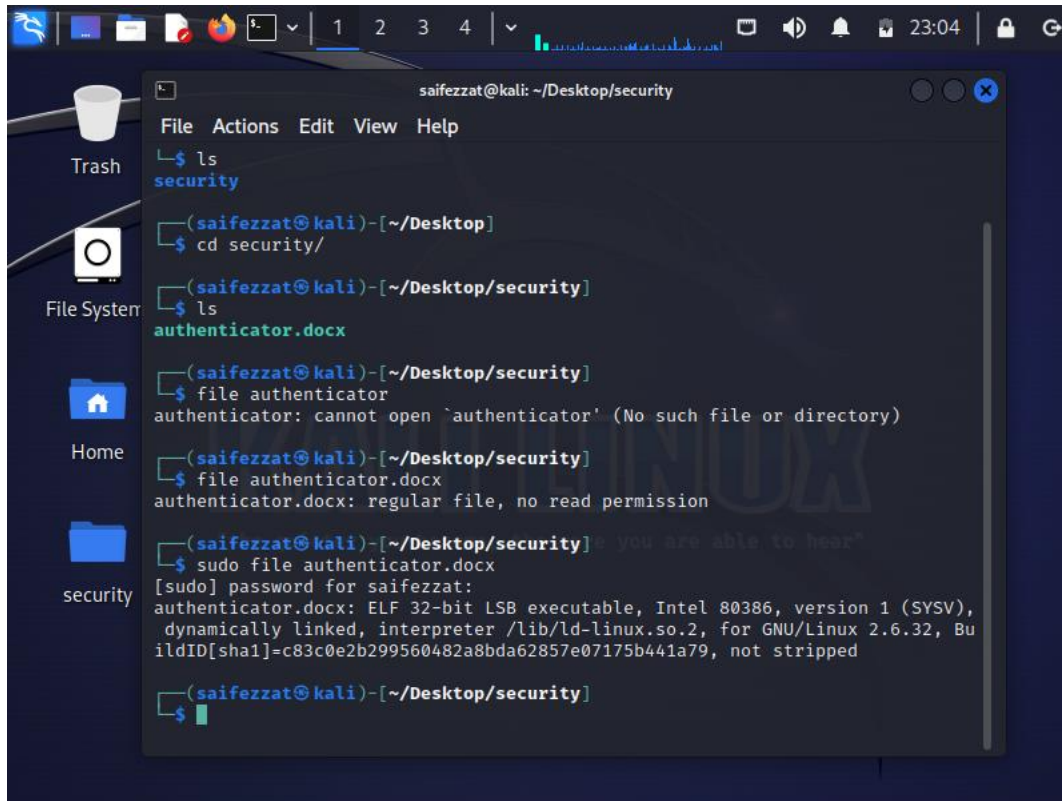


Reverse Engineering.
Saif Ezzat.

Using the 'file' command I was able to determine the type of the file which is ELF 32-bit.

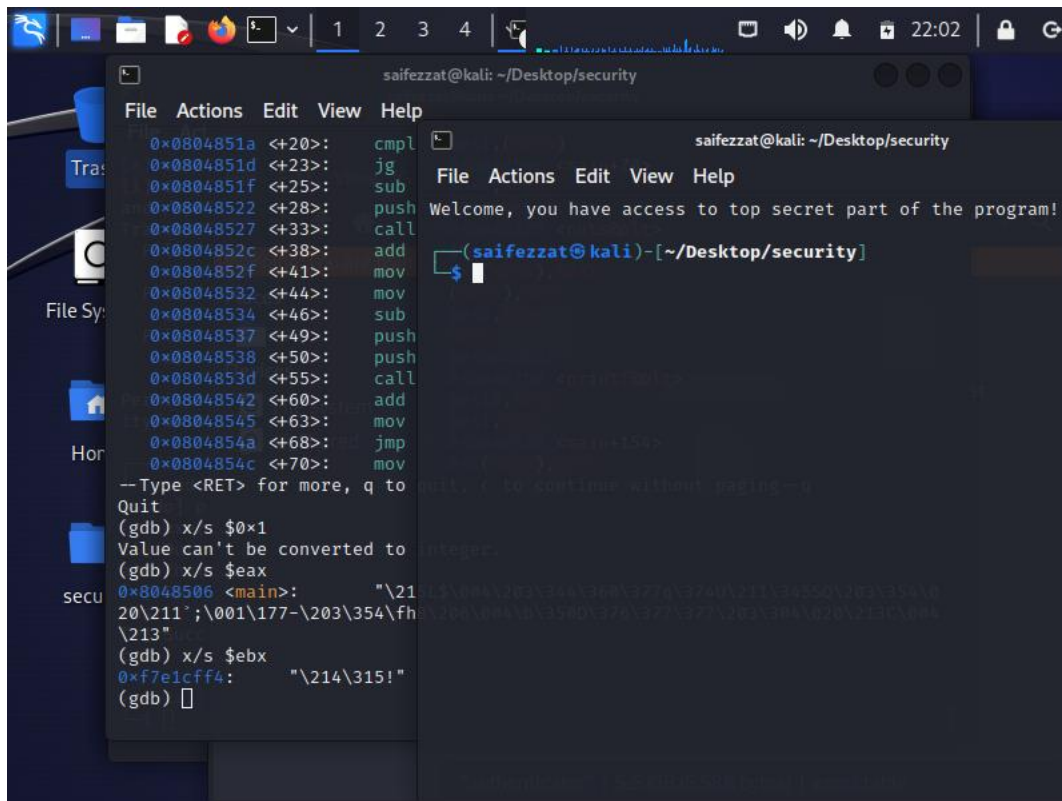


```
saifezzat@kali: ~/Desktop/security
File Actions Edit View Help
└─$ ls
security
(saifezzat@kali)-[~/Desktop]
└─$ cd security/
(saifezzat@kali)-[~/Desktop/security]
└─$ ls
authenticator.docx
(saifezzat@kali)-[~/Desktop/security]
└─$ file authenticator
authenticator: cannot open 'authenticator' (No such file or directory)
(saifezzat@kali)-[~/Desktop/security]
└─$ file authenticator.docx
authenticator.docx: regular file, no read permission
(saifezzat@kali)-[~/Desktop/security]
└─$ sudo file authenticator.docx
[sudo] password for saifezzat:
authenticator.docx: ELF 32-bit LSB executable, Intel 80386, version 1 (SYSV),
dynamically linked, interpreter /lib/ld-linux.so.2, for GNU/Linux 2.6.32, Bu
ildID[sha1]=c83c0e2b299560482a8bda62857e07175b441a79, not stripped
(saifezzat@kali)-[~/Desktop/security]
└─$
```

