Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Ballot_getterTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test the Ballot Constructor, and the setter for Ballot and BallotID

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___ X _____

Preconditions for Test: Create an instance of Ballot.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the getBallot()	Expected to return the int[] b	Pass	Fail	The getter function has not been implemented yet.
2	Test the getBallotID()	Expected to return the ballot ID	Pass	Fail	The getter function has not been implemented yet.
3					
4					

Post condition(s) for Test:

N/A

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/18/18**

Test Case ID#: Ballot_getterTest_2 **Name(s) of Testers: Yiwen Wan**

Test Description: Test the Ballot Constructor, and the setter for Ballot and BallotID

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __X___ Fail_____

Preconditions for Test: Create an instance of Ballot.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the getBallot()	Expected to return the int[] b	Pass	Pass	The getter function has been implemented.
2	Test the getBallotID()	Expected to return the ballot ID	Pass	Pass	The getter function has been implemented.
3					
4					

Post condition(s) for Test:

N/A

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Ballot_setterTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test the Ballot Constructor, and the setter for Ballot and BallotID

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___ X _____

Preconditions for Test: Create a Ballot instance.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the setBallot()	Input data is an int[]. Expected to update the ballot using the input	Pass	Fail	The setter function has not been implemented yet.
2	Test the setBallotID()	Input data is an int. Expected to update the ballot ID using the input.	Pass	Fail	The setter function has not been implemented yet.
3					
4					

Post condition(s) for Test:

ballot.getBallotID should now be equal to the new ballotID put in the setBallotID parameter
ballot.getBallot should now be equal to the new ballot put in the setBallot parameter

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/18/18**

Test Case ID#: Ballot_setterTest_2 **Name(s) of Testers: Yiwen Wan**

Test Description: Test the Ballot Constructor, and the setter for Ballot and BallotID

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __X___ Fail_____

Preconditions for Test: Create a Ballot instance.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the setBallot()	Input data is an input[]. Expected to update the ballot using the input	Pass	Pass	The setter function has not been implemented yet.
2	Test the setBallotID()	Input data is an int. Expected to update the ballot ID using the input.	Pass	Pass	The setter function has not been implemented yet.
3					
4					

Post condition(s) for Test:

ballot.getBallotID should now be equal to the new ballotID put in the setBallotID parameter
ballot.getBallot should now be equal to the new ballot put in the setBallot parameter

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Candidate_setterTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test the Candidate Constructor, and the setter for name, vote, and vote order

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___ X _____

Preconditions for Test: Create a candidate instance.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the setVoteOrder()	Input data is an integer. Expected to add the unput to the voteOrder ArrayList	Pass	Fail	The setter function has not been implemented yet.
2	Test the setVote()	No input data. Expected to increment total number of votes the candidate gets by one	Pass	Fail	The setter function has not been implemented yet.
3					
4					

Post condition(s) for Test:

candidate.getVote should now be larger than the original vote by 1
candidate.getVoteOrder should have a new voteOrder added to the end of the voteOrder ArrayList

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/16/18**

Test Case ID#: Candidate_setterTest_2 **Name(s) of Testers: Yao Zeng**

Test Description: Test the Candidate Constructor, and the setter for name, vote, and vote order

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass ___X__ Fail___ _____

Preconditions for Test: Create a candidate instance.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the setVoteOrder()	Input data is an integer. Expected to add the unput to the voteOrder ArrayList	Pass	Pass	The setter function has been implemented.
2	Test the setVote()	No input data. Expected to increment total number of votes the candidate gets by one	Pass	Pass	The setter function has been implemented.
3					
4					

Post condition(s) for Test:

candidate.getVote should now be larger than the original vote by 1
candidate.getVoteOrder should have a new voteOrder added to the end of the voteOrder ArrayList

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Candidate_getterTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test the CandidateConstructor, and the getter for Candidate name, vote, and vote order

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___ X _____

Preconditions for Test: Create a candidate instance

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the getName ()	Expected to return the name of candidate	Pass	Fail	The getter function has not been implemented yet.
2	Test the getVote()	Expected to return the total vote of candidate	Pass	Fail	The getter function has not been implemented yet.
3	Test the getVoteOrder()	Expected to return the ArrayList of voteOrder	Pass	Fail	The getter function has not been implemented yet.
4					

Post condition(s) for Test:

N/A

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Candidate_getterTest_2 **Name(s) of Testers: Yao Zeng**

Test Description: Test the CandidateConstructor, and the getter for Candidate name, vote, and vote order

