CS50 Walkthrough 4

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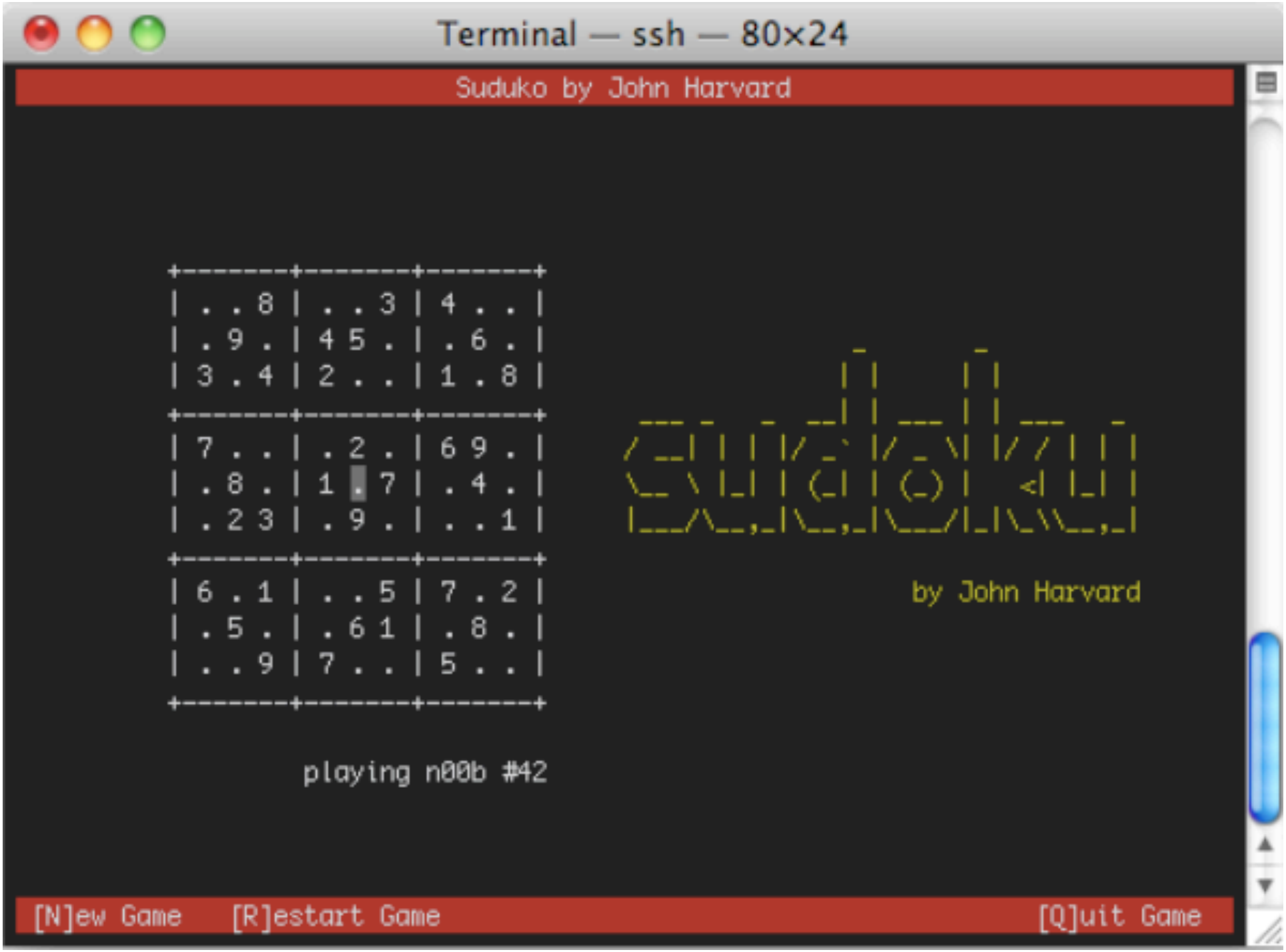
Terminal — ssh — 80×24
Suduko by John Harvard
+-------+-------+-------+
. . 8	. . 3	4 . .
. 9 .	4 5 .	. 6 .
3 . 4	2 . .	1 . 8
+-------+-------+-------+
7 . .	. 2 .	6 9 .
. 8 .	1 . 7	. 4 .
. 2 3	. 9 .	. . 1
+-------+-------+-------+
6 . 1	. . 5	7 . 2
. 5 .	. 6 1	. 8 .
. . 9	7 . .	5 . .
+-------+-------+-------+
by John Harvard
playing n00b #42
[N]ew Game
[R]estart Game
[Q]uit Game

To Do

- ncurses
- move cursor
- allow changing user-added numbers, but not original ones.
- allow replacement of blank with number
- invalid move?
- won?

ncurses

- Allows you to change colors, appearance of your program.
  - Always have foreground and background color.
- Allows you to have a cursor.
  - User interface
  - Updating board

Moving the cursor

- Switch statements!

```
switch (test)
{
   case x:
   case y:
         //Do this for cases x and y
   default:
         //Do  this otherwise
}
```

How to refer to keys/cursor?

- Keys
  - KEY_UP
  - KEY_DOWN
  - KEY_LEFT
  - KEY_RIGHT
- Cursor
  - g.board[g.y]][g.x] is spot on board where cursor is
    - g.y is cursor's y position
    - g.x is cursor's x position
  - showcursor()

Don't replace original or move when won!

- Keep track of locations originally there.
- Before moving, ensure that it is not an original number and that game is not won
  - make a copy of the board at start.
  - If not a 0 in original board, don't change it!

Replace blanks/non-original numbers

- function, takes one argument ch (ascii)
  - if ch is 0, . , KEY_BACKSPACE, KEY_DC
    - set that spot in the board to 0
  - if ch is numerical between ‘1’ and ‘9’
    - set that spot in the board to the values 1 through 9, not the ascii 1 through 9
      - like in Ceasar, subtract ‘0’
  - drawnumbers()

Invalid move!

- Wrap from the one next to/above the tile, to the one right before/below it, looking for the value in the tile.
- Check each box by starting top left, and moving 2 across, and 2 down (like Mario!) looking for same value as g.board[g.y][g.x], but “skip” g.board [g.y][g.x]

Won?

- Go to each box
  - Ensure no 0's
  - Check for errors
    - if no zero, and no errors, showbanner(congratsvariable);
- If not won, return to your box!