

Voting System (CandidateTest)

Team# 7

Test Stage: UNIT	Test Date: 3/28/23
Test Case ID#: CandidateTest_1	Name(s) of Testers: Lucas Olsen (olse0280)
Test Name: CandidateConstructor	Description: Test the constructor for the Candidate class
Automated: YES	Test location: Executable from `make CandidateTest` or `make tests` compiles to /src/gtest_code/executables/CandidateTest
Results: PASS	
Preconditions: Compile executable with `make CandidateTest` or `make tests` from the /project1/ directory Makefile	

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	c = Candidate()	Candidate c	c.getName() == "" c.getParty() == ""	c.getName() == "" c.getParty() == ""	
2	c = Candidate("mario", "party")	Candidate c	c.getName() == "mario" c.getParty() == "party"	c.getName() == "mario" c.getParty() == "party"	

Post condition(s) for Test:

Candidate C will be a new Candidate with name "mario" and party "party"

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Test Stage: UNIT	Test Date: 3/28/23
Test Case ID#: CandidateTest_2	Name(s) of Testers: Lucas Olsen (olse0280)
Test Name: getNumVotes	Description: Test the vote counting `getNumVotes()` method
Automated: YES	Test location: Executable from `make CandidateTest` or `make tests` compiles to /src/gtest_code/executables/CandidateTest
Results: PASS	
Preconditions: Compile executable with `make CandidateTest` or `make tests` from the /project1/ directory Makefile	

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	c1.getNumVotes()	Candidate c1	0	0	c1 initialized in setup()
2	c1.addBallot(b1) c1.getNumVotes()	Candidate c1	1	1	

Post condition(s) for Test:

Candidate C will be a new Candidate with 1 ballot assigned to it

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Test Stage: UNIT	Test Date: 3/28/23
Test Case ID#: CandidateTest_3	Name(s) of Testers: Lucas Olsen (olse0280)
Test Name: removeBallot	Description: Test the removeBallot() function
Automated: YES	Test location: Executable from 'make CandidateTest' or 'make tests' compiles to /src/gtest_code/executables/CandidateTest
Results: PASS	
Preconditions: Compile executable with 'make CandidateTest' or 'make tests' from the /project1/ directory Makefile	

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	c1.addBallot(b3) for i=1 to i=3 c1.removeBallot(&b_temp)	Candidate c1 Ballot b_temp	for int i=1 to i=3 choice = b_temp.getChoice() c1.removeBallot(i, choice)	for int i=1 to i=3 choice = b_temp.getChoice() c1.removeBallot(i, choice)	Test if removeBallot() returns an actual ballot. b3 is <1,2,3>
2	add 3 ballots to c1's ballots c1.getNumVotes()	Candidate c	c.getNumVotes() == 3	c.getNumVotes() == 3	
3	c1.removeBallot()	Candidate c	c1.removeBallot() == 0 c.getNumVotes() == 2	c1.removeBallot() == 0 c.getNumVotes() == 2	remove ballot returns 0 on success
4	remove all ballots from c1 c1.removeBallot()	Candidate c	c1.removeBallot() == 1	c1.removeBallot() == 1	remove ballot returns 1 on failure (no ballots)

Post condition(s) for Test:

Candidate c1 will have no ballots remaining

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Test Stage: UNIT	Test Date: 3/28/23
Test Case ID#: CandidateTest_4	Name(s) of Testers: Lucas Olsen (olse0280)
Test Name: LoadTest	Description: Test the candidate class under load
Automated: YES	Test location: Executable from 'make CandidateTest' or 'make tests' compiles to /src/gtest_code/executables/CandidateTest
Results: PASS	
Preconditions: Compile executable with 'make CandidateTest' or 'make tests' from the /project1/ directory Makefile	

Step #	Test Step Description	Test Data	Expected Result	Actual Result	Notes
1	<i>for i=0 to i=100000</i> c1.addBallot()	Candidate c1	c1.getNumVotes() == 100000	c1.getNumVotes() == 100000	
2	<i>for i=0 to i=99999</i> result = c1.removeBallot()	Candidate c int result	c.getNumVotes() == 1 result = 0	c.getNumVotes() == 1 result = 0	
3	<i>0 ballots left</i> result = c1.removeBallot()	Candidate c int result	result == 1	result == 1	remove ballot returns 1 on failure (no ballots)

Post condition(s) for Test:

Candidate c1 will have no ballots remaining