



# STUDENT REPORT

## DETAILS

Name

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Roll Number

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## 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(voter_count, votes):
    if voter_count == 0:
        return -1 # No voters

    # Step 1: Count votes for each party
    vote_count = {}

    for vote in votes:
        if vote in vote_count:
            vote_count[vote] += 1
        else:
            vote_count[vote] = 1

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

    for party, count in vote_count.items():
        if count > max_votes:
            max_votes = count
            winning_party = party
            tie = False # Reset tie flag
        elif count == max_votes:
            tie = True # Found a tie

    # Check if there's a majority
    if max_votes > majority_threshold and not tie:
        return winning_party
    else:
        return -1

# Sample Input
voter_count = 6
votes = [1, 1, 2, 2, 2, 3]

# Function Call
result = find_winning_party(voter_count, votes)
print(result) # Output: 2
```

### RESULT

1 / 6 Test Cases Passed | 17 %