

CIS-18A Course Project – Part 1

Documentation

Program Description

The purpose of the project is to implement a Java Casino War card game for 1 player to wager against the dealer according to standard War card game rules. The program implements a Casino style game in which a player can wager, be dealt cards, and experience winning, losing, or going to war. The intended purpose of this specific project is to demonstrate the object-oriented programming concepts in Java.

The program will allow the user to enter a starting balance and a wager amount per round. The program will randomly deal a card from a 52-card shoe or six-deck casino shoe. The program will evaluate the Player card against the dealer card, determine a winner, make balance adjustments, and provide screen output. The program will output a summary file with all rounds, wagers, wins, losses, and ending balances.

The target audience for this application is novice Java programmers and customers desiring straightforward casino-style games. This is an educational application; the focus here is on program logic, organization, and basic Java functionality, not advanced graphics.

The program is good in that it has a sound object-oriented structure. There are separate classes for cards, decks, players, and game control, which adds to the modularity and maintainability of the program. It also demonstrates a solid variety of array manipulation, inheritance, interfaces, and file output, all of which are requirements for the programming class.

One source of limitation is relying on console based user interaction rather than a graphical interface, and simplifying play to course level functionality, without advanced casino play or multi player support.

Work in the future would deliver a Swing based graphical user interface, advanced betting options, stat management, multi game support, for improved usability and realism without losing well designed program structure.

Program Pseudocode

START PROGRAM

Display welcome message
Initialize player balance
Initialize empty list to store game results

Create deck of cards
Shuffle deck

WHILE player chooses to continue AND balance > 0

 Display current balance
 Prompt player to enter wager amount
 IF wager is greater than balance
 Display error message
 Prompt for wager again
 END IF

 Deal one card to player
 Deal one card to dealer

 Display player card and dealer card

 IF player card value > dealer card value
 Player wins wager
 Add winnings to balance
 Record win in game results
 ELSE IF player card value < dealer card value
 Player loses wager
 Subtract wager from balance
 Record loss in game results
 ELSE
 Display WAR message
 Execute war rules
 Determine final winner
 Update balance accordingly
 Record war outcome in game results
 END IF

 Ask player if they want to play another round
END WHILE

Display final balance
Write game results and final balance to output file
Display goodbye message

END PROGRAM

