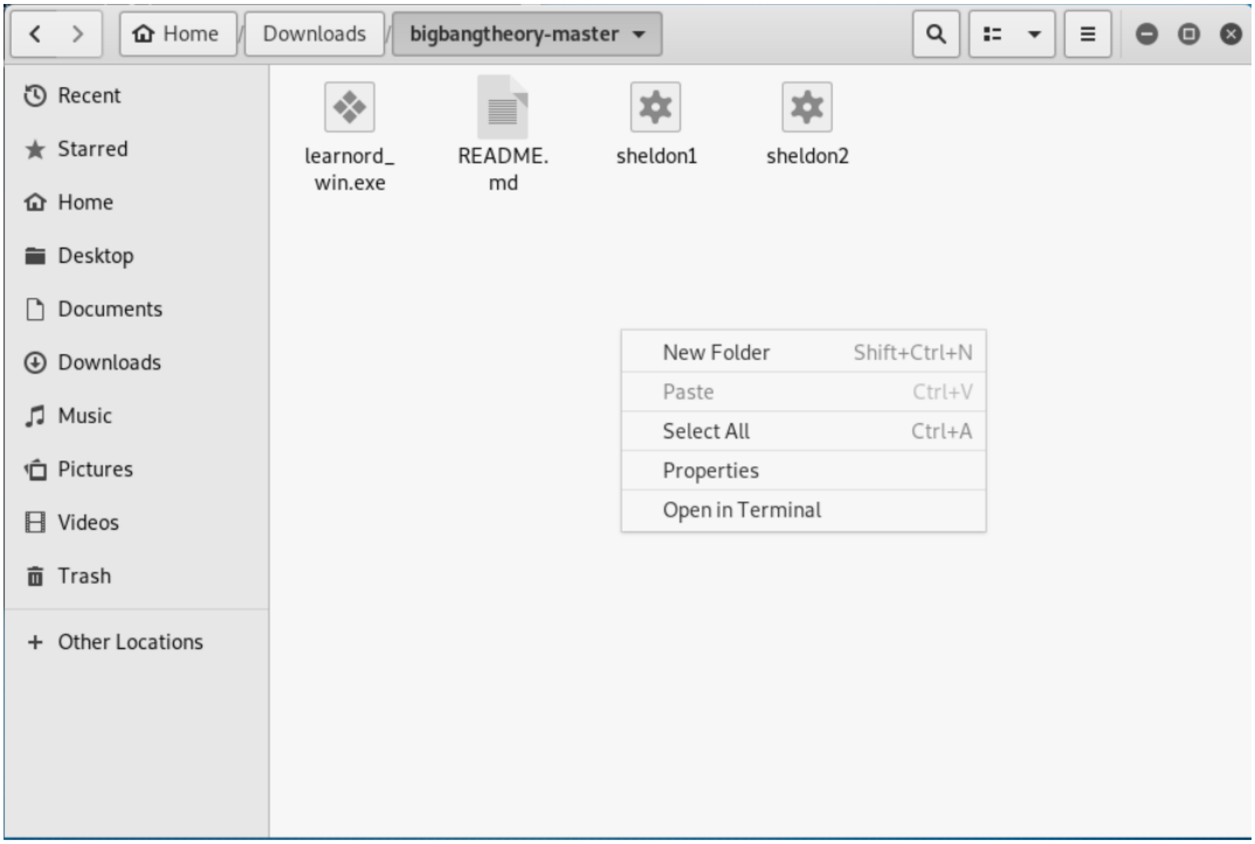
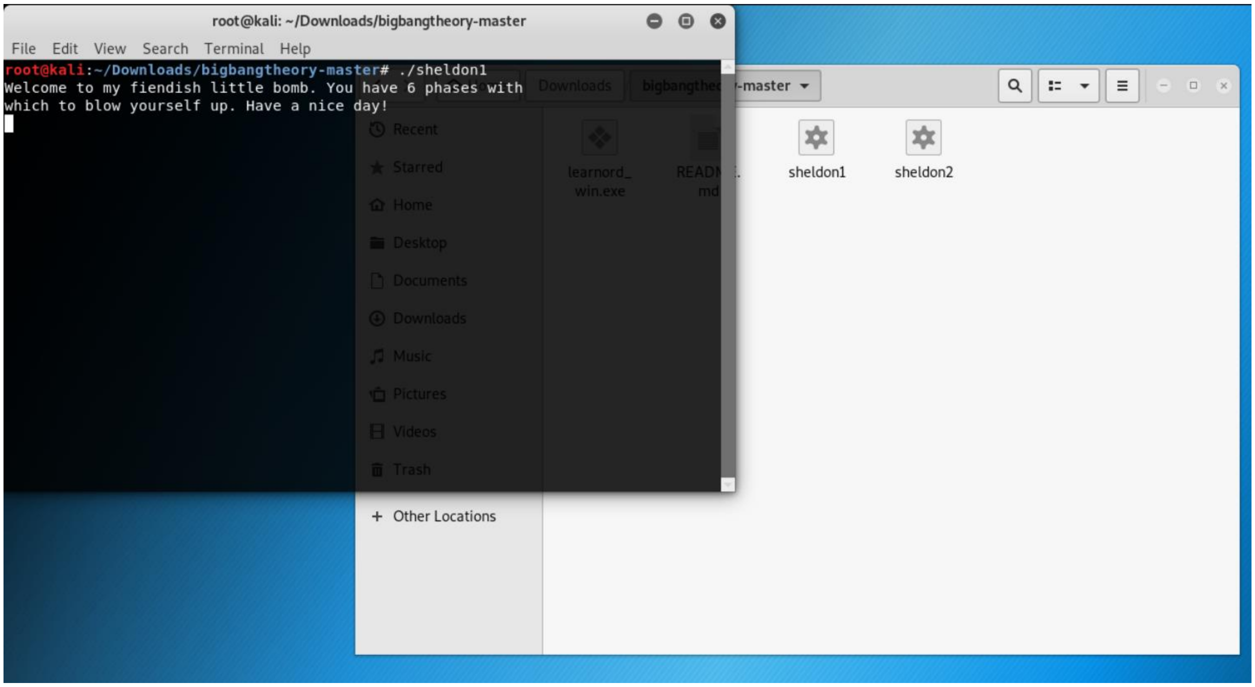
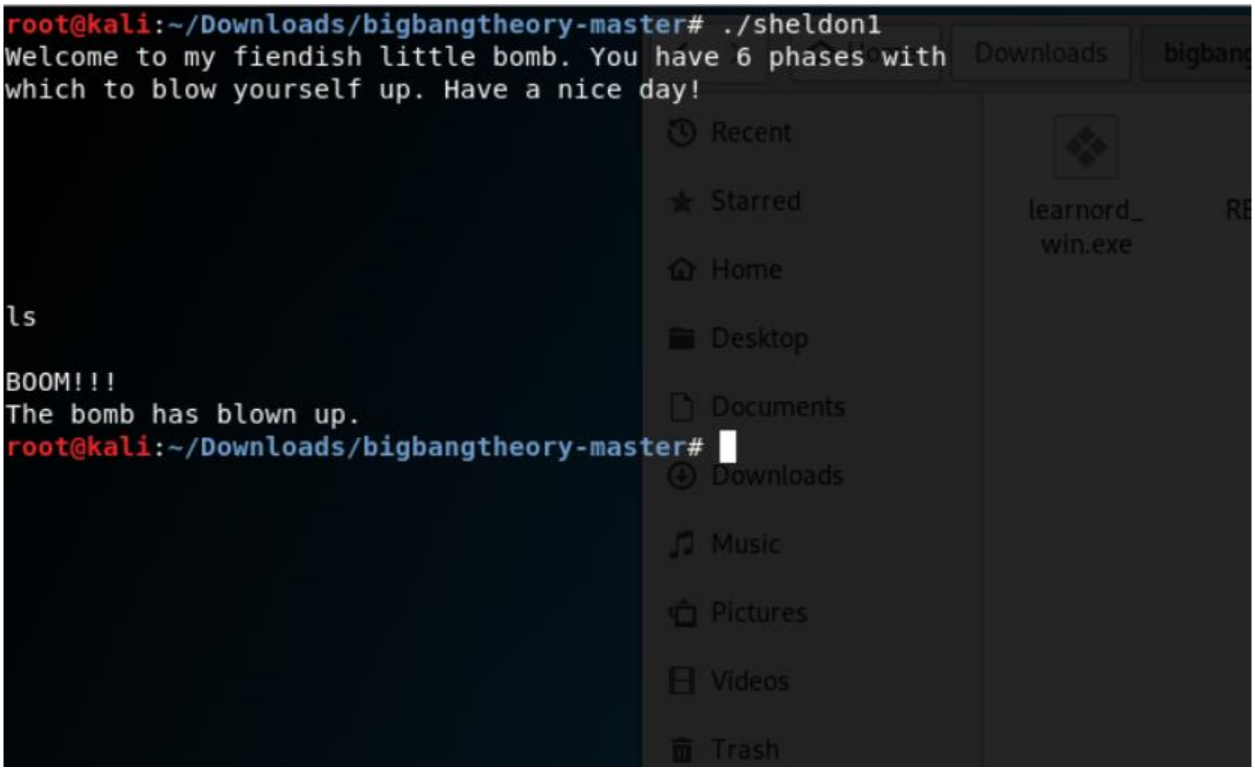
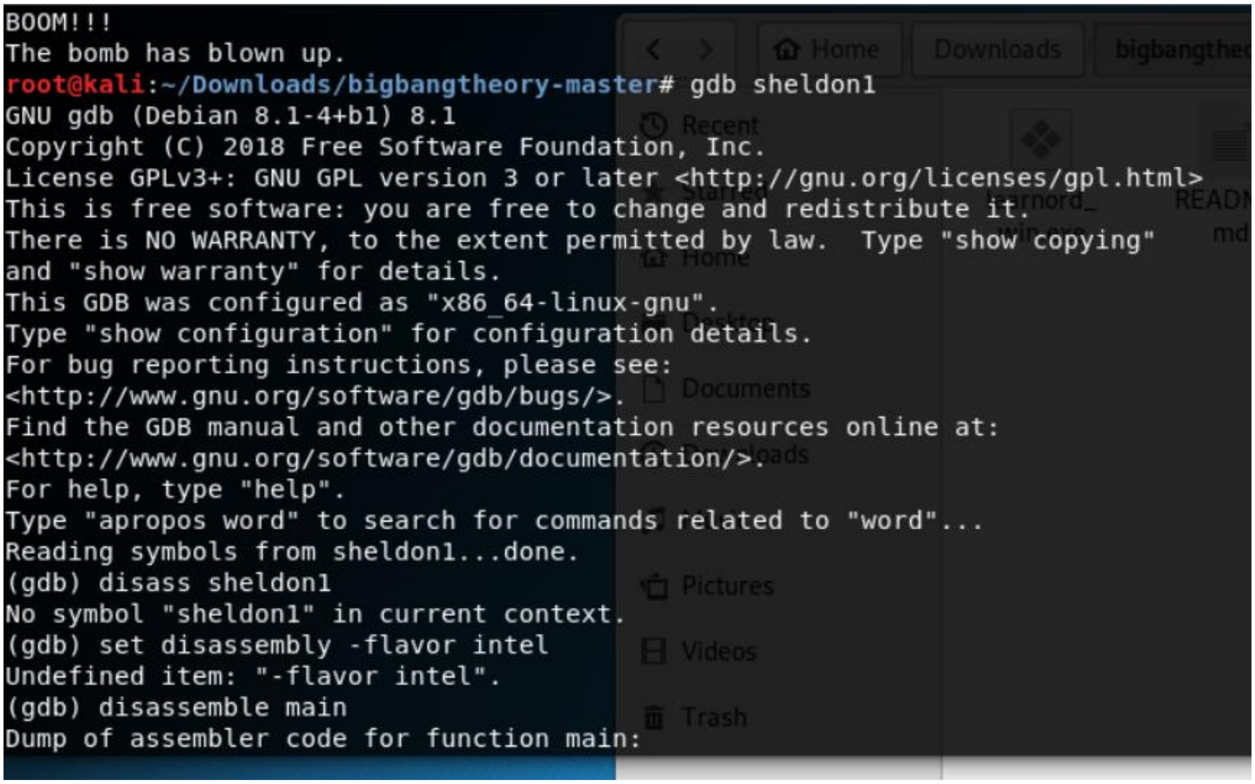



root@kali: ~/Downloads/bigbangtheory-master
File Edit View Search Terminal Help
sheldon1
sheldon2
