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| **Project Name: Project 1: CompuVote Team#19** | |
| **Test Stage:** Unit | **Test Date:** 3/27/21 |
| **Test Case ID #:** test\_312\_07\_runElection\_02\_testRunElectionPopularity | **Name(s) of Testers:** Aaron Kandikatla |
| **Test Description:**  Given a standard IR election with candidates, parties, and ballots, where the election results in a case where there are 2 candidates remaining and neither has majority votes, tests that the runElection algorithm works and outputs the expected audit file and report file  Note: If the test fails, the files generated are not deleted at the end. |  |
| **Automated:** Yes | **Indicate where you are storing the tests (what file) and the name of the method/functions being used:**  Test file: Project1/src/test/org/team19/InstantRunoffSystemTest.java  Test method: testRunElectionPopularity  Method/constructor being tested: runElection from Project1/src/main/org/team19/InstantRunoffSystem.java |
| **Results:** Pass |  |
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| **Preconditions for Test:**  There exists a file called run\_election\_popularity\_audit\_expected.txt and another file called run\_election\_popularity\_report\_expected.txt in testing/test-recources/instantRunoffSystem/ which represents the expected outputs and the system is able to open and read the files. | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
|  |  |  |  |  |  |
| 1 | Tests to check that once there are 2 candidates remaining after the eliminations, with Rosen having 3 votes and Chou having 2 votes, Rosen wins popularity by having 3/6 votes in the audit file | **Ballots (6):**  b1 [Rosen (D), Royce (L), Kleinberg (R), Chou (I)]  b2 [Rosen (D), Chou (I)]  b3 [Rosen (D), Kleinberg (R), Chou (I)]  b4 [Chou (I), Kleinberg (R), Rosen (D), Royce (L)]  b5 [Chou (I), Royce (L)]  b6 [Royce (L)]  **Candidates (4):**  Rosen: b1, b2, b3,  Kleinberg:  Chou: b4, b5  Royce: b6 | run\_election\_popularity\_audit\_expected.txt matches the audit file generated by runElection | run\_election\_popularity\_audit\_expected.txt matches the audit file generated by runElection | N/A |
| 2 | Tests to check that once there are 2 candidates remaining after the eliminations, with Rosen having 3 votes and Chou having 2 votes, Rosen wins popularity by having 3/6 votes in the report file | **Ballots (6):**  b1 [Rosen (D), Royce (L), Kleinberg (R), Chou (I)]  b2 [Rosen (D), Chou (I)]  b3 [Rosen (D), Kleinberg (R), Chou (I)]  b4 [Chou (I), Kleinberg (R), Rosen (D), Royce (L)]  b5 [Chou (I), Royce (L)]  b6 [Royce (L)]  **Candidates (4):**  Rosen: b1, b2, b3,  Kleinberg:  Chou: b4, b5  Royce: b6 | run\_election\_popularity\_report\_expected.txt matches the report file generated by runElection | run\_election\_popularity\_report\_expected.txt matches the report file generated by runElection |  |

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

N/A