Akrom S

HW2

As of hw2 project, I needed to have only 1 button “reposition”, but instead I added my “start/stop” button to the right of it. I didn’t want to re-create files and mess with couple more extra screenshots since teach.park.edu is not working, so instead I made both hw2 and extra credit all in the same files.

Project HTML:

<!DOCTYPE html>

<html lang="en">

<head>

<link rel="icon" href="../../images/icon.png">

<meta charset="utf-8">

<meta name="author" content="Akrom S">

<title>Seesaw</title>

<style>

canvas {border: thin solid black;}

.myCanvas {

width: 500px;

height: 500px;

position: relative;

}

.buttons {text-align: center;}

</style>

<script src="seesaw.js"></script>

</head>

<body onload="initialize();">

<div class="myCanvas">

<canvas id="canvas" width="500" height="400">

</canvas>

<br><br>

<div class="buttons">

<input type="button" value="Reposition" onclick="reposition();">

<input onclick="change();" type="button" value="Start" id="myButton1">

</div>

</div>

</body>

</html>

Project JS:

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\* seesaw.js

\* Akrom S

\*

\* This file handles drawing seesaw animation.

\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

// x and y coordinates for seesaw's center point.

const CANVAS\_X = 500;

const CANVAS\_Y = 400;

const CENTER\_X = CANVAS\_X / 2;

const CENTER\_Y = CANVAS\_Y / 2;

var ROTATION = 1;

var ctx; // the canvas object's context

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// This function draws seesaw with animated wood

function initialize() {

ctx = document.getElementById("canvas").getContext("2d");

metalBase();

wood();

reposition();

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//draws a wood

function wood() {

ctx.beginPath();

ctx.strokeStyle = "orange";

ctx.lineWidth = 8;

ctx.moveTo(0.12 \* CANVAS\_X, CENTER\_X-25);

ctx.lineTo(0.88 \* CANVAS\_X, CENTER\_X-25);

ctx.stroke();

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// repositions my wood

function reposition() {

if (ROTATION == 1) {

ctx.restore();

ctx.save();

ctx.setTransform(1, 0, 0, 1, 0, 0); // original coordinate system

ctx.clearRect(0, 0, canvas.width, canvas.height);

ctx.translate(CENTER\_X, CENTER\_Y);

ctx.rotate(Math.PI / 8);

ctx.translate(-CENTER\_X, -CENTER\_Y);

wood();

ROTATION = 2;

} else {

ctx.restore();

ctx.save();

ctx.setTransform(1, 0, 0, 1, 0, 0); // original coordinate system

ctx.clearRect(0, 0, canvas.width, canvas.height);

ctx.translate(CENTER\_X, CENTER\_Y);

ctx.rotate(-Math.PI / 8);

ctx.translate(-CENTER\_X, -CENTER\_Y);

wood();

ROTATION = 1;

}

metalBase();

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// for metal base

function metalBase() {

ctx.restore();

ctx.beginPath();

ctx.strokeStyle = "silver";

ctx.lineWidth = 8;

ctx.moveTo(CENTER\_X - 20, 0.75 \* CANVAS\_Y);

ctx.lineTo(CENTER\_X - 20, 0.65 \* CANVAS\_Y);

ctx.lineTo(CENTER\_X, CENTER\_X - 15);

ctx.lineTo(CENTER\_X + 20, 0.65 \* CANVAS\_Y);

ctx.lineTo(CENTER\_X + 20, 0.75 \* CANVAS\_Y);

ctx.stroke();

}

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* EXTRA CREDIT starts from here.

\* Akrom S

\* I decided to add a button near reposition instead of changing it to start/stop.

\* That way, I don't have to recreate 2 more file, then take a screenshot,

\* and post it in MS Word document. It’s less confusing if I just add the button

\* I am hoping to not get deducted for not changing the reposition button name.

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var handle = null; // handler variable

// This function changes button name, based on name, calls the functions

function change() {

var elem = document.getElementById("myButton1");

if (elem.value=="Start") {

elem.value = "Stop";

start(); // calling start function

}

else {

elem.value = "Start";

stop(); // calling stop function

}

}

// This function starts the animation

function start () {

handle = setInterval(begin, 500);

function begin() {

reposition();

}

}

// This function stops the animation

function stop() {

clearInterval(handle);

}

EXTRA CREDIT:

Also, I found an error in JDean book, and I emailed you about it. You asked me to remind you in my homework word document

HI Akrom,

Congrats! You found an error I was unaware of.

Copy this email text to your submitted homework so I know to give you one bonus point.

Thanks!

john

Screenshots: (from left to right)

