Research Topic   (Tic Tac Toe   )

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ABSTRACT

- The Tic Tac Toe Originally it's a paper game for 2 players X and O they struggle to fill within the spaces that form 3x3 or 4x4, The winner is that the player who can place three of his similar marks in an exceedingly horizontal, vertical or diagonal row.

- In different countries, they provide them faulty names like :

  1- In usa And Canada name it Tick-tack-toe, tick-tat-toe, tic-tac-toe
  2- In uk , Australia, South Africa , New Zealand, Republic of

Ireland , Zimbabwe And India named it Noughts and crosses or naughts and

crosses

  3- In European country named it Exy-ozies
  4- In Egypt, Ireland, Canada And Zimbabwe named it Xs and Os

- William Wordsworth write the tic-tac-toe in his book named The Prelude (1799).

- A player can play an honest game of tic-tac-toe to achieve to his goal if it's their intercommunicate play, they choose the primary available move from the subsequent list, as used in Newell and Simon's 1972 tic-tac-toe program.

Contents

1. History

Games that are played on triple boards or on the same style of games can be traced back to the ancient Egyptians, where many of the paintings of these types of games were found on the roof tiles dating back to about 1300 BC. A type of Tic-Tac-Toe game was played in the Roman Empire, from about the first century BC It was called at this time terni lapilli (three gravel at a time) and not an unlimited number of pebbles, each player had only three pieces, and therefore they had to move them to different empty places to continue playing. A type of such game such as a network mark of chalk is found throughout Rome. It is another closely related ancient game that is three Morris for men that is also played on a simple grid and requires three consecutive pieces to finish, [8] and Picaria, the Puebloans game .The different names of the sport are newer. the primary print relation to "noughts and crosses" (nought being an alternate word for zero), land name, appeared in 1858, in a problem of Notes and Queries. Many names appeared for this game. the primary printed name "noughts and crosses" (the word wasn't an alternate to zero), land name, appeared in 1858, in a number of notes and queries.The first name almost like a game called "tic-tac-toe" was in 1884, but it remarked "a children's game played on a board, consisting of trying to shut the eyes to drop the pen on variety from a collection of numbers written on a board that had been agreed upon so recorded the primary try .The name of the sport "Tic-tac-toe" may additionally be almost like and derived from "tictac", which is that the name of the backgammon game with its old version that was first discovered and described in 1558. The us was renamed "noughts and crosses" as "tic" -tac-toe "in the 20th century.

2. Game play

The different names of the game are more moderen. the primary print relevance "noughts and crosses" (nought being another word for zero), British people name, appeared in 1858, in a difficulty of Notes and Queries. Many names appeared for this game. the primary printed name "noughts and crosses" (the word wasn't another to zero), British people name, appeared in 1858, in a number of notes and queries. The first name just like a game called "tuk-to-to-to" was in 1884, but it noted "a children's game played on a board, consisting of trying to shut the eyes to drop the pen on variety from a collection of numbers written on a board that had been agreed upon then recorded the primary try. The name of the sport "Tic-tac-toe" may additionally be just like and derived from "tictac", which is that the name of the backgammon game with its old version that was first discovered and described in 1558. The u. s. was renamed "noughts and crosses" as "tic" -tac-toe "in the 20th century.
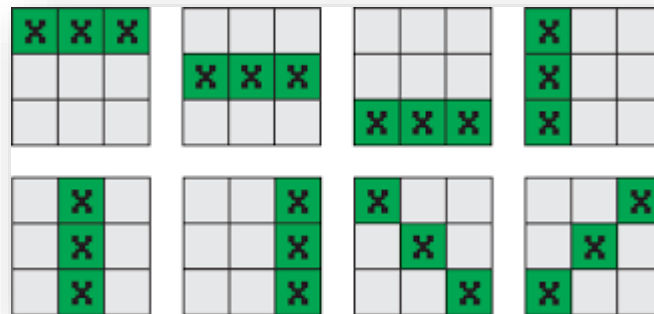
Fig 1 shows game play of tic tac toe

