

# Web Development – Mr. Turner

## Project – Codebreaker

### **Project Overview**

As an international sneak thief, you break into vaults all the time. Riddling out a simple 3 digit code is child's play for you. But you must be getting sloppy in your old age because you've tripped an alarm. In no time at all, the police will be all over the place. Can you get into the vault before they arrive?

The user will have to crack a 3 digit random code in 7 turns. Each time the user completes a 3 digit guess, the computer will tell him or her whether the code is higher, lower, or correct.

### **Display**

The list below includes the essential elements of the page.

- The "clock"
  - The clock will start at 7 and count down each time the user makes a guess.
- The "vault"
  - The vault has a series of buttons labeled "1" through "3".
  - The vault has a "clear" button.
  - The vault has a display of the user's current guess.
- A log of events.
- The page should be well dressed using CSS.

### **Functionality**

The clock will start at a value of 7.

The computer will generate a random, 3 digit code using the digits 1 through 3. *Note that you cannot simply generate a random number between 111 and 333 because that will include numbers with the digit 0.*

The user will enter guesses by clicking on the buttons. Each time the user clicks a button, that number will be concatenated onto the guess. *If the user clicks the 3 first, the 2 second, and the 3 third, his or her guess will be 323.*

Once the 3rd digit is entered, the guess is automatically submitted and compared to the combination. If the guess is higher or lower than the combination, the computer will add the appropriate clue to the log. Subtract 1 from the clock after each guess and clear out the guess. If the guess matches the code, then the user has cracked the vault.

If the user clicks on the *clear* button, clear out the guess.

At the end of the game, generate a new code and let the user play again.

### **Enhancements**

- Keep score for the player by adding up the leftover turns on the clock each time the player cracks a code. If the user is caught by the police, reset the score to 0. You'll need to add a score section to the display.
- After each turn, add a 5% random event that may add or subtract a turn.
  - Traffic jam. The police will be held up by one turn.
  - In the area. The police will show up 1 turn sooner.
  - Make up some of your own...