Other Locations

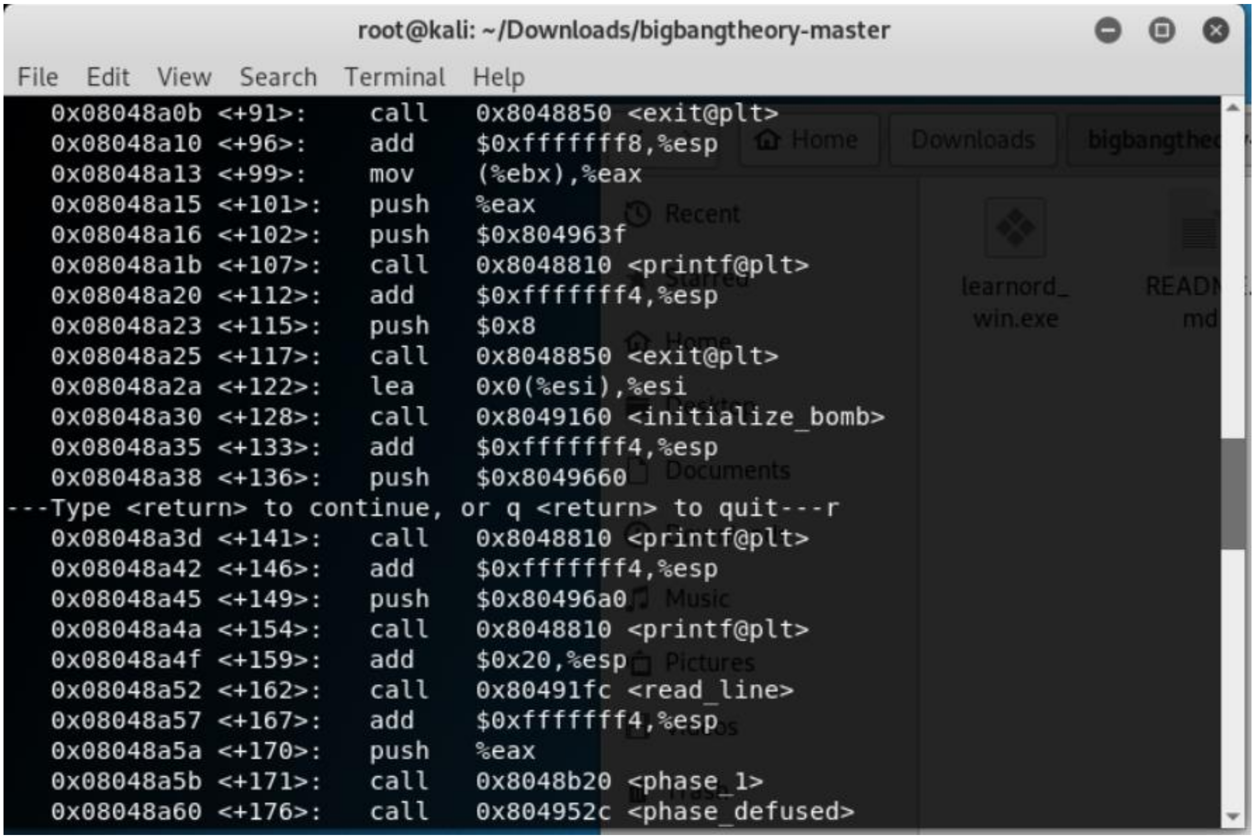
```
root@kali:~/Downloads/bigbangtheory-master# ./sheldon1
Welcome to my fiendish little bomb. You have 6 phases with
which to blow yourself up. Have a nice day!
```



```
root@kali:~/Downloads/bigbangtheory-master# ./sheldon1
