

## מטלה 1 - מערכות הפעלה

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.1

יצירת cores:

```
● adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ulimit -c unlimited
● adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ make
gcc -g -o zero DivideByZero.c
gcc -g -o seg SegmentaionFault.c
gcc -g -o stof StackOverflow.c
gcc -o zero_no_g DivideByZero.c
gcc -o seg_no_g SegmentaionFault.c
gcc -o stof_no_g StackOverflow.c
⊗ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ./zero
Floating point exception (core dumped)
⊗ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ./zero_no_g
Floating point exception (core dumped)
⊗ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ./seg
Segmentation fault (core dumped)
⊗ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ./seg_no_g
Segmentation fault (core dumped)
⊗ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ./stof
Segmentation fault (core dumped)
⊗ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ ./stof_no_g
Segmentation fault (core dumped)
```

DivisionByZero:

:DEBUG הרצה ללא

```
● adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ gdb zero_no_g core.zero_no_g.101959
GNU gdb (Ubuntu 12.1-0ubuntu1~22.04.2) 12.1
Copyright (C) 2022 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:
<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 <RET> for more, q to quit, c to continue without paging--c
Type "apropos word" to search for commands related to "word"...
Reading symbols from zero_no_g...
(No debugging symbols found in zero_no_g)
[New LWP 101959]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by `./zero_no_g'.
Program terminated with signal SIGFPE, Arithmetic exception.
#0  0x0000559a7996b143 in main ()
(gdb) where
#0  0x0000559a7996b143 in main ()
(gdb) l
1      ../sysdeps/unix/sysv/linux/dl-vdso-setup.c: No such file or directory.
(gdb) print a
No symbol "a" in current context.
(gdb) quit
○ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$
```

הרצה עם DEBUG:

```
● adipassover@Peisach-Laptop:~/os/OS_A1/Q1$ gdb zero core.zero.101943
GNU gdb (Ubuntu 12.1-0ubuntu1~22.04.2) 12.1
Copyright (C) 2022 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:
<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 zero...
[New LWP 101943]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by `./zero'.
Program terminated with signal SIGFPE, Arithmetic exception.
#0  0x000055abba804143 in main () at DivideByZero.c:4
4      int c = a/b;
(gdb) where
#0  0x000055abba804143 in main () at DivideByZero.c:4
(gdb) print a
$1 = 1
(gdb) print b
$2 = 0
(gdb) print c
$3 = 0
(gdb) print a/b
Division by zero
(gdb) l
1      int main() {
2          int a = 1;
3          int b = 0;
4          int c = a/b;
5          return 0;
6      }
(gdb) quit
○ adipassover@Peisach-Laptop:~/os/OS_A1/Q1$
```

הרצה בddd:

DDD: /home/adipassover/os/OS\_A1/Q1/DivideByZero.c

File Edit View Program Commands Status Source Data Help

(): d

Lookup Find Break Watch Print Display Plot Hide Rotate Set Undisp

1: a	2: b	3: c
1	0	0

```
int main() {  
  int a = 1;  
  int b = 0;  
  int c = a/b;  
  return 0;  
}
```

