

stack_overflow_g

g- דיבוג טקסטואלי עם דגל

```
idoc@idodolaptop:~/projects$ gdb ./divide_by_zero_g core
GNU gdb (Ubuntu 15.0.50.20240403-0ubuntu1) 15.0.50.20240403-git
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License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
```

```
Debuginfod has been enabled.
To make this setting permanent, add 'set debuginfod enabled on' to .gdbinit.
Core was generated by `./home/idoc/projects/stack_overflow_g'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x00005555555555136 in ?? ()
(gdb) w
watch          whatis          while          winheight      with
wh             where          while-stepping winwidth       ws
(gdb) where
#0  0x00005555555555136 in ?? ()
#1  0x00007ffffff7ff010 in ?? ()
#2  0x0000555555555513b in ?? ()
#3  0x00007ffffff7ff020 in ?? ()
#4  0x0000555555555513b in ?? ()
#5  0x00007ffffff7ff030 in ?? ()
#6  0x0000555555555513b in ?? ()
#7  0x00007ffffff7ff040 in ?? ()
#8  0x0000555555555513b in ?? ()
#9  0x00007ffffff7ff050 in ?? ()
#10 0x0000555555555513b in ?? ()
#11 0x00007ffffff7ff060 in ?? ()
#12 0x0000555555555513b in ?? ()
#13 0x00007ffffff7ff070 in ?? ()
#14 0x0000555555555513b in ?? ()
#15 0x00007ffffff7ff080 in ?? ()
#16 0x0000555555555513b in ?? ()
#17 0x00007ffffff7ff090 in ?? ()
#18 0x0000555555555513b in ?? ()
#19 0x00007ffffff7ff0a0 in ?? ()
#20 0x0000555555555513b in ?? ()
#21 0x00007ffffff7ff0b0 in ?? ()
#22 0x0000555555555513b in ?? ()
#23 0x00007ffffff7ff0c0 in ?? ()
#24 0x0000555555555513b in ?? ()
#25 0x00007ffffff7ff0d0 in ?? ()
#26 0x0000555555555513b in ?? ()
#27 0x00007ffffff7ff0e0 in ?? ()
#28 0x0000555555555513b in ?? ()
--Type <RET> for more, q to quit, c to continue without paging--
```

invalid_memory_g

דיבוג טקסטואלי עם דגל g-

```
idoc@idodolaptop:~/projects$ ./invalid_memory_g core
Segmentation fault (core dumped)
idoc@idodolaptop:~/projects$ ls -lh /cores
total 124K
-rw----- 1 idoc idoc 296K Jun 12 20:22 core.invalid_memory_.40239.1749748929
idoc@idodolaptop:~/projects$ gdb ./invalid_memory_g /cores/core.invalid_memory_.40239.1749748929
GNU gdb (Ubuntu 15.0.50.20240403-0ubuntu1) 15.0.50.20240403-git
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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.
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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 ./invalid_memory_g...
[New LWP 40239]

This GDB supports auto-downloading debuginfo from the following URLs:
<https://debuginfod.ubuntu.com>
Enable debuginfod for this session? (y or [n]) y
Debuginfod has been enabled.
To make this setting permanent, add 'set debuginfod enabled on' to .gdbinit.
Downloading separate debug info for system-supplied DSO at 0x7fff62547000
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by './invalid_memory_g core'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x0000563dddf8ac13e in main () at invalid_memory.c:3
3      *pointer = 2;
(gdb) where
#0  0x0000563dddf8ac13e in main () at invalid_memory.c:3
(gdb) |
```

