Project 3 Design Document

**Project Requirements:**

In this program, we are taking numeric inputs from a file .txt\*\* and reading data. In which the votes are written Presidential Election, Vice Presidential Election, Secretary Election, Treasurer Election respectively. Read inputs from a file & print the output on the screen with the winner's name & count the votes. Further, print the percentage of the votes particular candidate got.

**Program Inputs:**

* + - Reading numbers from the given file (.txt\*) through input streams.

**Program Output:**

* Winner of the particular election with the total vote counts, winner on the top & the percentage of the winning over the lost candidates.

**Test Plan:**

Program inputs

Number input from a given file, using the fstream library

Num = Integer

**Integer limit (num>0)**

**Test Output:**

1. **Test 1**

**File with the numbers: 1 3 5 8**

**1 3 6 8**

**1 4 5 8**

**output should be:**

Presidential Election Winner:

Cedric Diggory - 3 - Winner (100%)

Harry Potter - 0 - (0%)

Vice Presidential Election Winner:

Vincent Crabbe - 2 - Winner (80%)

Hermione Granger - 1 - (20%)

Secretary Election Winner:

Draco Malfoy - 2 - Winner (80%)

Neville Longbottom - 1 - (20%)

Treasurer Election Winner:

Draco Malfoy - 3 - Winner (100%)

Neville Longbottom - 0 - (0%)

Test Case Pass

1. **Test 2**

**File with the numbers: 2 3 5 8**

**2 3 6 8**

**1 4 5 8**

**output should be:**

Presidential Election Winner:

Harry Potter - 2 - Winner (80%)

Cedric Diggory - 1 - (20%)

Vice Presidential Election Winner:

Vincent Crabbe - 2 - Winner (80%)

Hermione Granger - 1 - (20%)

Secretary Election Winner:

Draco Malfoy - 2 - Winner (80%)

Neville Longbottom - 1 - (20%)

Treasurer Election Winner:

Draco Malfoy - 3 - Winner (100%)

Neville Longbottom - 0 - (0%)

Test Case Pass

1. **Test 3**

**File with the numbers: 2 3 5 8**

**2 3 6 8**

**1 4 5 8 8**

**output should be:**

Presidential Election Winner:

Harry Potter - 2 - Winner (50%)

Cedric Diggory - 2 - (50%)

Vice Presidential Election Winner:

Vincent Crabbe - 2 - Winner (80%)

Hermione Granger - 1 - (20%)

Secretary Election Winner:

Draco Malfoy - 2 - Winner (80%)

Neville Longbottom - 1 - (20%)

Treasurer Election Winner:

Draco Malfoy - 3 - Winner (100%)

Neville Longbottom - 0 - (0%)

Test Case Pass with some bug

1. **Test 4**

**File with the numbers: A 3 5 8**

**2 3 G 8**

**1 4 5 N**

**output should be:**

Run Time Error\*\*

Test Case Fail

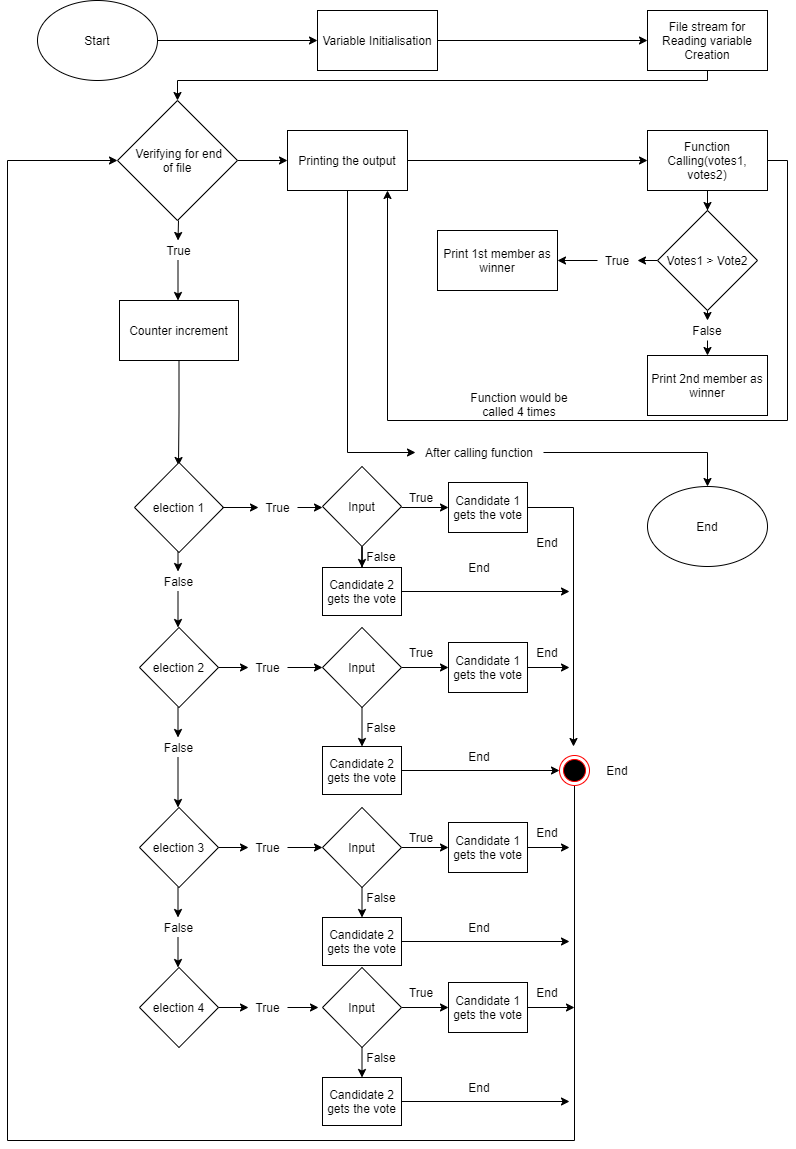
**Solution Overview:**

Algorithm steps for the Program.

1. Start program with declaring Variables for user input & data manipulations

Counter, input, e1 – e8 (8 candidates – 2 per election).

1. Input from the file, the series of number in the order of 4.
2. Do while loop till the end of the file. Deciding the winner of that particular vote from input.
3. And incrementing the variable according to the input.
4. Now, calling the function & passed the parameters per election.
5. Calculating the counts, percentage & printing that out then, return.
6. At last, printing the output as per the winner with the total counts & percentage. Further, with the other candidate’s count & percentage.
7. End of Program

**Algorithm Flowchart:**