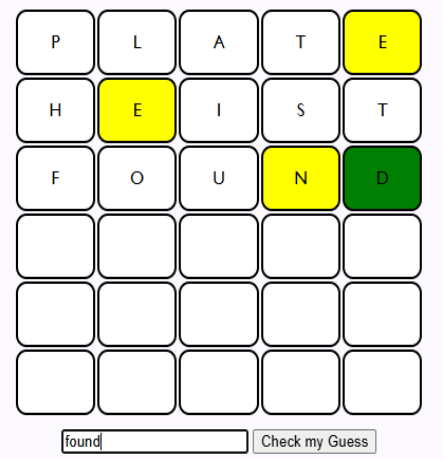
CS 120 Web Programming
Project 2: Wordle

Tasks
Create the game of Wordle

Objectives
Create an interactive game using HTML/CSS/JavaScript utilizing programming elements and UI/UX.

Requirements
✓ Implement the game of Wordle *similar to* the NY Times version. In the game, the user gets 6 tries to guess a 5 letter word. Each guess must be a 5 letter word.

IMPORTANT: see the screenshot for a model of how your implementation should appear. You are welcome to add enhancements as long as you meet the requirements.



✓ After each guess report the following to the user using a visual cue such as changing the background to indicate the status of each letter.
- Letters that are in the correct place. (usually green)
- Letters that are in the word but are in the wrong position. (usually yellow)

✓ Get the *guess* from the user using an input text field and a button.

✓ Get the answer randomly from a "dictionary" (array) of 5 letter words *that you create* (you must have at least 30 words).

- ✓ Display a used letter board indicating letters used. The used letter board must include a visual indicator of whether the used letter was correct/in the wrong place/ or not in the word. An example is shown below:

- ✓ Display the answer for each game in the console (to assist with debugging)

- ✓ Include a button that will restart the game when clicked. Hide the button until the game is won or lost.

- ✓ If the user uses up all 6 guesses without guessing the word, show the answer word in a popup (and show the button to restart the game).

- ✓ *The game should be responsive down to 600px*

- ✓ You must include the following constructs as a minimum:
  - An array
  - An arrow function
  - An event handler
  - .map or .forEach
  - A JavaScript class

Example response:
Answer: PRIDE
Guess: DOPED
the D is in the wrong place
the O is not in the word
the P is in the wrong place
the E is in the wrong place
the second D is not in the word

We will be looking for a creative implementation, not merely getting it to work.
You MAY NOT look up how to code the game online – that will be considered cheating.

Optional extra credit: Add an API (10 points)

Incorporate an API – you only need to do ONE of the following:

- Use an API to get a 5 letter word for the answer in real time when the game starts
- Use an API to check if a 5 letter guess word is a valid word

Note: Find a free API. You may need to try more than one to get it to work as you want.

Optional extra credit (5 points):

- Display the average guesses needed for the user on that device over multiple browser sessions (hint- use a cookie)

Rubric:

Deliverables	10 points
Works and meets all requirements	60 points
Excellent user interface	15 points
Code quality	15 points
Extra credit – up to 15 pts	

Hints!

The following are suggestions for the development process of creating your Wordle website as well as how to break this problem down. These are suggestions- not requirements.

1. Create the board first.
    a. Create a function to do one word and then loop to call it six times.
    b. Use a for each of the cells
    c. You may add the div's with document.write
    d. Add a class to the to be able to style each letter. Add a second class to identify the position of the letter. Elements can have two or more classes separated by a space

2. Add the guess input box and button to submit the guess. Attach an event handler to the button that reads the word entered, validates that the word is 5 letters (display an error if it is not) and displays the word in an alert.

3. Change the event handler to place the word in the letter boxes for the first word

4. Set a variable to indicate the "current" word – ie, it should move down to the next word after a word is entered. Update the event handler to be able to fill in all 6 words. After the 6th word, display "game over" in an alert.

5. Hard code a word to be a guess – update the event handler display in an alert the status or each letter: correct/wrong place/not in word

6. Update the event handler to shade letters based on their status – suggestion: add a class to a letter to color it as correct/wrong place

7. Update the event handler to report a win or after 6 words, to display the answer word

8. After that is all working, then add API, extra credit, other enhancememts.

Deliverable worksheet

- ❑ All html/css/js files (combine into a compressed/zip file)
- ❑ URL for wordle game

  URL: _____

Project requirements- check off those you completed.

- ❑ Game is complete and runs online
- ❑ An array
- ❑ An arrow function
- ❑ An event handler
- ❑ .map or .forEach
- ❑ A JavaScript object
- ❑ Used letter board
- ❑ Optional: use of an API
- ❑ Optional: track average score

Are there any extra features you added that are not listed above?

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What is your favorite topic in the course so far?

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