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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Ballot\_Getters\_Setters** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will test the getters and setters for currDis and id data members.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the ballot\_unittest.cc file.**  **The methods used are SetCurrDis, SetId, GetCurrDis, GetId** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **ballot.h and ballot.cpp must compile** * **Parameters for SetCurrDis and SetId are integers.** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the GetCurrDis method | none | 0 | 0 |  |
| 2 | Testing the SetCurrDis method | int 1 | 1 | 1 |  |
| 3 | Testing the GetId method | none | 1 | 1 |  |
| 4 | Testing the SetId method | 99 | 99 | 99 |  |

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

* id and currDis data members are set to the desired values
* Desired values are returned for GetId() and SetId() 

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Ballot\_Add\_Candidate** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will test that the AddCandidate method properly adds a candidate string to the candidates vector** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The test is stored in the ballot\_unittest.cc file.**  **The methods used are AddCandidate and Print** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **ballot.h and ballot.cpp must compile** * **Parameter for AddCandidate must be a string** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the AddCandidate method | “Trump” | “Trump\n” | “Trump\n” |  |

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

* A candidate is added to the candidates vector

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Ballot\_Print** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will test whether or not the Print method prints out the elements of the candidates vector in the correct order** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The test is stored in the ballot\_unittest.cc file.**  **The methods used are AddCandidate and Print** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **ballot.h and ballot.cpp must compile** * **Parameter for AddCandidate must be a string** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the Print method | “Trump” “Biden” “Harris” | “Trump\nBiden\nHarris\n” | “Trump\nBiden\nHarris\n” |  |

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

* The candidates vector is populated with “Trump”, “Biden”, and “Harris”
* The elements of the candidates vector are printed out in the correct order

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Candidate\_Getters\_Setters** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the getters and setters for the Candidate class work properly.** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The tests are stored in the candidate\_unittests.cc file.**  **The methods used are GetName, GetParty, SetName, SetParty, GetBallotListSize** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** * **Parameters for SetName and SetParty must strings** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the GetName method | “Bui | “Bui | “Bui” |  |
| 2 | Testing the GetParty method | “R” | “R” | “R” |  |
| 3 | Testing the SetName method | “Tran” | “Tran” | “Tran” |  |
| 4 | Testing the SetParty method | “D” | “D” | “D” |  |
| 5 | Testing the GetBallotListSize method | none | 1 | 1 |  |

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

* A candidate object’s name and party are set to desired values
* Desired values for party, name, ballot list size are returned

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Candidate\_Add\_Ballot** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the AddBallot method properly adds a ballot to the ballots vector for a candidate** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The tests are stored in the candidate\_unittests.cc file.**  **The methods used are AddBallot and GetBallotListSize** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** * **Parameter must be a pointer to a ballot object** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Added a ballot to the ballots vector and returned the vector’s size | \*newBallot | 1 | 1 |  |

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

* A ballot is added to a candidate object’s ballots vector

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Candidate\_Add\_Ballot** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the RemoveBallot method properly removes a ballot to the ballots vector for a candidate** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The tests are stored in the candidate\_unittests.cc file.**  **The methods used are AddBallot, RemoveBallot and GetBallotListSize** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Adding a ballot to the ballots vector | \*newBallot | none | none |  |
| 2 | Removed the ballot the from the vector and returned the vector’s size | none | 0 | 0 |  |

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

* A ballot is added to a candidate object’s ballots vector

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Driver\_Get\_File\_Name** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the GetFileName method** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The test is stored in the driver\_unittests.cc file.**  **The method used is GetFileName** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** * **driver.h and driver.cpp must compile** * **election.h and election.cpp must compile** * **A driver object must exist** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the GetFileName method | none | “ballots” | “ballots” |  |

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

* A candidate object’s name and party are set to desired values
* Desired values for party, name, ballot list size are returned

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Driver\_Read\_IR\_Arguments** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the read methods work properly for an instant runoff election.** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The tests are stored in the driver\_unittests.cc file.**  **The methods used are ReadInElectionType, ReadInNumCandidates, ReadInNumberofBallots, ReadInBallots** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** * **driver.h and driver.cpp must compile** * **election.h and election.cpp must compile** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Driver class is constructed | ir.csv | none | none |  |
| 2 | Testing ReadInElectionType | none | "Compute IR election.\n" | "Compute IR election.\n" |  |
| 3 | Testing ReadInNumCandidates | none | "Number of candidates: 4\n" | "Number of candidates: 4\n" |  |
| 4 | Testing ReadInCandidates | none | 0 | 0 |  |
| 5 | Testing ReadInNumberOfBallots | none | "Number of ballots: 9\n" | "Number of ballots: 9\n" |  |
| 6 | Testing ReadInBallots | none | 0 | 0 |  |

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

* All data is read from the CSV file for an instant runoff election.

