

CCPS506 Lab 2 – Blocks, Control Structures, Collections

Preamble

In this lab you'll write a more sophisticated Smalltalk class with methods that makes use of blocks and branching. You're not required to use any collection more advanced than a simple array, but some of them can come in very handy if you know how to use them.

Lab Description

Add a class called Lab2 to your CCPS506 category in Pharo. This class should contain the following methods, described below. Your class should not make use of instance variables in any way. Each method should be completely self-contained. No helper methods, etc.

pokerStraight:

- This method takes an array as an argument and returns a Boolean.
- The input array should contain five integers (no runtime errors from incorrect types!). If it doesn't, return False.
- The integers represent card ranks. 1 is Ace, 2-10 are the numbered cards, and 11, 12, 13 are face cards Jack, Queen, King respectively.
- If any of the integers in the array are not between 1 - 13, return False.
- If the cards are valid, check if they form a straight (five cards in a row)
- Ace can be both high and low! **#(1 3 4 2 5)** is a straight, as is **#(1 13 10 11 12)**

pokerFullHouse:

- This method takes an array of integers representing card ranks, just like in the above description. All the same constraints apply on the cards.
- This method will return True if the array could represent a Full House (two of one rank, three of another) and False otherwise.

pokerTwoPair:

- Once again, same card constraints as above.
- This method should return True if the array represents a two-pair hand, and False otherwise.
- A two-pair hand contains two cards of one rank, two cards of another rank, and one last card whose rank is different from either pair.

Clever use of Smalltalk's various collections can make each of these methods much more elegant, as opposed simply using a giant if/else ladder for each.

Submission

Submit your source code for each of the three methods. Combine all three into a plain text file (*.txt). Plain text is important – do not submit a docx file or a PDF. These file types do not typically paste cleanly into the Pharo editor window. Submit a single file, with each method clearly separated and cleanly formatted.

Labs are to be submitted ***individually***! Submit your answers on D2L.