**The user’s guide contains any additional features your team has added that were not a part of the minimum requirements, and must describe how to use your program and each additional feature. Features that are NOT listed in the user’s guide will not be considered during judging.**

In order to add candidates for any office in any year to the database, the user must open the county auditor module and execute the YearSelectionApp. After doing so, the user may register a candidate with their name, zip code, state, office, and party. If the zip code is not 5 numerical digits long or does not exist within the selected state, an error message is displayed in the window.

In order to vote, the user must first register themselves in the database. To do so, the user needs to run the VoterRegistrationApp. Once executed, a window will appear and prompt the user to enter their first name, last name, social security number (SSN), zip code, and state. If the entered SSN is not nine digits of numeric characters, an error message is printed on the window. If the zip code is not five digits of numeric characters, or doesn’t exist within the state entered, an error message is printed on the window. To test this program, try registering a voter in the zip code 60565 or 52240 or 52242 or 60571.

Once registered, a user may vote. In order to do so, the user must run the VoterLoginApp. Once executed, this app will bring-up a window that prompts the user to enter their zip code and social security number. If the user enters a SSN that is not 9 digits of numeric characters, or a zip code that is not five digits of numeric characters, and that the entered SSN and zip code are stored with a registered user in the database. If any one of these checks fails a message is printed on the window. To test this program try signing in as a registered voter with the zip code 60565 or 52240 or 52242 or 60571.

When the user successfully logs in, a new window details the possible candidates the voter can vote for. This window contains four tabs, the voter is not required to vote for someone in each drop-down box in each tab. Additionally, there are likely only registered candidates in the years 2012 and 2016 and from one of the aforementioned zip codes. Once the voter has selected their desired candidates, in order to submit their ballot, they need view the summary tab (detailing their choices) and click the submit button.

Should the user desire to view the results of the election, they need to run the VotesResultsApp. Once executed, this application will bring-up a window in which the user can view the results of the election from any year. In this window exist three tabs, each of which display the results relevant to one level of government (federal, state, or county). In the federal tab, there is a drop-down menu where the user can select the office they wish to view the election results for. There is also a slider for the user to choose the year in which they desire to view election results. There is also three buttons for the user to select the visual tool to view the data with (bar chart, pie chart, or Electoral College bar chart). In the state tab, in addition to the drop-down menu for offices, the slider for choosing year, and the buttons for choosing method of visual description, there is also a second drop-down menu for choosing the state in which the user wishes to view the results. In the county tab, in addition to the same drop-down menus, slider, and buttons in the state tab, there is a third drop-down menu for the user to select the county they wish to view the results for. In any tab, if the user selects some combination of office, state, county, and year for which no votes have been entered and/or no candidates have been registered, then a message stating that there is no data is printed in the space where charts are displayed.

Additional Features:

* CountyAuditor
  + Registering candidates need only enter their zip code
  + Validate that zip code has 5 digits
  + Allows auditor to enter the year of future elections
  + Authentication that the entered zip code exists within the entered state
* VoterRegistration
  + Interface that allows voters to register for elections
  + Social security number is checked for proper form (9 digits of only numerics)
  + Voter social security number is encrypted upon registration
  + Voter zip code is checked to ensure it corresponds to an existing zip code in the voter entered state
  + Zip code is checked if it is 5 digits of numeric characters.
* VoterBallot
  + Voter login with encrypted social security number
  + Checks if the SSN is 9 numeric digits, and if the zip code is 5 numeric digits
  + Checks entered SSN and zip code against database containing existing registered voter information
  + Voters are limited to one ballot submission per election
  + Voters are able to vote for federal, state, and county officials
  + Summary tab to allow the voter to check all votes before submitting ballot
  + After a voter submits their ballot a new login appears for the next voter to allow sequential voting
* VotesResults
  + Ability to view previous election results
  + Two options to view the election results (bar or pie chart)
  + Three tabs to view each level of election results
  + Dropdown menus to choose office, state, and/or county when applicable
  + Ability to view Electoral College results for the presidential election.