

Web Development – Mr. Turner

Project – Kings In The Corners

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.

Display

The list below includes the essential elements of the page.

- A 4x4 grid into which the player place cards.
- A single cardback image representing the deck.
- An image representing the card drawn off the top of the deck.
- A reset button.

Functionality

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 by clicking on it. That card will show up next to the deck. Until that card is placed, the user may not flip another card.

The player must 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 moves into the removal phase. While in the removal phase the player may not flip any cards off the deck.

There should be some indication on screen that the game is in the removal phase. During this phase, the player must remove all possible cards according to the following combinations.

- 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. It's up to the game to know whether or not combinations still exist on the board.

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 to continue through the deck if this condition exists.

Enhancements

- Scores
 - While the player is on the page and playing the game, keep track of game results and add in scoring.
 - The player receives 1 point for every picture card placed.
 - The player receives an additional 4 points for completing each of the royalty.
 - The player receives a bonus of 12 points for winning the game *plus* 1 point for each card remaining in the deck.
- Power ups
 - A player may receive power ups during the game that are to be used for the next game played. The awarded power up is determined by which of the royal ranks is completed first.
 - If a player places all 4 kings first, then (s)he will have a card peek during the next game. A card peek allows the player to see what the top card on the deck is.
 - If a player places all 4 queens first, then (s)he will have a triple play during next game. A triple play allows a player to remove 3 cards that add up to 10.
 - ***Note that the implementation of a triple play will require significant changes to how the program moves from phase to phase.***
 - If a player places all 4 jacks first, the player will have a jump during the next game. A jump allows the player to move one placed card to another open space just once during each round.