

**Name: Mohammed Deeb**

**SFSU ID: 922875899**

**Github username: MohammedDeeb261**

### **Game: GrammarWise**

GrammarWise is an English grammar game that helps students practice English grammar and do better in school. This game targets middle school students. As a student who has never been good at or enjoyed English classes, I thought that practicing English grammar through a game would be a lot more fun than solving regular worksheets. So I created this game to make English classes more fun for middle school students.

### **How to play:**

GrammarWise has three game mode:

1. **Capitalize Words:** in this game mode the player will have an uncapitalized sentence and they need to click the words that need to be capitalized. Clicking the right word rewards the user with one point, while clicking the wrong word will subtract half a point. The displayed sentences are picked randomly from a list of sentences. So each match might have different sentences in different order.
2. **Homophones:** in this game mode the player will see a sentence with a missing word. The player will have to click one of two displayed words which fits the displayed sentence. Choosing the right word is challenging because the two words sound very similar but they are spelled differently and have different meaning. This helps players to differentiate between words that sound similar but have different meanings. The player gains 1 point if they answer right, and loses half a point if they answer wrong. Sentences are also randomly chosen by the program.
3. **Parts of Speech:** in this game mode the player will have one word, and the challenge is to find the right part of speech for this word. They will be presented with the eight parts of speech and they have to click the right one. If they click the wrong one they will lose half a point. The definition of the incorrect part of speech they chose will be displayed to help them understand why it is the wrong choice. They must keep trying to get the right part of speech. This means it's possible to lose 3.5 points in one round while they can gain only one, which makes this game mode challenging. The words are randomly chosen by the program from a list of words.

All these gamemode have 10 rounds. After the 10th round a page with their score will appear. To make this game as convenient as possible for the player to learn from it, I added a next button that allows the user to move to the next round once they are ready. The reason for this button is to give the player time to see what they got wrong and think about why it's wrong. In the parts of speech game mode they will have more time to read the definitions if they need to. The data in this game was taken from english worksheets that I found on this website:  
<https://www.ereadingworksheets.com/languageartworksheets/free-grammar-worksheets>

### **Issues and how you resolved them:**

**Problem 1:** the background image is a ruled paper, my goal was to have the sentences displayed over the lines of the paper. However, after I made that work, I tried to zoom in and out which caused the words to move away from the lines. The reason for this is that I had the background-size: cover on the css of the body. The issue was fixed when I removed it.

**Problem 2:** one of the things I needed to consider while programming this game was what is going to happen when the user clicks the right word or the wrong word. However, I realized that my program allows the user to keep clicking the right word and keep winning points. To fix that I used the removeEventListener function to disable the player from clicking the word they already clicked.

Problem 3: similar to problem 2, when the player wins the round they are able to click the words they haven't clicked yet (which are wrong words). Meaning they might lose points by accident after they won. To fix this I iterate through the array that contain all the word elements and removes their event listeners, so that the player is enable to click anything but the next button.