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __ X ___ Fail_____

Preconditions for Test: Create a candidate instance

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the getName ()	Expected to return the name of candidate	Pass	Pass	The getter function has been implemented.
2	Test the getVote()	Expected to return the total vote of candidate	Pass	Pass	The getter function has been implemented.
3	Test the getVoteOrder()	Expected to return the ArrayList of voteOrder	Pass	Pass	The getter function has been implemented.
4					

Post condition(s) for Test:

N/A

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Plurality_runAlgorithmTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test if the runAlgorithm() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test: Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and plurality instance. Also, create empty electedCandidates and nonElectedCandidate ArrayList.
Store the expected output in an ArrayList for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm()	No input data. Expected to store winner in electedCandidate and others in nonelectedCandidate	Pass	Fail	The runAlgorithm function has not been implemented yet.
2					
3					
4					

Post condition(s) for Test:

electedCandidates and nonElectedCandidate should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/16/18**

Test Case ID#: Plurality_runAlgorithmTest_2 **Name(s) of Testers: Yao Zeng**

Test Description: Test if the runAlgorithm() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test: Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and plurality instance. Also, create empty electedCandidates and nonElectedCandidate ArrayList.
Store the expected output in an ArrayList for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm()	No input data. Expected to store winner in electedCandidate and others in nonelectedCandidate	Pass	Fail	Wrong candidate was stored in electedCandidate list
2					
3					
4					

Post condition(s) for Test:

electedCandidates and nonElectedCandidate should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/18/18**

Test Case ID#: Plurality_runAlgorithmTest_3 **Name(s) of Testers: Yiwen Wan**

Test Description: Test if the runAlgorithm() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass ___X__ Fail_____

Preconditions for Test: Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and plurality instance. Also, create empty electedCandidates and nonElectedCandidate ArrayList.
Store the expected output in an ArrayList for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm()	No input data. Expected to store winner in electedCandidate and others in nonelectedCandidate	Pass	Pass	N/A
2					
3					
4					

Post condition(s) for Test:

electedCandidates and nonElectedCandidate should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: STV_runAlgorithmTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test if the runAlgorithm(int) is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Create empty electedCandidates, nonElectedCandidate and invalidateBallots ArrayList.
- Store the expected output in an ArrayList for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm(int)	Input data is the calculated droop quota. Expected to store winner in electedCandidate and others in nonelectedCandidate. All invalidated ballots are expected to be stored in the invalidateBallots	Pass	Fail	The runAlgorithm function has not been implemented yet.
2					
3					
4					

Post condition(s) for Test:

electedCandidates, nonElectedCandidate and invalidateBallot should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/16/18**

Test Case ID#: STV_runAlgorithmTest_2 **Name(s) of Testers: Yao Zeng**

Test Description: Test if the runAlgorithm(int) is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Create empty electedCandidates, nonElectedCandidate and invalidateBallots ArrayList.
- Store the expected output in an ArrayList for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm(int)	Input data is the calculated droop quota. Expected to store winner in electedCandidate and others in nonelectedCandidate. All invalidated ballots are expected to be stored in the invalidateBallots	Pass	Fail	Wrong candidates are stored in electedCandidates and nonElectedCandidates
2					
3					
4					

Post condition(s) for Test:

electedCandidates, nonElectedCandidate and invalidateBallot should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/18/18**

Test Case ID#: STV_runAlgorithmTest_3 **Name(s) of Testers: Yiwen Wan**

Test Description: Test if the runAlgorithm(int) is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Create empty electedCandidates, nonElectedCandidate and invalidateBallots ArrayList.
- Store the expected output in an ArrayList for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm(int)	Input data is the calculated droop quota. Expected to store winner in electedCandidate and others in nonelectedCandidate. All invalidated ballots are expected to be stored in the invalidateBallots	Pass	Fail	Correct candidates but wrong number of votes. No invalidateBallots.
2					
3					
4					

Post condition(s) for Test:

electedCandidates, nonElectedCandidate and invalidateBallot should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/19/18**

Test Case ID#: STV_runAlgorithmTest_3 **Name(s) of Testers: Yao Zeng**

Test Description: Test if the runAlgorithm(int) is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___ X _____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Create empty electedCandidates, nonElectedCandidate and invalidateBallots ArrayList.
- Store the expected output in an ArrayList for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm(int)	Input data is the calculated droop quota. Expected to store winner in electedCandidate and others in nonelectedCandidate. All invalidated ballots are expected to be stored in the invalidateBallots	Pass	Fail	Candidates are stored in correct ArrayList with correct number of votes. InvalidateBallots is not working.
2					
3					
4					