Welcome to my fiendish little bomb. You have 6 phases with
which to blow yourself up. Have a nice day!




ls

BOOM!!!
The bomb has blown up.
root@kali:~/Downloads/bigbangtheory-master# 
```

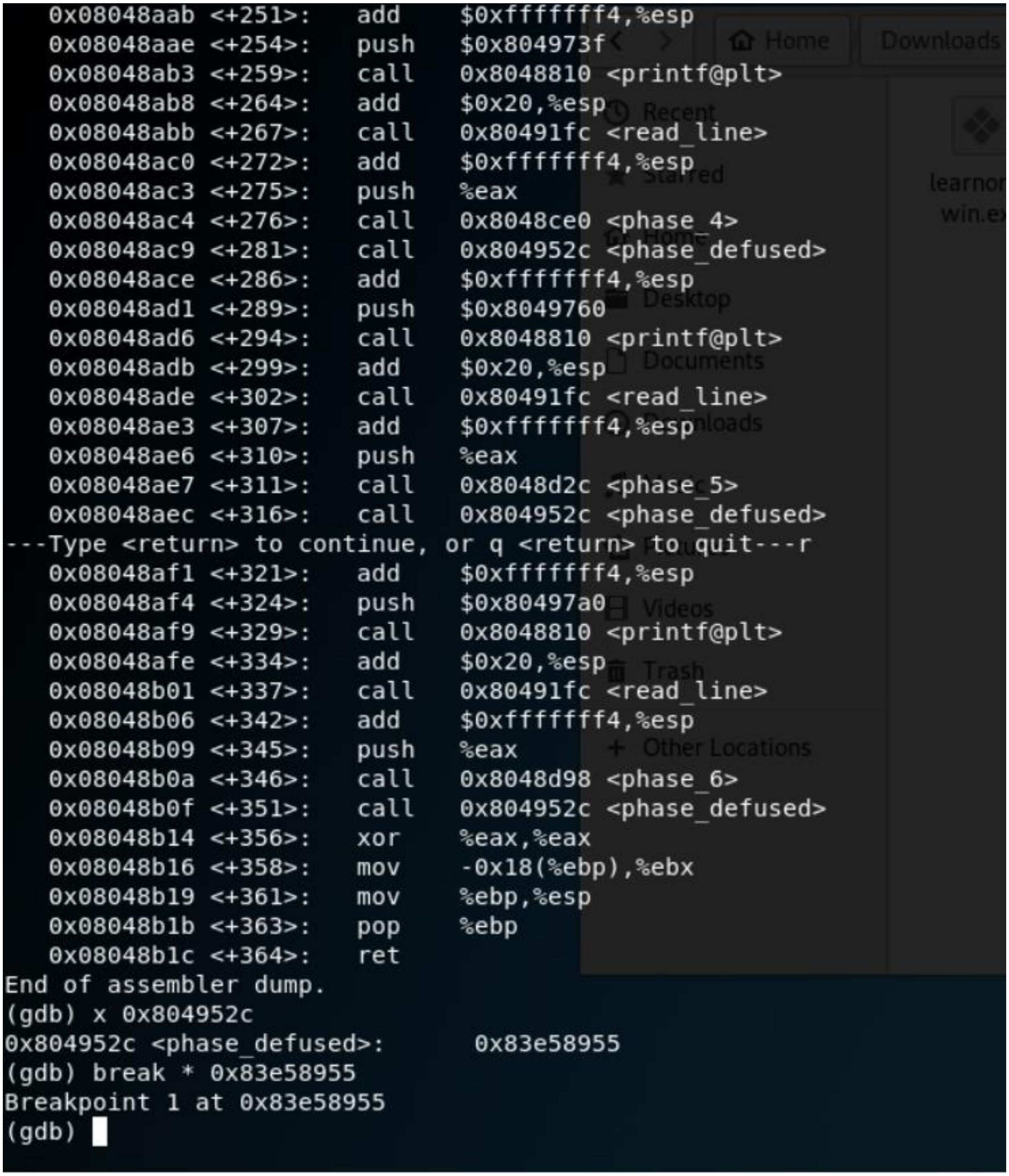


```
BOOM!!!
