

Web Development – Mr. Turner

Project – Hot and Cold

Project Overview

In the game of Hot and Cold, the player gets a set number of turns to “find” a number. As the player guesses, (s)he will be informed of how close (s)he is to the actual number in terms of hot and cold.

Display

The list below includes the essential elements of the page.

- The page should have a proper display using HTML.
- The page should show a log of each of the numbers already guessed.
- The page should show a log of the hot/cold responses for each of the numbers already guessed.
- The page should show the player’s current guess.
- The page should have buttons for adding and subtracting 1, 5, and 10, and 25 to and from the current guess.
- The number of guesses remaining.
- The page should have a “commit” button.
- The page should have a “reset” button.

Functionality

When the game begins, the page should generate a random number between 1 and 100.

Note: Though the number certainly should not appear on the page anywhere during game play, you may want to create a space for it during testing.

The player’s guess will start at 50. The player has 5 guesses. When the player clicks one of the add or subtract buttons, it will perform the appropriate operation on the player’s guess and update the display.

The player’s guess should never be allowed to go above 100 or below 1.

When the player clicks the “commit” button, the page will test his or her guess against the number and generate a new entry into the log. The log can be kept as a single string with new information concatenated onto the end of it.

Refer to the following chart for responses to the guess:

<u>Guess</u>	<u>Response</u>
Within 5	Very Hot
Within 6 - 8	Hot
Within 9 - 15	Very Warm
Within 16 - 20	Warm
Within 21 - 30	Cool
Within 31 - 40	Very Cool
Within 41 - 55	Cold
More than 55 away	Very Cold

If the player's guess is incorrect, the number of guesses should count down by one. If the number of guesses has reached 0, then the game is over and the player has lost. Display the number.

If the player's guess is incorrect, but Very Hot, do not subtract a guess.

If the player's guess is correct, the player has won.

When the player clicks the reset button, wipe the log, generate a new number, bring the number of guesses to 5, and let the player play again.

Enhancements

1. Just for fun, let's make the computer mischievous. Whenever the user makes a guess, there is a 5% chance that the computer will lie about the result. Generate a random response and add that to the log.

- a. If the response should be very hot and the computer lies about it, the user will still not be penalized a guess.

Programming Skills

- Comprehension of the specifications sheet.
- Keeping track of information in variables.
- Using conditionals to control outcomes.
- Sequencing through user interaction and functions.
- Proper display of information.