Take-Home Midterm

Due: Thursday, December 4, 1996, at 11:59 PM

Introduction

This is a take-home midterm exam. All the usual rules of a midterm apply: it is open book, open notes, but closed neighbor, so it's not fair to work on this with anyone else.

The goal of this midterm is simple: to show you can do some basic debugging using *gdb* and can submit homework correctly. It is not meant to be hard; also, it is graded pass/fail.

In the CSIF directory for this class, ~cs40, is a directory called *lab-midterm*. It contains a program called *parity.c*. This program is supposed to load an array of 10 elements with alternating 1s and 0s, beginning with index #1, and to print each element when it is loaded.

But this program doesn't work right – it goes into an infinite loop. Your job: find the bug!

The Examination

Get the program. Use *gdb* to show what the bug is. You do not have to fix it, but you must clearly exhibit the bug using *gdb* (possibly annotating what you did), and say very clearly what caused it.

What to Turn In

Use the program *script*(1) to generate a typescript file called *DEBUGGING* showing your debugging session with *gdb*. Note you *must* do this, even if you did not use *gdb* to find the error. Step through the program at least once in such a way that you demonstrate exactly where the bug is, and then add a comment saying exactly what the bug is. Feel free to add comments to your *gdb* commands in the file to explain what you are doing.

How to Turn It In

Submit the midterm as though it were a homwork; the directory is *labmid*:

```
handin cs40r labmid DEBUGGING
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