The bomb has blown up.
root@kali:~/Downloads/bigbangtheory-master# gdb sheldon1
GNU gdb (Debian 8.1-4+b1) 8.1
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.  Type "show copying"
and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.
For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from sheldon1...done.
(gdb) disass sheldon1
No symbol "sheldon1" in current context.
(gdb) set disassembly -flavor intel
Undefined item: "-flavor intel".
(gdb) disassemble main
Dump of assembler code for function main:
```

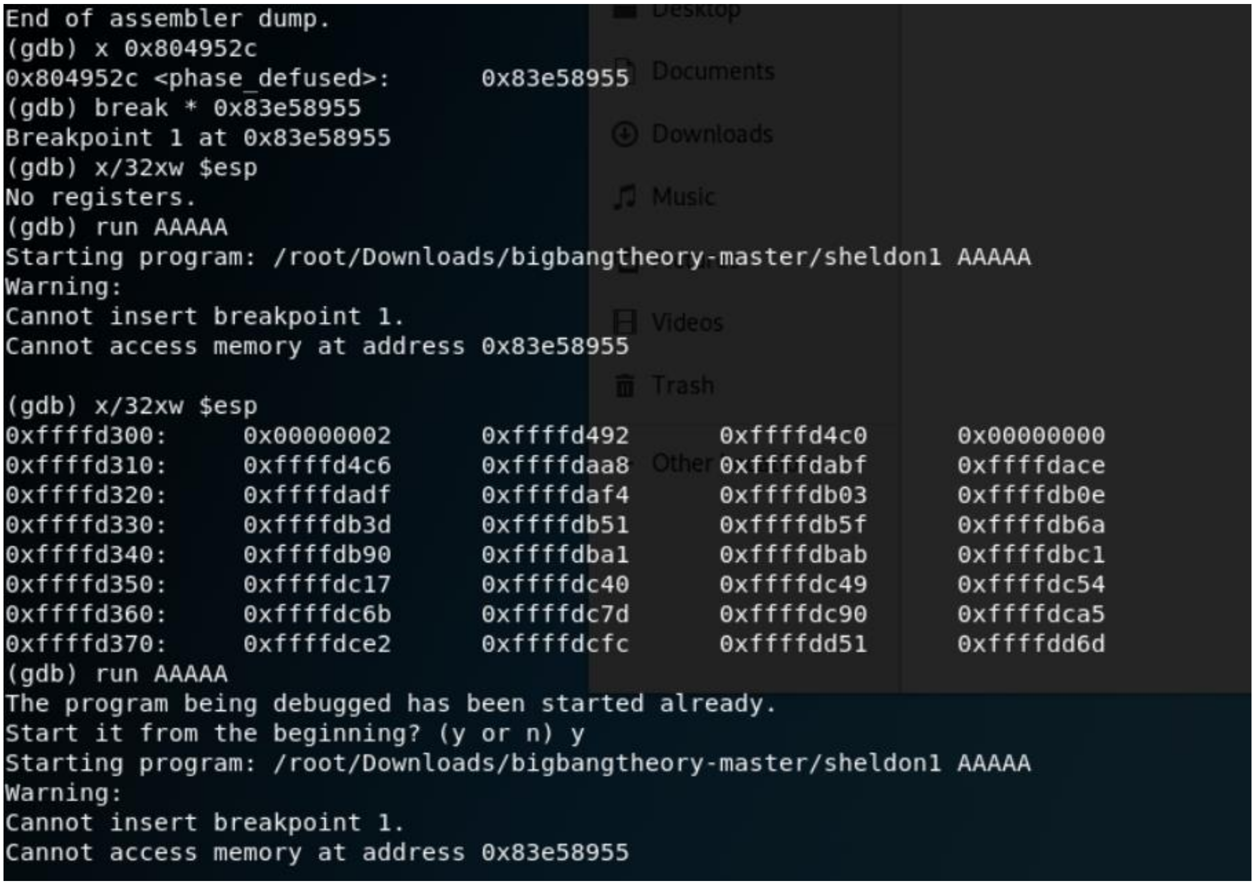


root@kali: ~/Downloads/bigbangtheory-master
File Edit View Search Terminal Help

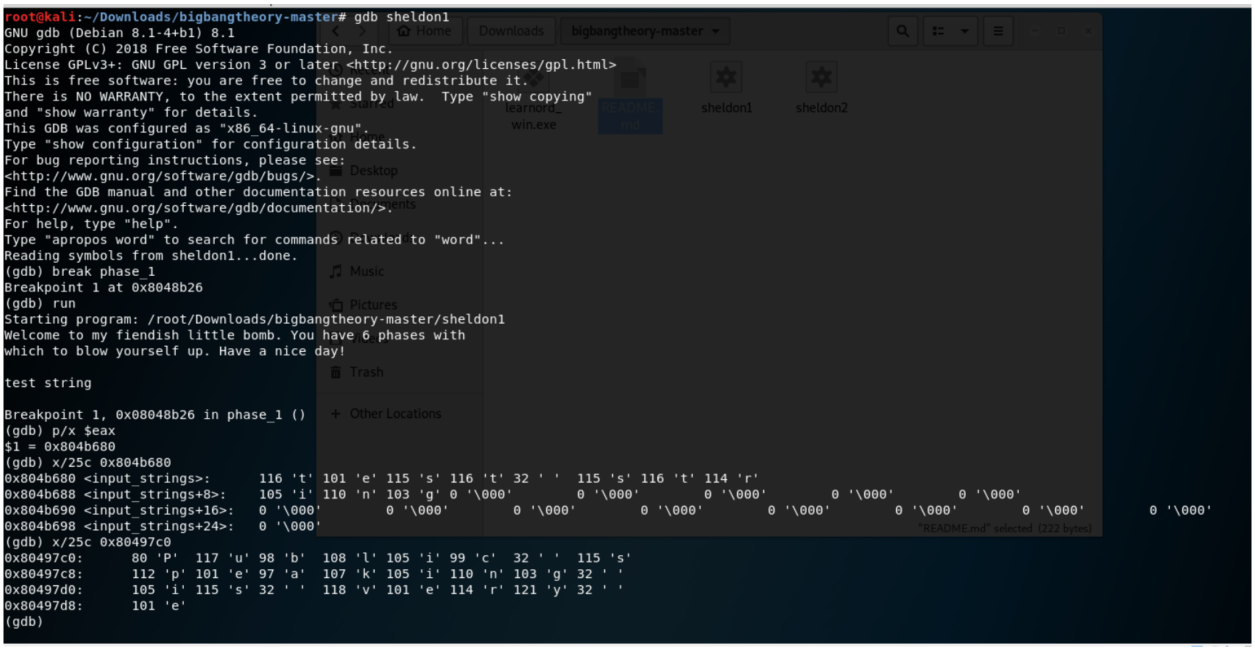
```
   0x08048a0b <+91>:    call   0x8048850 <exit@plt>
   0x08048a10 <+96>:    add    $0xfffffff8,%esp
   0x08048a13 <+99>:    mov    (%ebx),%eax
   0x08048a15 <+101>:   push   %eax
   0x08048a16 <+102>:   push   $0x804963f
   0x08048a1b <+107>:   call   0x8048810 <printf@plt>
   0x08048a20 <+112>:   add    $0xfffffff4,%esp
   0x08048a23 <+115>:   push   $0x8
   0x08048a25 <+117>:   call   0x8048850 <exit@plt>
   0x08048a2a <+122>:   lea    0x0(%esi),%esi
   0x08048a30 <+128>:   call   0x8049160 <initialize_bomb>
   0x08048a35 <+133>:   add    $0xfffffff4,%esp
   0x08048a38 <+136>:   push   $0x8049660
---Type <return> to continue, or q <return> to quit---r
   0x08048a3d <+141>:   call   0x8048810 <printf@plt>
   0x08048a42 <+146>:   add    $0xfffffff4,%esp
   0x08048a45 <+149>:   push   $0x80496a0
   0x08048a4a <+154>:   call   0x8048810 <printf@plt>
