Programming Languages and Translators
Language Proposal

I. Introduction
This paper describes a language for creating card games. The language will allow for
the creation of any card game regardless of the rules for each. It is up to the
programmer to use the language to program a game of their choosing.

II. Language Description

The language only outputs and takes inputs as text.
The cards in the language are limited to the standard 52 card deck. The cards will
already be initialized at the beginning of the program.
Simple arithmetic is included in the language. Each card has certain characteristics
and value. For example Ace of hearts will have the character A for Ace, h for hearts,
r for red, True/False for whether or not the card is showing, an integer for group
number and miscellaneous values (should this become necessary). Group number
determines where the card is relative to the other cards. By default, each card will
have the first characteristics and value already assigned. It is up the programmer to
assign value to the cards as the game is played. The value of the cards can change
once the game begins.

Reserved Keywords Commands to be used

  # A list in the compiler holds the 52 card standard deck.
  # Below is the command to initialized the program and randomized the cards.

Shuffle
# This will pass from deck or another grouping of cards to another group
Pass
Discard
# shows the cards in a group
Reveal
# All the cards in the grouping
All
# prints text to command line
Print
# if the values are an integer, it will all up the card total.
Total

# conditional checking
If
While

**Reserved words for the characteristics of cards**

Number

Suit

Color

# Hides or shows the card
Showing

# Group number is pretty much a list to hold the cards.
Group

# This is also a list. Reason is so that this card might contain more than one value.
For example in black jack, an Ace has a value of 1 and 11. In the misc characteristics of the Ace, the list will have two elements.
Misc

III. **Sample Code**

The following is a sample lines of code for blackjack with cards.

# This is a comment for the cards language.
# The following is a black jack game.
# in this game there will be two players.
# With two players in black jack, there are 4 groups of cards.
# First group is 1 which is deck grouping
# Second group is 2 which is player
# Third group is 3 which is dealer
# Fourth group is 4 with is discard
# It’s up to the programmer to assign the grouping and order of play as the game # progresses.

If the cards showing are ten of clubs and king of diamonds. The output to command line will be.

Code:
# To get two cards
Code:
Group.2 ← Group.1.Pass.2
# defaults that cards are passed out face down
Group.2 ← Reveal.All
Print Group.1

Output to Command Line:
[Th][Kd]

In case of black jack the total will be:
20
This can be outputted to screen with the following code:
Print Total(Group.1.Misc)

# For the dealer, the following lines could be used
Group.3 ← Group.1.Pass.2
Group.3 ← Reveal.1

Print Group.1
[??][7d]

Simple arithmetic will also be used.
+ (add)
- (subtract)
> (greater than)
= (equal to)
< (less than)
!= (not equal to)

Each card is the number of the card or Capital Letter followed by the suit of the card.
[As]  # This means the A of Spades.

All suits are lowercased
s is spades
h is hearts
c is club
d is diamond

The numbers of each card are as follows:
A is Ace
K is King
Q is Queen
J is Jack
T is Ten
9 is 9

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2 is 2