CS50 Walkthrough 4
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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!

```java
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!