

PBI #1 - Input Multiple Files (IR, CPL)

As an election official

I want to be able to input multiple files for a single election

So that files from different polling stations can be read together for calculating a winner of a single election

Acceptance Criteria:

- The program can process multiple files for a single election

Definition of Done:

- Program runs without causing errors.
- Program passes all unit, integration, and system tests.
- All documentation fully completed.
- Performs correctly in line with the acceptance criteria.

Effort: Small

PBI Author(s): Alex, Gideon

PBI #2 - Election Table (IR)

As an election official

I want to be able to know the winner and rounds of elimination in an IR election.

So that I can know the winner and order of elimination without opening any files

Acceptance Criteria:

- Program prints the correct candidate as the winner
- Program correctly prints each round of the IR voting.
- Program prints a table showing each round of the IR voting and the number of votes added/subtracted for each candidate for that round.

Definition of Done:

- Program runs without causing errors.
- Program passes all unit, integration, and system tests.
- All documentation fully completed.
- Performs correctly in line with the acceptance criteria.

Effort: Medium

PBI Author(s): Alex

PBI #3 - Process a file (PO)

As an election official

I want to be able to process a file for a PO election

So that the file can be processed to run the election and determine a winner.

<p>Acceptance Criteria:</p> <ul style="list-style-type: none"> - Program can correctly process input file format (CSV). - Program processes the correct file
<p>Definition of Done:</p> <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Medium
PBI Author(s): Alex
PBI #4 - Determine the winner of a PO election
<p>As an election official</p> <p>I want to count the votes of each candidate and determine the winner of a PO election</p> <p>So that the results of a PO election can be determined with a limited margin of human error</p>
<p>Acceptance Criteria:</p> <ul style="list-style-type: none"> - Winner is correctly determined based off votes
<p>Definition of Done:</p> <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Large
PBI Author(s): Gideon
PBI #5 - File handler does not handle nonexistent files cleanly
<p>As an election official</p> <p>I want to be able to re-enter input file names in case it was improperly entered</p> <p>So that I can avoid re-running the election program.</p>
<p>Acceptance Criteria:</p> <ul style="list-style-type: none"> - Program prompts user for new filename if the previously entered filename does not exist
<p>Definition of Done:</p> <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Small
PBI Author(s): Alex
PBI #6 - Out of bounds error in addToResults in CPL

As an election official
I want to run a CPL election cleanly and without errors
So that the program runs without crashing.
Acceptance Criteria: - Running a CPL election does not cause errors
Definition of Done: - addToResults function runs without causing errors. - addToResults function passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Medium
PBI Author(s): Alex
PBI #7 - Break a Tie
As an election official
I want to the system to automatically and fairly break ties
So that tied PO and CPL elections are resolved fairly, randomly, and free of bias or human error
Acceptance Criteria: - Each tied candidate/party should win the election in an equal proportion of times as the other tied candidates/parties(ties are broken fairly) - Should break ties only when candidates/parties have the same vote count.
Definition of Done: - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Small
PBI Author(s): Robert
PBI #8 - Candidates' statistics printed to console (PO)
As an election official
I want to be able to know the voting stats of each candidate immediately after running the election
So that I can report how well each candidate performed to the public.
Acceptance Criteria: - Program prints the correct percentage for each candidate - Program prints voting statistics for each candidate
Definition of Done: - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Small

PBI Author(s): Alex
PBI #9 - Audit file is created (PO)
As an election official
I want to be able to view the audit file containing the election winner and other votes after running the election
So that I can have the election results in a readable file
Acceptance Criteria: <ul style="list-style-type: none"> - Audit file is created in same directory - Audit file contains correct vote counts for each candidate - Audit file is clearly written and easy to read - Audit file contains the correct winner
Definition of Done: <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Medium
PBI Author(s): Robert
PBI #10 - Select file(s) via GUI
As an election official
I want to be able to be able to select files that I want to be processed via a GUI.
So that I can easily bring in necessary files.
Acceptance Criteria: <ul style="list-style-type: none"> - GUI is accessible and easy to use. - The correct file(s) are read in as per the GUI request - The GUI allows the user to select files until they click "Done"
Definition of Done: <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Large
PBI Author(s): Ethan
PBI #11 - Invalidated Ballots File Created (IR)
As an election official
I want to be able to be able to see which ballots were invalidated in an IR election
So that I can fully audit the election.
Acceptance Criteria: <ul style="list-style-type: none"> - Invalidated Ballots file created in the same directory. - The file is named invalidated_dateofelection.xxx

Definition of Done: <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Large
PBI Author(s): Alex
PBI #12 - Enter date of election when program is run
As an election official
I want to be able to record the date of the election when I run the program
So that the file name can contain the date of the election
Acceptance Criteria: <ul style="list-style-type: none"> - Date GUI opens after the file-selection GUI is closed - Prompted for the date of the election when the program is run - Correct date is recorded in MM/DD/YYYY format and output files contain such information - GUI closes once the user clicks "Done"
Definition of Done: <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Small
PBI Author(s): Robert, Gideon
PBI #13 - IRV ballots are invalidated during vote counting
As an election official
I want all ballots that does not have at least half of the candidates ranked (rounded up from ≥ 0.5) to be invalidated and removed from the ballot counting process
Acceptance Criteria: <ul style="list-style-type: none"> - Only ballots that have more than or equal to half of the candidates ranked are validated towards counting votes in IRV election - Ballots that are invalid are not counted towards the vote count of any candidate
Definition of Done: <ul style="list-style-type: none"> - Program runs without causing errors. - Program passes all unit, integration, and system tests. - All documentation fully completed. - Performs correctly in line with the acceptance criteria.
Effort: Medium
PBI Author(s): Robert
PBI #14 - Winner printed to console (PO)

As an election official
I want to be able to know the winner of a PO election
So that I can report the winner to the public.
Acceptance Criteria: <ul style="list-style-type: none">- Program prints the correct candidate as the winner
Definition of Done: <ul style="list-style-type: none">- Program runs without causing errors.- Program passes all unit, integration, and system tests.- All documentation fully completed.- Performs correctly in line with the acceptance criteria.
Effort: Small
PBI Author(s): Alex