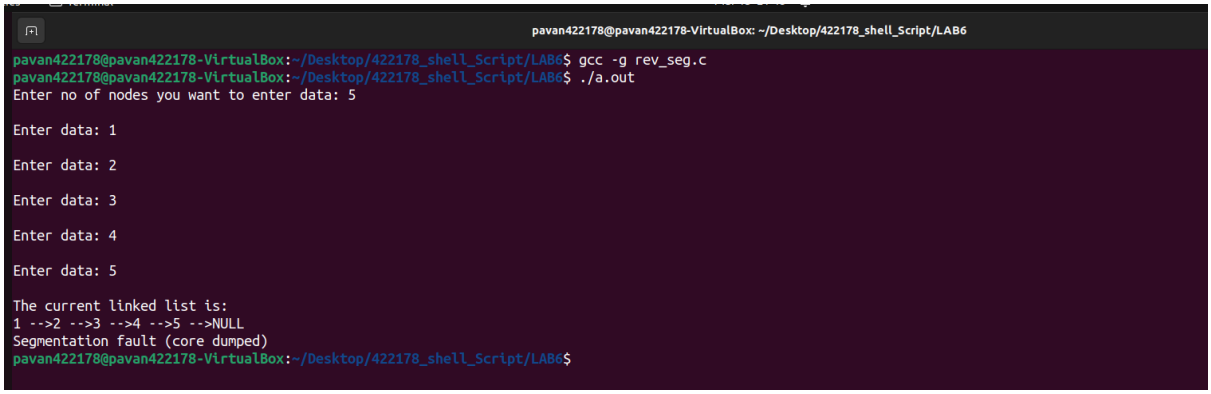
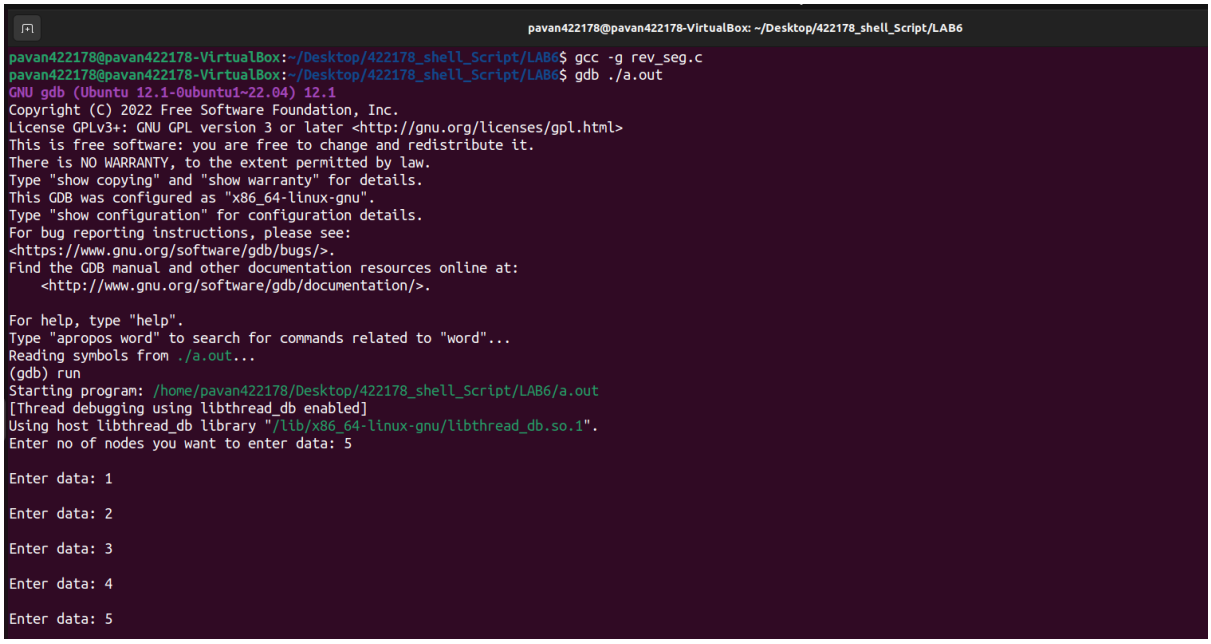
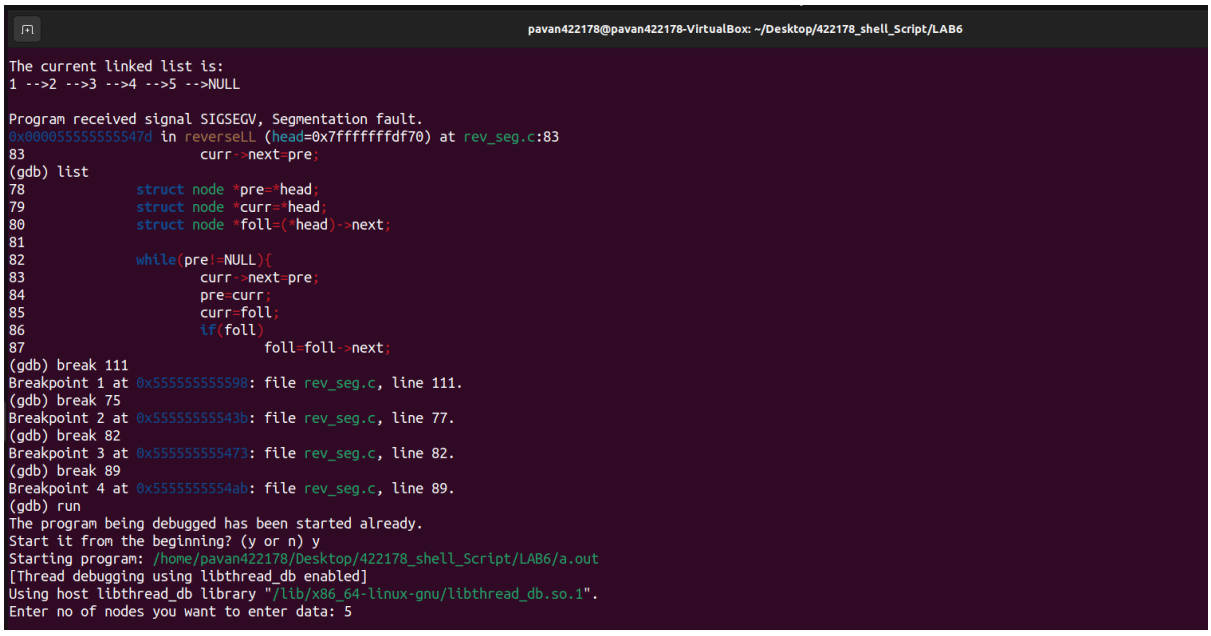
Rev_seg.c file execution screenshots



```
pavan422178@pavan422178-VirtualBox: ~/Desktop/422178_shell_Script/LAB6
pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$ gcc -g rev_seg.c
pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$ ./a.out
Enter no of nodes you want to enter data: 5

Enter data: 1

Enter data: 2

Enter data: 3

Enter data: 4

Enter data: 5

The current linked list is:
