

Compiler Lab 1

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1

I made the following changes:

- added in an additional check inside the for loop in lookup.c on line 463
- watching variable "*my_watch*" inside gdb

In order to find where to make the changes to the program, I used gdb. To do this, I ran the program in gdb with the command:

```
gdb ./ispell
```

Then followed by:

```
r -a -d americanmed+ < small.txt > ispell.out
```

This executes the program with those arguments. To watch the variable, I used the command

```
watch my_watch
```

and then used

```
c
```

followed by as many enter key presses as needed to finish program execution.

In order to find the program in the original place, I used the gdb command

```
bt
```

to find where program execution failed.

2

Starting program: /home/jmarple/EECS665/ispell/ispell -a -d americanmed+ < small.txt > i
Hardware watchpoint 1: my_watch

Old value = 0
New value = 2
0x00000000040971f in main (argc=3, argv=0x7fffffffda50) 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 initied = 1;
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 248
New value = 228
trydict (filename=0x616be0 <personaldict> "", home=0x0, prefix=0x410b5e ".ispell_", suff
273 if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 228
New value = 208
trydict (filename=0x7ffffc8f0 "", home=0x7fffffeb74 "/home/jmarple", prefix=0x410b5
273 if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 208
New value = 188
trydict (filename=0x616be0 <personaldict> "", home=0x0, prefix=0x410b5e ".ispell_", suff
273 if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 188

```

New value = 168
trydict (filename=0x7fffffff8f0 "", home=0x7ffffffeb74 "/home/jmarple", prefix=0x410b5
273         if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 168
New value = 169
treeinit (p=0x0, LibDict=0x7ffffffde46 "americanmed+") at tree.c:167
167         if (dictf == NULL && secondf == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch
Old value = 169
New value = 149
trydict (filename=0x616be0 <personaldict> "", home=0x0, prefix=0x410b5e ".ispell_", suff
273         if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 149
New value = 129
trydict (filename=0x7fffffff8f0 "", home=0x7ffffffeb74 "/home/jmarple", prefix=0x410b5
273         if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 129
New value = 180
treeinit (p=0x0, LibDict=0x7ffffffde46 "americanmed+") at tree.c:173
173         if (dictf == NULL && secondf == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

Old value = 180
New value = 160
trydict (filename=0x616be0 <personaldict> "", home=0x0, prefix=0x410b5e ".ispell_", suff
273         if (home == NULL)
(gdb)
Continuing.
Hardware watchpoint 1: my_watch

```

```
Old value = 160
New value = 140
trydict (filename=0x7ffffc8f0 "", home=0x7ffffeb74 "/home/jmarple", prefix=0x410b5
273      if (home == NULL)
(gdb)
```