

# Big Bank Theory

## Sheldon1 phase\_1

Twitter updates link <https://twitter.com/Abishu14A/status/1237353060659331072?s=20>

Execute the `sheldon1`

Change the access permission of `sheldon1`

```
root@kali:~/Downloads/bigbangtheory-master# ./sheldon1
bash: ./sheldon1: Permission denied
root@kali:~/Downloads/bigbangtheory-master# chmod +x sheldon1
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!

gdb

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

To find the call arguments in the disassembly of the `sheldon1`

Debugging start with `q` option

```
root@kali: ~/Downloads/bigbangtheory-master
File Actions Edit View Help
root@kali: ~/...theory-master x
root@kali:~/Downloads/bigbangtheory-master# gdb -q sheldon1
Reading symbols from sheldon1...
(gdb) list
22      bomb.c: No such file or directory.
(gdb) disassemble phase_1
Dump of assembler code for function phase_1:
0x08048b20 <+0>:      push    %ebp
0x08048b21 <+1>:      mov     %esp,%ebp
0x08048b23 <+3>:      sub     $0x8,%esp
0x08048b26 <+6>:      mov     0x8(%ebp),%eax
0x08048b29 <+9>:      add     $0xffffffff,%esp
0x08048b2c <+12>:     push    $0x80497c0
0x08048b31 <+17>:     push    %eax
0x08048b32 <+18>:     call   0x8049030 <strings_not_equal>
0x08048b37 <+23>:     add     $0x10,%esp
0x08048b3a <+26>:     test   %eax,%eax
0x08048b3c <+28>:     je      0x8048b43 <phase_1+35>
0x08048b3e <+30>:     call   0x80494fc <explode_bomb>
0x08048b43 <+35>:     mov     %ebp,%esp
0x08048b45 <+37>:     pop     %ebp
0x08048b46 <+38>:     ret
End of assembler dump.
```

Debugging output shows that reversing value is stored in 0x80497c0

```
root@kali: ~/Downloads/bigbangtheory-master
File Actions Edit View Help
root@kali: ~/...theory-master x
(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)
```

Sheldon1 Phase\_1 completed

```
root@kali: ~/Downloads/bigbangtheory-master
File Actions Edit View Help
root@kali: ~/...theory-master x
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?
```