**Wei Fei (2538810)**

**EECS 665 Lab1**

**Elluru, Bharath Chandra**

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**1.** Quickly describe the exact changes you made and why you made them. Discuss how you approached the problem and exactly how you determined the source of the problem. Discuss which debugger commands you found most helpful.

**When I use the GDB to try to find the error, the terminal shows me these messages:**

***“Program received signal SIGSEGV, Segmentation fault.***

***lookup (s=0x7ffff7fe11f2 "LUCY", dotree=1) at lookup.c:466***

***466 s1 = dp->word;”***

**So I can go to the line 466 to check the error directly. And I find the error is because the “for loop” misses the condition. If the loop does not have any conditions, it may not be terminated. So we need to add the condition “dp != NULL” in the “for loop”.**

**2.** List (in order) the modifications of my\_watch, including both the old value and new value it was set with.

**After adding watch point, I can track the difference between old values of new values when I continue to run the program every time. Here are all outputs from terminal:**

***(gdb) watch my\_watch***

***Hardware watchpoint 1: my\_watch***

***Old value = 0***

***New value = 2***

***0x000000000040971f in main (argc=3, argv=0x7fffffffd490) at ispell.c:303***

***303 arglen = my\_watch = strlen (\*argv);***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 2***

***New value = 248***

***linit () at lookup.c:391***

***391 inited = 1;***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 248***

***New value = 228***

***trydict (filename=0x616be0 <personaldict> "", home=0x0,***

***prefix=0x410b5e ".ispell\_", suffix=0x7fffffffd994 "americanmed+")***

***at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 228***

***New value = 208***

***trydict (filename=0x7fffffffc330 "", home=0x7fffffffe90e "/home/wfei26",***

***prefix=0x410b5e ".ispell\_", suffix=0x7fffffffd994 "americanmed+")***

***at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 208***

***New value = 188***

***trydict (filename=0x616be0 <personaldict> "", home=0x0,***

***prefix=0x410b5e ".ispell\_", suffix=0x410b67 "words") at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 188***

***New value = 168***

***trydict (filename=0x7fffffffc330 "", home=0x7fffffffe90e "/home/wfei26",***

***prefix=0x410b5e ".ispell\_", suffix=0x410b67 "words") at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 168***

***New value = 169***

***treeinit (p=0x0, LibDict=0x7fffffffd994 "americanmed+") at tree.c:167***

***167 if (dictf == NULL && secondf == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 169***

***New value = 149***

***trydict (filename=0x616be0 <personaldict> "", home=0x0,***

***prefix=0x410b5e ".ispell\_", suffix=0x7fffffffd994 "americanmed+")***

***at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 149***

***New value = 129***

***trydict (filename=0x7fffffffc330 "", home=0x7fffffffe90e "/home/wfei26",***

***prefix=0x410b5e ".ispell\_", suffix=0x7fffffffd994 "americanmed+")***

***at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 129***

***New value = 180***

***treeinit (p=0x0, LibDict=0x7fffffffd994 "americanmed+") at tree.c:173***

***173 if (dictf == NULL && secondf == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 180***

***New value = 160***

***trydict (filename=0x616be0 <personaldict> "", home=0x0,***

***prefix=0x410b5e ".ispell\_", suffix=0x410b67 "words") at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***Hardware watchpoint 1: my\_watch***

***Old value = 160***

***New value = 140***

***trydict (filename=0x7fffffffc330 "", home=0x7fffffffe90e "/home/wfei26",***

***prefix=0x410b5e ".ispell\_", suffix=0x410b67 "words") at tree.c:273***

***273 if (home == NULL)***

***(gdb) c***

***Continuing.***

***[Inferior 1 (process 3391) exited normally]***

***(gdb) c***

***The program is not being run.***