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| Name | System reads file |
| ID | UC\_002 |
| Description | When the user entered the filename then the system will open the file, which is the vote OPL and CPL file will be exported from Excel into the CSV format, it will be comma separated values for the ballots where each row is separated by a newline. System will read the data inside the files. |
| Actors | Programmers, Testers, Government officials |
| Organizational Benefit | This will reduce the time needed to produce a new file or audit the election if necessary, improving productivity for Government Officials.x |
| Frequency of Use | This will be used at least once a year for major elections |
| Triggers | When the user entered the filename |
| Preconditions | * The filename can be searched in the system successfully * The input file has already been successfully loaded in by the user prior to this use case. * All necessary information to run the processing is contained in the input file (ie. closed vs. open party list). * Independent candidates are grouped into a single independent party. |
| Postconditions | * A single output file is produced. * Input data is not altered. * All proper steps of the voting process are recorded into the output file. * Output file is readable |
| Main Course | 1. User log into the system. (SEE AC2) 2. Users enter the filename that they want to open. 3. User read the file that they opened. (SEE AC1) |
| Alternate Courses | AC1: There are no ballots remaining.   1. Each candidate/party is recorded into the audit file with their total vote counts.   AC2: Users cannot open the file.   1. Users back to the Main course1 and re-entered ID. |
| Exceptions | EX1: There are no ballots cast on the ballot   1. Alert the user of this issue, and (question on how to address this) |

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| Name | Produce Audit File |
| ID | UC\_003 |
| Description | An audit file is created when UC\_004 begins to run where all election information is recorded into. Audit information includes the type of election, number of candidates in the election, candidate names, number of ballots, any calculations made, and total number of votes a candidate has. |
| Actors | Programmers, Testers, Government Officials, Voting System |
| Organizational Benefit | This will reduce the time needed to audit the election if necessary, improving productivity for Government Officials. |
| Frequency of Use | This will be used at least once a year for major elections |
| Triggers | UC\_004 is in effect. |
| Preconditions | * The input file has already been successfully loaded in by the user prior to this use case. * All necessary information to run the processing is contained in the input file (ie. closed vs. open party list). * Independent candidates are grouped into a single independent party. * System can create and write to a file. * Voting system is operating in conjunction. |
| Postconditions | * A single output file is produced. * Input data is not altered. * All proper steps of the voting process are recorded into the output file. * Output file is readable |
| Main Course | 1. New output text file is created. 2. Ballot is processed by UC\_004: (see UC\_004 Main Course step 2) 3. Ballot processing steps are recorded in the output text file. (see AC1) 4. Candidate (and party) with the most votes are recorded into the audit file. (See EX1) 5. Data stream to output file is closed. (See UC-005) |
| Alternate Courses | AC1: There are no ballots remaining.   1. Each candidate/party is recorded into the audit file with their total vote counts. |
| Exceptions | EX2: There are tied candidates/parties   1. Presence of a ties is noted in audit file. 2. Results of the coin flip are recorded. 3. Jump to Main Course step 4. |

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| Name | Run Vote Processing |
| ID | UC\_004 |
| Description | After all ballots for an election have been cast and converted into a comma-delimited text file, and that file has been passed in by UC\_001 and UC\_002, a user runs the vote processing software. |
| Actors | Programmers, Testers, Government Officials |
| Organizational Benefit | This will reduce the time needed to accurately count ballots and determine the winner of an election to improve productivity for Government Officials. |
| Frequency of Use | This will be used at least once a year for major elections |
| Triggers | The user enters the “run” command. |
| Preconditions | * There are no errors in the input file. * There is exactly one input file. * The input file has already been successfully loaded in by the user prior to this use case. * All necessary information to run the processing is contained in the input file (ie. closed vs. open party list). * Independent candidates are grouped into a single independent party. |
| Postconditions | * The input file has not been altered. * An audit log detailing a vote-by-vote account of the election has been produced. * The results of the election have been displayed and can be shared with the media. |
| Main Course | 1. The first line of the input file specifies that the election uses open party list voting. (See AC1) 2. For each ballot contained in the input file, the system will: (See EX1)    1. Increase the vote count for the selected candidate by 1.    2. Write the ballot number and selected candidate to the audit log. 3. Once the last ballot has been recorded, display the total number of votes and the percentage of the votes cast for each candidate and party. 4. Declare the candidate (and party) with the most votes as the winner, write this to and finalize the audit log. (See EX2) 5. Prompt the user to send the results to the media. (See UC\_005) |
| Alternate Courses | AC1: The first line of the input file specifies that the election uses closed party list voting   1. For each ballot contained in the input file, the system will:    1. Increase the vote count for the selected candidate by 1.    2. Write the ballot number and selected candidate to the audit log. 2. Jump to Main Course step 3. |
| Exceptions | EX1: There are no ballots cast on the ballot   1. Alert the user of this issue, and (question on how to address this)   EX2: There are tied candidates/parties   1. Decide the winner through a fair simulated coin flip. 2. Record the results in the audit log. 3. Jump to Main Course step 4. |