

Use Cases

1. Prompt user to input seats and choose algorithm
2. Prompt user inputs filename for balloon information
3. Shuffle/Shuffle off
4. System generates the audit report
5. Help Window
6. Testing

1. User Inputs Seats and Chooses Algorithm

Name	User inputs seats and chooses algorithm
ID	UC_001
Description	Get user input information about the campaign and automatically choose which algorithm should use to generate result
Actor	User(Voting election official)
Organizational Benefits	Provide necessary information for the voting process
Frequency of Use	Once per campaign
Trigger	User press the "Input Seats and Algorithms" button
Preconditions	All ballot data has been collected. And the system is ready to be run.
Postcondition	System gets the information of seats and algorithm
Main Courses	<ol style="list-style-type: none">1. System prompt user input seats and algorithm information2. User input information of seats and algorithm3. System stores the information4. User submit their input and then system redirects the user to view saved information.5. User confirms submission
Alternate Courses	AC1: User input is not valid <ol style="list-style-type: none">1. System prompts user "invalid input"2. Return to step 1
Exception	System fails to save input information <ol style="list-style-type: none">1. System notifies user error occurs2. Return to main page

2. User Inputs Filename

Name	User Inputs Filename
ID	UC_002
Description	The user choose the file that they want to use
Actor	User(Voting election official)
Organizational Benefits	Providing necessary information of the election
Frequency of Use	Once for every election
Trigger	User presses "Input Filename" button
Preconditions	All ballot data has been selected and stored in a file
Postcondition	System gets the information of the ballot for a certain election.
Main Courses	<ol style="list-style-type: none">1. System prompt user input filename2. User inputs the filename3. System stores the filename4. User submits their input and then system redirects the user to view saved information.5. User confirms submission6. System reads the filename and store information
Alternate Courses	AC1: User input is not valid <ol style="list-style-type: none">1. System prompts user "invalid input"2. Return to step 1
Exception	System fails to save input information <ol style="list-style-type: none">1. System notifies user error occurs2. Return to main page System fails to read the file <ol style="list-style-type: none">1. System notifies user error occurs2. Return to main page

3. Shuffle/Shuffle off

Name	Shuffle/Shuffle off
ID	UC_003
Description	Users have the option to choose shuffle/or shuffle off. A campaign must turn on shuffle when running the result, and a test must turn off shuffle to make sure consistency of the result
Actor	Voting election officials
Organizational Benefits	Ensure fairness and provide a flexible way for testing systems.
Frequency of Use	Many time for testing, once for each campaign
Trigger	Users press “shuffle option” button
Preconditions	System is in the main page
Postcondition	System chooses the desired option either shuffle or shuffle off
Main Courses	<ol style="list-style-type: none">1. User chooses one option2. System stores the option3. User submits and the system redirects the user to view the option4. User confirms submission
Alternate Courses	AC1: User did not choose option but submit <ol style="list-style-type: none">1. System notifies “please choose”2. Return to step 1
Exception	System fails to save option <ol style="list-style-type: none">1. System notifies user error occurs2. Return to main page

4. System Generates The Audit Report

Name	Generate Audit report
ID	UC_004
Description	After all necessary information been typed in, the voting system run with this information to generate Audit report which include (e.g. type of election, number of seats, number of candidates, winners, losers, etc)
Actor	Voting election officials and Testers
Organizational Benefits	Simplify the campaign process and improve management efficiency
Frequency of Use	Once for every election/test
Trigger	User press "Generate report" button
Preconditions	All necessary information is being typed in.
Postcondition	The audit report generated in another text file
Main Courses	<ol style="list-style-type: none">1. User request to generate results2. User confirm request3. System run with the required information4. System display to the screen providing the details of the election as it is running5. System generates audit report6. System indicates the location of the audit report
Alternate Courses	AC1: System determine the user typed wrong information <ol style="list-style-type: none">1. Return to main page
Exception	System fails to display details of the campaign <ol style="list-style-type: none">1. System notifies user error occur2. Return to main page

	System fails to generate the report <ol style="list-style-type: none"> 1. System notifies user error occur 2. Return to main page
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5. User Uses Help Window

Name	User uses Help Window
ID	UC_005
Description	Providing information about the voting system to help users get some knowledge of how to use this program by using help window
Actor	Voting election official
Organizational Benefits	Help users eliminates confusion and make this program easy to use
Frequency of Use	Once a user needs some help or gets confused. .
Trigger	User pressed the "Help Window" button
Preconditions	System is in the main page
Postcondition	A help window pops up with helpful information
Main Courses	<ol style="list-style-type: none"> 1. User requests for help window 2. System shows help window with help information of how to use this program 3. User closes help window after finish 4. System redirects user to main page
Alternate Courses	
Exception	System fails to show help window <ol style="list-style-type: none"> 1. System notifies user error occur 2. Return to main page

6. Testers Do Testing

Name	Testers do testing
ID	UC_006
Description	Users could use this program to do testing.
Actor	Tester
Organizational Benefits	This ensures a way for maintenance and helps developers find existing and potential problems within the system.
Frequency of Use	Once a tester needs to do some testing on the system.
Trigger	Testers use the common line to execute the test file.
Preconditions	test data is selected correctly, the shuffle option should be turned off and the system works.
Postcondition	A testing result generated.
Main Courses	<ol style="list-style-type: none"> 1. Tester running this program by using command line arguments 2. Shuffle option is off 3. Tester input necessary informations like filename, seats and algorithms 4. System runs to get result 5. System compares results with expected result 6. System generates testing results
Alternate Courses	<p>AC1: Not enough input information but trying to run results</p> <ol style="list-style-type: none"> 1. System prompts warning “needs information to run” 2. Return to step 3 <p>AC2: Tester input the wrong input information</p> <ol style="list-style-type: none"> 1. System prompts warning “invalid information” 2. Return to step 3

Exception	<p>System fails to run results</p> <ol style="list-style-type: none">1. System notifies user error occur2. Return to step 1 <p>System fails to save input information</p> <ol style="list-style-type: none">1. System notifies user error occur2. Return to step 1 <p>Shuffle option is still on</p> <ol style="list-style-type: none">1. System notifies user error occur2. Return to step 1 <p>System fails to generate testing result</p> <ol style="list-style-type: none">1. System notifies user error occur2. Return to step 1
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