divide_by_zero_g

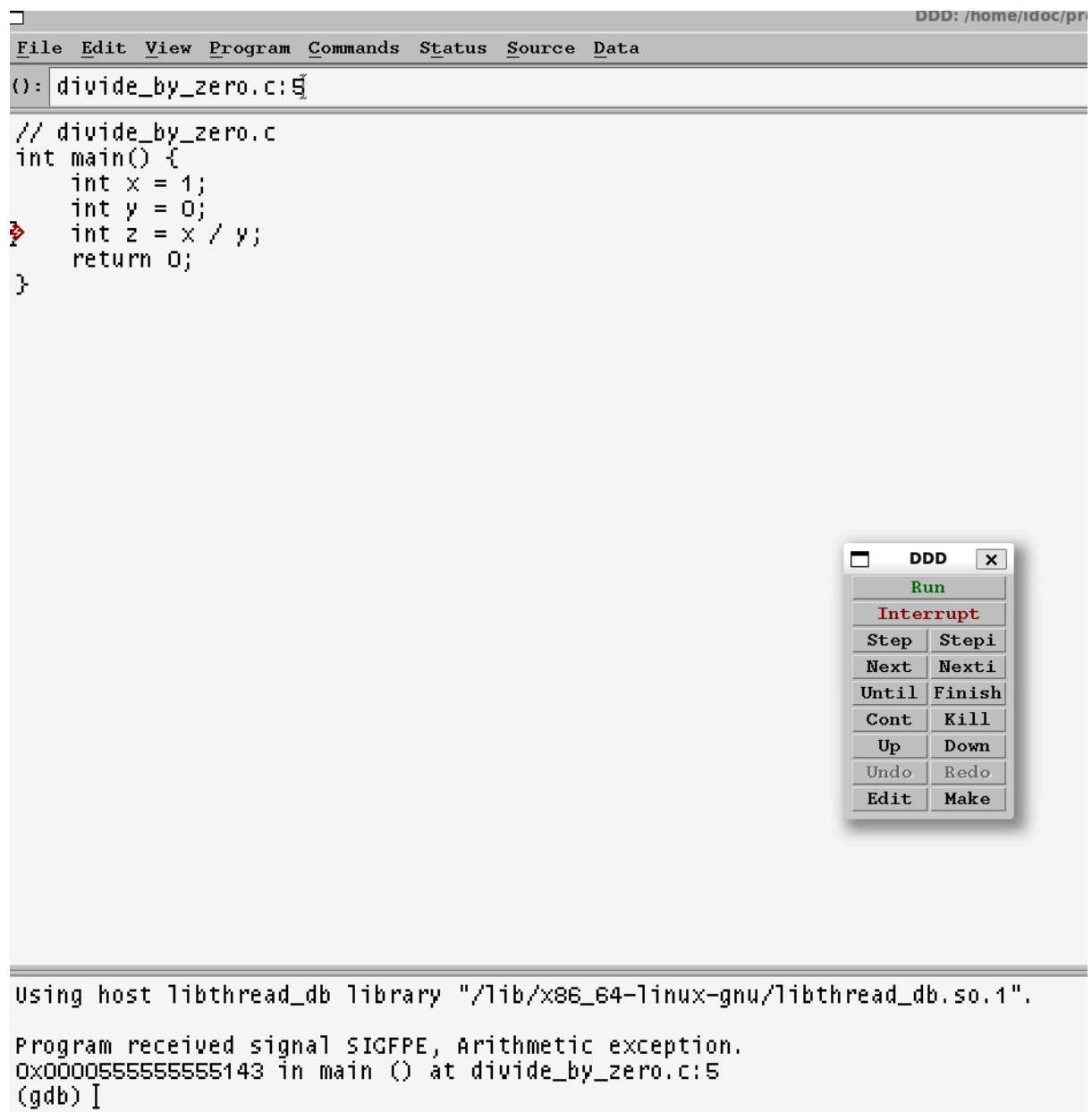
דיבוג טקסטואלי עם דגל g-

```
idoc@idodolaptop:~/projects$ gdb ./divide_by_zero_g /cores/core.divide_by_zero_.40845.1749749254
GNU gdb (Ubuntu 15.0.50.20240403-0ubuntu1) 15.0.50.20240403-git
Copyright (C) 2024 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 ./divide_by_zero_g...
[New LWP 40845]

This GDB supports auto-downloading debuginfo from the following URLs:
<https://debuginfod.ubuntu.com>
Enable debuginfod for this session? (y or [n]) y
Debuginfod has been enabled.
To make this setting permanent, add 'set debuginfod enabled on' to .gdbinit.
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by './divide_by_zero_g core'.
Program terminated with signal SIGFPE, Arithmetic exception.
#0  0x0000560ed3e31143 in main () at divide_by_zero.c:5
5      int z = x / y;
(gdb) where
#0  0x0000560ed3e31143 in main () at divide_by_zero.c:5
(gdb) |
```