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Driver\_Read\_OPL\_Arguments** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the read methods work properly for an OPL election.** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The tests are stored in the driver\_unittests.cc file.**  **The methods used are ReadInElectionType, ReadInNumCandidates, ReadInNumberofBallots, ReadInBallots, ReadInNumberOfSeats** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** * **driver.h and driver.cpp must compile** * **election.h and election.cpp must compile** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Driver class is constructed | opl.csv | none | none |  |
| 2 | Testing ReadInElectionType | opl.csv | "Compute OPL election.\n" | "Compute OPL election.\n" |  |
| 3 | Testing ReadInNumCandidates | opl.csv | "Number of candidates: 6\n" | "Number of candidates: 6\n" |  |
| 4 | Testing ReadInCandidates | opl.csv | 0 | 0 |  |
| 5 | Testing for ReadInNumberOfSeats | opl.csv | “Number of seats: 3\n” | “Number of seats: 3\n” |  |
| 6 | Testing ReadInNumberOfBallots | opl.csv | "Number of ballots: 9\n" | "Number of ballots: 9\n" |  |
| 7 | Testing ReadInBallots | opl.csv | 0 | 0 |  |

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

* All data is read from the CSV file for an instant OPL election.

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Driver\_Get\_OPL\_Vote** | **Name(s) of Testers: Hoai Bui** |
| **Test Description: This test will determine if the GetOPLVote method works properly.** |  |
| **Automated: yes\_\_✓\_ no \_\_\_** | **The test is stored in the driver\_unittests.cc file.**  **The method used is GetOPLVote.** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **candidate.h and candidate.cpp must compile** * **ballot.h and ballot.cpp must compile** * **driver.h and driver.cpp must compile** * **election.h and election.cpp must compile** * **A driver object must be created** | |

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| --- | --- | --- | --- | --- | --- |
| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Driver class is constructed | opl.csv | none | none |  |
| 2 | Testing ReadInElectionType | opl.csv | "Compute OPL election.\n" | "Compute OPL election.\n" |  |
| 3 | Testing ReadInNumCandidates | opl.csv | "Number of candidates: 6\n" | "Number of candidates: 6\n" |  |
| 4 | Testing ReadInCandidates | opl.csv | 0 | 0 |  |
| 5 | Testing for ReadInNumberOfSeats | opl.csv | “Number of seats: 3\n” | “Number of seats: 3\n” |  |
| 6 | Testing ReadInNumberOfBallots | opl.csv | "Number of ballots: 9\n" | "Number of ballots: 9\n" |  |
| 7 | Testing ReadInBallots | opl.csv | 0 | 0 |  |

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

* All data is read from the CSV file for an instant OPL election.

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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_Getter\_Setters** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test all the getter and setters**  **numberOfCandidates, numberOfBallots, numberOfSeats, and quota.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are GetNumberOfSeats, SetNumberOfSeats, GetNumberOfBallots, SetNumberOfBallots, GetNumberOfCandidates, SetNumberOfCandidates, GetQuota, SetQuota** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **Parameters for numberOfCandidates, numberOfBallots, numberOfSeats, and quota are integers.** | |

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| --- | --- | --- | --- | --- | --- |
| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the GetNumberOfSeats method | none | 3 | 3 |  |
| 2 | Testing the SetNumberOfSeats method | 3 | 3 | 3 |  |
| 3 | Testing the GetNumberOfBallots method | none | 9  6 | 9  6 |  |
| 4 | Testing the SetNumberOfBallots method | 9  6 | 9  6 | 9  6 |  |
| 5 | Testing the GetNumberOfCandidates method | none | 6 | 6 |  |
| 6 | Testing the SetNumberOfCandidates method | 6 | 6 | 6 |  |
| 7 | Testing the GetQuota method | none | 3 | 3 |  |
| 8 | Testing the SetQuota method | 3 | 3 | 3 |  |

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

* numberOfCandidates, numberOfBallots, numberOfSeats, and quota data members are set to the desired values





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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_Get\_Set\_ElectionType** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test all the get and set of the electionType** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are GetElectionType and SetElectionType** |
| **Results: Pass \_\_\_✓\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **parameters for SetElectionType are a string** | |

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| --- | --- | --- | --- | --- | --- |
| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 |  |  |  |  |  |
| 2 | Testing the GetElectionType method | none | OPL  IR | OPL  IR |  |
| 3 | Testing the SetElectionType method | “OPL”  “IR” | OPL  IR | OPL  IR |  |

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

None



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_VotesForParty** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test the get and set votes for party/s** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are GetVotesForParty and SetVotesForParties** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **Parameters for GetVotesForParty are strings.** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the GetVotesForParty method | ‘D’ | 0 | 0 |  |
| 2 | Testing the SetVotesForParties method | none | 0 | 0 |  |

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

* The votes for each party are returned/set





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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_Increaser** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test the incremental functions that use numberOfCandidates and numberOfBallots.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are IncreaseNumberOfCandidates, and IncreaseNumberOfBallots** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **numberOfCandidates and numberOfBallots are integers.** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the IncreaseNumberOfCandidates method | none | 6 | 7 |  |
| 2 | Testing the IncreaseNumberOFBallots method | none | 10 | 10 |  |

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

* none



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_Add\_Remove\_Candidates** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test that the number of candidates gets modified.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are AddCandidate and RemoveCandidate** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the AddCandidate method | Candidate | 1  1 | 1  1 |  |
| 2 | Testing the RemoveCandidate method | 0 | 0 | 0 |  |

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

* The number of candidates are set after removing candidate.



