ELEC 2543 Object-Oriented Programming and Data Structures

Exercise 8b

Topics: Polymorphism

Due Date: Mar 30, 2017

Overview: We will continue to enhance the playing card game of Lab 8a to include a cheating player. The same provided files in Lab 8a should be used unless specified otherwise.

The Game (TrumpCardGame)

There will be 3-6 players in each game. In the beginning, each player is given *k* cards. The cards are drawn from a deck of cards with a certain trump suit. That is, the cards with the trump suit are the largest card in the deck.

In each round, each player removes a card from his hand. This card is selected according to the strategy of the player. The player whose card is larger wins this round. The game keeps track of the number of rounds each player has won.

Cheating Player (Class CheatPlayer)

The first player (P0) is a cheating player that in the beginning of each round (after all players get their cards), he would swap the smallest card in his hand with the remaining cards in the deck. That is, he draws another card from the remaining deck and puts his smallest card into the deck. He has to take the card from the deck no matter whether it is larger or smaller than the card he originally has.

This player deals the largest card each round after getting a new card from the remaining deck.

Driver Lab8bTrumpCardGameDriver.java

The driver program has been provided for you to test your program. The number of cards each player get in the beginning, the trump suit, and the players are specified there. A sample output is provided in Moodle.

Handin

Submit your TrumpDeck.java, Player.java, RandomPlayer.java, LCPlayer.java, SCPlayer.java, CheatPlayer.java, and TrumpCardGame.java by zipping all the files into one single zip file to Moodle before the deadline.