

Name	Collect Ballots
ID	VS_001
Description	User is prompted for the name of ballot files
Actors	Voting Official
Organizational Benefits	By manually collecting ballots from files the voting official has a tabulated way of organizing ballots
Frequency of Use	One time
Triggers	User is prompted by system
Preconditions	Ballots are available in the system
Postconditions	Ballots have been collected and are in the system ready to be counted
Main Course	<ol style="list-style-type: none"> 1. User is prompted for ballots file names 2. User inputs ballot file names 3. User is brought to next input selection
Alternate Courses	AC1: Files not found in system <ol style="list-style-type: none"> 1. Bring user back to Main course 1
Exception	EX1: System fails to find ballots <ol style="list-style-type: none"> 1. Notify User 2. Return to Main Course 1

Name	Input Election Information
ID	VS_002
Description	Prompt the user to input the information for how many seats are available and the algorithm to use.
Actors	Voting Official
Organizational Benefits	Allows the election official a way to give election parameters
Frequency of Use	Once

Triggers	Voting official is prompted by system
Preconditions	Voting official knows what election information needs to be tabulated
Postconditions	The number of seats and type of election are known
Main Course	<ol style="list-style-type: none"> 1. System prompts user for number of election seats 2. User inputs number of election seats 3. System prompts user for type of election 4. User inputs number election type
Alternate Courses	AC1: User inputs a non number <ol style="list-style-type: none"> 1. Notify user of incorrect input 2. Return user to input selection AC2: User incorrects wrong input for election <ol style="list-style-type: none"> 1. Notify user of incorrect input 2. Return user to input selection
Exception	EX1: User decides to exit the selection Exit system

Name	Calculate Droop Quota
ID	VS_003
Description	Calculate the droop quota for stv elections
Actors	Voting Official
Organizational Benefits	Allows an automatic way to calculate the droop quota
Frequency of Use	Once
Triggers	Voting official inputs they want to perform an STV election
Preconditions	Number of votes in the system
Postconditions	The Droop Quota is known
Main Course	<ol style="list-style-type: none"> 1. User selects STV election

	2. System calculates the Droop quota
Alternate Courses	AC1 Ballots not in system 1. Bring user back to user ballot names VS_001
Exception	EX1 System fails to calculate droop quota 1. Notify User 2. Return user to ballot input

Name	Determine Number of candidates and number of ballots
ID	VS_004
Description	Read the ballots files to determine the number of candidates and number of ballots
Actors	Voting Official
Organizational Benefits	Allows the user an automated way of counting ballots and determining amount of candidates
Frequency of Use	Once
Triggers	User inputs ballot names
Preconditions	Ballot Files
Postconditions	Number of candidates and number of ballots are known
Main Course	1. File is found and read 2. The program counts how many comma separated values are on the first line 3. Iterate through every line and store ballot in a data structure and keep count of how many lines are read through 4. Repeat for every file.
Alternate Courses	AC1 File is unreadable 1. Skip reading file 2. Notify user
Exception	EX1 Unable to find files in system

	1. Notify user 2. Return user to VS_001 EX2 Mismatch of provided files 1. Notify user 2. Return user to VS_001
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Name	Shuffle Ballots
ID	VS_005
Description	Shuffle ballots in system
Actors	Voting official
Organizational Benefits	Allows for a fair election by not giving advantage to early voters
Frequency of Use	Once
Triggers	User initiates shuffle from system
Preconditions	Ballots are in the system
Postconditions	Ballots are shuffled in the system
Main Course	1. Run shuffling algorithm
Alternate Courses	N/A
Exceptions	EX1 Shuffle Fails to finish 1. Notify User 2. Prompt them if they want to attempt shuffle again

Name	Run voting algorithm
ID	VS_006
Description	Count the ballots and determine winner
Actors	Voting official
Organizational Benefits	Allows an automated way of counting the ballots

Frequency of Use	Once
Triggers	User is prompted to count the ballots
Preconditions	Ballots are in the system Election type and number of candidates are known If running STV droop quota has been calculated.
Postconditions	All candidate seats have been filled. Election audit file has been filed
Main Course	1. System starts counting ballots 2. At relevant steps write to election audit file 3. At end of election display an election results snapshot
Alternate Courses	AC1 User runs plurality election AC2 User runs STV election
Exceptions	EX1 System fails to decide winner 1. Notify User 2. Prompt user if they want to rerun the counting process.

Name	Display Help Information
ID	VS_007
Description	Display system help information to the user
Actors	Voting official
Organizational Benefits	Allows the user to access a help screen to answer relevant questions
Frequency of Use	As many times as needed
Triggers	User inputs help
Preconditions	User is a prompt screen
Postconditions	Help Screen is displayed
Main Course	1. User inputs help

	2. Help screen is displayed
Alternate Courses	N/A
Exceptions	N/A