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CED171047
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Exercise 7. Write a C program and try to access Kernel memory, this will result into a system error message, display the error.

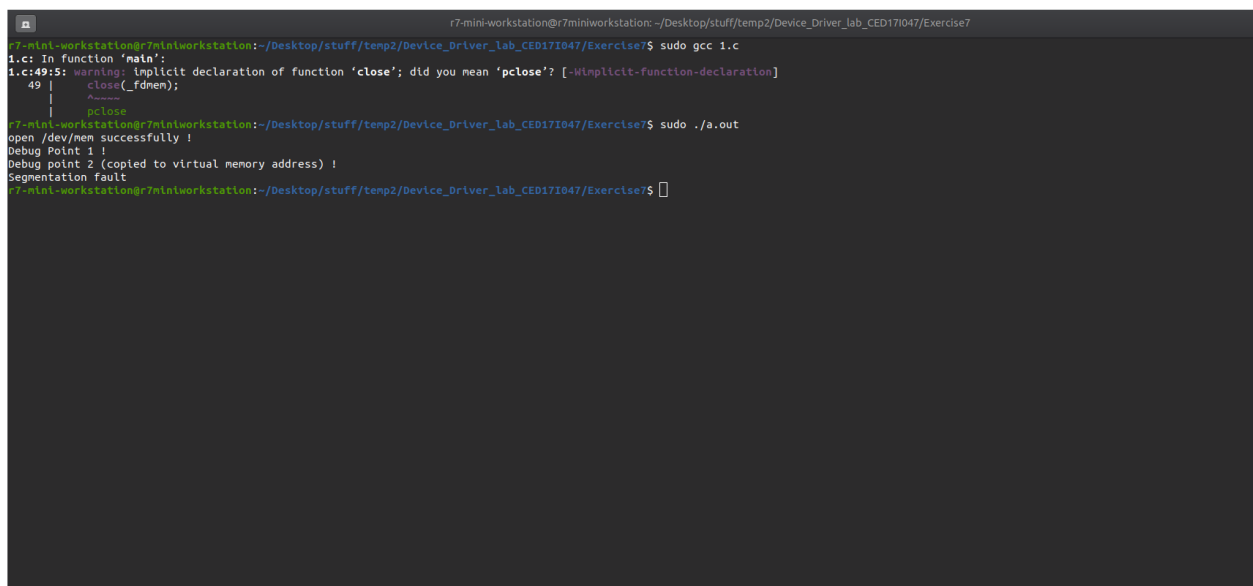
In Linux, user memory and kernel memory are independent and implemented in separate address spaces. The address spaces are virtualized, meaning that the addresses are abstracted from physical memory (through a process detailed shortly)

<https://developer.ibm.com/technologies/linux/articles/l-kernel-memory-access/>

Explanation :

The logic is to map the second of main physical memory into the user program .

Accessing the content of kernel memory space will throw error.



```
r7-mini-workstation@r7miniworkstation: ~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Exercise7
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Exercise7$ sudo gcc 1.c
1.c: In function 'main':
1.c:49:5: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
   49 |     close(_fdmen);
      |     ^~~~~
      |     pclose
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Exercise7$ sudo ./a.out
open /dev/mem successfully !
Debug Point 1 !
Debug point 2 (copied to virtual memory address) !
Segmentation fault
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Exercise7$
```

