

Poker Hands Comparison

Question 03

Story

In a high-stakes poker tournament, two players are competing for the grand prize. To determine the winner, their poker hands must be compared according to standard poker rules. Each hand consists of five cards, and the hands can be ranked in a specific order, from the highest (Royal Flush) to the lowest (High Card).

The referee needs your help to decide which player wins the most games, given a series of poker hands for both players. Your task is to create a C program that compares poker hands and determines which player has the winning hand.

Problem Statement

Given a list of poker hands for two players, each with five cards, your task is to determine which player wins more hands. The poker hands should be evaluated according to standard poker rules. The program must compare the hands to identify the winner.

Write a C program that compares poker hands and outputs the player with the winning hand.

Input

A list of poker hands, where each line contains 10 cards separated by a space. The first five cards represent Player 1's hand, and the next five cards represent Player 2's hand.

Output

The player with the winning hand for each set of poker hands. If the hands are equal, output "It's a tie."

Hints

- Consider evaluating poker hands according to the standard hand rankings: Royal Flush, Straight Flush, Four of a Kind, Full House, Flush, Straight, Three of a Kind, Two Pairs, One Pair, and High Card.
- Implement a function to parse the input and convert it into card ranks and suits.
- Use loops to compare hands and determine the winner.
- Keep track of which player wins more hands.

Example Scenario

Consider the following five hands dealt to two players:

Hand	Player 1	Player 2	Winner
1	5H 5C 6S 7S KD	2C 3S 8S 8D TD	Player 2
2	5D 8C 9S JS AC	2C 5C 7D 8S QH	Player 1
3	2D 9C AS AH AC	3D 6D 7D TD QD	Player 2
4	4D 6S 9H QH QC	3D 6D 7H QD QS	Player 1
5	2H 2D 4C 4D 4S	3C 3D 3S 9S 9D	Player 1

Table 1: Poker Hands Comparison

Tasks

1. **Parse Poker Hands:** Implement a function to parse a line of input into two separate poker hands.
2. **Evaluate Poker Hands:** Create a function to evaluate the rank of each poker hand.
3. **Compare Poker Hands:** Implement a function to compare two poker hands and determine the winner.
4. **Main Program:** Create a program that reads a list of poker hands and outputs which player wins more games.

Deliverables

- The source code of your C program, with comments explaining the logic and key sections.
- A brief explanation of the approach taken to solve the problem.
- Test cases demonstrating the correctness of your program with different sets of poker hands.

Submission Guidelines

- Submit your code as a single C source file with appropriate comments.
- Provide a brief explanation of your approach and test cases demonstrating its correctness.
- Ensure your solution correctly compares poker hands and outputs the winner.