| **Project Name: Project 1: Voting System Team#08** | |
| --- | --- |
| **Test Stage: Unit \_x\_ System \_ \_** | **Test Date: 3/23/2023** |
| **Test Case ID#: CPLElection\_04** | **Name(s) of Testers: Dheva Subramaniam** |
| **Test Description:**   * Testing the ReadElection method using the WriteResultsToFile method * This test uses the CPLElectionTest\_Basic.csv file, which contains an election that has no ties, no use for remainder allocation, and no seat redistributions |  |
| **Automated: yes\_x\_ no \_\_\_ using Google Test** |  |
| **Results: Pass \_\_\_\_x\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**  CPLElectionTest\_Basic.csv must be in the same directory as the testing executable | |

| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| 1 | Opens CPLElectionTest\_Basic.csv | CPLElectionTest\_Basic.csv | ifstream object | ifstream object | N/A |
| 2 | Call ignore() on istream object with inputs 256 and ‘\n’ | int 256, char ‘\n’ | N/A | N/A | First line is being skipped as it is already known what type of election is being read |
| 3 | Create CPLElection object | istream generated by step 2, date string: “05042001” | CPLElection object | CPLElection object | N/A |
| 4 | Call RunElection method on CPLElection object | CPLElection object from step3 | N/A | N/A | CPLElection’s private members should only be interacted with bypublic methods and so do not result in any direct output |
| 5 | Check that CPLElectionTest\_basic.csv is closed using is\_open() | istream object | false | false | N/A |
| 6 | Run the WriteResultsToFile | CPLElection object from step 3 | 05042001CPL.txt file | 05042001CPL.txt file | File generated from auditFiler |
| 7 | Open 05042001CPL.txt | 05042001CPL.txt | ifstream object | ifstream object | N/A |
| 8 | Read contents | ifstream object | See below Post Conditions | See below Post Conditions | Contents are compared using Google Test |

**Post condition(s) for Test:**

05042001CPL.txt file containing auditor information

Expected results for step 8:

CPLElection

Number of Parties: 5

PartyA: A,B,C,D

PartyB: E,F,G

PartyC: H,I,J,K,L

PartyD: M,N

PartyE: O

Number of seats: 3

Number of ballots: 8

Ballot ID: 1 Ballot Info: 1,,,,

Ballot ID: 2 Ballot Info: ,,1,,

Ballot ID: 3 Ballot Info: ,,,1,

Ballot ID: 4 Ballot Info: ,,1,,

Ballot ID: 5 Ballot Info: ,,1,,

Ballot ID: 6 Ballot Info: ,,,,1

Ballot ID: 7 Ballot Info: ,,,,1

Ballot ID: 8 Ballot Info: ,,,1,

Counting ballots:

Party "PartyA" received ballot number 1

Party "PartyC" received ballot number 2

Party "PartyD" received ballot number 3

Party "PartyC" received ballot number 4

Party "PartyC" received ballot number 5

Party "PartyE" received ballot number 6

Party "PartyE" received ballot number 7

Party "PartyD" received ballot number 8

Quota determined to be: 2

Party "PartyA" | Seats assigned using quota: 0

Party "PartyB" | Seats assigned using quota: 0

Party "PartyC" | Seats assigned using quota: 1

Party "PartyD" | Seats assigned using quota: 1

Party "PartyE" | Seats assigned using quota: 1

Candidates receiving seats:

PartyA: None

PartyB: None

PartyC: H

PartyD: M

PartyE: O

Actual Result for step 8:

CPLElection

Number of Parties: 5

PartyA: A,B,C,D

PartyB: E,F,G

PartyC: H,I,J,K,L

PartyD: M,N

PartyE: O

Number of seats: 3

Number of ballots: 8

Ballot ID: 1 Ballot Info: 1,,,,

Ballot ID: 2 Ballot Info: ,,1,,

Ballot ID: 3 Ballot Info: ,,,1,

Ballot ID: 4 Ballot Info: ,,1,,

Ballot ID: 5 Ballot Info: ,,1,,

Ballot ID: 6 Ballot Info: ,,,,1

Ballot ID: 7 Ballot Info: ,,,,1

Ballot ID: 8 Ballot Info: ,,,1,

Counting ballots:

Party "PartyA" received ballot number 1

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Party "PartyC" received ballot number 5

Party "PartyE" received ballot number 6

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Quota determined to be: 2

Party "PartyA" | Seats assigned using quota: 0

Party "PartyB" | Seats assigned using quota: 0

Party "PartyC" | Seats assigned using quota: 1

Party "PartyD" | Seats assigned using quota: 1

Party "PartyE" | Seats assigned using quota: 1

Candidates receiving seats:

PartyA: None

PartyB: None

PartyC: H

PartyD: M

PartyE: O