



STUDENT REPORT

DETAILS

Name

SHAIKH MOHAMMAD KAIF

Roll Number

KUB23CSE131

EXPERIMENT

Title

ELECTIONS

Description

You are the head of the election committee in your village. Each Political party is associated with a unique number and the votes are represented as an integer array A. where each element contains the party number voted for by the villagers. For a party to win, they must have a majority of votes. our task is to find and return an integer value denoting the winning party's number. Return -1 if there is no party with a majority.

Note: If only one vote is there he is the winner.

Input Format :

input1: An integer value representing the number the number of voters

input2: An integer array A representing the votes of the voters.

output Format:

Return an integer value denoting the winning party's number.Return -1 there is no party with a majority

Example 1:

Input:

6

1 1 2 2 2 3

Output:

2

Explanation:

As 2 got the most number of votes i.e 3.

Example 2:

Input:

6

1 2 1 1 2 2

Output:

-1

Explanation:

As both the contestants got same votes there is no majority.

Source Code:

```
def find_winning_party(num_voters, votes):
    if num_voters == 0:
        return -1 # No voters, no party can win

    # Count the votes for each party
    vote_count = {}
    for vote in votes:
        if vote in vote_count:
            vote_count[vote] += 1
        else:
            vote_count[vote] = 1

    # Determine the party with the maximum votes
    majority_threshold = num_voters // 2
    max_votes = 0
    winning_party = -1
    tie = False

    for party, count in vote_count.items():
        if count > max_votes:
            max_votes = count
            winning_party = party
            tie = False # Reset tie since we found a new max
        elif count == max_votes:
            tie = True # We have a tie if counts are the same

    # Check if the winning party has a majority
    if max_votes > majority_threshold and not tie:
        return winning_party
    else:
        return -1

# Example usage
num_voters = 6
votes = [1, 1, 2, 2, 2, 3]
print(find_winning_party(num_voters, votes)) # Output: 2

num_voters = 6
votes = [1, 2, 1, 1, 2, 2]
print(find_winning_party(num_voters, votes)) # Output: -1
```

RESULT

0 / 6 Test Cases Passed | 0 %