DDD: Backtrace

Backtrace

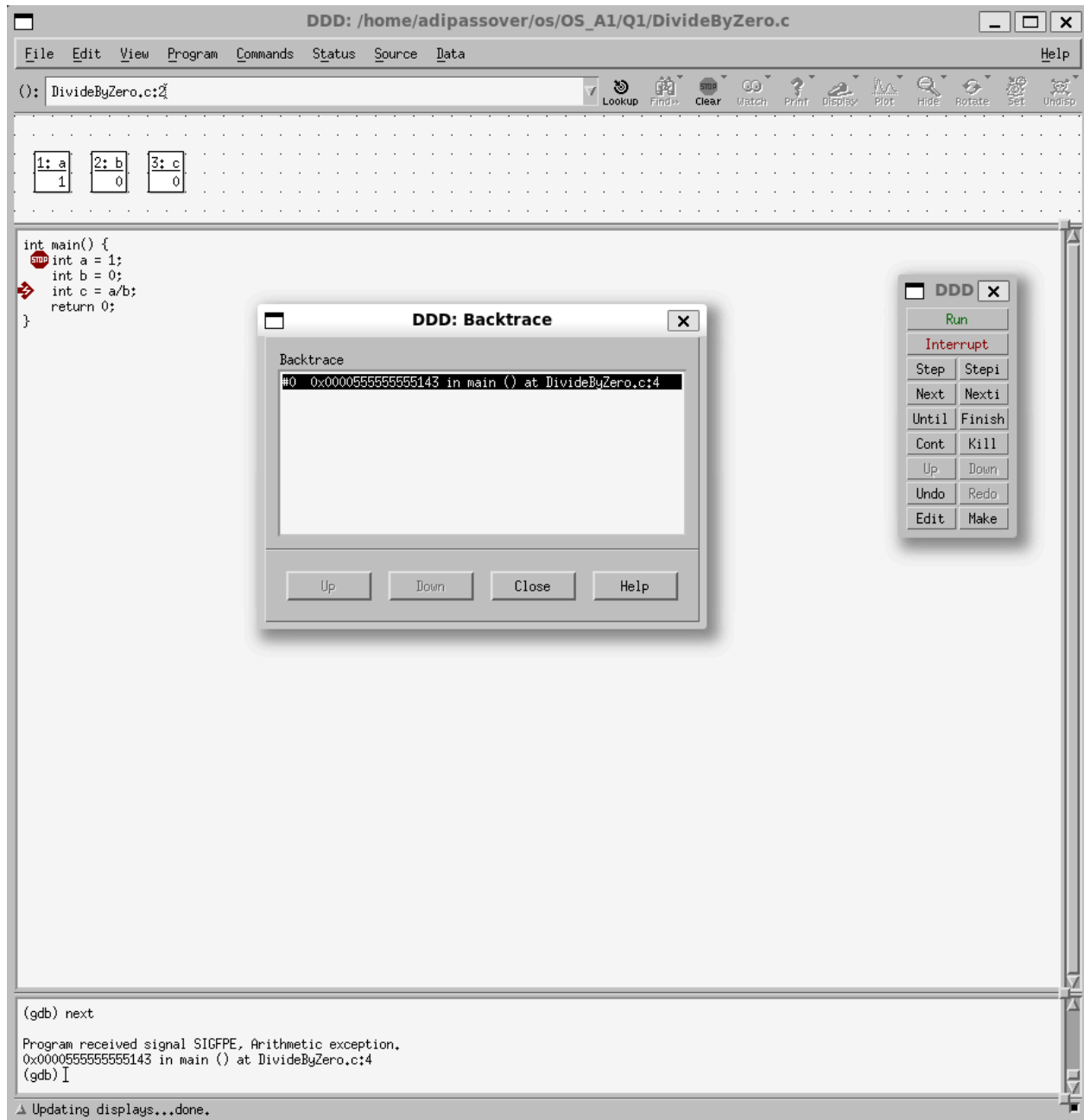
#0 main () at DivideByZero.c:3

Up Down Close Help

Run Interrupt Step Step1 Next Next1 Until Finish Cont Kill Up Down Undo Redo Edit Make

(gdb) next  
(gdb) graph display a  
(gdb) graph display b  
(gdb) graph display c  
(gdb) |

Display 3: c (enabled, scope main, address 0x7fffffffdc2c)



Segmentation Fault:

הרצה ללא DEBUG:

```

This GDB was configured as "x86_64-linux-gnu".
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 seg_no_g...
(No debugging symbols found in seg_no_g)
[New LWP 102034]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by `./seg_no_g'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x0000564a6afd913d in main ()
(gdb) where
#0  0x0000564a6afd913d in main ()
(gdb) print ptr
No symbol "ptr" in current context.
(gdb) break main
Breakpoint 1 at 0x564a6afd9131
(gdb) run
Starting program: /home/adipassover/os/OS_A1/Q1/seg_no_g
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".

Breakpoint 1, 0x0000555555555131 in main ()
(gdb) n
Single stepping until exit from function main,
which has no line number information.

Program received signal SIGSEGV, Segmentation fault.
0x000055555555513d in main ()
(gdb) n
Single stepping until exit from function main,
which has no line number information.

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