   0x08048a4f <+159>:   add    $0x20,%esp
   0x08048a52 <+162>:   call   0x80491fc <read_line>
   0x08048a57 <+167>:   add    $0xfffffff4,%esp
   0x08048a5a <+170>:   push   %eax
   0x08048a5b <+171>:   call   0x8048b20 <phase_1>
   0x08048a60 <+176>:   call   0x804952c <phase_defused>
```



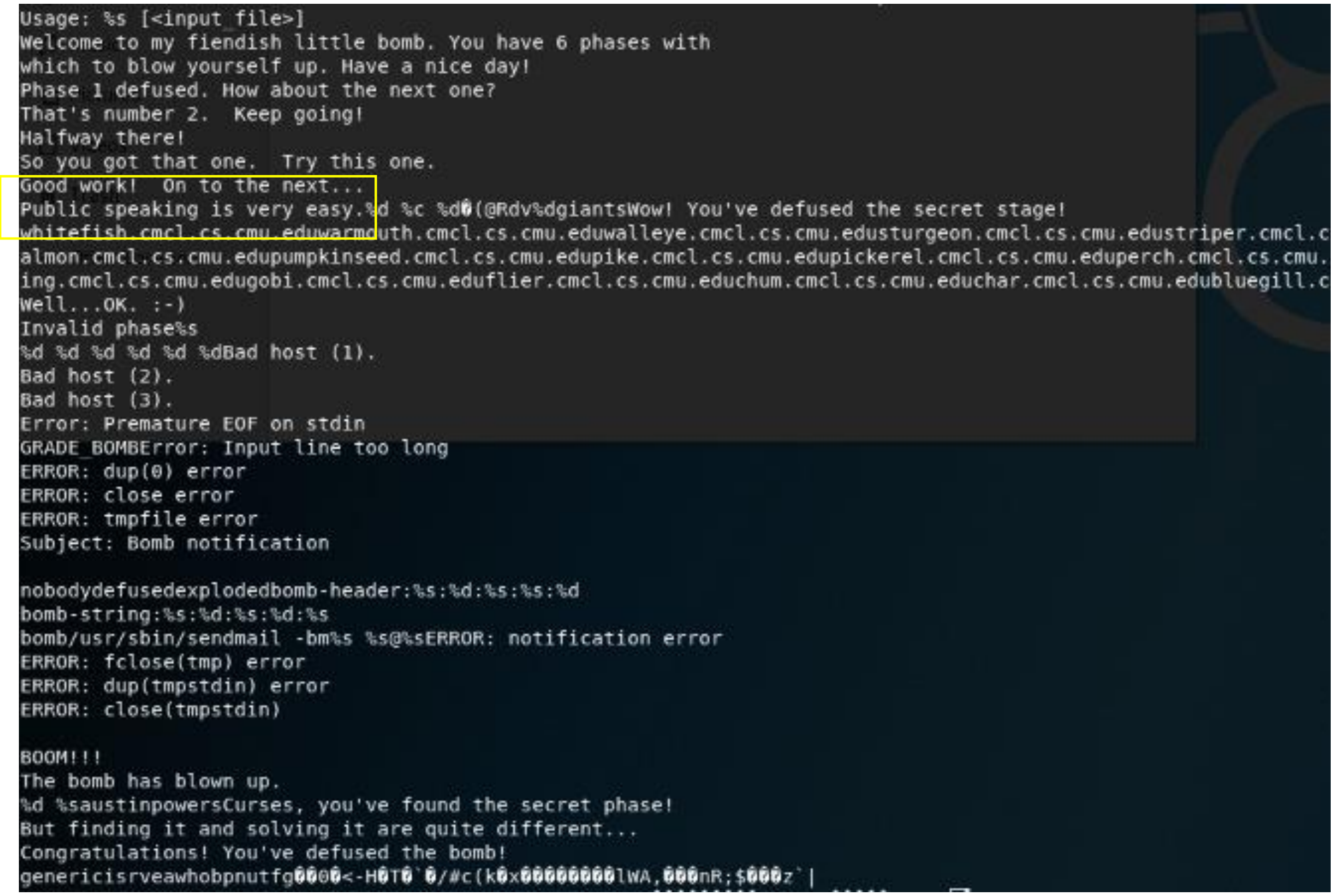
```
   0x08048aab <+251>:   add    $0xfffffff4,%esp
   0x08048aae <+254>:   push   $0x804973f
   0x08048ab3 <+259>:   call   0x8048810 <printf@plt>
   0x08048ab8 <+264>:   add    $0x20,%esp
   0x08048abb <+267>:   call   0x80491fc <read_line>
   0x08048ac0 <+272>:   add    $0xfffffff4,%esp
   0x08048ac3 <+275>:   push   %eax
   0x08048ac4 <+276>:   call   0x8048ce0 <phase_4>
   0x08048ac9 <+281>:   call   0x804952c <phase_defused>
   0x08048ace <+286>:   add    $0xfffffff4,%esp
   0x08048ad1 <+289>:   push   $0x8049760
   0x08048ad6 <+294>:   call   0x8048810 <printf@plt>
   0x08048adb <+299>:   add    $0x20,%esp
   0x08048ade <+302>:   call   0x80491fc <read_line>
   0x08048ae3 <+307>:   add    $0xfffffff4,%esp
   0x08048ae6 <+310>:   push   %eax
   0x08048ae7 <+311>:   call   0x8048d2c <phase_5>
   0x08048aec <+316>:   call   0x804952c <phase_defused>
---Type <return> to continue, or q <return> to quit---r
   0x08048af1 <+321>:   add    $0xfffffff4,%esp
   0x08048af4 <+324>:   push   $0x80497a0
   0x08048af9 <+329>:   call   0x8048810 <printf@plt>
   0x08048afe <+334>:   add    $0x20,%esp
   0x08048b01 <+337>:   call   0x80491fc <read_line>
   0x08048b06 <+342>:   add    $0xfffffff4,%esp
