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| Name: | Check the majority in IR |
| ID | UC\_006 |
| Description | The program has determined that the voting system will be performed as an instant run off and starts to determine a winning candidate, and it’ll check if there is a candidate receiving over 50% votes and becoming the majority. |
| Actors | Election official, testers, and programmers. |
| Organizational Benefits | It would help the organization to organize and have a plan for the voting process. |
| Frequency of Use | The first line of the CSV file is “IR”. |
| Triggers | Original first choice votes are ready, or new total votes of each candidate after transferring votes is ready. |
| Preconditions | A CSV file has successfully loaded, and no error has occurred. |
| Postconditions | A candidate who receives a majority of the votes is considered as the winner. A majority means that the winning candidate has received more than 50% of the votes cast. |
| Main Course | 1. System determines the highest candidate. 2. System divides the highest number by the number of the total votes. 3. System compares the percentage of the highest candidate to 50%. When the highest candidate receives more than 50% of the votes, there is a majority. (EX1) |
| Alternate Course | AC1  1. System read the first line of the CSV file and recognize that it’s start with the IRS, so it’s IRS method  2. The program parsed the line 2-4 of the CSV file to determine the number of candidates, who’s the candidate, and numbers of ballots (lines).  3. System divides the highest number by the number of the total votes.  4. System compares the percentage of the highest candidate to 50%, and if there’s no majority, it will consider it as a tie |
| Exceptions | EX1 System gets a percentage out of range (0,100%)   1. System notifies the user that an error has occurred. |