```

:DUBUG עם הרצה

```

For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from seg...
[New LWP 102008]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by `./seg'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x0000557fcb24c13d in main () at SegmentaionFault.c:3
3      int val = *ptr;
(gdb) where
#0  0x0000557fcb24c13d in main () at SegmentaionFault.c:3
(gdb) print val
$1 = 0
(gdb) print ptr
$2 = (int *) 0x70707070
(gdb) break main
Breakpoint 1 at 0x557fcb24c131: file SegmentaionFault.c, line 2.
(gdb) run
Starting program: /home/adipassover/os/OS_A1/Q1/seg
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".

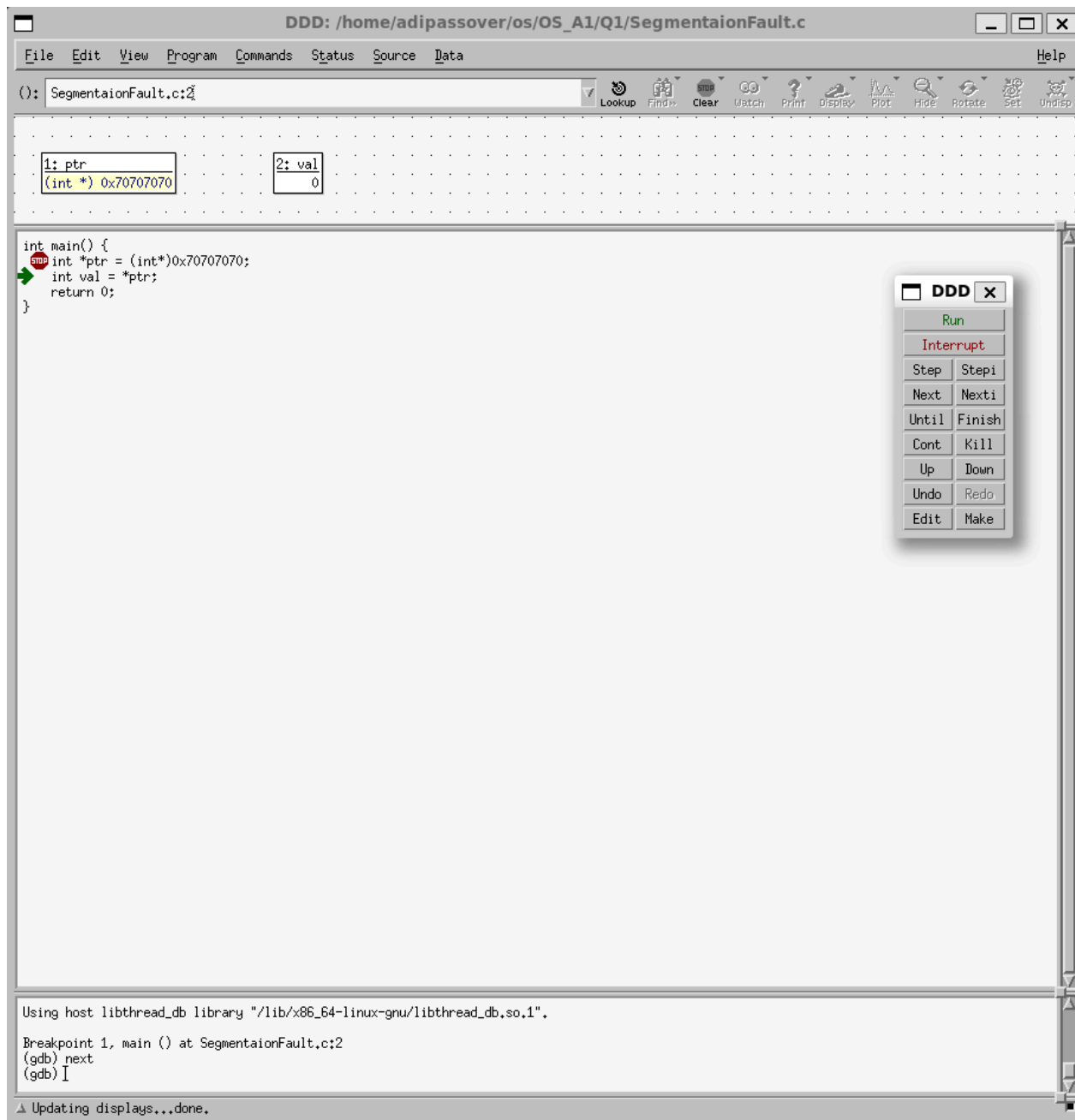
Breakpoint 1, main () at SegmentaionFault.c:2
2      int *ptr = (int*)0x70707070;
(gdb) n
3      int val = *ptr;
(gdb) n

Program received signal SIGSEGV, Segmentation fault.
0x0000555555555513d in main () at SegmentaionFault.c:3
3      int val = *ptr;
(gdb) n

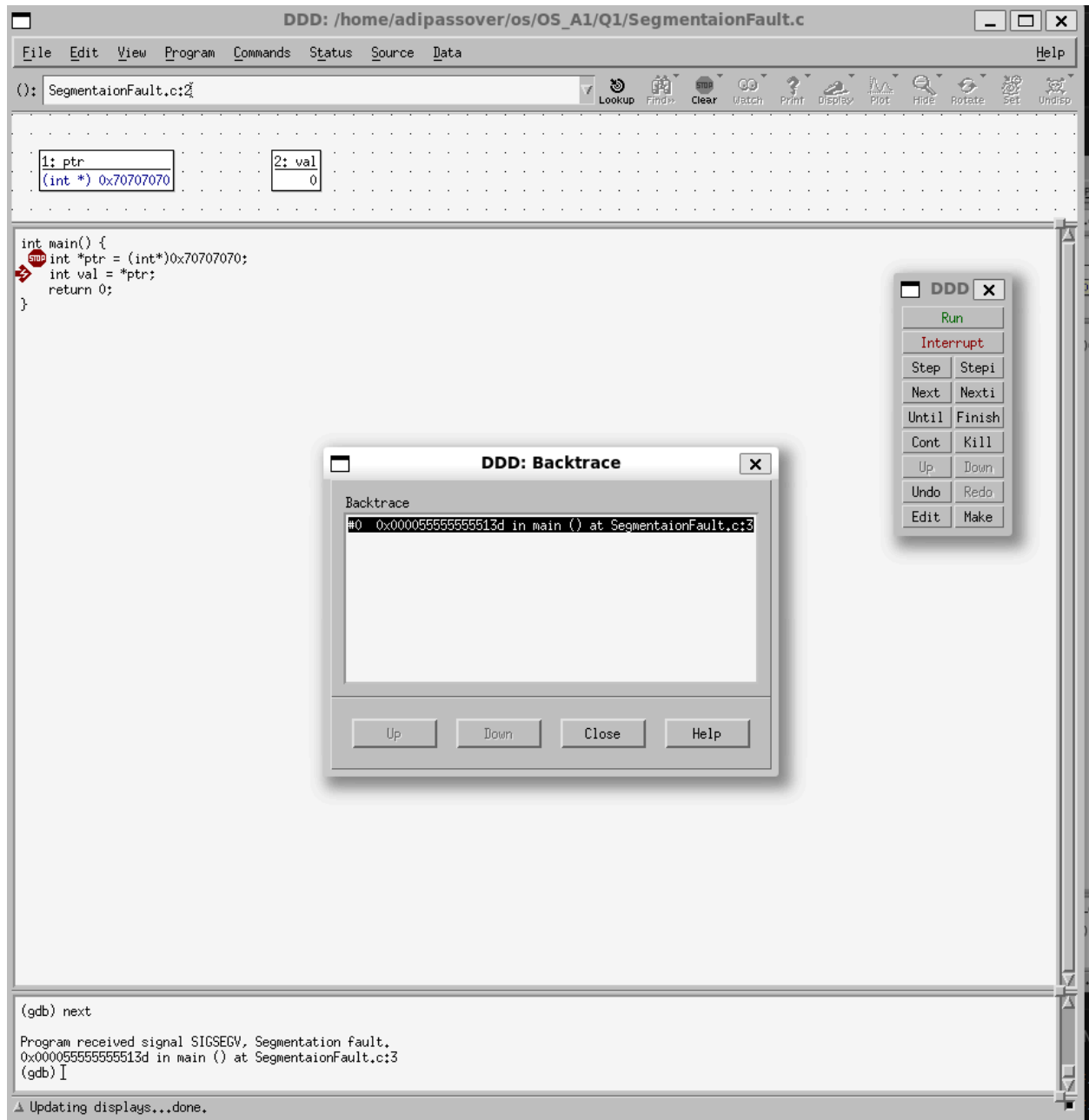
Program terminated with signal SIGSEGV, Segmentation fault.
The program no longer exists.
(gdb) quit
adipassover@Peisach-Laptop:~/os/OS_A1/Q1$