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_Add\_Party** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will add a party by name given.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are AddParty.** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **Must give a string name of the party.** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the AddParty method | string “Test” | 0 | 0 |  |

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

* none



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-13-2021** |
| **Test Case ID#: Election\_Majority** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test if there’s a majority vote or not.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are CheckForMajority** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **Must be IR election** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the CheckForMajority method | none | 0 | 0 |  |

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

* none



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-14-2021** |
| **Test Case ID#: Election\_Tie** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test that if it returns a random number.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are ResolveTie** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** | |
|  | |

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| --- | --- | --- | --- | --- | --- |
| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the ResolveTie method | integer 3 | random number | random number |  |

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

* none



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-14-2021** |
| **Test Case ID#: Election\_GetDateAndTime** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test that if current time is given.** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are GetDateAndTime** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the GetDateAndTime method | none | current date and time | current date and time |  |

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

* none



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| **Project Name: Project 1: Voting System Team# 11** | |
| **Test Stage: Unit \_✓\_ System \_\_** | **Test Date: 3-14-2021** |
| **Test Case ID#: Election\_CloseReports** | **Name(s) of Testers: Emma Spindler** |
| **Test Description: This test will test that if the method executes correctly** |  |
| **Automated: yes\_✓\_\_ no \_\_\_** | **The tests are stored in the election\_unittest.cc file.**  **The methods used are CloseReports** |
| **Results: Pass \_✓\_\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **election.h and election.cpp must compile** * **the audit and media report must be already opened** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | Testing the CloseReports method | none | 0 | 0 |  |

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

* none



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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-14-2021** |
| **Test Case ID#: IR\_100000\_Candidates** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an instant runoff election with 100000 candidates and check if the system run it in under 8 minutes** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in ir100000.csv, audit\_ir\_100000.txt, media\_ir\_100000.txt, IR\_execution\_runtime.png** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
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| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of 100000 ballots | ir100000.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced | IR\_execution\_runtime.png shows that the system ran in under eight minutes and details of how the election went are in audit\_ir\_100000.txt |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-14-2021** |
| **Test Case ID#: OPL\_100000\_Candidates** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an OPL election with 100000 candidates and check if the system run it in under 8 minutes** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in opl100000.csv, audit\_opl\_100000.txt, media\_opl\_100000.txt, OPL\_execution\_runtime.png** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of 100000 ballots | opl100000.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced | OPL\_execution\_runtime.png shows that the system ran in under eight minutes and details of how the election went are in audit\_opl\_100000.txt |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-25-2021** |
| **Test Case ID#: OPL\_One** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an OPL election with 6 candidates and one ballot and check that it outputs the correct results.** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in opl\_one.csv.** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of 1 ballot | opl\_one.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced |  |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-25-2021** |
| **Test Case ID#: IR\_One** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an OPL election with 4 candidates and one ballot and check that it outputs the correct results.** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in ir\_one.csv.** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of 1 ballot | ir\_one.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced |  |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-25-2021** |
| **Test Case ID#: OPL\_Candidate\_Tie** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an OPL election with a tie between multiple candidates, including some from the same party** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in opl\_candidate\_tie.csv.** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of ballots that will lead to a tie | opl\_candidate\_tie.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced |  |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal

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| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-25-2021** |
| **Test Case ID#: OPL\_Party\_Tie** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an OPL election with a tie between multiple parties.** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in opl\_party\_tie.csv.** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of ballots that will lead to a tie | opl\_party\_tie.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced |  |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal

|  |  |
| --- | --- |
| **Project Name: Project 1: Voting System Team#11** | |
| **Test Stage: Unit \_\_ System \_✓\_** | **Test Date: 3-25-2021** |
| **Test Case ID#: IR\_Tie** | **Name(s) of Testers: Hoai Bui, Eric Palmer, Ryan Mower** |
| **Test Description: This test will run an IR election with a tie between multiple candidates.** |  |
| **Automated: yes\_\_\_ no \_\_✓\_** | **The test is stored in ir\_tie.csv.** |
| **Results: Pass \_\_✓\_\_\_ Fail\_\_\_\_\_\_\_\_** |  |
|  |  |
| **Preconditions for Test:**   * **The voting system must compile** * **There must be an appropriate CSV file to run** | |

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| --- | --- | --- | --- | --- | --- |
| **Step**  **#** | **Test Step**  **Description** | **Test**  **Data** | **Expected**  **Result** | **Actual**  **Result** | **Notes** |
| 1 | The voting system is run with a CSV file of ballots that will lead to a tie | ir\_tie.csv | Voting System executes successfully and media and audit reports are produced | Voting System executes successfully and media and audit reports are produced |  |

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

* A media report is generated
* An audit report is generated
* Results are displayed on terminal