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# TheDeckClass.py
""" Contains a class that can be used to manipulate a
deck of
playing cards.
"""

from random import shuffle as shuffle
from TheCardClass
import *

class Deck(object):
    """ Represents a deck of playing cards.

    Attributes:
        DeckOfCards: list of Card objects
        n: int

    n is the number of cards in the deck.

    The "top" of the deck is
self.DeckOfCards[0]
    The "bottom" of the deck is self.DeckOfCards[self.n]
    """

    def __init__(self):
        """ Returns a reference
to a Deck object that represents a traditional
deck of 52 playing cards.
    """
        self.n = 52
        self.DeckOfCards = []
        for suit in
range(4):
            for rank in range(1,14):
                card = Card(suit,rank)

            self.DeckOfCards.append(card)

    def __str__(self):
        """
Returns a string s such that print s
nicely displays self,
        """
        s = []
        for card in self.DeckOfCards:
            s.append(str(card))

        return '\n'.join(s)

    def pop_card(self,Where=None):
        """ Returns
a Card from self and removes that Card from
self.DeckOfCards
PreC: self has at
least one card. Where is a string
that determines how the card is extracted:

Where == 'Top' the card at the top of the deck
Where == 'Bot' the card
at the bottom of the deck
Where == None the card is randomly selected
    """
        if Where=='Top':
            c = self.DeckOfCards.pop(0)

        elif Where=='Bot':
            c = self.DeckOfCards.pop()

        elif Where==None:

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k = randi(0,self.n-1)
    c = self.DeckOfCards.pop(k)
    self.n -= 1

return c

def add_card(self,c):
    """ Adds the Card c to self.

    PreC: c is a Card
    """
    self.DeckOfCards.append(c)

self.n += 1

def shuffle(self):
    """Randomly permutes the
entries in self.DeckOfCards
    """
    shuffle(self.DeckOfCards)

def sort(self):
    """ Permutes the entries in self.DeckOfCards so
that they
    are sorted with respect to the __cmp__ function in the class Card.
    """
    self.DeckOfCards.sort()

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