```

הרצה בddd:







Stack Overflow:

הרצה ללא DEBUG:

```
GNU gdb (Ubuntu 12.1-0ubuntu1~22.04.2) 12.1
Copyright (C) 2022 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:
<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 stof_no_g...
(No debugging symbols found in stof_no_g)
[New LWP 102116]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by `./stof_no_g'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x00005577cfe1a135 in infinteRec ()
(gdb) where
#0  0x00005577cfe1a135 in infinteRec ()
#1  0x00005577cfe1a14a in infinteRec ()
#2  0x00005577cfe1a14a in infinteRec ()
#3  0x00005577cfe1a14a in infinteRec ()
#4  0x00005577cfe1a14a in infinteRec ()
#5  0x00005577cfe1a14a in infinteRec ()
#6  0x00005577cfe1a14a in infinteRec ()
#7  0x00005577cfe1a14a in infinteRec ()
#8  0x00005577cfe1a14a in infinteRec ()
#9  0x00005577cfe1a14a in infinteRec ()
#10 0x00005577cfe1a14a in infinteRec ()
#11 0x00005577cfe1a14a in infinteRec ()
#12 0x00005577cfe1a14a in infinteRec ()
#13 0x00005577cfe1a14a in infinteRec ()
#14 0x00005577cfe1a14a in infinteRec ()
#15 0x00005577cfe1a14a in infinteRec ()
#16 0x00005577cfe1a14a in infinteRec ()
#17 0x00005577cfe1a14a in infinteRec ()
#18 0x00005577cfe1a14a in infinteRec ()
```

```
#10 0x00005577cfe1a14a in infinteRec ()
#11 0x00005577cfe1a14a in infinteRec ()
#12 0x00005577cfe1a14a in infinteRec ()
#13 0x00005577cfe1a14a in infinteRec ()
#14 0x00005577cfe1a14a in infinteRec ()
#15 0x00005577cfe1a14a in infinteRec ()
#16 0x00005577cfe1a14a in infinteRec ()
#17 0x00005577cfe1a14a in infinteRec ()
#18 0x00005577cfe1a14a in infinteRec ()
#19 0x00005577cfe1a14a in infinteRec ()
#20 0x00005577cfe1a14a in infinteRec ()
#21 0x00005577cfe1a14a in infinteRec ()
#22 0x00005577cfe1a14a in infinteRec ()
#23 0x00005577cfe1a14a in infinteRec ()
#24 0x00005577cfe1a14a in infinteRec ()
#25 0x00005577cfe1a14a in infinteRec ()
#26 0x00005577cfe1a14a in infinteRec ()
#27 0x00005577cfe1a14a in infinteRec ()
#28 0x00005577cfe1a14a in infinteRec ()
#29 0x00005577cfe1a14a in infinteRec ()
#30 0x00005577cfe1a14a in infinteRec ()
#31 0x00005577cfe1a14a in infinteRec ()
#32 0x00005577cfe1a14a in infinteRec ()
#33 0x00005577cfe1a14a in infinteRec ()
--Type <RET> for more, q to quit, c to continue without paging--q
Quit
(gdb) l
1      ./elf/dl-call-libc-early-init.c: No such file or directory.
(gdb) print a
No symbol "a" in current context.
(gdb) quit
adipassover@Peisach-Laptop:~/os/OS A1/01$
```

הרצה עם DUBUG:

