Web Development – Mr. Turner

Project – Bluff Stuff (BS) Card Game

**Project Overview**

The game of Bluff Stuff begins by dealing out the entire deck to all of the players. The player with the Ace of Spades begins play by laying it face down on the table. That player may throw other cards with it. Play continues in rank order so that the next player must throw down 2s and the next player has to throw down 3s. A player needs to say how many of what card (s)he is throwing. The player can bluff, but other players have the option of calling that bluff. If the bluff is called and the thrower is bluffing (s)he collects the whole pile. Otherwise, the caller collects the pile. The object is to get rid of all of your cards.

**The Page**

The player will play against 3 to 5 computer opponents. The user can enter in his or her name and the computer opponents should have their names generated randomly.

The player must be able to see representations of each player’s hand, including how many cards are in the hand. The player must have the ability to select cards from his or her hand. The player must have some way of calling a bluff.

The game starts with a shuffled standard deck, dealt out evenly to all of the players. The computer will decide which player has the Ace of Spades and declare that player as the first player. That player will play cards face down in the middle of the table and declare how many aces have been thrown.

***Two Aces***

Play then proceeds to the next player on the list. That player must play twos. The next player will play threes, etc…

A player may never throw more than 4 cards in a turn.

The computer will only bluff under the following circumstances:

* If the computer does not have the card it needs to play, it will play 1 card from whatever it has the most of and call it one of whatever it’s supposed to play.
* If the computer has more than 25 cards, there is a 1% chance that it will add 1 card to its play. Again, it will choose from whatever it has the most.

Otherwise, the computer will throw all of the cards it has of its current rank.

The player may call a bluff at any time during the period between two players throwing cards. There should be a delay between every turn so that the human player has time to see and react to the computer’s responses.

If the player doesn’t call a bluff, the computer may call a bluff. A computer player will call a bluff under the following conditions:

* It is impossible for the current player to have played the cards stated. For example, if a player throws three queens and the computer player has two queens in hand, the computer player will call the bluff.
* A 3% chance is calculated.

Only one bluff can be called. Once someone calls a bluff, no other player gets a chance.

The game is over when one player throws out his or her last card. That player is the winner.

**Programming Hints**

The delay between turns can be accomplished in several ways. If you’re comfortable using a timer, that’s the best option. Finding the right time for the delay may take some trial and error, but more than 30 seconds will be extreme.

A simple button is very effective. Let the player click the button whenever (s)he’s ready for the next turn, no matter whose turn it is.

**Enhancements**

Create AI for the computer players. Though you are encouraged to come up with your own AI algorithms, here are a few simple ones:

***Mr. Caution*** will always throw only 1 card. If Mr. Caution has the proper rank, he will throw it. Otherwise, he will throw 1 card of whatever he has the most of. Mr. Caution will only call a bluff if it’s impossible for the current player to have played what (s)he stated.

***Ms. Aggressive*** will play all 4 of one rank if she has it. Otherwise, she will play 3 or les cards, depending on the number of cards she has of the rank. She will always choose 1 additional card at random if she is throwing less than 3 cards. Ms. Aggressive will always call a bluff if she has 2 or more of the called rank in her hand.

***The Wise Guy*** will never throw more than 2 cards and never more than he has of the particular rank. But he will never throw the right cards. He will choose 1 or 2 cards at random to throw in their place. He will *never* throw cards that he would otherwise need to throw on his next turn. The Wise Guy will call a bluff only if someone throws 3 or 4 cards and only if he has ***none*** of those cards in his own hand.

**Programming Requirements**

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| * You must code your own HTML and CSS. 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. Use an HTML 5 reference as your guide. |
| * Your home page must be named *index.html*. |
| * You must comment your name into the top of every page. |
| * Your code must be structured in a consistent and legible manner |
| * Your text must be organized through the use of sectioning tags (div, span, p, h1 – h6). Tables are acceptable for data but not for page design. |
| * Your interface must be smooth and easy to figure out for a client. |
| * Your pages must be formatted using CSS. |

*You project is to be submitted via Moodle. Compress all of the necessary files into a zip or rar file.*