Team 10: Jacob McIsaac, Caleb Otto, Dan Kong, Ruolei Zeng

Voting System Initial Sprint Backlog

Selected PBIs In Order of Rank (Highest to Lowest Priority):

Majority Calculation IRV PBI

As the Election Official I want the program to produce correct results for IRV when I run the program for an IRV election So that the election is fair and correct.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) The program prints that the candidate with the majority of the votes is the winner (more than 50% of the initial first place votes). This will be determined after however many rounds is necessary to come to this conclusion.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The program uses the correct logic to calculate the majority (calculates majority from the total number of cast first place votes, not just from the total number of votes given to non-eliminated candidates). Keeps running rounds until a winner or tiebreaker results in the final outcome. Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Small.
PBI Author(s) Caleb

File Wrong Name PBI

As the Election Official I want a user friendly interface when I start the program for inputting information So that I can process files/bring in files to the system in a convenient way.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) The program prompts the user again if the file name had a mistake.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The program doesn't quit when an incorrect file name is input and instead re-prompts the user for a new name. Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Small.
PBI Author(s) Caleb

Seat Lottery CPL Audit Bug

As the Election Official I want the program to output a correct and easy to read audit file on the conclusion of the CPL election So that it can be easily reviewed.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) The program correctly gives seats to other parties randomly when a party earns more seats than they have candidates, and this is accurately reported in the audit file.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The audit file data reflects the actual election properly for any seat lotteries. Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Medium
PBI Author(s) Daniel

Validate date File Parser Bug

As the Election Official I want a user-friendly interface for entering in the date of the election So that I can input the election date quickly and accurately.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) The program asks the election official to enter the date again if the day given isn't actually in that month (ie February 31st).
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The program will prompt the user if the user enters a date that is nonexistent (incompatible combination of day and month). Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Small.
PBI Author(s) Caleb

User Input Multiple Election Files

As the Election Official I want the program ask me if I have multiple files and if so it should keep asking me for more file names until I'm done So that I can process elections that have ballot data in several different files.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) Program will continue to ask the user for additional file names until the user specifies that they are finished entering file names. Program prints a message to inform the user if they gave a nonexistent file name.The program prompts for further files until it is indicated that there are no more to be added.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The program is able to prompt for more files. Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Small.
PBI Author(s) Jacob

Process Multiple Election Files IRV

As the Election Official

I want the program to be able to still calculate the IRV election results even when the data is in multiple files

So that I don't have to worry about combining data from multiple sources.

Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete)

If multiple files are required, the program correctly combines and processes all the given files for an IRV election.

Definition of Done (what is required by the team before sending out for review)

Functionality is documented, tested (unit and system testing), and commented. The program doesn't run much slower with multiple files. The program is able to prompt for more files and handle up until a certain amount of different files. Can run on CSE lab machines.

Effort: Small, Medium, Large, Extra Large (estimate of effort and time)

Medium.

PBI Author(s)

Daniel

Process Multiple Election Files CPL

As the Election Official I want the program to be able to still calculate the CPL election results even when the data is in multiple files So that I don't have to worry about combining data from multiple sources.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) If multiple files are required, the program correctly combines and processes all the given files for an CPL election.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The program doesn't run much slower with multiple files. The program is able to prompt for more files and handle up until a certain amount of different files. Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Medium.
PBI Author(s) Daniel

GUI Table of IRV Results

As the Election Official I want the program to have a pleasing to look at GUI for displaying the results of the election So that it is easy to read and examine for accuracy.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) Program shows the accurate results of an election using a clean GUI along with all relevant information about the election. It should also have options to get to the more specific data.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The GUI shows the correct results in a clean manner as well as including summarized information about the election. There should also be options to output data to media or open the audit file. Can run on CSE lab machines.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Medium.
PBI Author(s) Ruolei

Popularity Only Processing

As the Election Official I want the program to be able to run a popularity only election that is fair and accurate So that we can expand this program to be usable on more election types which makes elections faster.
Acceptance Criteria (conditions that have to be fulfilled to ensure the story is complete) Program runs an election and correctly calculates the winner based on the pure popularity vote. Ties are handled fairly using a “fair coin toss”.
Definition of Done (what is required by the team before sending out for review) Functionality is documented, tested (unit and system testing), and commented. The popularity election is optimized and can run on CSE lab machines. Ties of arbitrary numbers of candidates are handled fairly.
Effort: Small, Medium, Large, Extra Large (estimate of effort and time) Medium
PBI Author(s) Jacob

Task	Not Started	In Progress	Completed
Fix logic for calculating majority in IRV	Jacob		
Unit Testing for IRV majority calculation	Jacob		
System tests for IRV majority calculation	Jacob		
Finish table of IRV results	Jacob		
Unit test table of IRV results	Jacob		
System test table of IRV results	Jacob		
Implement validation of date	Ruolei		
Unit tests for validation of date	Ruolei		
System tests for validation of date	Ruolei		
Implement better handling of incorrect filename	Ruolei		
Unit tests for better handling of incorrect filename	Ruolei		
System tests for better handling of incorrect filename	Ruolei		
Fix bug to ensure that lotteried seats in CPL are reflected in the audit	Caleb		
Unit testing to ensure lotteried seats are reflected	Caleb		
System testing to ensure lotteried seats are reflected	Caleb		
Implement popularity only ballot processing	Caleb		
Implement popularity only winner calculation	Caleb		
Unit tests for popularity only	Caleb		
System tests for popularity only	Caleb		
Implement processing multiple IRV files	Daniel		
Implement processing multiple CPL files	Daniel		
Unit tests for processing multiple IRV files	Daniel		
Unit tests for processing multiple CPL files	Daniel		
System tests for processing multiple IRV files	Daniel		
System tests for processing multiple CPL files	Daniel		
Implement input for multiple files	Daniel		
Unit tests for input for multiple files	Daniel		
System tests for input for multiple files	Daniel		