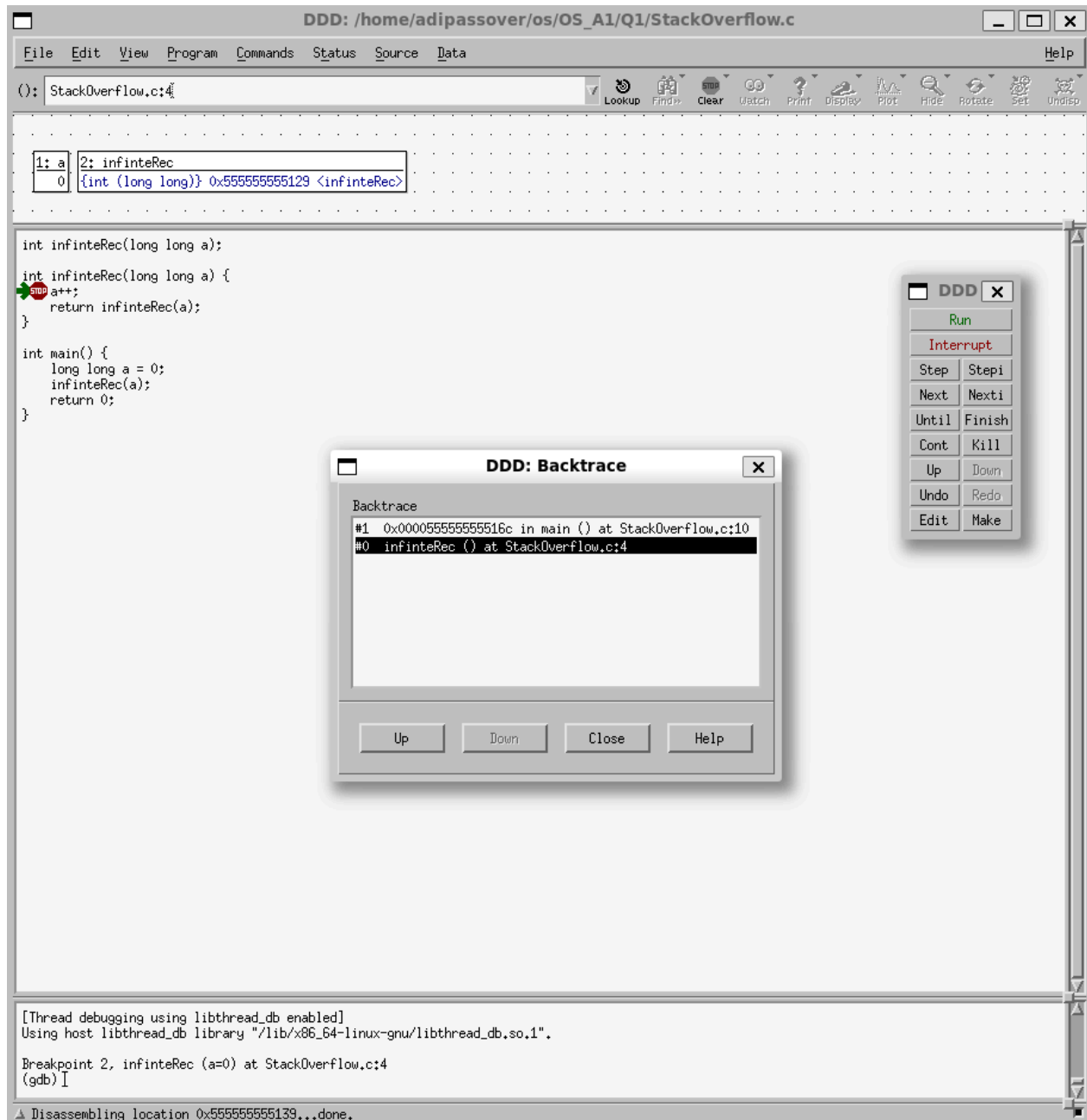
```
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by `./stof'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x000055580bf20145 in infinteRec (a=261898) at StackOverflow.c:5
--Type <RET> for more, q to quit, c to continue without paging--c
5      return infinteRec(a);
(gdb) where
#0  0x000055580bf20145 in infinteRec (a=261898) at StackOverflow.c:5
#1  0x000055580bf2014a in infinteRec (a=261897) at StackOverflow.c:5
#2  0x000055580bf2014a in infinteRec (a=261896) at StackOverflow.c:5
#3  0x000055580bf2014a in infinteRec (a=261895) at StackOverflow.c:5
#4  0x000055580bf2014a in infinteRec (a=261894) at StackOverflow.c:5
#5  0x000055580bf2014a in infinteRec (a=261893) at StackOverflow.c:5
#6  0x000055580bf2014a in infinteRec (a=261892) at StackOverflow.c:5
#7  0x000055580bf2014a in infinteRec (a=261891) at StackOverflow.c:5
#8  0x000055580bf2014a in infinteRec (a=261890) at StackOverflow.c:5
#9  0x000055580bf2014a in infinteRec (a=261889) at StackOverflow.c:5
#10 0x000055580bf2014a in infinteRec (a=261888) at StackOverflow.c:5
#11 0x000055580bf2014a in infinteRec (a=261887) at StackOverflow.c:5
#12 0x000055580bf2014a in infinteRec (a=261886) at StackOverflow.c:5
#13 0x000055580bf2014a in infinteRec (a=261885) at StackOverflow.c:5
#14 0x000055580bf2014a in infinteRec (a=261884) at StackOverflow.c:5
#15 0x000055580bf2014a in infinteRec (a=261883) at StackOverflow.c:5
#16 0x000055580bf2014a in infinteRec (a=261882) at StackOverflow.c:5
#17 0x000055580bf2014a in infinteRec (a=261881) at StackOverflow.c:5
#18 0x000055580bf2014a in infinteRec (a=261880) at StackOverflow.c:5
#19 0x000055580bf2014a in infinteRec (a=261879) at StackOverflow.c:5
#20 0x000055580bf2014a in infinteRec (a=261878) at StackOverflow.c:5
#21 0x000055580bf2014a in infinteRec (a=261877) at StackOverflow.c:5
#22 0x000055580bf2014a in infinteRec (a=261876) at StackOverflow.c:5
#23 0x000055580bf2014a in infinteRec (a=261875) at StackOverflow.c:5
#24 0x000055580bf2014a in infinteRec (a=261874) at StackOverflow.c:5
#25 0x000055580bf2014a in infinteRec (a=261873) at StackOverflow.c:5
#26 0x000055580bf2014a in infinteRec (a=261872) at StackOverflow.c:5
#27 0x000055580bf2014a in infinteRec (a=261871) at StackOverflow.c:5
#28 0x000055580bf2014a in infinteRec (a=261870) at StackOverflow.c:5
#29 0x000055580bf2014a in infinteRec (a=261869) at StackOverflow.c:5
#30 0x000055580bf2014a in infinteRec (a=261868) at StackOverflow.c:5
#31 0x000055580bf2014a in infinteRec (a=261867) at StackOverflow.c:5
--Type <RET> for more, q to quit, c to continue without paging--q
Quit
(gdb) print a
```

