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| **Project Name: Project 1: Voting System Team#3** | |
| **Test Stage: Unit \_x\_ System \_\_** | **Test Date: 4/1/20** |
| **Test Case ID#: Plurality\_election\_record\_UT008** | **Name(s) of Testers: Colin Kluegel** |
| **Test Description:**  **Repeatedly move candidates to winners list, check that the winners list continues to have the correct elements** | **Test file: plurality\_election\_record\_UT.cc**  **Method: TEST\_F(PluralityElectionRecordTests, GetWinnersList)** |
| **Automated: yes\_x\_\_ no \_\_\_** | **Indicate where are you storing the tests (what file) and the name of the method/functions being used.** |
| **Results: Pass \_\_\_x\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test: Preconditions for Test: 5 candidate objects and 5 ballot objects are created and put in candidate lists and ballot lists respectively. A new PluralityElectionRecord object is created with these lists** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Check that the winners list is empty |  | Winners list is empty | Winners list is empty, test passed |  |
| 2 | Move 2 candidates to winners list |  |  |  |  |
| 3 | Set a winners\_list to what is returned by election\_record->GetWinnersList | Winners\_list |  |  |  |
| 4 | Check size of winners list |  | Size is 2 | Size is 2, test passed |  |
| 5 | Check that the correct candidate is at the front of the winners list |  | Candidate5 is at front of winners list | Candidate5 is a front of winners list, test passed |  |
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| 6 | Add 2 more candidates to winners list |  |  |  |  |
|  |  |  |  |  |  |
| 7 | Set a winners\_list to what is returned by election\_record->GetWinnersList | Winners\_list |  |  |  |
| 8 | Check size of winners list |  | Size is 4 | Size is 4, test passed |  |
| 9 | Check which candidate is at front of winners list |  | Candidate 5 is at front of winners lsit | Candidate5 is at front of winners list, test passed |  |
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| 10 | Pop\_candidate off of winners list, set new candidate to the front of the winners\_list | Winning\_candidate |  |  |  |
| 11 | Verify winning\_candidate is the correct candidate |  | Winning\_candidate is candidate4 | Winning\_candidate is candidate4, test passed |  |
|  |  |  |  |  |  |
| 12 | Pop\_candidate off of winners list, set new candidate to the front of the winners\_list | Winning candidate |  |  |  |
| 13 | Verify winning\_candidate is the correct candidate |  | Winning\_candidate is candidate3 | Winning\_Candidate is candidate3, test passed |  |
| 14 | Pop\_candidate off of winners list, set new candidate to the front of the winners\_list | Winning candidate |  |  |  |
| 15 | Verify winning\_candidate is the correct candidate |  | Winning\_candidate is candidate2 | Winning\_Candidate is candidate2, test passed |  |

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

4 of the candidates have been moved to the winners list, 1 remains on the non-elected candidate list

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.