   0x08048b09 <+345>:   push   %eax
   0x08048b0a <+346>:   call   0x8048d98 <phase_6>
   0x08048b0f <+351>:   call   0x804952c <phase_defused>
   0x08048b14 <+356>:   xor    %eax,%eax
   0x08048b16 <+358>:   mov    -0x18(%ebp),%ebx
   0x08048b19 <+361>:   mov    %ebp,%esp
   0x08048b1b <+363>:   pop    %ebp
   0x08048b1c <+364>:   ret
End of assembler dump.
(gdb) x 0x804952c
0x804952c <phase_defused>:      0x83e58955
(gdb) break * 0x83e58955
Breakpoint 1 at 0x83e58955
(gdb) 
```



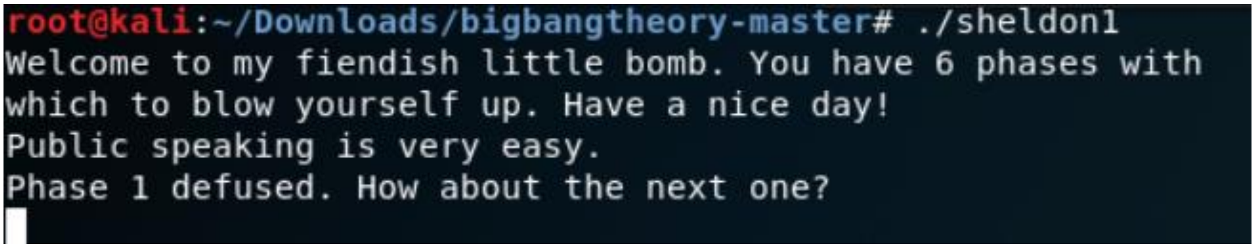
```
End of assembler dump.
(gdb) x 0x804952c
0x804952c <phase_defused>:      0x83e58955
(gdb) break * 0x83e58955
Breakpoint 1 at 0x83e58955
(gdb) x/32xw $esp
No registers.
(gdb) run AAAAA
Starting program: /root/Downloads/bigbangtheory-master/sheldon1 AAAAA
Warning:
Cannot insert breakpoint 1.
Cannot access memory at address 0x83e58955

(gdb) x/32xw $esp
0xffffd300:     0x00000002      0xffffd492      0xffffd4c0      0x00000000
0xffffd310:     0xffffd4c6      0xffffdaa8      0xffffdabf      0xffffdace
0xffffd320:     0xffffdadf      0xffffdaf4      0xffffdb03      0xffffdb0e
0xffffd330:     0xffffdb3d      0xffffdb51      0xffffdb5f      0xffffdb6a
0xffffd340:     0xffffdb90      0xffffdba1      0xffffdbab      0xffffdbc1
0xffffd350:     0xffffdc17      0xffffdc40      0xffffdc49      0xffffdc54
0xffffd360:     0xffffdc6b      0xffffdc7d      0xffffdc90      0xffffdca5
0xffffd370:     0xffffdce2      0xffffdcfc      0xffffdd51      0xffffdd6d
(gdb) run AAAAA
The program being debugged has been started already.
