PBI_001 | OPL Party Tiebreaking | TEST 001
Team Member Responsible: Peter / Nikhil / Alex
Inputs: ● A new OPLElection instance which takes in a sample ballot file ○ This election has 3 parties with 2 candidates each ○ The ballot file gives each party 2 votes for a total of 6 ○ 4 seats are to be allocated, so after the initial allocation 1 seat must be allocated via tiebreak
Tests: ● Testing that the overall probability of winning the tiebreak is even between each party ○ This election is run 10 times. Each time, the winner of 2/4 seats, indicating the tiebreak winner, is noted.
Outputs ● The proportion of times that a certain party won, as a percentage
Passed or Failed ● Failed due to float values, but proportions were shown to be largely correct
Date: 05/02/21

PBI_002 | Proper OPL Seat Allocation | TEST 002
Team Member Responsible: Nikhil
Inputs: ● An OPLElection where there are more parties than seats ○ This election has 3 parties with 2 candidates each ○ The ballot file gives 3 votes to one party, 2 to another, and 1 to the last ○ 2 seats are to be allocated, so the party with 3 votes should win a seat and the party with 2 votes should win the other
Tests: ● Testing that the outcome is correct for the given scenario ○ Should also be consistent for multiple different runs
Outputs: ● The results of the election
Passed or Failed ● Passed
Date: 05/02/2021

PBI 007 | Loading Multiple Ballots for Single Election | TEST 003
Team Member Responsible: Alex
Inputs: ● Multiple OPL ballot files
Tests: ● Test single file is read correctly ● Test reading two files produces election information from both files ● Elections still function with single file ● Elections run with multiple files
Outputs: ● Election information (candidates,number of seats, ballots, etc)
Passed or Failed ● Passed
Date: 05/02/2021

PBI 009 | Validating IR Ballots | TEST 004
Team Member Responsible: Peter
Input: An IRBallot instance with an arbitrary set of choices ex. (1,2,3,4)
Tests: ● Testing the validity of a ballot with 4 choices out of 4 total candidates ● Testing the validity of a ballot with 3 choices out of 4 total candidates ● Testing the validity of a ballot with 0 choices out of 4 total candidates
Outputs: ● A boolean representing whether the ballot is deemed valid (true) or invalid (false)
Passed or Failed ● Passed ● Passed ● Passed
Date: 05/02/2021

PBI 005 | Validating PO Election | TEST 005
Team Member Responsible: Peter
Input: Any PO ballot

Tests:

- Testing PO election with PO ballots
    - a total of 6 candidates
    - 3 parties
    - 9 ballots

Outputs:

- Candidate with the most votes out of 9 votes (5+) is the projected winner

Passed or Failed

- Failed

Date: 05/02/2021