Project 2

**Date Assigned: 11/09/2015**

**Lab Report Due: Midnight 11/16/2015 on iLearn**

**Section 1: Button Click Event Handler**

1. Create a folder **project2** on the desktop. Copy and paste html/css files you made in **project1**.
2. Create a JS file **tictactoe.js.** Save them in **project2**. Attach **tictactoe.js** to **tictactoe.html.**
3. In Tic Tac Toe game, whenever a player clicks on a button, an “X” or “O” should be displayed in the button clicked. Let’s write an event handler for this button click event.

In **tictactoe.html,** add an “**onclick**” attribute to every button in the table. Let the value of “onclick” be “**set(idvalue);**”, where “**set(idvalue)**” is a Javascript **function** which we will define in **tictactoe.js,** and **idvalue** is a parameter that allows us to pass the id of a button to the set function. In **tictactoe.html**, you need to replace “idvalue” by id of the target button. For example, for the button in the 1st row and 1st column, its **onclick** should be “**set(‘0’);**”, as its id is ‘0’, and for the button in the 1st row and 2st column, its **onclick** should be “**set(‘1’);**”, as its id is ‘1’.

1. In **tictactoe.js,** add and complete the definition for function **set(idvalue)** following the format of

function set(idvalue) {

// Find the button clicked by id

var buttonclicked = document.getElementById(idvalue);

// Complete the function from here

// Add a statement to find out who is the current player, “X” or “O” by reading paragraph id “currentplayer” in tictactoe.html

// Add a statement to let the value of buttonclicked be the current user

// Add a statement to let the innerHTML of buttonclicked be the current user (to display “X” or “O” on the buttonclicked)

}

1. Launch **tictactoe.html** in Chrome. Click on a button, and see if the function set() works.

**Section 2: Change Player**

1. In Tic Tac Toe game, player “X” and “O” take turns to click on buttons. For example, after player “X” clicks on a button, if he does not win the game, it would be player “O”s turn to move, and vice versa. Let’s write a function to change player.
2. In **tictactoe.js,** add and complete the function **changeplayer()** following the format of

function changeplayer() {

// Add a statement to find out who is the current user, “X” or “O” by reading paragraph id “currentplayer” in tictactoe.html, and save it in a variable called player

if(player =="X")

{

// change the current user to “O” if the current user is “X”

document.getElementById("currentplayer").innerHTML = "O";

}

else

{

// Add a statement to change the current user to “X” if the current user is “O”

}

}

1. In **tictactoe.js,** in function **set(idvalue),** add a statement to call the function changeplayer():

function set(idvalue) {

// Find the button clicked by id

var buttonclicked = document.getElementById(idvalue);

// Complete the function here

// Add a statement to find out who is the current user, “X” or “O” by reading paragraph id “result” in tictactoe.html

// Add a statement to let the value of buttonclicked be the current user

// Add a statement to let the innerHTML of buttonclicked be the current user (to display “X” or “O” on the buttonclicked)

// Add a statement to change player

changeplayer();

}

1. Launch **tictactoe.html** in Chrome. Click on buttons, and see if “X” and “O” take turns to be displayed on buttons.

**Section 3: Button Clicked already?**

1. In Tic Tac Toe game, whenever a player clicks on a button, an “X” or “O” should be displayed in the button clicked. And in the future, you can not click this button any more. In other words, **players can not click on a button that is already clicked**.
2. Here comes the question: How do we know if a button is clicked already or not? To answer this question, we need to take advantage of the **value** property. By default, an unclicked button, its value should be “” or null. On the other hand, a clicked button, its value should be either “O” or “X”. Thus we can look at **value** of a button to tell if it has been clicked or not.
3. Right now, our function **set(idvalue)** in tictactoe.js does not examine whether a button is clicked or not. Let’s add a few statements in **set(idvalue) to** read button status.

Logic:

Current player clicks on a button.

Has the button been clicked already?

Yes – Display an alert message “You can not click on this button!”

No – Display current player (either “X” or “O”) on the button, change player

function set(idvalue) {

// Find the button clicked by id

var buttonclicked = document.getElementById(idvalue);

if(buttonclicked.value==""||buttonclicked.value==null)

{ // If the button is not clicked before

// Complete the function here

// Add a statement to find out who is the current user, “X” or “O” by reading paragraph id “currentplayer” in tictactoe.html

// Add a statement to let the value of buttonclicked be the current user

// Add a statement to let the innerHTML of buttonclicked be the current user (to display “X” or “O” on the buttonclicked)

changeplayer();

}

else

{

// Add a statement to display an alert message “You can not click on this button!”

}

}

1. Launch **tictactoe.html** in Chrome. Click on a button, and click on the same button again. See if your function can detect a clicked button.

**TURN-IN CHECKLIST:**

1. **Source Code (.html/.css/.js files) created in this assignment. Remember to include your name, the date, and the lab number in comments near the beginning of your code.**

**Create a folder and name it 'FirstName\_LastName\_Project2'. In the newly created folder copy and paste your source code (.html/.css/.js). Then compress the folder, and upload it to iLearn.**