1 -->2 -->3 -->4 -->5 -->NULL
Segmentation fault (core dumped)
pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$
```



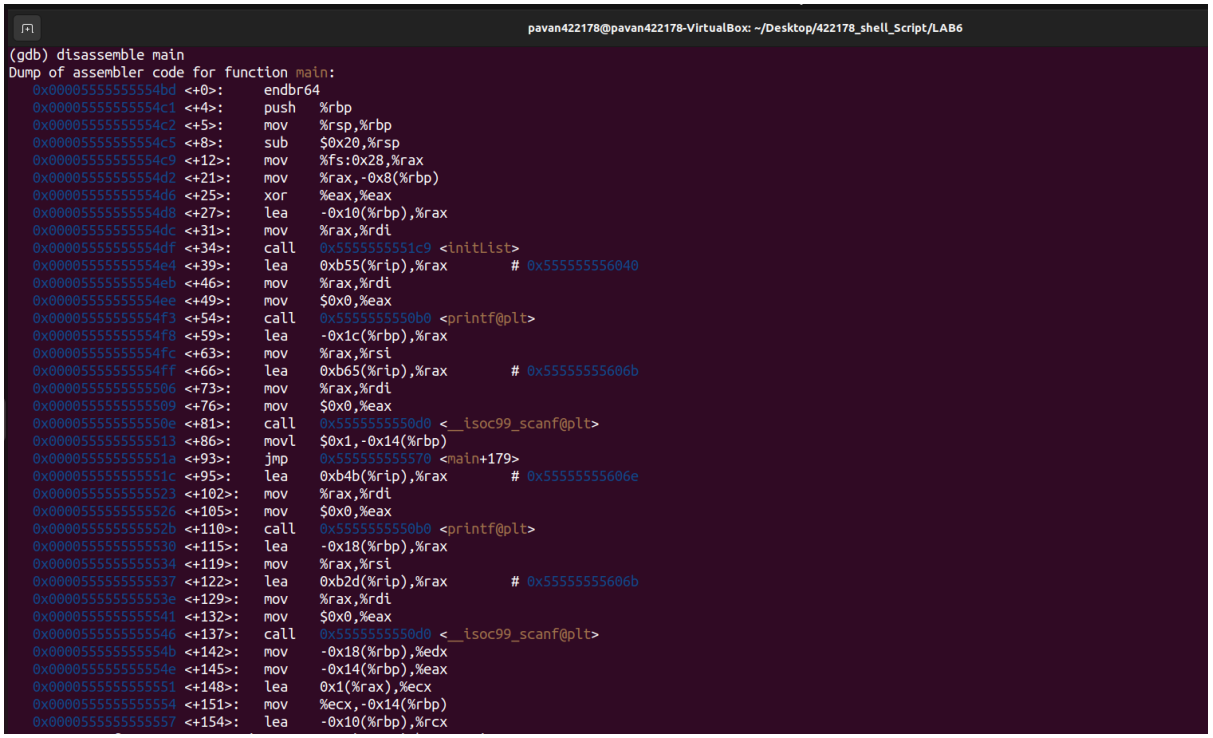
```
pavan422178@pavan422178-VirtualBox: ~/Desktop/422178_shell_Script/LAB6
pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$ gcc -g rev_seg.c
pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$ gdb ./a.out
GNU gdb (Ubuntu 12.1-0ubuntu1~22.04) 12.1
Copyright (C) 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 ./a.out...