3. Codes and Method's Uses

We will explain in this part on the methods that were used until we write the code for programming this game through the language of html and css and jq and js until we get to what is found in fig 2.
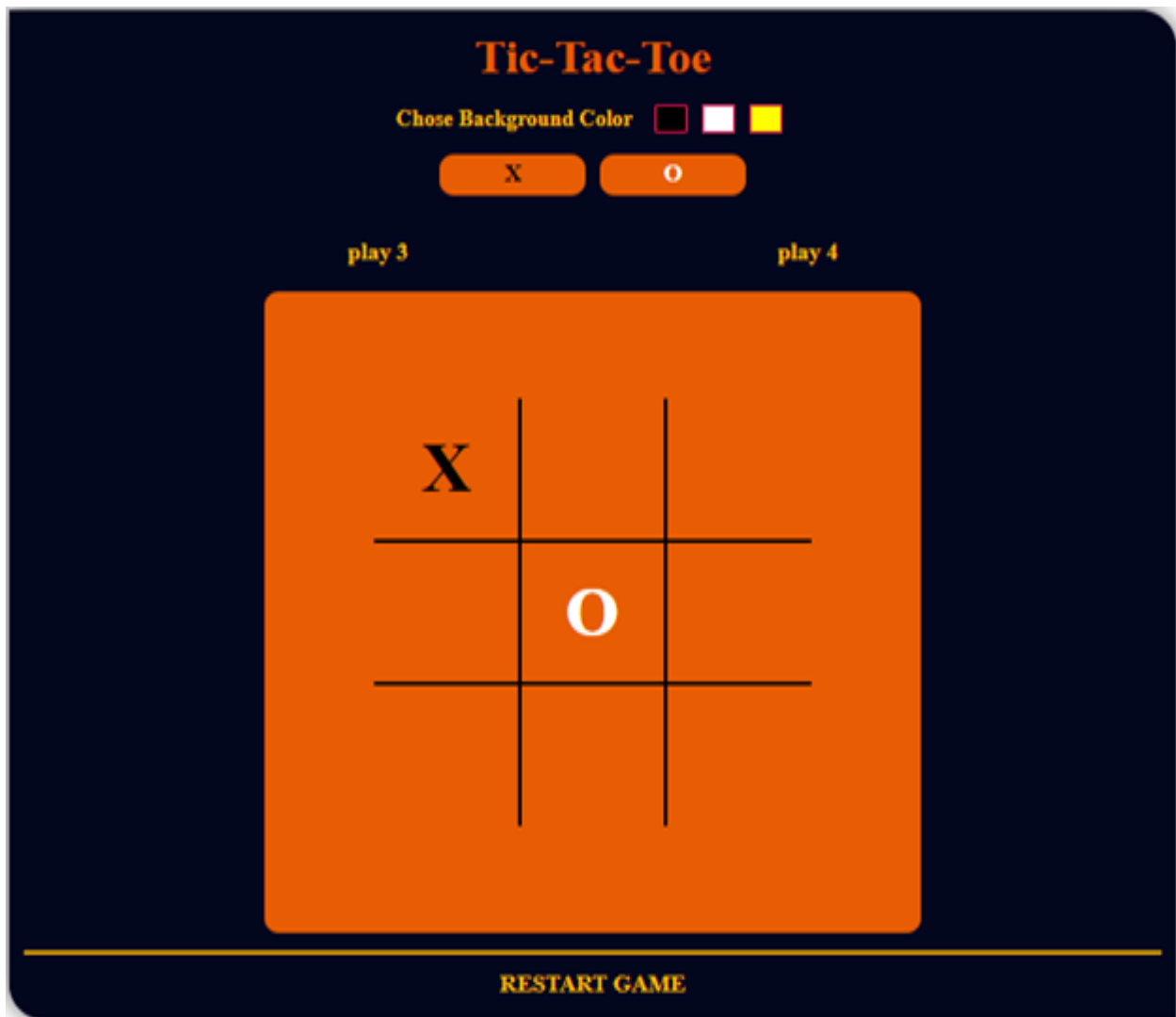