דיבוג גרפי divide_by_zero_g



דיבוג גרפי invalid_memory_g

The screenshot shows the DDD (Data Display Debugger) interface. The main window has a menu bar with File, Edit, View, Program, Commands, Status, Source, and Data. The source code is as follows:

```
int main() {  
    int *pointer = (int *) 0xdeadbeef;  
    *pointer = 2;  
    return 0;  
}
```

The command window at the bottom shows the following commands:

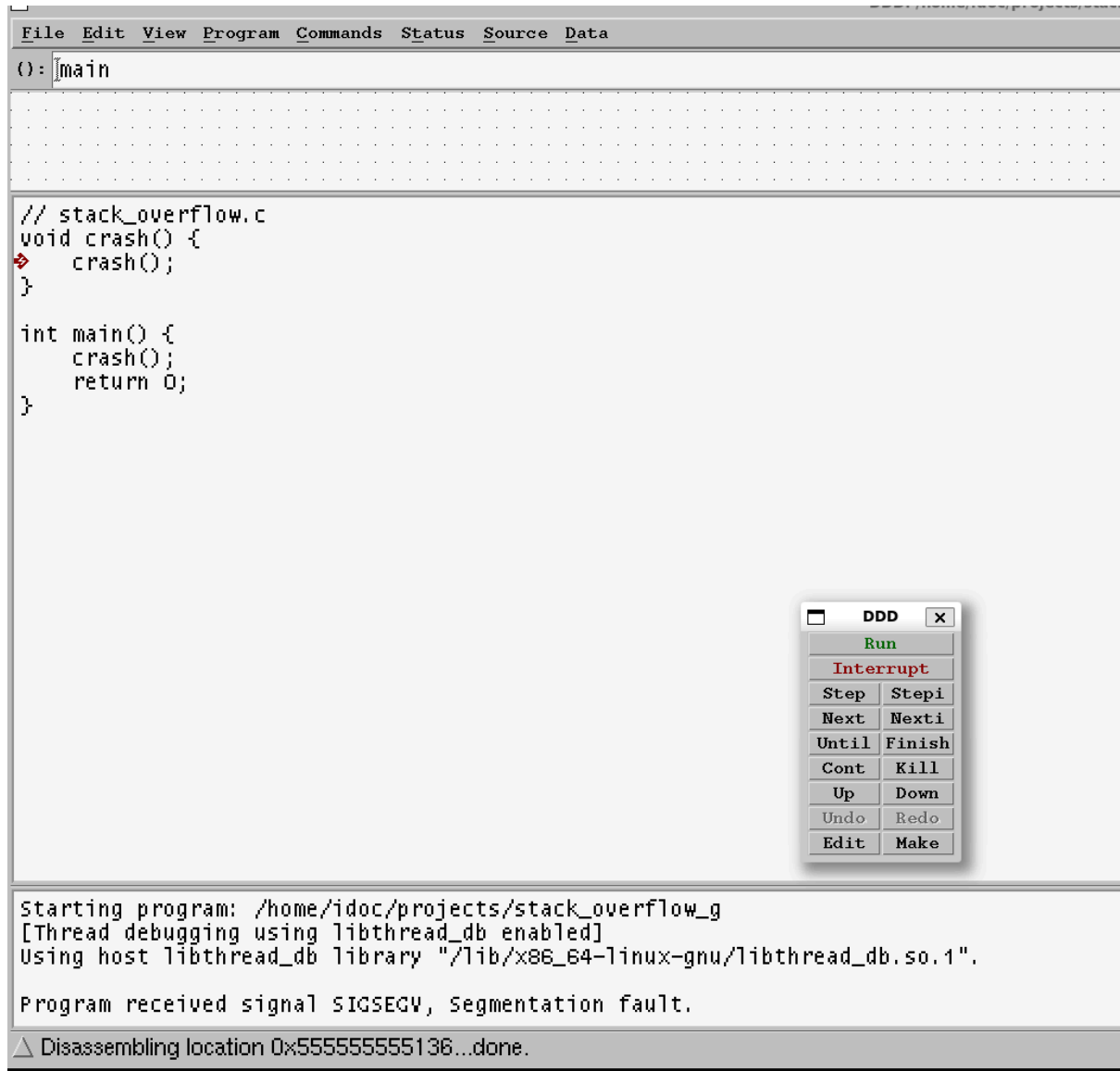
```
(gdb) graph display *pointer  
(gdb) [
```