(gdb) run
Starting program: /home/pavan422178/Desktop/422178_shell_Script/LAB6/a.out
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Enter no of nodes you want to enter data: 5

Enter data: 1

Enter data: 2

Enter data: 3

Enter data: 4

Enter data: 5
```

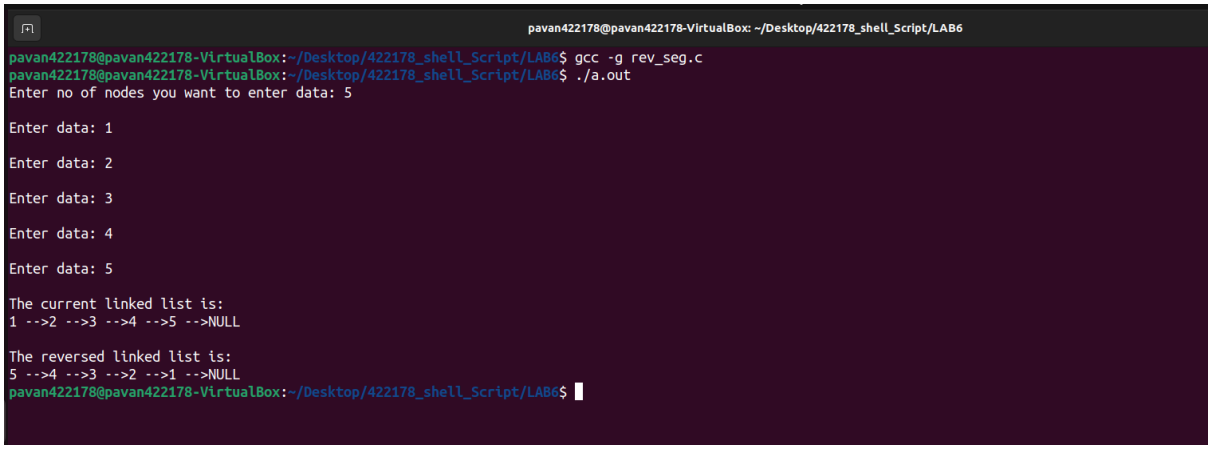


```
pavan422178@pavan422178-VirtualBox: ~/Desktop/422178_shell_Script/LAB6

The current linked list is:
1 -->2 -->3 -->4 -->5 -->NULL

Program received signal SIGSEGV, Segmentation fault.
0x000055555555547d in reverseLL (head=0x7fffffffdf70) at rev_seg.c:83
83                      curr->next=pre;
(gdb) list
78              struct node *pre=*head;
79              struct node *curr=*head;
80              struct node *foll=(*head)->next;
81
82              while(pre!=NULL){
83                      curr->next=pre;
84                      pre=curr;
85                      curr=foll;
86                      if(foll)
87                              foll=foll->next;
(gdb) break 111
Breakpoint 1 at 0x555555555598: file rev_seg.c, line 111.
(gdb) break 75
Breakpoint 2 at 0x55555555543b: file rev_seg.c, line 77.
(gdb) break 82
Breakpoint 3 at 0x555555555473: file rev_seg.c, line 82.
(gdb) break 89
Breakpoint 4 at 0x5555555554ab: file rev_seg.c, line 89.
(gdb) run
The program being debugged has been started already.