Fig 2 shows the codes and method's used

3.1   HTML

In the html code we have done a div container so that it contains the game and we put it in the middle of the page by margin: 0.5% auto; After that we made h1 tag a group of divs under each other. The h1 tag contains the name of the game "Tic-Tac-Toe". The first div contains a group of small colored spans, each span has its own color. When clicking on any of them the background color changes according to the color that I pressed. The colors are black (default) or white or yellow. The second div contains two buttons X & O. The default color is X black and O white. When you press on either of them, the hidden div will appear with two color black and white to choose if you want the color of X to be white or black. As well as the button O. If you press X and choose white it will change the color of X to white and the color of O to black and if you choose black it will change the color of X to black and the color of O to white. Likewise, If you press the button O, two black and white colors will appear and you will choose the color of O that you like to play with. The third div has two words, play3 and play4, the default is play3, which is the game with 9 cells. If you press play4, the game with 16 cells will appear, and if you press again on play3, the game will appear with 9 cells, which is the default that appears in front of you on the screen when the game is downloaded. The fourth div is a hidden div that appears when player X or player O wins and tells you which of them won. The fifth div is the div that contains the game, whether the game is 9 cells, which is the default, or 16 cells, which are hidden under it by visibility: hidden, z-index: 1 appears when you click on play4. The sixth thing is horizontal line, hr. Seventh, a div that contains the word restart game, when clicked, the game starts again.

3.2 Css

In the Css code, we used some selector and attributes to organize the appearance of the game, like…

box-sixing: that allows us to include the padding and border in an element's total width and height. and with it prefix for old browsers or that do not support this feature.

We put the div container in the center of the page and made all the divs inside it to be centered by:

<div align="center">display: flex</div>

<div align="center">flex-direction: column</div>

<div align="center">align-items: center</div>

Then we put some layouts and colors on the tages, to give us a good appearance.

3.3 JQ

In jq code when you press the x button the hidden div appears by "visibility", "visible" and when you click on any color you will choose a color for X and the second color will be for O and then hide the div. also when you press the O button.

Changing the background color of the game.

When you click on the white div, it will change the background color to white and the color of title, the color of words, the color of the buttons XO, the color of the game's place and also the hover that is on the cells of the game, all of these will change their color for colors consistent with the white background.

When you click on the yellow div, it will change the background color to yellow and the color of title, the color of words, the color of the buttons XO, the color of the game's place and also the hover that is on the cells of the game, all of these will change their color for colors consistent with the yellow background.

When you click on the black div (default), it will change the background color to black and the color of title, the color of words, the color of the buttons XO, the color of the game's place and also the hover that is on the cells of the game, all of these will change their color for colors consistent with the black background.

3.4 JS

We put a function that it would do if the user pressed div and set the turn value to start with true

The function named (insrt) will check if the value of turn is if it is true and there is no writing on this div if it will write X in the div and give it the color and if the value is false and there is no writing on this div will write O and give this div a color

and this function will do the another func that name checkwinner as show in the fig 3

the function checkwinner we do an array that contian the all div's and make the Terms to know who win The player x or player O

we make the terms as we know in the topic number 2 (Game Play) and make that function do the reset function that make the row or column or diagonal that win change the style color to red to make the user know which row or column or diagonal that make him win

The function checkwinner of the player 3X3 sure different from the function checkwinner of the player 4X4 because the terms of because the terms of 3x3 different from the terms of 4x4.

```js
function insrt(id){
    var M = document.getElementById(id);
    if(turn && M.innerHTML=="" && w){
    document.getElementById(id).innerHTML="X";
    document.getElementById("k3").innerHTML="O turn now";
    document.getElementById(id).style.color="black";
      turn= !turn;
    }
    else if(!turn && M.innerHTML=="" && w){
        document.getElementById(id).innerHTML="O";
         document.getElementById("k3").innerHTML="X turn now";
         document.getElementById(id).style.color="white";
        turn=!turn;
    }
    checkwinner();
}
```

Fig 3 shows function insrt