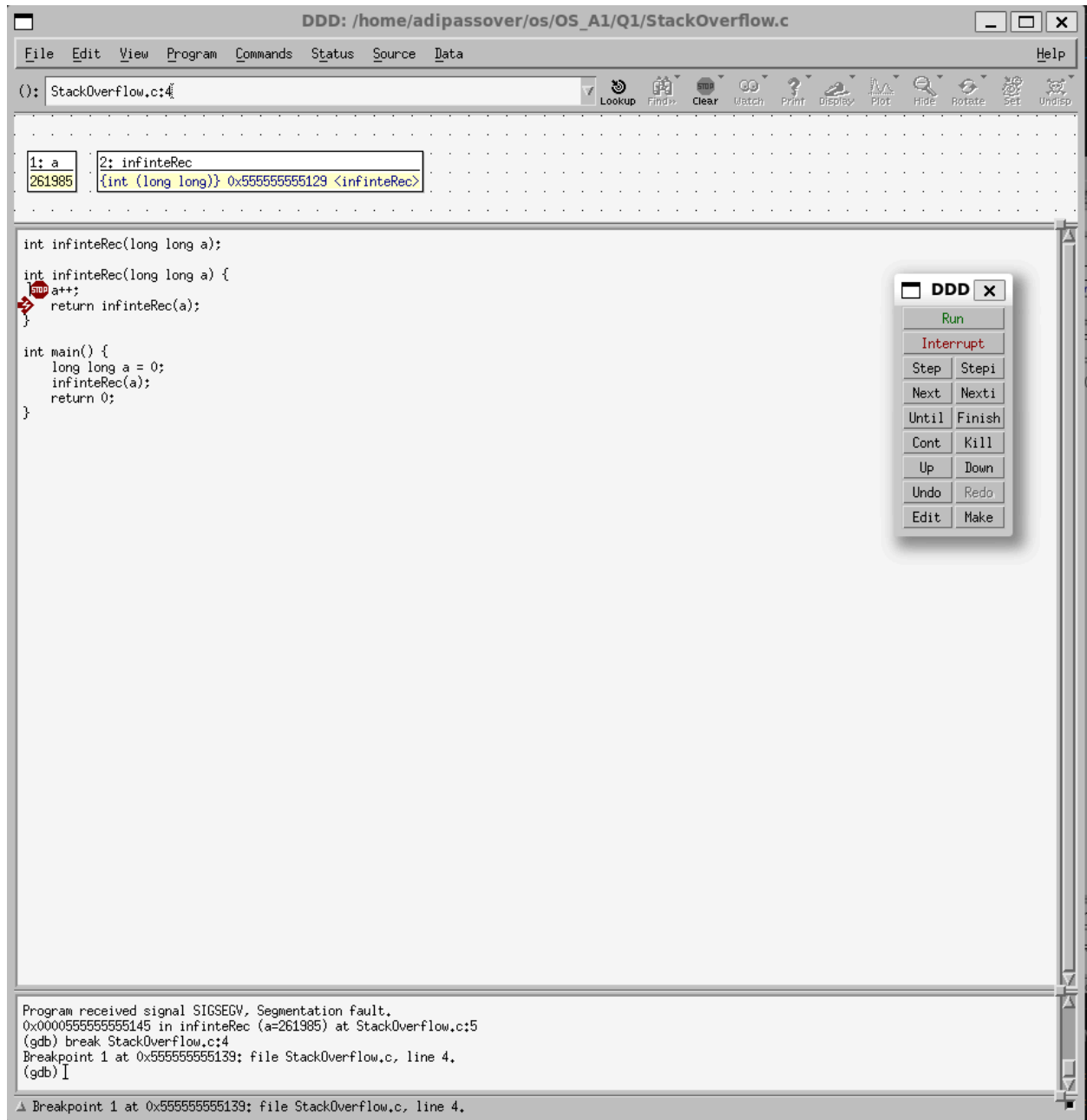
```

#24 0x000055580bf2014a in infinteRec (a=261874) at StackOverflow.c:5
#25 0x000055580bf2014a in infinteRec (a=261873) at StackOverflow.c:5
#26 0x000055580bf2014a in infinteRec (a=261872) at StackOverflow.c:5
#27 0x000055580bf2014a in infinteRec (a=261871) at StackOverflow.c:5
#28 0x000055580bf2014a in infinteRec (a=261870) at StackOverflow.c:5
#29 0x000055580bf2014a in infinteRec (a=261869) at StackOverflow.c:5
#30 0x000055580bf2014a in infinteRec (a=261868) at StackOverflow.c:5
#31 0x000055580bf2014a in infinteRec (a=261867) at StackOverflow.c:5
--Type <RET> for more, q to quit, c to continue without paging--q
Quit
(gdb) print a
$1 = 261898
(gdb) l
1      int infinteRec(long long a);
2
3      int infinteRec(long long a) {
4          a++;
5          return infinteRec(a);
6      }
7
8      int main() {
9          long long a = 0;
10         infinteRec(a);
(gdb) quit
adina@over@Reisach Laptop: /cs/05_A1/01$

