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| **Project Name: Project 2: Voting System Team# 25** | |
| **Test Stage: Unit \_1\_ System \_\_** | **Test Date: 12/12/2019** |
| **Test Case ID#: OPL\_001** | **Name(s) of Testers: YongFeng Ji** |
| **Test Description: To test all the function in OPL** |  |
| **Automated: yes\_1\_\_ no \_\_\_** | **Indicate where are you storing the tests (what file) and the name of the method/functions being used.** |
| **Results: Pass \_\_\_1\_\_ Fail\_\_\_\_\_\_\_\_** |  |
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| **Preconditions for Test:**  **The input files exist (oplscenario1.csv), and pre-processing has already been done on the file** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
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| 1 | OPL\_Increment test, to test if the increment function can successfully assign votes to each candidates | The candidates vector, provided by the function “get\_candidates” | The corresponding candidate’s vote should be increased by one. If the number is over the index, return -1  For example: If parameter is 1. The second candidate’s voting count in the candidates vector should be increased by 1 | The corresponding candidate’s vote should be increased by one.  If the number is over the index, return -1  For example: If parameter is 1. The second candidate’s voting count in the candidates vector be increased by 1 | Looks good |
| 2 | OPL\_Candidate\_test, test if the get\_candidates function works or not, simply compare the result with given name. | The CSV file. | Vector contains all candidates, the candidates in the vector should be same as the CSV file  Vector contains 15 candidates, the second one should be “Foster” | Vector contains all candidates, the candidates in the vector should be same as the CSV file  Vector contains 15 candidates, the second one be “Foster” | Looks good |
| 3 | OPL\_GenerateRandomNumber\_Test is to test the function can generate random number or not. | Test with seed parameter | A random number | A random number | Looks good |

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| 4 | to test OPL\_GetMaxVotes\_Test works properly or not, the purpose is to get who gets the most votes | The candidates vector | The candidate’s voting number who has most votes.  For example, if cand1 has 9 votes, cand2 has 74 votes, cand3 has 0 votes, cand4 has 94 vote. It returns 94 | The candidate’s voting number who has most votes  If cand1 has 9 votes, cand2 has 74 votes, cand3 has 0 votes, cand4 has 94 vote. It returns 94 | Looks good |
| 5 | To test break tie function, it is design for two candidates in a tie. We will manual check it to see if successfully break the tie or not, who wins. | Candidates vector | Manual check the correct one | Manual check the correct one | Looks good |

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

All function works fine, should be ready to go with processor.

Project Name: The project #, name of your system, and the team#

Test Stage: Indicate whether it is a unit test or a system test.

Test Date: The date the test was performed.

Test Case ID#: A unique ID is required. Decide on a naming convention and use numbering. Example: Ballot\_Shuffle\_1

Name(s) of Testers: List the names of anyone involved in running this test case.

Test Description: Describe briefly the test objective.

Automated: Indicate if the test is completely automated or being checked manually. (If you have methods running the tests and checking results, select “yes”. If you are manually checking results, indicate manual by selecting the “no.”)

**Results:** Indicate if the test passed or failed.

**Step #:** You will be listing the test steps in order. This number is the step number in the process.

**Test Step Description:** Details of the test step.

**Test Data:** What the test data will be for this step. Be clear on what the input data will be. If using a specific file, be clear on the name.

**Expected Result:** What result are you expecting from the program component or system.

**Actual Result:** What result were returned based on the test.

**Post condition for Test:** What will be true after the test has been run? Has the state of the system changed in any way?

**Notes:** Comments and notesfor you and your team members.