Web Development – Mr. Goldman

Level 4 Project – Kings in the Corners Card Game

**Project Overview**

Kings in the Corners is a solitaire card game during which the player lays out cards, one at a time off the top of the deck, onto a 4X4 board. Jacks are placed on the sides. Queens are placed on the top and bottom. Kings are placed in the corners. Once 16 cards have been placed and the board filled, the player will begin removing number cards (as appropriate) until no more can be removed. The game is won when all of the face cards have been properly placed and all of the number cards have been removed.

**The Page**

The player will need to see the deck of cards, the 4X4 grid (both empty spaces and spaces with cards on them), the next card to be placed.

Gameplay begins with a shuffled deck.

While there are empty spaces in the grid, the player should be able to flip the top card of the deck. Only one card may be flipped at a time. The player must then select an empty space on the grid for the card.

* Jacks may only be placed into one of the 4 side spaces.
* Queens may only be placed into the top or bottom spaces.
* Kings may only be placed in the corner spaces.
* All other cards may be placed in any of the 16 slots.

If there are no appropriate empty slots for a picture card when it is flipped, then the game is over and the player has lost.

Once all 16 spaces on the board have been filled, the player must remove as many cards as possible before beginning to fill it again.

* All 10s may be taken off of the board.
* Any ***two*** cards that add up to 10 may be taken off the board together.
  + The value of an Ace is 1.

The player must remove all of the valid cards before beginning to fill the empty spaces off of the deck again. If the board is full and no cards can be removed, then the game is over and the player has lost.

In order to win the game, the player must place all of the picture cards into the proper spaces and remove all of the number cards from the board. The player does not have continue through the deck if this condition exists.

**Programming Hints**

Since the game operates in 2 distinct phases, the computer will need to know whether or not the player is playing cards or removing cards. The player should not be allowed to flip or place cards during the removal phase and the player should not be allowed to remove cards during the flip and play phase.

The flip and play phase ends when the board is full.

The removal phase ends when there are no more cards that can be removed. That means that the computer will need to determine whether or not there are still pairs of cards that add up to 10 (or just plain 10s).

Try programming the board as if it was a deck, even though they’re all face up on the table. Using the add and remove functions from the engine, you should be able to manipulate the cards pretty easily.

**Programming Requirements**

|  |
| --- |
| * 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.*