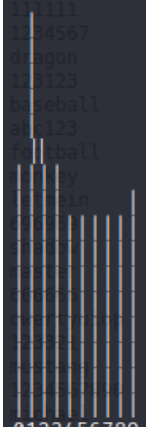
```
Password length (length ordered)
3 = 853 (0.09%)
4 = 26830 (2.68%)
5 = 51444 (5.14%)
6 = 248824 (24.88%)
7 = 183917 (18.39%)
8 = 305082 (30.51%)
9 = 69687 (6.97%)
10 = 46716 (4.67%)
11 = 22495 (2.25%)
12 = 15892 (1.59%)
13 = 12725 (1.27%)
14 = 5786 (0.58%)
15 = 3811 (0.38%)
16 = 2765 (0.28%)
17 = 969 (0.1%)
18 = 707 (0.07%)
19 = 475 (0.05%)
20 = 396 (0.04%)
21 = 192 (0.02%)
22 = 145 (0.01%)
23 = 71 (0.01%)
24 = 72 (0.01%)
25 = 33 (0.0%)
26 = 41 (0.0%)
27 = 16 (0.0%)
28 = 24 (0.0%)
29 = 9 (0.0%)
30 = 8 (0.0%)
31 = 4 (0.0%)
32 = 1 (0.0%)
33 = 3 (0.0%)
35 = 1 (0.0%)
36 = 1 (0.0%)
37 = 2 (0.0%)
```

```
Password length (count ordered)
8 = 305082 (30.51%)
6 = 248824 (24.88%)
7 = 183917 (18.39%)
9 = 69687 (6.97%)
5 = 51444 (5.14%)
10 = 46716 (4.67%)
4 = 26830 (2.68%)
11 = 22495 (2.25%)
12 = 15892 (1.59%)
13 = 12725 (1.27%)
14 = 5786 (0.58%)
15 = 3811 (0.38%)
16 = 2765 (0.28%)
17 = 969 (0.1%)
3 = 853 (0.09%)
18 = 707 (0.07%)
19 = 475 (0.05%)
20 = 396 (0.04%)
21 = 192 (0.02%)
22 = 145 (0.01%)
24 = 72 (0.01%)
23 = 71 (0.01%)
26 = 41 (0.0%)
25 = 33 (0.0%)
28 = 24 (0.0%)
27 = 16 (0.0%)
29 = 9 (0.0%)
30 = 8 (0.0%)
31 = 4 (0.0%)
33 = 3 (0.0%)
37 = 2 (0.0%)
32 = 1 (0.0%)
35 = 1 (0.0%)
36 = 1 (0.0%)
```



```
00000000001111111111222222222233333333333
01234567890123456789012345678901234567890

One to six characters = 327951 (32.8%)
One to eight characters = 816950 (81.7'%)
More than eight characters = 183048 (18.3%)

Only lowercase alpha = 337118 (33.71%)
Only uppercase alpha = 16053 (1.61%)
Only alpha = 353171 (35.32%)
Only numeric = 165206 (16.52%)

First capital last symbol = 263 (0.03%)
First capital last number = 34361 (3.44%)

Single digit on the end = 91141 (9.11%)
Two digits on the end = 99156 (9.92%)
Three digits on the end = 47942 (4.79%)
```

```
Last number
0 = 48696 (4.87%)
1 = 84201 (8.42%)
2 = 54140 (5.41%)
3 = 52553 (5.26%)
4 = 38413 (3.84%)
5 = 41218 (4.12%)
6 = 39180 (3.92%)
7 = 41888 (4.19%)
8 = 38060 (3.81%)
9 = 43760 (4.38%)
```




```
Last digit
1 = 84201 (8.42%)
2 = 54140 (5.41%)
3 = 52553 (5.26%)
0 = 48696 (4.87%)
9 = 43760 (4.38%)
7 = 41888 (4.19%)
5 = 41218 (4.12%)
6 = 39180 (3.92%)
4 = 38413 (3.84%)
8 = 38060 (3.81%)

Last 2 digits (Top 10)
23 = 15745 (1.57%)
00 = 13195 (1.32%)
11 = 11165 (1.12%)
12 = 11091 (1.11%)
01 = 9087 (0.91%)
99 = 8343 (0.83%)
10 = 7452 (0.75%)
69 = 7378 (0.74%)
77 = 7011 (0.7%)
21 = 6205 (0.62%)

Last 3 digits (Top 10)
123 = 11482 (1.15%)
000 = 4303 (0.43%)
234 = 2820 (0.28%)
007 = 2404 (0.24%)
111 = 2325 (0.23%)
777 = 2247 (0.22%)
010 = 2193 (0.22%)
666 = 2109 (0.21%)
999 = 2073 (0.21%)
001 = 1979 (0.2%)
```

```
Last 4 digits (Top 10)
1234 = 2465 (0.25%)
2000 = 2445 (0.24%)
2010 = 1747 (0.17%)
2345 = 1340 (0.13%)
1991 = 1152 (0.12%)
1995 = 1151 (0.12%)
1994 = 1135 (0.11%)
1992 = 1113 (0.11%)
1987 = 1087 (0.11%)
1996 = 1069 (0.11%)

Last 5 digits (Top 10)
12345 = 1244 (0.12%)
23456 = 729 (0.07%)
56789 = 264 (0.03%)
54321 = 238 (0.02%)
11111 = 176 (0.02%)
34567 = 161 (0.02%)
55555 = 158 (0.02%)
77777 = 146 (0.01%)
45678 = 144 (0.01%)
00000 = 138 (0.01%)
```

```
Character sets
loweralphanum: 360564 (36.06%)
loweralpha: 337118 (33.71%)
numeric: 165206 (16.52%)
mixedalphanum: 65679 (6.57%)
mixedalpha: 35750 (3.58%)
upperalpha: 16053 (1.61%)
upperalphanum: 9812 (0.98%)
loweralphaspecial: 3980 (0.4%)
loweralphaspecialnum: 2824 (0.28%)
mixedalphaspecialnum: 1370 (0.14%)
mixedalphaspecial: 750 (0.08%)
specialnum: 276 (0.03%)
upperalphaspecialnum: 101 (0.01%)
upperalphaspecial: 69 (0.01%)
special: 28 (0.0%)

Character set ordering
allstring: 388921 (38.89%)
stringdigit: 284213 (28.42%)
alldigit: 165206 (16.52%)
stringdigitstring: 55470 (5.55%)
othermask: 54530 (5.45%)
digitstring: 40328 (4.03%)
digitstringdigit: 5565 (0.56%)
stringspecialstring: 3388 (0.34%)
stringspecialdigit: 1316 (0.13%)
stringspecial: 763 (0.08%)
specialstring: 206 (0.02%)
specialstringspecial: 64 (0.01%)
allspecial: 28 (0.0%)

┌──(kali㉿kali)-[~/Desktop]
```

