1. Run IR

As an election official, I want to find the majority vote So that I can run an Instant Runoff Election.
Acceptance Criteria: Election official is able to run a majority vote election with multiple candidates and one clear and definitive winner.
Definitions of Done: Majority vote election algorithm is functional and produces one fair winner. Election is properly logged on an audit file. Unit and system testing is successful.
Effort: Medium

As an election official, I want to eliminate the candidate with the least votes in an IRV if there is no majority winner So that I can still find a winner if there is not a clear majority.
Acceptance Criteria: Election officials are able to run a IRV election with multiple candidates, where the lowest candidate is removed if there is no majority until one clear and definitive winner is determined.
Definitions of Done: IRV election algorithm is functional and produces one fair winner. Election is properly logged on an audit file. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be able to keep track of the information from each ballot So that I can easily keep track of each vote.
Acceptance Criteria: All information from each ballot is stored within the program, separately from the input file.
Definitions of Done: Ballot information is stored. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be able to keep track of the information for each IRV ballot So that I can easily keep track of the candidate rankings and current votes.

Acceptance Criteria: All information from each IRV ballot is stored within the program, separately from the input file.
Definitions of Done: Ballot information is stored. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be able to keep track of the information for each candidate or party being voted for So that I can know each party or candidate voted for and the votes for each.
Acceptance Criteria: All information from each votable item is stored within the program, separately from the input file.
Definitions of Done: Votable item information is stored. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be able to keep track of the information for each candidate So that I can easily get all the candidate information.
Acceptance Criteria: All information from each candidate is stored within the program, separately from the input file.
Definitions of Done: Candidate information is stored. Unit and system testing is successful.
Effort: Medium

2. Run CPL

As an election official, I want to be be able to able to determine which party in Cpl has the most votes So that a party winner can be determined in a Cpl election
Acceptance Criteria: The party with the most votes is determined to be the winning party.
Definitions of Done: runCpl function works up until determineSeatAllocation.
Effort: Medium

As an election official, I want to be be able to able to determine how many seats are allocated to each party in a Cpl election, So that I can determine which party members won a seat.
Acceptance Criteria: Seats are distributed by a quota described by the cpl protocol.
Definitions of Done: runCpl function works up until distributeRemainderSeats
Effort: Medium

As an election official, I want to be able to use the largest remainder algorithm to distribute any of the winning party's extra seats. So that leftover seats are distributed fairly.
Acceptance Criteria: All seats are distributed to the appropriate parties.
Definitions of Done: runCpl function works properly and is tested.
Effort: Medium

As an election official, I want to be able to keep track of the information for each CPL ballot So that I can easily keep track of each ballot's rankings and current vote
Acceptance Criteria: All information from each CPL ballot is stored within the program, separately from the input file.
Definitions of Done: Ballot information is stored. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be able to keep track of the information for each party So that I can easily get all the party information.
Acceptance Criteria: All information from each party is stored within the program, separately from the input file.
Definitions of Done: Party information is stored. Unit and system testing is successful.

Effort: Medium

As an election official, I want to be be able to able to determine which party in Cpl has the most votes So that a party winner can be determined in a Cpl election
Acceptance Criteria: The party with the most votes is determined to be the winning party.
Definitions of Done: runCpl function works up until determineSeatAllocation.
Effort: Medium

As an election official, I want to be be able to able to determine how many seats are allocated to each party in a Cpl election, So that I can determine which party members won a seat.
Acceptance Criteria: Seats are distributed by a quota described by the cpl protocol.
Definitions of Done: runCpl function works up until distributeRemainderSeats
Effort: Medium

As an election official, I want to be able to use the largest remainder algorithm to distribute any of the winning party's extra seats. So that leftover seats are distributed fairly.
Acceptance Criteria: All seats are distributed to the appropriate parties.
Definitions of Done: runCpl function works properly and is tested.
Effort: Medium

3. Input File

4. Tie

As an election official,

I want to be able to fairly determine a tie between two candidates by a coin toss So that a tie can be determined fairly and randomly.
Acceptance Criteria: Tie breaking can handle two candidates. One candidate is determined as the winner.
Definitions of Done: Tie breaker is functional and produces one fair winner. Unit and system testing is successful.
Effort: Medium

5. Audit

As an election official, I want to have a file tracking the process of the election So that I can review how the election was determined, and the result.
Acceptance Criteria: Audit file is created and can hold the information on how ballots were assigned throughout the election.
Definitions of Done: Audit file is functional and follows the process of the election. Election is properly logged on the file. Unit and system testing is successful.
Effort: Medium

As an election official, I want to track when a candidate is removed in an IRV election So that I can see how their ballots were reassigned.
Acceptance Criteria: Audit file holds the information on how ballots were reassigned after a candidate is removed in an IRV election.
Definitions of Done: Audit file follows the process of the removal of a candidate from an IRV election. Election is properly logged on the file. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be shown the results of the election when it is done running So that I can easily see who won..
Acceptance Criteria: Results of the election are displayed once determined.
Definitions of Done: Results of the election are displayed to the terminal. Election results are properly logged on an audit file. Unit and system testing is successful.

Effort: Medium

6. Multiple Files

As an election official, I want to be able to input multiple ballot files So that files from multiple voting locations may be used at once.
Acceptance Criteria: Multiple .csv files are inputted into the program which are then parsed to obtain ballot information.
Definitions of Done: Multiple files are accepted until indicated done with input files. Unit and system testing is successful.
Effort: Large

7. IR election data table

As an election official, I want the IRV election data organized into a table So that we may clearly understand how the election went.
Acceptance Criteria: At the completion of IRV election, a table is displayed to the screen detailing each IRV round and the number of votes added or subtracted from each candidate per round.
Definitions of Done: A table with the correct IRV election data is displayed to the screen. Unit and system testing is successful.
Effort: Large

8. PO Files.

As an election official, I want to be able to input ballots as a .csv file So that I can provide ballots in a simple way that the program can use.
Acceptance Criteria: .csv files containing the ballots of an election are accepted by the system in order to run the program.
Definitions of Done: File input is functional and the program runs with .csv files as input parameters. Unit and system testing is successful.

Effort: Small

9. PO election

As an election official, I want to find the plurality vote So that I can run a Popularity Only Election.
Acceptance Criteria: Election official is able to run a popularity only election with multiple candidates and one clear and definitive winner.
Definitions of Done: Popularity Only election algorithm is functional and produces one fair winner. Election is properly logged on an audit file. Unit and system testing is successful.
Effort: Medium

As an election official, I want to be able to determine a tie between two or more candidates in a popularity vote by a coin toss So that a tie can be determined fairly and randomly.
Acceptance Criteria: Tie breaking can handle two or more candidates. One candidate is determined as the winner.
Definitions of Done: Tie breaker is functional and produces one fair winner. Testing is successful.
Effort: Medium