Binary Sudoku
problem set 4
Sudoku by John Harvard

playing n00b #42

[N]ew Game   [R]estart Game   [Q]uit Game
Hacker Edition
store@cs50.net
Pass/Fail
void
swap(int a, int b)
{
    int tmp = a;
    a = b;
    b = tmp;
}
void
swap(int *a, int *b)
{
    int tmp = *a;
    *a = *b;
    *b = tmp;
}
MAN, I SUCK AT THIS GAME. CAN YOU GIVE ME A FEW POINTERS?

I HATE YOU. 0x3A28213A
0x6339392C, 0x7363682E.
main's parameters

foo's parameters

main's locals

foo's locals

main's parameters
CS50 Library

GetChar
GetDouble
GetFloat
GetInt
GetLongLong
GetString
#include <string.h>

void foo (char *bar)
{
    char c[12];

    memcpy(c, bar, strlen(bar));  // no bounds checking...
}

int main (int argc, char **argv)
{
    foo(argv[1]);
}
Unallocated Stack Space

Char c[12]

Char *bar

Saved Frame pointer

Return Address

Parent Routine's Stack

http://en.wikipedia.org/wiki/Stack_buffer_overflow
Unallocated Stack Space

Stack Growth

Char c[12]

Char *bar

Saved Frame pointer

Return Address

Parent Routine's Stack
to be continued...