Web Development – Mr. Turner

Level 3 Project – Black and Red

**Project Overview**

Two players each have 2 piles of tokens (one pile of black and one pile of red). The object of the game is to get rid of all of the black tokens and have the most red tokens.

**The Site**

Black and Red is a 2 player game. The user will play against the computer.

Each player receives 10 black tokens and 10 red tokens at the beginning of the game.

There is one black die (6 sides) and one red die (6 sides).

*On each turn*, the current player will roll both dice. The red die will apply to the red tokens and the black die will apply to the black tokens. The player will be adding and removing tokens according to color and dice roll. For the purposes of the game, you may assume that there is an unlimited bank of black and red tokens available.

On your roll (player or computer), you may:

1- Remove red tokens from your pile and add black tokens to your opponent.

2- Add red tokens to your pile and remove black tokens from your opponent.

3- Remove black tokens from your pile and add red tokens to your opponent.

4- Add black tokens to your pile and remove red tokens from your opponent.

The game ends when one player has run out of black tokens. At that time, the player with the most red tokens is the winner.

Using HTML and Javascript, you will write a page that plays this game. The user will play against the computer.

On the user’s turn, (s)he will click the button to roll the dice.

After the dice have been rolled, the roll will be displayed. The user can then click on one of the 4 options (listed above) determining how (s)he wants to play the roll.

Once a selection has been made, the turn will switch to the computer. The computer will perform the same operations as the player. When it comes to the display, there needs to be some way for the player to see what the computer has done. There are a number of ways to do this:

1. Run a scrolling output of the game’s actions so that the player can read the computer’s results.
2. Have a graphical display of the computer’s turn that remains on screen while the player takes his or her turn.
3. Have a button for the player to take the computer’s turn, which would remain on screen until the user rolls the dice.

**Programming Requirements**

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| * You must write all of your own code. Use of a drag and drop interface or the usage of code downloaded from the internet is not permitted. |
| * Use of deprecated code is not permitted. |
| * Your home page must be named *index.html or index.php*. |
| * You must comment your name into the top of every page, but below the doctype. |
| * Your code must be structured in a consistent and legible manner. |
| * Your interface must be smooth and easy to figure out for a client. |