Start it from the beginning? (y or n) y
Starting program: /root/Downloads/bigbangtheory-master/sheldon1 AAAAA
Warning:
Cannot insert breakpoint 1.
Cannot access memory at address 0x83e58955
```



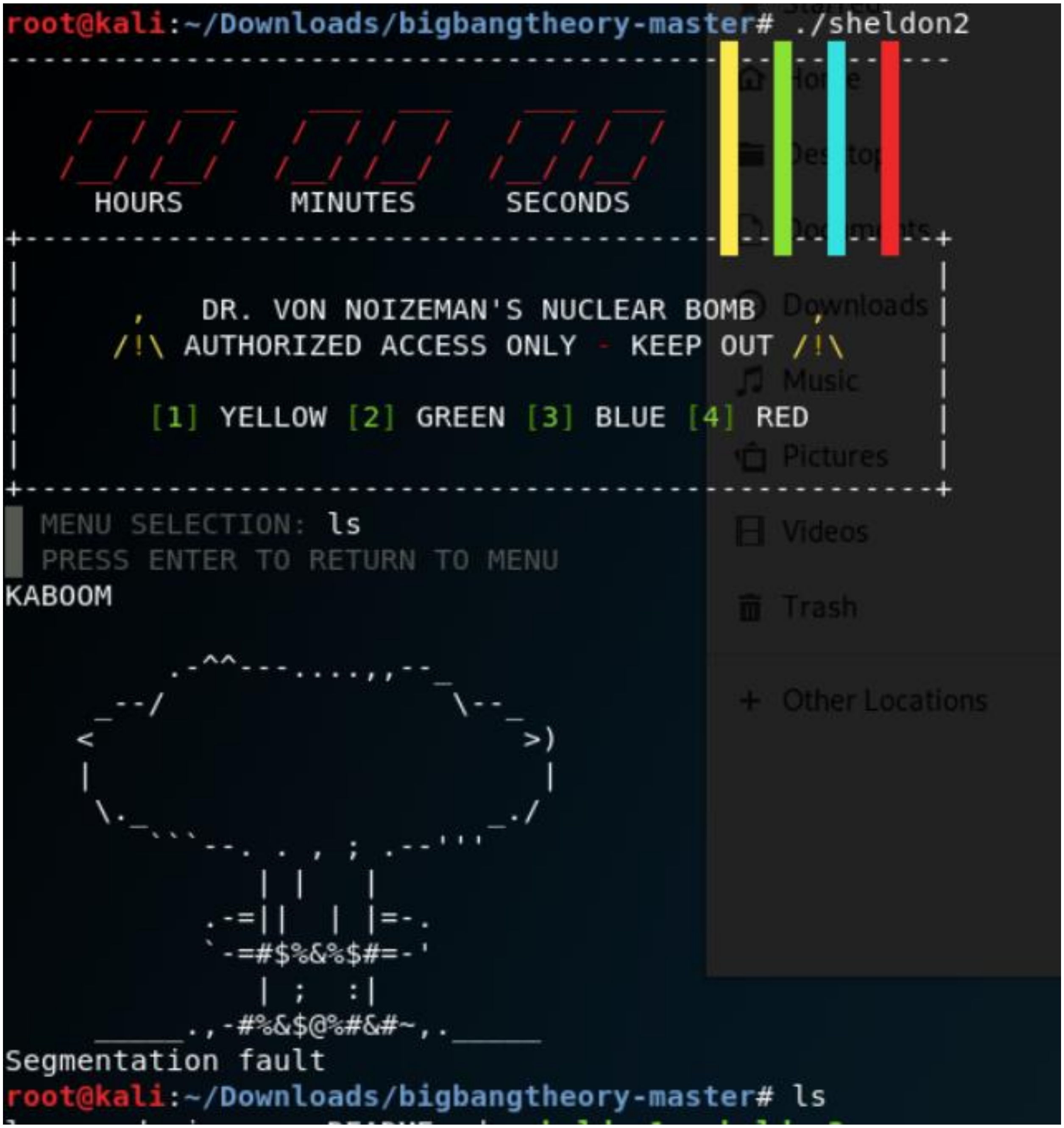
```
root@kali:~/Downloads/bigbangtheory-master# gdb sheldon1
GNU gdb (Debian 8.1-4+b1) 8.1
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.  Type "show copying"
and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.
For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from sheldon1...done.
(gdb) break phase_1
Breakpoint 1 at 0x8048b26
(gdb) run
Starting program: /root/Downloads/bigbangtheory-master/sheldon1
Welcome to my fiendish little bomb. You have 6 phases with
which to blow yourself up. Have a nice day!

