

Andrew DiBella

Project Proposal

Deterministic Finite Automata

For my semester project I will create a Deterministic Finite Automata (DFA) that will be able to validate the possible sequences of a game of solitaire. If given a random sequence of cards the DFA will test if it is able to reach an accepting state. I will also allow the program to output statistics of the game like number of moves, redeals, and possibly time. For data structures I will be able to use two arrays of Stack objects that hold card objects to keep track of the locations, suits, and value of each card. An example of an accepting state is having each suit from Ace to King in ascending order and the draw stack is empty. Even though it is less than likely for there not to be a winning hand, an error state would be having no possible moves for a full deal of the draw stack. I will use different text files for input to create different “shuffled” decks for testing.