```

הרצה בddd:





2.  
דוגמאות הרצה:

```

adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q2$ make
gcc -Wall -g Poisson.c -lm -o Poisson
adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q2$ ./Poisson 5 4
P_4 (5.000000) = 0.175467369748
adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q2$ ./Poisson 5 70
P_70 (5.000000) = 0.000000000000
adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q2$ ./Poisson 1.345 4
P_4 (1.345000) = 0.035526450767
adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q2$ ./Poisson 1.3wr 5
Error: lambda is illegal
adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q2$ ./Poisson 1.3 5 1
Error

```

.3

דוגמאות הרצה:

```

adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q3$ make
gcc -Wall -g -c -o Main.o Main.c
gcc -Wall -g -fPIC -c Poisson.c
gcc -shared -Wall -o libpoisson.so Poisson.o
gcc -Wall -g Main.o libpoisson.so -lm -o Poisson -Wl,-rpath=.
adipassover@Peisach-Laptop:/mnt/c/Users/adipe/CLionProjects/OS-A1/Q3$ ./Poisson
P_1 (2.000000) = 0.270670562983
P_10 (2.000000) = 0.000038189850
P_2 (2.000000) = 0.270670562983
P_3 (3.000000) = 0.224041800946
P_3 (100.000000) = 0.000000000000

```

.4

דוגמת הרצה:



```
adipassover@Peisach-Laptop:~/os/OS_A1/Q4$ make
g++ -Wall -g -fprofile-arcs -ftest-coverage -c Main.cpp -o Main.o
g++ -Wall -g -fprofile-arcs -ftest-coverage -c Graph.cpp -o Graph.o
g++ -Wall -g -fprofile-arcs -ftest-coverage -o dijkstra Main.o Graph.o
adipassover@Peisach-Laptop:~/os/OS_A1/Q4$ make coverage
./dijkstra < ./tests/goodInput1.txt > /dev/null || true;
./dijkstra < ./tests/goodInput2.txt > /dev/null || true;
./dijkstra < ./tests/negativeSize.txt > /dev/null || true;
./dijkstra < ./tests/negativeWeights.txt > /dev/null || true;
./dijkstra < ./tests/notEnoughEdges.txt > /dev/null || true;
./dijkstra < ./tests/notNumbers.txt > /dev/null || true;
./dijkstra < ./tests/selfEdges.txt > /dev/null || true;
./dijkstra < ./tests/tooManyEdges.txt > /dev/null || true;
./dijkstra < ./tests/wrongStartingVertex.txt > /dev/null || true;
gcov Main.cpp > coverage_report.txt 2>&1
gcov Graph.cpp >> coverage_report.txt 2>&1
adipassover@Peisach-Laptop:~/os/OS_A1/Q4$
```

קבצים עם 100% כיסוי:

File 'Graph.hpp'

Lines executed:100.00% of 1

Creating 'Graph.hpp.gcov'

Lines executed:100.00% of 46

File 'Graph.cpp'

Lines executed:100.00% of 49

Creating 'Graph.cpp.gcov'

File '/usr/include/c++/11/iostream'

No executable lines

Removing 'iostream.gcov'

File '/usr/include/c++/11/ext/new\_allocator.h'

Lines executed:42.11% of 19

Creating 'new\_allocator.h.gcov'

File '/usr/include/c++/11/bits/stl\_vector.h'

Lines executed:51.52% of 66

Creating 'stl\_vector.h.gcov'

File '/usr/include/c++/11/bits/allocator.h'

Lines executed:25.00% of 4

Creating 'allocator.h.gcov'

