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CB.EN.P2CYS23007

## 1. Broken

```
File Actions Edit View Help
33 cout << "Please enter the value of x : " ;
(gdb) n
36 cin >> x;
(gdb) n
Please enter the value of x : 4
39 cout << endl << "Please enter an integer value for n : " ;
(gdb) n
40 cin >> n;
(gdb) n
Please enter an integer value for n : 8
41 cout << endl;
(gdb) n
43 double seriesValue = ComputeSeriesValue(x, n);
(gdb) n
44 cout << "The value of the series for the values entered is "
45 << seriesValue << endl;
(gdb) n
The value of the series for the values entered is inf
47 return 0;
(gdb) n
48 }
(gdb) n
__libc_start_call_main(main=main@entry=0x5555555524f <main()>, argc=argc@entry=1, argv=argv@entry=0x7ffffffdf28)
at ../sysdeps/nptl/libc_start_call_main.h:74
74 ../sysdeps/nptl/libc_start_call_main.h: No such file or directory.
(gdb) n
[Inferior 1 (process 7876) exited normally]
(gdb) n
The program is not being run.
```

```
Users / RGD / OneDrive / Desktop / Tanuj / Broken.cpp
1 #include <iostream>
2 #include <cmath>
3
4 using namespace std;
5
6 int ComputeFactorial(int number) {
7     int fact = 1;
8
9     for (int j = 1; j <= number; j++) {
10         fact = fact * j;
11     }
12
13     return fact;
14 }
15
16 double ComputeSeriesValue(double x, int n) {
```

```
kali@kali: ~/Desktop/securecoding
File Actions Edit View Help

(kali@kali)~/Desktop/securecoding
$ g++ broken.cpp -o broken -g

(kali@kali)~/Desktop/securecoding
$ ./broken
This program is used to compute the value of the following series :
(x^0)/0! + (x^1)/1! + (x^2)/2! + (x^3)/3! + (x^4)/4! + ..... + (x^n)/n!
Please enter the value of x : 3

Please enter an integer value for n : 4

The value of the series for the values entered is 16.375

(kali@kali)~/Desktop/securecoding
$
```

## 2. Test.it

```
kali@kali: ~/Desktop/securecoding
File Actions Edit View Help

Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<https://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 testit...
(gdb) break main
Breakpoint 1 at 0x1141: file testit.c, line 5.
(gdb) run
Starting program: /home/kali/Desktop/securecoding/testit
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".

Breakpoint 1, main () at testit.c:5
5      char *temp = "Paras";
(gdb) next
8      i=0;
(gdb) next
10     temp[3]='F';
(gdb) next

Program received signal SIGSEGV, Segmentation fault.
main () at testit.c:10
10     temp[3]='F';
(gdb) next

Program terminated with signal SIGSEGV, Segmentation fault.
The program no longer exists.
(gdb)
```

```
#include <stdio.h>

void main()
{
    char temp[] = "Paras";

    int i;
    i=0;
```

```
File Actions Edit View Help
kali@kali: ~/Desktop/securecoding

(kali@kali)-[~/Desktop/securecoding]
$ code testit.c

(kali@kali)-[~/Desktop/securecoding]
$ gcc testit.c -o testit -g

(kali@kali)-[~/Desktop/securecoding]
$ ./testit
P
a
r
t
s

(kali@kali)-[~/Desktop/securecoding]
$
```