Post condition(s) for Test:

electedCandidates, nonElectedCandidate and invalidateBallot should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/20/18**

Test Case ID#: STV_runAlgorithmTest_4 **Name(s) of Testers: Yiwen Wan**

Test Description: Test if the runAlgorithm(int) is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __X___ Fail_____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Create empty electedCandidates, nonElectedCandidate and invalidateBallots ArrayList.
- Store the expected output in an ArrayList for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the runAlgorithm(int)	Input data is the calculated droop quota. Expected to store winner in electedCandidate and others in nonelectedCandidate. All invalidated ballots are expected to be stored in the invalidateBallots	Pass	Pass	N/A.
2					
3					
4					

Post condition(s) for Test:

electedCandidates, nonElectedCandidate and invalidateBallot should contains the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: STV_DQTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test if the calculateDQ() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Store the expected output in an int variable for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the calculateDQ(int,int)	Input data are the number of ballots and number of seats	Pass	Fail	The calculateDQ function has not been implemented yet.
2					
3					
4					

Post condition(s) for Test:

The output should be equal to the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/16/18**

Test Case ID#: STV_DQTest_2 **Name(s) of Testers: Yiwen Wan**

Test Description: Test if the calculateDQ() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __X___ Fail_____

Preconditions for Test:

- Create a Ballot ArrayList, voteOrder ArrayList, Candidate ArrayList, and STV instance.
- Store the expected output in an int variable for comparing results.
- Droop Quota is caluculated.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the calculateDQ(int,int)	Input data are the number of ballots and number of seats	Pass	Pass	N/A
2					
3					
4					

Post condition(s) for Test:

The output should be equal to the expected output.

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Voting_shuffleTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test if the shuffle() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __ X ___ Fail_____

Preconditions for Test:

- Create a Ballot ArrayList and a Voting instance
- Create a Boolean option for shuffle
- Store the expected output in an ArrayList<Ballot> for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the shuffle(boolean)	Input data is Boolean to indicate to shuffle or not	Pass	Pass	Using the built-in shuffle
2					
3					
4					

Post condition(s) for Test:

The order of the arrayList has be shuffle and has a different order

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/15/18**

Test Case ID#: Voting_redistributeTest_1 **Name(s) of Testers: Pinki Wong**

Test Description: Test if the redistribute() is working.

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass ___X__ Fail_____

Preconditions for Test:

- Create a Ballot ArrayList, and a Voting instance
- Store the expected output in an ArrayList<Ballot> for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the redistribute(ArrayList<Ballot>)	Input data is an ArrayList of Ballot	Pass	Pass	Use the ArrayList add function to add the input ballot to the end of the original ArrayList
2					
3					
4					

Post condition(s) for Test:

The input ArrayList is now added to the end of the original ArrayList

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/18/18**

Test Case ID#: Voting_generateReportTest_1
Test Description: Test if the generateReport () is working. Expected to generate an output file and check if the content and format are correct.

Name(s) of Testers: Yiwen Wan

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass _____ Fail___X _____

Preconditions for Test:

- Create a Ballot ArrayList, electedCandidate and nonElectedCandidates ArrayList, invalidateballot ArrayList, and a Voting instance
- Store the expected output in an ArrayList<Candidate> for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the generateReport()	No input data.	Pass	Fail	Not implemented yet
2					
3					
4					

Post condition(s) for Test:

The output file is expected to print out the electedCandidate, nonElectedCandidate and invalidateBallot

Project Name: Project 1: Voting System **Team#21**

Test Stage: Unit _X_ System __ **Test Date: 3/20/18**

Test Case ID#: Voting_generateReportTest_2
Test Description: Test if the generateReport () is working. Expected to generate an output file and check if the content and format are correct.

Name(s) of Testers: Yao Zeng

Indicate where are you storing the tests (what file) and the name of the method/functions being used.

Automated: yes_X__ no ___

Results: Pass __X___ Fail_____

Preconditions for Test:

- Create a Ballot ArrayList, electedCandidate and nonElectedCandidates ArrayList, invalidateballot ArrayList, and a Voting instance
- Store the expected output in an ArrayList<Candidate> for comparing results.

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	Test the generateReport()	No input data.	Pass	Pass	N/A
2					
3					
4					

Post condition(s) for Test:

The output file is expected to print out the electedCandidate, nonElectedCandidate and invalidateBallot

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 notes for you and your team members.