**Project 2**

Title

**War**

Course

**CSC-17A**

Section

**42474**

Due Date

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Author

**Josh McIntyre**

Rules & Overview:

War is a 2 player card game in which a standard card deck is used. The game starts with both player’s randomly getting 26 cards, the players leave them face down and do not see what cards they have. Player’s then flip the top card of their deck at the same time, and whichever player has the card with the higher value takes both cards and puts them at the bottom of their deck. Card values are ranked from least to greatest in this order: 2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen, King, and Ace. If the cards of the same value then the players take their next top card and leaving it face down they set it on top of their first card, they then draw the next card and reveal it. Whichever player has the higher card then takes all the drawn cards. If player’s keep drawing cards of the same value the process is repeated until 1 player draws a card of higher value than the other player’s. A player wins the game when they have all the cards in their deck.

Pseudocode:

1. Card inherits from AbstractCard and has member function for setting and getting the value and suit of the card, getting the name of the card, and overloading the operators <, >, and == in regards to the value of the card
2. Player and Dealer both inherit from the abstract class GameEntitity
3. Dealer has member functions for shuffling and dealing the deck
4. Player has member functions for moving cards to the bottom of their hand, removing cards from their hand, getting the top card in their hand, getting the number of cards in their hand, and getting and setting the player’s name
5. The template class Deck holds an array of Card objects as well as an integer array parallel to the array of card objects that is used to query Cards without actually having to change the array of Cards
6. The main function creates instances of 2 players, a deck, and a dealer, the deck creates 52 instances of card objects
7. The dealer then shuffles the deck and deals 26 cards to each player
8. Players then proceed to play the game by drawing a card by pressing ENTER on the keyboard
9. The game runs telling players what cards were drawn and which player won the turn
10. When a player wins the game asks them if the would like to play again, if they say yes the game restarts, if they say no then the program exits

Repository:

<https://github.com/JMAK13/McIntyreJosh_CSC_17A_Spring2018/tree/master/Projects/CSC17A_Project%202>