INFO 6250 – Web Technology
SPRING SEMESTER 2023

Due Date: Saturday 21 January 2023, 10:00 AM

Option 1: Tic-Tac-Toe Game

Tic Tac Toe is a two-player game where each player takes turns placing their symbol (either "X" or "O") on a 3x3 grid. The player who succeeds in placing three of their symbols in a horizontal, vertical, or diagonal row wins the game. If the grid is filled and no player has won, the game is a draw.

Using HTML and JavaScript create a tic-tac-toe game, where HTML is used to create the grid layout and button for the players to click on, and JavaScript is used to handle the logic of the game.

B+ Grade:

1) 1)Use HTML to create a 3x3 table for the grid.
2) Each cell contains a textbox, where the user can enter an "X" or "0".

   Note : Validate input tag using pattern attribute
   https://www.w3schools.com/tags/att_input_pattern.asp
   https://www.w3schools.com/tags/att_input_size.asp

3) Add a "Who Won?" button, which checks the result (Which player has won 'X' or '0' , if no player has won then it's a 'Draw') and then displays the result on the page, once the manual game is completed.

   Note: "Who Won? " , should also check for invalid conditions , one such example is , if the user enters all "X", then the result should display "Invalid Game".

4) Add a "Reset" button, which clears the data from the textbox and result sections.

A- Grade:

1) Use HTML to create a 3x3 table for the grid.
2) Each cell contains a button , where the user can enter an "X" or "0".
3) Add, additional 4 buttons "Start Game" , "Rest Game" , "X-Turn" , "0-Turn"
4) The game is played by clicking on the following button
   a) "Start Game" - This will clear all values of the button and result section. And initialize any variables that are used and disable itself and enable "Reset Game"

      Note: https://www.w3schools.com/jsref/prop_pushbutton_disabled.asp

   b) "X-Turn" - After the user clicks on "X-Turn" button, after that when the user click on any cell in the grid , the value of the grid will turn to "X". (Similar behavior for "Y-Turn" button)
   c) "Who Won ?" - See B+ Grade explanation
   d) "Reset Button" - Reset the game to its initial state by clearing all its values
5) Display a local history of all the results of the games played (History will only be maintained if the page is not refreshed)

A Grade:

1) Use HTML to create a 3x3 table for the grid.
2) "Start Game", initializes the game, where the user can click on the button and the current player's symbol ("X" or "0") is displayed on the button.
3) Once the game is completed , the result is displayed
4) Implement your own user experience, how to reset the game once the game is completed or if the players want to abandon the game mid way.
5) Display the result of all the games played.

Option 2: Wordle Game

How to play : ▶ How to play Wordle /

▶ How to Play Wordle: What It Is + A Beginner's Guide

Eg: https://www.nytimes.com/games/wordle/index.html

(Ignore the comment from the videos, "It can be played only once a day" - This is NOT to be implemented)

Grade A- :

1) Create a grid of 6 rows x 5 Columns (ie. 5 Letter word , 6 Attempts)
2) Each Cell in the grid will be a TextBox, where the user can enter only in a single Letter(A-Z). After the player hits enter, the focus will move to next adjacent textbox
3) Create a static list of 5 words, one of those 5 words will be randomly selected from the list after the player clicks on "Start Game".
4) "Check" button would check the word entered and color the cells the correct background color based on the rules of the game .
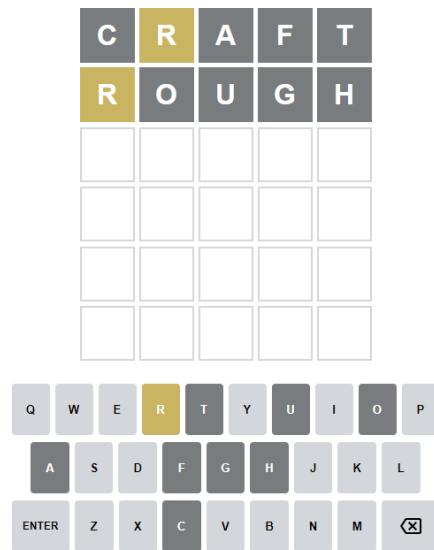
    Note:
    - It should check that all 5 letters are present.
    - For this assignment the 5-letter word does not need to be a valid word from the dictionary, but the player should be entering valid word keeping in spirit of the game

5) "Restart" button will clear all data entered and restart the game
6) Display the historical result of all attempts (Each student can decide what is the best information to display as results) ,

    Eg: What information to be displayed as historical results.
    a) Display the final word guess , if Correct or Wrong OR
    b) Numbers of Wins vs Losses OR
    c) ...

Grade A :

1) Create a grid of 6 rows x 5 Columns (ie. 5 Letter word , 6 Attempts)
2) Each Cell in the grid will be a textbox which can capture only alphabets
3) Create a static list of 5 words, one of those 5 words will be randomly selected from the list after the player clicks on "Start Game".
4) Create a virtual keyboard layout on the HTML page

Acceptable Functionality to enter the word:

a) Click on a single cell , then once you click on the button of your virtual keyboard, it will enter the letter click and focus will move to the next cell.

Note: https://www.w3schools.com/jsref/met_html_focus.asp

OR

b) You MAY try to enter the word directly via the keyboard where the cells are buttons. (Similar to the NY times games example)

Note: If this functionality does not work for any reason you will get B+, need a working project, grade for trying is B+.

5) The word will be check, when enter key is pressed in the virtual keyboard

   Note:
- It should check that all 5 letters are present.
- For this assignment the 5-letter word does not need to be a valid word from the dictionary, but the player should be entering valid word keeping in spirit of the game

7) "Restart" button will clear all data entered and restart the game

8) Display the historical result of all attempts (Each student can decide what is the best information to display as results) ,

   Eg: What information to be displayed as historical results.
   d) Display the final word guess , if Correct or Wrong OR

   e) Numbers of Wins vs Losses OR

   f) …