Using a hexadecimal editor I was able to reverse the hexadecimal binary to readable ASCII, I just used objdump into a txt file

```
auth_hach.txt
00000500: 0080 45t4 c9c3 804c 2404 83e4 T0TT /1TC ..E....L$....q.
00000510: 5589 e553 5183 ec10 89cb 833b 017f 2d83 U..SQ.....;..-
00000520: ec0c 6842 8604 08e8 44fe ffff 83c4 108b ..hB....D.....
00000530: 4304 8b00 83ec 0850 6852 8604 08e8 0efe C.....PhR.....
00000540: ffff 83c4 10b8 0100 0000 eb54 8b43 0483 .....T.C..
00000550: c004 8b00 83ec 0c50 e84e ffff ff83 c410 .....P.N.....
00000560: 8945 f483 7df4 0074 2283 ec0c 6867 8604 .E..}..t"...hg..
00000570: 08e8 0afe ffff 83c4 1083 ec0c 6870 8604 .....hp..
00000580: 08e8 eafd ffff 83c4 10eb 1083 ec0c 68ac .....h.
00000590: 8604 08e8 d8fd ffff 83c4 10b8 0000 0000 .....
000005a0: 8d65 f859 5b5d 8d61 fcc3 6690 6690 6690 .e.Y[.]a..f.f.f.
000005b0: 5557 31ff 5653 e825 feff ff81 c331 1300 UW1.VS.%.....1..
000005c0: 0083 ec0c 8b6c 2420 8db3 0cff ffff e839 .....l$ .....9
000005d0: fdff ff8d 8308 ffff ff29 c6c1 fe02 85f6 .....).....
000005e0: 7423 8db6 0000 0000 83ec 04ff 7424 2cff t#.....t$,.
000005f0: 7424 2c55 ff94 bb08 ffff ff83 c701 83c4 t$,U.....
00000600: 1039 f775 e383 c40c 5b5e 5f5d c38d 7600 .9.u....[^_]..v.
00000610: f3c3 0000 5383 ec08 e8c3 fdff ff81 c3cf ....S.....
00000620: 1200 0083 c408 5bc3 0300 0000 0100 0200 .....[.....
00000630: 3078 6162 6331 3233 0030 7830 786d 6169 0xabc123.0x0xmai
00000640: 6e00 496e 7661 6c69 6420 6f70 7469 6f6e n.Invalid option
00000650: 3a00 5573 6167 6520 2573 205b 7061 7373 :.Usage %s [pass
00000660: 776f 7264 5d0a 0063 6c65 6172 0000 0000 word]..Clear....
00000670: 5765 6c63 6f6d 652c 2079 6f75 2068 6176 Welcome, you hav
00000680: 6520 6163 6365 7373 2074 6f20 746f 7020 e access to top
00000690: 7365 6372 6574 2070 6172 7420 6f66 2074 secret part of t
000006a0: 6865 2070 726f 6772 616d 2100 496e 7661 he program!.Inva
000006b0: 6c69 6420 7061 7373 776f 7264 2e20 5472 lid password. Tr
000006c0: 7920 6167 6169 6e21 0000 0000 011b 033b y again!.....;
000006d0: 3000 0000 0500 0000 64fc ffff 4c00 0000 0.....d...L...
```

I tried the password found and it worked.



I wasn't able to prompt shell.