```html
<html>
<head>
    <title>Tic Tac Toe Game</title>
    <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <!-- when the page loads the its going to call the function start the game -->

<body onload="startGame();">
        <h1>Tic Tac Toe</h1>

        <!-- all the messages are getting the id -->
        <div id="message">messages will go here</div>

    <table align ="center" border="5" >
        <!-- Centering the table row -->
        <tr align="center">
            <!-- oncick does a certain action when it is clicked on, in this case it activates the
nextMove function -->
            <td id="s1" class="Square" onclick="nextMove(this);"></td>
            <td id="s2" class="Square" onclick="nextMove(this);"></td>
            <td id="s3" class="Square" onclick="nextMove(this);"></td>
        </tr>
        <!-- Centering the table row -->
        <tr align="center">
            <!-- oncick does a certain action when it is clicked on, in this case it activates the
nextMove function -->
            <td id="s4" class="Square" onclick="nextMove(this);"></td>
            <td id="s5" class="Square" onclick="nextMove(this);"></td>
            <td id="s6" class="Square" onclick="nextMove(this);"></td>
        </tr>
        <!-- Centering the table row -->
        <tr align="center">
            <!-- oncick does a certain action when it is clicked on, in this case it activates the
nextMove function -->
            <td id="s7" class="Square" onclick="nextMove(this);"></td>
            <td id="s8" class="Square" onclick="nextMove(this);"></td>
            <td id="s9" class="Square" onclick="nextMove(this);"></td>
        </tr>
        </table>
        <!-- Creating the button to start over, making it a link by using href -->
        <a href="javascript:startGame();"><button class="button">Start Over</button></a>
    </body>

    <style>
```

```css
/*Styling the class square */
.Square {
    width: 150px;
    height: 150px;
    text-align: center;
    font-size: 20pt;
    font-weight: bold;
    font-family: Verdana;
}
/*Styling the body */
body{
    font-size: 20px;
    text-transform: uppercase;
    font-weight: bold;
    text-align: center;
    /* adding a background image to the body */
    background-image: url("https://www.clipartsgram.com/image/1732069297-in-blue-
only-yet-there-really-are-changes-you-won-t-ever-be-bored-in-vision-hd-single-color-
wallpaper1.jpg");
}
table{
    background-color: lightgreen
}
#message{
    text-align: center;

    font-size: 20px;
    font-weight: bold;
}
.button{
    background-color: yellow;
    color: black;
    padding: 23px 32px;
    text-align: center;
    text-transform: uppercase;
    display: inline-block;
    font-size: 20px;
    margin: 10px 5px;
    cursor: pointer;
    /* Curving the edges of the button */
    border-radius: 80px;
}
</style>
```

```
<script>
    //Starting game function
    function startGame() {
        //When starting resets the board when it less than or equal to 9
        for (var i = 1; i <= 9; i++) {
            clearBox(i);
        }
        //variable is X and X goes first
        document.turn = "X";
        document.winner = null;
        //Message saying X gets to start
        setMessage(document.turn + " gets to start.");
    }

    function setMessage(msg) {
        //getting elements by ID message and set what ever is on msg
        document.getElementById("message").innerText = msg;
    }

    function nextMove(square) {
        //if the winner is not equal to null outputs the message showing who won the game
        if (document.winner != null) {
            setMessage(document.winner + " already won the game.");
        //this else if checks if the square is empty if it is lets the user click and turn it if not gives
a message saying the square is already being used
        } else if (square.innerText == "") {
            square.innerText = document.turn;
            //calling the switch turn function
            switchTurn();
        //the message saying the sqaure is already being used
        } else {
            setMessage("That square is already being used.");
        }
    }

    //this function switches the turns eg:- from player X to player O
    function switchTurn() {
        //if we have a winner we output the messege
        if (checkForWinner(document.turn)) {
            setMessage("Congratulations,  " + document.turn + " !  You win!");
            document.winner = document.turn;
        } else if (document.turn == "X") {
            document.turn = "O";
            setMessage("It's " + document.turn + "'s turn!");
```

```
        } else {
            document.turn = "X";
            //message showing who's turn is next
            setMessage("It's " + document.turn + "'s turn!");
        }
    }

    function checkForWinner(move) {
        var result = false;
        //win combinations
        if (checkRow(1, 2, 3, move) ||
            checkRow(4, 5, 6, move) ||
            checkRow(7, 8, 9, move) ||
            checkRow(1, 4, 7, move) ||
            checkRow(2, 5, 8, move) ||
            checkRow(3, 6, 9, move) ||
            checkRow(1, 5, 9, move) ||
            checkRow(3, 5, 7, move)) {

            result = true;
            }
        return result;
    }
    //this function checks if all the items in the 3 square are the same
     function checkRow(a, b, c, move) {
        var result = false;
        //if whats is in box a, b and c are all same then the result is true
        if (getBox(a) == move && getBox(b) == move && getBox(c) == move) {
            result = true;
        }
        return result;
    }
    //this function is going to give you the item based on the number
    function getBox(number) {
        return document.getElementById("s" + number).innerText;
    }
    //Clearing the box by getting the box location by ID and then replacing the text with a blank
    function clearBox(number) {
        document.getElementById("s" + number).innerText = "";
    }
    </script>
  </head>

</html>
```

Citations:

How onclick event works – http://www.w3schools.com/jsref/event_onclick.asp

Concept - https://slate.sheridancollege.ca/d2l/le/content/352284/viewContent/5307570/View

getElementID – Week 2 Summary Handout

innerText - http://stackoverflow.com/questions/19030742/difference-between-innertext-and-innerhtml-in-javascript