

## Background Information

There are two major national political parties in the United States. The Democratic party and the Republican party.

### **Presidential Elections**

Presidential elections occur once every 4 years, in the beginning of the month of November. The winner of the presidential election is determined by the candidate who receives 270 or more of the 538 electoral votes. The number of electoral votes per state in a Presidential Election depends on its population size. No matter how small the population of the state is, it has at least 3 electoral votes. In 48 of the 50 states, the candidate who receives the most votes is determined to be the winner. In two states, the candidate with the most votes wins 2 electoral votes, and the rest of the electoral votes are split by the winner of specific regions of the state.

### **The Legislative Branch**

The Federal Legislation of the United States occurs in two separate legislative parliaments. The Senate and the House of representatives.

### **Senators**

Regardless of the size of the population of a given state, each state has exactly two senators in congress. There are 50 states  $\times$  2 senators per state, which yields 100 senators altogether. A senator remains in office for 6 years and is elected to the position in a statewide election.

Senate elections occur on even numbered years. If the years happens to be a presidential election year, then the elections for Senator and President occur on the same day. Otherwise, they will occur in the beginning of the year. Unless there is a special circumstance, states will run elections for senators such that only one senator is elected during an election cycle. Therefore, in a 6-year cycle, typically in 2 of the 3 even numbered years a state will have a senator up for election and in 1 of the 3 even numbered year both senators will remain in office with no election.

Currently, there are 50 Republican Senators and 48 Democrat Senators and 2 Independent Senators. In practice, the 2 independent senators are closely aligned ideologically with the Democratic party and one can assume that they are Democrats.

## **House Members**

The number of states representatives in the house of representatives varies by the population of the state. States with smaller population may have only one representative in the house of representative while the state of California (the state with the greatest population) currently has over 50 representatives in the House. A state with more than one representative in the house of representative will split into districts of roughly equal population size and each district will elect a single representative to the house of representative.

A representative in the house is elected for a 2-year term and the elections occur in the beginning of the November in an even numbered year. If an even numbered year does not have a presidential election, it is referred to as a mid-term election, since it occurs in the middle of a presidential term. Some political pundits claim that midterm elections are a form of referendum on the president.

## **Assignment**

This assignment will be focused on the elections to the House of Representatives that occur every other year. Furthermore, rather than attempting to estimate how each congressional district within a state voted, we will be interested in the overall number of votes per state (voter turnout) and who had more votes in a particular state per election, a Democrat, or a Republican.

The bonus section will be predicting the outcome of the 2022 senate midterm elections. With your prediction model, maybe you will be able to predict if the 50-50 tie in the senate will be broken and who will have the upper hand.