test string

Breakpoint 1, 0x08048b26 in phase_1 ()
(gdb) p/x $eax
$1 = 0x804b680
(gdb) x/25c 0x804b680
0x804b680 <input_strings>:      116 't' 101 'e' 115 's' 116 't' 32 ' '  115 's' 116 't' 114 'r'
0x804b688 <input_strings+8>:    105 'i' 110 'n' 103 'g' 0 '\000'        0 '\000'        0 '\000'        0 '\000'        0 '\000'
0x804b690 <input_strings+16>:   0 '\000'        0 '\000'        0 '\000'        0 '\000'        0 '\000'        0 '\000'        0 '\000'        0 '\000'
0x804b698 <input_strings+24>:   0 '\000'
(gdb) x/25c 0x80497c0
0x80497c0:      80 'P'  117 'u' 98 'b'  108 'l' 105 'i' 99 'c'  32 ' '  115 's'
0x80497c8:      112 'p' 101 'e' 97 'a'  107 'k' 105 'i' 110 'n' 103 'g' 32 ' '
0x80497d0:      105 'i' 115 's' 32 ' '  118 'v' 101 'e' 114 'r' 121 'y' 32 ' '
0x80497d8:      101 'e'
(gdb)
```



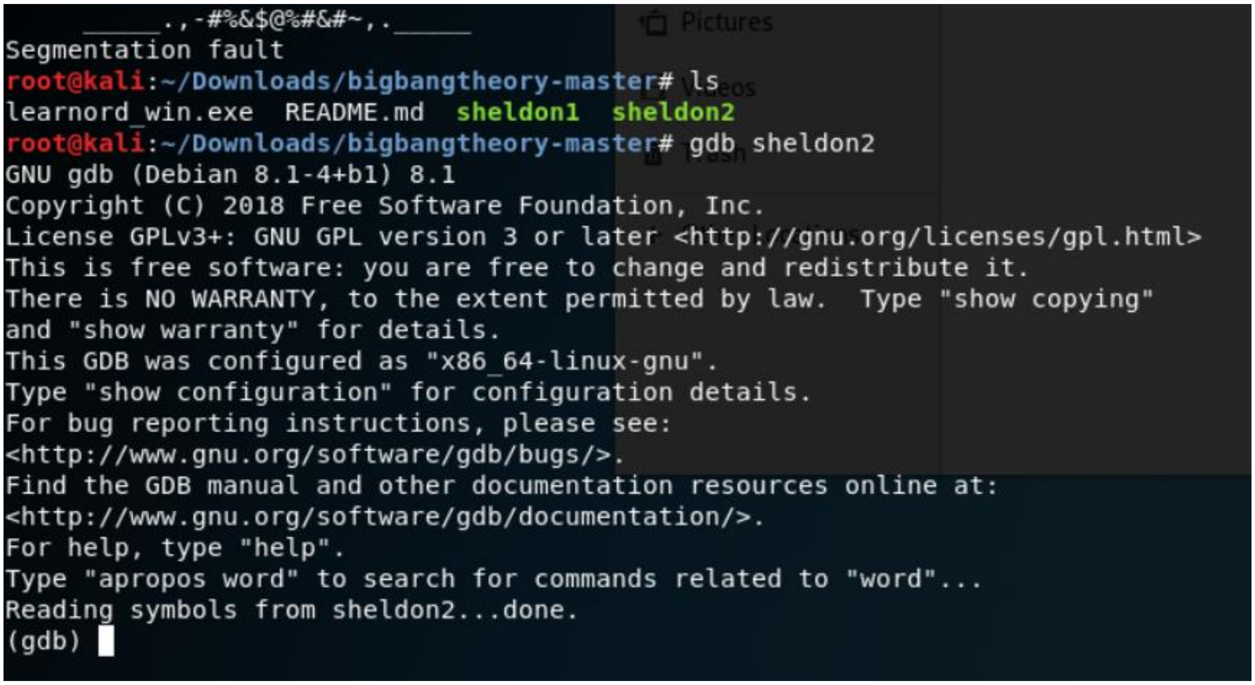
```
Usage: %s [<input_file>]
Welcome to my fiendish little bomb. You have 6 phases with
which to blow yourself up. Have a nice day!
Phase 1 defused. How about the next one?
That's number 2.  Keep going!
Halfway there!
So you got that one.  Try this one.
Good work!  On to the next...
Public speaking is very easy.%d %c %d�(@Rdv%dgiantsWow! You've defused the secret stage!
whitefish.cmcl.cs.cmu.eduwarmouth.cmcl.cs.cmu.eduwalleye.cmcl.cs.cmu.edusturgeon.cmcl.cs.cmu.edustriper.cmcl.c
almon.cmcl.cs.cmu.edupumpkinseed.cmcl.cs.cmu.edupike.cmcl.cs.cmu.edupickerel.cmcl.cs.cmu.eduperch.cmcl.cs.cmu.
ing.cmcl.cs.cmu.edugobi.cmcl.cs.cmu.eduflier.cmcl.cs.cmu.educhum.cmcl.cs.cmu.educhar.cmcl.cs.cmu.edubluegill.c
Well...OK. :-)
Invalid phase%s
%d %d %d %d %d %dBad host (1).
Bad host (2).
Bad host (3).
Error: Premature EOF on stdin
GRADE_BOMBError: Input line too long
ERROR: dup(0) error
ERROR: close error
ERROR: tmpfile error
Subject: Bomb notification

nobodydefusedexplodedbomb-header:%s:%d:%s:%s:%d
bomb-string:%s:%d:%s:%d:%s
bomb/usr/sbin/sendmail -bm%s %s@%sERROR: notification error
ERROR: fclose(tmp) error
ERROR: dup(tmpstdin) error
ERROR: close(tmpstdin)

BOOM!!!
The bomb has blown up.
%d %saustinpowersCurses, you've found the secret phase!
But finding it and solving it are quite different...
Congratulations! You've defused the bomb!
genericisrveawhobpnutfg����<-H�T�`�/#c(k�x���������lWA,���nR;$���z`|
```



```
root@kali:~/Downloads/bigbangtheory-master# ./sheldon1
Welcome to my fiendish little bomb. You have 6 phases with
which to blow yourself up. Have a nice day!
Public speaking is very easy.
Phase 1 defused. How about the next one?
```



~~~
root@kali:~/Downloads/bigbangtheory-master# ./sheldon2
----------------------------------------------------

     ___  ___      ___  ___      ___  ___
    /  / /  /     /  / /  /     /  / /  /
   /__/ /__/     /__/ /__/     /__/ /__/
     HOURS        MINUTES        SECONDS
+---------------------------------------------------+
|                                                   |
|      ,   DR. VON NOIZEMAN'S NUCLEAR BOMB   ,      |
|     /!\ AUTHORIZED ACCESS ONLY - KEEP OUT /!\     |
|                                                   |
|       [1] YELLOW [2] GREEN [3] BLUE [4] RED       |
|                                                   |
+---------------------------------------------------+
  MENU SELECTION: ls
  PRESS ENTER TO RETURN TO MENU
KABOOM

         .-^^---....,,--_
     _--/                \--_
    <                        >)
    |                         |
     \._                   _./
        ```--. . , ; .--'''
              | |   |
           .-=||  | |=-.
           `-=#$%&%$#=-'
              | ;  :|
     _____.,-#%&$@%#&#~,._____
Segmentation fault
root@kali:~/Downloads/bigbangtheory-master# ls
~~~



```
     _____.,-#%&$@%#&#~,._____
Segmentation fault
root@kali:~/Downloads/bigbangtheory-master# ls
learnord_win.exe  README.md  sheldon1  sheldon2
root@kali:~/Downloads/bigbangtheory-master# gdb sheldon2
GNU gdb (Debian 8.1-4+b1) 8.1
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.  Type "show copying"
and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.
For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from sheldon2...done.
(gdb) 
```