Start it from the beginning? (y or n) y
Starting program: /home/pavan422178/Desktop/422178_shell_Script/LAB6/a.out
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Enter no of nodes you want to enter data: 5
```

```
pavan422178@pavan422178-VirtualBox: ~/Desktop/422178_shell_Script/LAB6

Enter data: 1

Enter data: 2

Enter data: 3

Enter data: 4

Enter data: 5

The current linked list is:
1 -->2 -->3 -->4 -->5 -->NULL

Breakpoint 1, main () at rev_seg.c:111
111             reverseLL(&head);
(gdb) print head->data
$1 = 1
(gdb) next

Breakpoint 2, reverseLL (head=0x7fffffffdf70) at rev_seg.c:77
77              if(!(*head)) return 0;
(gdb) print head->data
$2 = 1
(gdb) next
78              struct node *pre=*head;
(gdb) print pre->data
$3 = 1
(gdb) next
79              struct node *curr=*head;
(gdb) print curr
$4 = (struct node *) 0x7ffffffe098
(gdb) next
80              struct node *foll=(*head)->next;
(gdb) print foll->data
Cannot access memory at address 0x0
(gdb) next
```

```
pavan422178@pavan422178-VirtualBox: ~/Desktop/422178_shell_Script/LAB6

(gdb) next

Breakpoint 3, reverseLL (head=0x7fffffffdf70) at rev_seg.c:82
82              while(pre!=NULL){
(gdb) next
83                      curr->next=pre;
(gdb) next
84                      pre=curr;
(gdb) next
85                      curr=foll;
(gdb) next
86                      if(foll)
(gdb) next
87                              foll=foll->next;
(gdb) next
82              while(pre!=NULL){
(gdb) next
83                      curr->next=pre;
(gdb) continue
Continuing.

Program received signal SIGSEGV, Segmentation fault.
0x000055555555547d in reverseLL (head=0x7fffffffdf70) at rev_seg.c:83
83                      curr->next=pre;
```


pavan422178@pavan422178-VirtualBox: ~/Desktop/422178_shell_Script/LAB6
(gdb) disassemble main
Dump of assembler code for function main:
0x00005555555554bd <+0>: endbr64
0x00005555555554c1 <+4>: push %rbp
0x00005555555554c2 <+5>: mov %rsp,%rbp
0x00005555555554c5 <+8>: sub $0x20,%rsp
0x00005555555554c9 <+12>: mov %fs:0x28,%rax
0x00005555555554d2 <+21>: mov %rax,-0x8(%rbp)
0x00005555555554d6 <+25>: xor %eax,%eax
0x00005555555554d8 <+27>: lea -0x10(%rbp),%rax
0x00005555555554dc <+31>: mov %rax,%rdi
0x00005555555554df <+34>: call 0x5555555551c9 <initList>
0x00005555555554e4 <+39>: lea 0xb55(%rip),%rax # 0x555555556040
0x00005555555554eb <+46>: mov %rax,%rdi
0x00005555555554ee <+49>: mov $0x0,%eax
0x00005555555554f3 <+54>: call 0x5555555550b0 <printf@plt>
0x00005555555554f8 <+59>: lea -0x1c(%rbp),%rax
0x00005555555554fc <+63>: mov %rax,%rsi
0x00005555555554ff <+66>: lea 0xb65(%rip),%rax # 0x55555555606b
0x0000555555555506 <+73>: mov %rax,%rdi
0x0000555555555509 <+76>: mov $0x0,%eax
0x000055555555550e <+81>: call 0x5555555550d0 <__isoc99_scanf@plt>
0x0000555555555513 <+86>: movl $0x1,-0x14(%rbp)
0x000055555555551a <+93>: jmp 0x555555555570 <main+179>
0x000055555555551c <+95>: lea 0xb4b(%rip),%rax # 0x55555555606e
0x0000555555555523 <+102>: mov %rax,%rdi
0x0000555555555526 <+105>: mov $0x0,%eax
0x000055555555552b <+110>: call 0x5555555550b0 <printf@plt>
0x0000555555555530 <+115>: lea -0x18(%rbp),%rax
0x0000555555555534 <+119>: mov %rax,%rsi
0x0000555555555537 <+122>: lea 0xb2d(%rip),%rax # 0x55555555606b
0x000055555555553e <+129>: mov %rax,%rdi
0x0000555555555541 <+132>: mov $0x0,%eax
0x0000555555555546 <+137>: call 0x5555555550d0 <__isoc99_scanf@plt>
0x000055555555554b <+142>: mov -0x18(%rbp),%edx
0x000055555555554e <+145>: mov -0x14(%rbp),%eax
0x0000555555555551 <+148>: lea 0x1(%rax),%ecx
0x0000555555555554 <+151>: mov %ecx,-0x14(%rbp)
0x0000555555555557 <+154>: lea -0x10(%rbp),%rcx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pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$ ./a.out
Enter no of nodes you want to enter data: 5
Enter data: 1
Enter data: 2
Enter data: 3
Enter data: 4
Enter data: 5
The current linked list is:
1 -->2 -->3 -->4 -->5 -->NULL
The reversed linked list is:
5 -->4 -->3 -->2 -->1 -->NULL
pavan422178@pavan422178-VirtualBox:~/Desktop/422178_shell_Script/LAB6$