

PBI: Fully functional and correct STV implementation

Rank: 1

<p>As an election official</p> <p>I want to be able to process an STV-style election correctly</p> <p>So that when the Secretary of State announces an election of that type, winners can be determined.</p>
<p>Acceptance Criteria:</p> <ul style="list-style-type: none">- STV can handle any number of seats and candidates where the number of seats is less than or equal to the number of candidates, but greater than zero.- Ballot shuffling is toggleable and functions correctly- STV accurately produces the winners and losers of the election
<p>Definition of Done:</p> <ul style="list-style-type: none">- Code refactoring- Exceptions are handled gracefully- In-line documentation is updated- Unit and integration tests are written and pass
<p>Effort:</p> <ul style="list-style-type: none">- Small- 2-3 Hours
<p>PBI Author(s):</p> <ul style="list-style-type: none">- Baanee Singh, Josh Subhan

PBI: Process file header with election information

Rank: 2

<p>As an election official</p> <p>I want to be able to run elections without having to manually input any parameters into the system except for the election csv file</p> <p>So that erroneous or fraudulent information is not given, and elections are secure.</p>
<p>Acceptance Criteria:</p> <ul style="list-style-type: none">- System should successfully parse the following from the file:<ul style="list-style-type: none">- Election type- Number of seats- Number of candidates- Number of ballots- Candidate names- CSV file cannot be modified- CSV file cannot undergo any preprocessing
<p>Definition of Done:</p> <ul style="list-style-type: none">- Documentation (JavaDocs, In-line comments)

<ul style="list-style-type: none"> - Code refactoring - Unit and integration tests are written and pass - All exceptions are handled gracefully
Effort: <ul style="list-style-type: none"> - Medium - 3-4 hours
PBI Author(s): Josh Subhan

PBI: MV algorithm

Rank: 3

<p>As an election official I want to be able to process ballots that are designed for a municipal voting style election So that when the Secretary of State announces an election of that type, ballots can be appropriately counted and winners determined</p>
Acceptance Criteria: <ul style="list-style-type: none"> - Election winners are properly determined - Accurately count ballots where a voter has only voted for one candidate - Accurately count ballots where a voter has voted for more than one candidate - Accurately count ballots where a voter has voted for all candidates - Settle a tie between candidates with a fair coin toss mechanism
Definition of Done: <ul style="list-style-type: none"> - Documentation (JavaDocs, In-line comments). - Unit and integration tests are written and pass - All exceptions are handled gracefully
Effort: <ul style="list-style-type: none"> - Large - 5-6 hours
PBI Author(s): Josh Subhan

PBI: Bring in Multiple Files for Both STV and Plurality

Rank: 4

<p>As an election official I want to be able to bring in multiple files from different balloting locations for both STV and Plurality voting So that the election data can be processed and managed efficiently from different locations.</p>
Acceptance Criteria:

<ul style="list-style-type: none"> - System must be able to accept multiple csv files when STV or PV are selected as the election type - System must be able to stop accepting files when prompted by the user - System properly collects all the information from ballots in each csv file
Definition of Done: <ul style="list-style-type: none"> - Refactoring. - Unit and integration tests are written and pass - All exceptions are handled gracefully - Documentation (JavaDocs, In-line comments)
Effort: <ul style="list-style-type: none"> - Medium - 4-5 Hours
PBI Author(s): Baane Singh

PBI: Ensure that at least half the candidates are ranked on a ballot for STV

Rank: 5

<p>As an election official</p> <p>I want to ensure that an STV ballot has at least half the candidates ranked, and remove any ballots without at least half the candidates ranked</p> <p>So that only valid ballots are counted towards an STV election and the burden of validation is removed from poll workers.</p>
Acceptance Criteria: <ul style="list-style-type: none"> - System must check if each ballot has at least half the candidates ranked. - System must remove any STV ballots that don't have at least half the candidates ranked. - Removed ballots should not be used in voter tabulations
Definition of Done: <ul style="list-style-type: none"> - Documentation (JavaDocs, In-line comments). - Unit and integration tests are written and pass - Code refactoring
Effort: <ul style="list-style-type: none"> - Medium - 3-4 hours
PBI Author(s): Amelia Lunning

PBI: Small Report**Rank: 6**

As an election official

I want to produce a small report for each election

So that they can get and save a snapshot of the election statistics

Acceptance Criteria:

- Report file should be successfully created with a .txt extension
- Report file should be named automatically by the system with election type and timestamp
- Report file should display:
 - Election type
 - Number of ballots
 - Number of seats to be filled
 - List of candidates
 - Number of votes received per candidate
 - Percentage of votes received per candidate
 - Winners of the election

Definition of Done:

- Documentation (JavaDocs, In-line comments).
- Unit and integration tests are written and pass
- All exceptions are handled gracefully

Effort:

- Small
- 1-2 hours

PBI Author(s):

Amelia Lunning

PBI: Display results of the MV**Rank: Unranked**

As an election official

I want the system to display relevant statistical information for a municipal voting election

So that it will be easy to know who won and lost an election and the percentage of votes they received.

Acceptance Criteria:

- Election type is displayed on the screen
- Number of seats is displayed on the screen
- Number of candidates is displayed on the screen
- Number of ballots is displayed on the screen
- Winning candidates' names are listed with their vote percentage
- Losing candidates' names are listed with their vote percentage

Definition of Done:

- Refactoring
- Documentation (JavaDocs, In-line comments)
- Unit and integration tests are written and pass
- All exceptions are handled gracefully

Effort:

- Small
- 1-2 hours

PBI Author(s):

Zach Larsen

PBI: Audit file for MV**Rank: Unranked**

As an election official

I want to produce an election audit file for MV voting

So that the details of an MV election can be documented and tracked

Acceptance Criteria:

- The user is prompted to name the audit file.
- Audit file should be successfully created with a .txt extension
- Audit file should display:
 - Election type
 - Number of ballots
 - Number of seats to be filled
 - Number of candidates
 - Winners and voter percentage
 - Losers and vote percentage
 - Ballot assignments to candidates and their order.

Definition of Done:

- Documentation (JavaDocs, In-line comments).
- Unit and integration tests are written and pass
- All exceptions are handled gracefully

Effort:

- Small
- 1-2 hours

PBI Author(s):

Amelia Lunning

PBI: Bring in the MV as a .csv file

Rank: Unranked

As an election official

I want to be able to accept a csv file formatted for an MV election

So that I can process ballots and determine a winner for this type of election when the Secretary of State chooses it.

Acceptance Criteria:

- System must accept only a .csv file
- System must correctly parse and store ballots from the file
- System must correctly parse header info

Definition of Done:

- Refactoring
- Documentation (JavaDocs, In-line comments)
- Unit and integration tests are written and pass
- All exceptions are handled gracefully

Effort:

- Small
- Less than 1 hour

PBI Author(s):

Zach Larsen