File '/usr/include/c++/11/bits/move.h'

Lines executed:33.33% of 6

Creating 'move.h.gcov'

File '/usr/include/c++/11/bits/stl\_algobase.h'

Lines executed:88.46% of 26

Creating 'stl\_algobase.h.gcov'

```
1 File 'Main.cpp'
2 Lines executed:100.00% of 9
3 Creating 'Main.cpp.gcov'
4
5 File '/usr/include/c++/11/iostream'
6 No executable lines
7 Removing 'iostream.gcov'
8
9 File '/usr/include/c++/11/ext/new_allocator.h'
10 Lines executed:100.00% of 3
11 Creating 'new_allocator.h.gcov'
12
13 File '/usr/include/c++/11/bits/stl_construct.h'
14 Lines executed:100.00% of 11
15 Creating 'stl_construct.h.gcov'
16
17 File '/usr/include/c++/11/bits/alloc_traits.h'
18 Lines executed:100.00% of 5
19 Creating 'alloc_traits.h.gcov'
20
21 File '/usr/include/c++/11/bits/stl_vector.h'
22 Lines executed:100.00% of 14
23 Creating 'stl_vector.h.gcov'
24
25 File '/usr/include/c++/11/bits/allocator.h'
26 Lines executed:100.00% of 1
27 Creating 'allocator.h.gcov'
28
29 File '/usr/include/c++/11/bits/move.h'
30 Lines executed:100.00% of 2
31 Creating 'move.h.gcov'
```

```

gcc -Wall -Wextra -pg -c Main_On.c -o Main_On.o
gcc -Wall -Wextra -pg -o maxsumn MaxSubarraySum.o Main_On.o
gcc -Wall -Wextra -pg -c Main_On2.c -o Main_On2.o
gcc -Wall -Wextra -pg -o maxsumn2 MaxSubarraySum.o Main_On2.o
gcc -Wall -Wextra -pg -c Main_On3.c -o Main_On3.o
gcc -Wall -Wextra -pg -o maxsumn3 MaxSubarraySum.o Main_On3.o
adipassover@Peisach-Laptop:~/os/OS_A1/Q5$ make profiling
./maxsumn 42 100
For seed: 42, and size: 100, the results are: 203 for O(n) algorithm
mv gmon.out gmon_n_100
gprof maxsumn gmon_n_100 > analysis_n_100.txt
./maxsumn 42 1000
For seed: 42, and size: 1000, the results are: 315 for O(n) algorithm
mv gmon.out gmon_n_1000
gprof maxsumn gmon_n_1000 > analysis_n_1000.txt
./maxsumn 42 10000
For seed: 42, and size: 10000, the results are: 3391 for O(n) algorithm
mv gmon.out gmon_n_10000
gprof maxsumn gmon_n_10000 > analysis_n_10000.txt
./maxsumn2 42 100
For seed: 42, and size: 100, the results are: 203 for O(n^2) algorithm
mv gmon.out gmon_n2_100
gprof maxsumn2 gmon_n2_100 > analysis_n2_100.txt
./maxsumn2 42 1000
For seed: 42, and size: 1000, the results are: 315 for O(n^2) algorithm
mv gmon.out gmon_n2_1000
gprof maxsumn2 gmon_n2_1000 > analysis_n2_1000.txt
./maxsumn2 42 10000
For seed: 42, and size: 10000, the results are: 3391 for O(n^2) algorithm
mv gmon.out gmon_n2_10000
gprof maxsumn2 gmon_n2_10000 > analysis_n2_10000.txt
./maxsumn3 42 100
For seed: 42, and size: 100, the results are: 203 for O(n^3) algorithm
mv gmon.out gmon_n3_100
gprof maxsumn3 gmon_n3_100 > analysis_n3_100.txt
./maxsumn3 42 1000
For seed: 42, and size: 1000, the results are: 315 for O(n^3) algorithm
mv gmon.out gmon_n3_1000
gprof maxsumn3 gmon_n3_1000 > analysis_n3_1000.txt
./maxsumn3 42 10000
For seed: 42, and size: 10000, the results are: 3391 for O(n^3) algorithm
mv gmon.out gmon_n3_10000
gprof maxsumn3 gmon_n3_10000 > analysis_n3_10000.txt

```

Flat profile:

Each sample counts as 0.01 seconds.

% time	cumulative seconds	self seconds	calls	self ms/call	total ms/call	name
100.00	0.27	0.27	1	270.00	270.00	maxSubarraySum_n3
0.00	0.27	0.00	1	0.00	0.00	generateRandomArray
0.00	0.27	0.00	1	0.00	270.00	runProgram

.6

דוגמת הרצה:

```

● adipassover@Peisach-Laptop:~/os/OS_A1/Q6$ make
gcc -g -c SignalsHandling.c
SignalsHandling.c: In function 'handleSigSegv':
SignalsHandling.c:16:14: warning: division by zero [-Wdiv-by-zero]
    16 |     int a = 1/0;
        |           ^
gcc -g -o signals SignalsHandling.o
● adipassover@Peisach-Laptop:~/os/OS_A1/Q6$ ./signals
Count: 0
Received SIGUSR1
Received SIGSEGV
Received SIGFPE
Received SIGALRM
Count: 1

```