3. To store the output in another file (-o or --output)
   `pipal -t 10 -0 s.txt passwords.txt`

```
┌──(kali㉿kali)-[~/Desktop]
└─$ pipal -t 10 -o s.txt passwords.txt
Generating stats, hit CTRL-C to finish early and dump stats on words already processed.
Please wait...
Processing:    100% |ooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo
```

4. To show the available checker which are enabled (--list-checkers)
   `pipal --list-checkers`

```
┌──(kali㉿kali)-[~/Desktop]
└─$ pipal --list-checkers
/usr/share/pipal/checkers_available/FR_colour_checker.rb:11: warning: key "ocre" is duplicated and overwritten on line 11
pipal 3.1 Robin Wood (robin@digi.ninja) (http://digi.ninja)

You have the following Checkers on your system
==============================================
Australia_Checker - List of Australian places
Basic_Checker - Basic Checks - Enabled
Colour_Checker - List of common English colours
Date_Checker - Days, months and years
Email_Checker - Compare email addresses to passwords. Checks both name and full address.
External_List_Checker - Check an external file for matches
FR_Colour_Checker - List of common French colours
FR_Date_Checker - French day, month and year checker
FR_Hashcat_Mask_Generator - Hashcat mask generator (French)
FR_Windows_Complexity_Checker - Check for default Windows complexity (French)
FR_area_Code_Checker - List of French area codes
Frequency_Checker - Frequency Checks
Hashcat_Mask_Generator - Hashcat mask generator
NL_Colour_Checker - List of common dutch colours
NL_Date_Checker - Dutch day, month and year checker
NL_Season_Checker - List of common Dutch seasons
Russian_Cities_Checker - List of common Russian cities
Season_Checker - List of common English seasons
US_Area_Code_Checker - List of US area codes
US_Zip_Code_Checker - List of US zip codes
Username_Checker - Compare usernames to passwords.
Windows_Complexity_Checker - Check for default Windows complexity
```

Conclusion

- ❖ It is an useful tool which helps us in analysing passwords

References

1. https://www.kali.org/tools/pipal/
2. https://subscription.packtpub.com/book/security/9781789952308/7/ch07lvl1sec87/using-pipal