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Cardtester.py

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'''
Created on Feb 14,2011
@author: ola
'''
5
import random

def toCardString(card):
    rankStrings = ["ace", "two", "three", "four", "five", "six", "seven",
10      "eight", "nine", "ten", "jack", "queen", "king"]
    suitStrings = ["spades", "hearts", "diamonds", "clubs"]
    return rankStrings[card[0]] + " of " + suitStrings[card[1]]

def get_rank_counts(hand):
15    '''
    returns list of how often each rank 1-13 occurs in a hand
    e.g., list[3] = # occurrences of a 3, list[11] = # occurrences of jack
    ,
    counts = [0]*13
20    for card in hand:
        rank = card[0]
        counts[rank] += 1
    return counts

25 def is_pair(hand):

    ranks = get_rank_counts(hand)
    if ranks.count(2) == 1 and ranks.count(1) == 3:
        return True
30    return False

def get_deck():
    '''
    create and return an unshuffled deck of cards
35    ,
    d = []
    for rank in range(0,13):
        for suit in range(0,4):
            d.append([rank,suit])
40    return d

def get_hand(deck):
    random.shuffle(deck)
    return deck[0:5]
45

def print_hand(hand):
    print '['
    for card in hand:
        print toCardString(card), ', '
50    print ']'

def deal_demo():
    deck = get_deck()
    print_hand(deck)
    print_hand(get_hand(deck))
    print_hand(get_hand(deck))
55

def simulate(n):
60    '''
    Simulate dealing n poker hands
    ,
    deck = get_deck()
    pc = 0
65    for i in range(0,n):
        hand = get_hand(deck)
        if is_pair(hand):
            pc += 1
        print "# hands = %d, # pairs = %d, prob = %.3f" % (n, pc, 1.0*pc/n)
70

if __name__ == "__main__":
    deal_demo()
    simulate(500)

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DiceRolling.py

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'''
Created on Feb 14, 2012
@author: ola
'''
5
import random

def get_roll():
    return [random.randint(1,6), random.randint(1,6)]
10

def simulate(n):
    return [get_roll() for i in range(n)]

15 def count_one(roll, all):
    return all.count(roll)

def count_all(all):
    rolls = []
20    for first in range(1,7):
        for sec in range(1,7):
            rolls.append([first,sec])

    for roll in rolls:
        tot = count_one(roll,all)
25        print roll, "\t", tot

def main():
    print "how many rolls?",
    rolls = raw_input()
    sim = simulate(int(rolls))
    #for x in sim:
    #    print x
    count_all(sim)
35

if __name__ == "__main__":
    main()

```