A floating window titled "DDD" is visible, containing the following buttons:

- Run
- Interrupt
- Step
- Stepi
- Next
- Nexti
- Until
- Finish
- Cont
- Kill
- Up
- Down
- Undo
- Redo
- Edit
- Make

The status bar at the bottom displays: **△ Display 1: *pointer(enabled, scope main, address 0xdeadbeef)**

דיבוג גרפי stack_overflow_g
(ניתן לראות מאחורי הקלעים איך הרקורסיה קוראת לעצמה דרך status->backtrace, אצלי יש עם זה בעיה...)



invalid_memory

```
idoc@idodolaptop:~/projects$ gdb invalid_memory /cores/core.invalid_memory.46524.1749900278
GNU gdb (Ubuntu 15.0.50.20240403-0ubuntu1) 15.0.50.20240403-git
Copyright (C) 2024 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 invalid_memory...

This GDB supports auto-downloading debuginfo from the following URLs:
<https://debuginfod.ubuntu.com>
Enable debuginfod for this session? (y or [n]) y
Debuginfod has been enabled.
To make this setting permanent, add 'set debuginfod enabled on' to .gdbinit.
Downloading separate debug info for /home/idoc/projects/invalid_memory
(No debugging symbols found in invalid_memory)
[New LWP 46524]
Downloading separate debug info for system-supplied DSO at 0x7ffe8d1fa000
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by './invalid_memory core'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x00005570b333f13e in main ()
(gdb) where
#0  0x00005570b333f13e in main ()
(gdb)
```

divide_by_zero

דיבוג טקסטואלי בלי דגל

```
idoc@idodolaptop:~/projects$ gdb divide_by_zero /cores/core.divide_by_zero.50287.1749903684
GNU gdb (Ubuntu 15.0.50.20240403-0ubuntu1) 15.0.50.20240403-git
Copyright (C) 2024 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 divide_by_zero...

This GDB supports auto-downloading debuginfo from the following URLs:
<https://debuginfod.ubuntu.com>
Enable debuginfod for this session? (y or [n]) y
Debuginfod has been enabled.
To make this setting permanent, add 'set debuginfod enabled on' to .gdbinit.
Downloading separate debug info for /home/idoc/projects/divide_by_zero
(No debugging symbols found in divide_by_zero)
[New LWP 50287]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by './divide_by_zero core'.
Program terminated with signal SIGFPE, Arithmetic exception.
#0  0x000056270fa95143 in main ()
(gdb) where
#0  0x000056270fa95143 in main ()
(gdb)
```



```
idoc@idodolaptop:~/projects$ gdb stack_overflow /cores/core.stack_overflow.50457.1749903777
GNU gdb (Ubuntu 15.0.50.20240403-0ubuntu1) 15.0.50.20240403-git
Copyright (C) 2024 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 stack_overflow...

This GDB supports auto-downloading debuginfo from the following URLs:
  <https://debuginfod.ubuntu.com>
Enable debuginfod for this session? (y or [n]) y
Debuginfod has been enabled.
To make this setting permanent, add 'set debuginfod enabled on' to .gdbinit.
Downloading separate debug info for /home/idoc/projects/stack_overflow
(No debugging symbols found in stack_overflow)
[New LWP 50457]
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Core was generated by './stack_overflow core'.
Program terminated with signal SIGSEGV, Segmentation fault.
#0  0x0000561186729136 in crash ()
(gdb) where
#0  0x0000561186729136 in crash ()
#1  0x000056118672913b in crash ()
#2  0x000056118672913b in crash ()
#3  0x000056118672913b in crash ()
#4  0x000056118672913b in crash ()
#5  0x000056118672913b in crash ()
#6  0x000056118672913b in crash ()
#7  0x000056118672913b in crash ()
#8  0x000056118672913b in crash ()
#9  0x000056118672913b in crash ()
#10 0x000056118672913b in crash ()
#11 0x000056118672913b in crash ()
#12 0x000056118672913b in crash ()
#13 0x000056118672913b in crash ()
#14 0x000056118672913b in crash ()
#15 0x000056118672913b in crash ()
#16 0x000056118672913b in crash ()
#17 0x000056118672913b in crash ()
#18 0x000056118672913b in crash ()
#19 0x000056118672913b in crash ()
#20 0x000056118672913b in crash ()
```