

YocoJack

YocoJack is a very simple card game that is played with two people (it's similar to Blackjack but different in important ways, so read carefully - and if you do not know Blackjack, that is not an issue, all instructions are provided).

The goal is to have your cards add up to as close to 21 as you can, without going over 21.

Each card is given a point value:

2, 3, 4, 5, 6, 7, 8, 9 are each worth the number on the card

10, Jack, Queen and King are all worth 10 points (in our example files these are written as 10, J, Q, K)

Aces are worth 11 points (in example files these are written as A)

In our examples, a card is represented as the number and then the suite - e.g. 5H is the 5 of hearts, KD is the king of diamonds.

Players are each dealt two cards, and then each player can keep requesting as many cards as they like. If the player goes over 21 points then they will lose the round. Whoever has a higher score (less than 21) wins the round.

If the players have a tied score (e.g. they both add up to 20), then we award the round to the player that has the highest single value card.

e.g. in the hand AH 5S vs 10D 6S - the first hand would win because the A is higher than the 10. If they both have the same high card, then you must look at the second highest card, and if those match the third highest card (etc until there are no more cards to compare). e.g. 10H 6H 5H would beat the hand of 10D 5C 3S 3C because the 6 is higher than the 5. The cards that have a value of 10 can be ranked in the following order K, Q, J, 10, i.e. a hand with a K high card will beat a hand with a J high card.

If two hands are identical other than the suites (e.g. 10D 6C vs 10S 6H) then we look at the suite of the highest card. We rank the suits as follows:

S > H > C > D - so in the above hand the second hand would win because Spades (S) is ranked higher than Diamonds (D). The four suites are Spades (S), Hearts (H), Clubs (C) and Diamonds (D)

Here are some example hands

Hand		Player A		Player B		Winner
1		['5H', '5D', '7C', '9S'] Over 21		['2S', '4H', '8D'] 12		Player B
2		['AH', 'JC'] 21		['10H', '6C'] 16		Player A
3		['AH', 'JC'] 21 with high card A		['6H', '5C', '10D'] 21 with 10 high card		Player A

We have uploaded a file which is a JSON list of test cases. You must write a program which downloads this file. You should then loop through each test case and write a function that can evaluate which hand wins given hands in the format:

```
1  {
2    "playerA": [
3      "9S",
4      "2S"
5    ],
6    "playerB": [
7      "5D",
8      "7C"
9    ]
10 }
```

The function should take in these two hands, and return whether player A wins the hand. Included in the test file is the expected result (with the key `playerAWins`), you can use this to compare to your function and see any test cases that your code fails on. Your program should loop through each hand, and print out who the winner is, and whether this matches the expected result. (Obviously your program should not just read the expected winner, we will be looking at how you solve the problem and not just the output of your code).

The test cases are hosted here:

<https://s3-eu-west-1.amazonaws.com/yoco-testing/tests.json>