Project.html

<!DOCTYPE HTML>

<html lang="en-US">

<html>

<head>

<title>My first game</title>

<link href = "project.css" type = "text/css" rel = "stylesheet"/>

</head>

<body>

<!--loads the audio for the beginning of the game-->

<audio preload="true" id="collide">

<source src="ow.mp3" type="audio/mp3">

</audio>

<!--loads the audio for the ending of the game-->

<audio id="end">

<source src="end.mp3" type="audio/mp3">

</audio>

<!--define element for the beginning of the game-->

<div id = "startGame" class="centerStartGame" >

</div>

<!--define element for the ending of the game-->

<div id = "endGame" class="centerEndGame" >

</div>

<!--define canvas id-->

<canvas id="canvas"></canvas>

<script type="text/javascript" src="project.js"></script>

</body>

</html>

Project.css

/\*define the position of the body\*/

body

{

position: relative;

}

/\*define what will be displayed in the canvas at the beginning of the game\*/

.centerStartGame

{

background: url("controller.jpeg") no-repeat;

background-size: 100%;

margin: 50px auto;

z-index:1;

position: absolute;

top: 0; left: 0; bottom: 0; right: 0;

width: 300px;

height: 470px;

line-height: 50px;

color: #fff;

text-align: center;

-webkit-box-shadow: 2px 2px 5px #000;

-moz-bot-shadow: 2px 2px 5px #000;

}

/\*define what will be displayed in the canvas at the end of the game\*/

.centerEndGame

{

background-color: #000;

border: 5px solid white;

background-size: 100%;

margin: 150px auto;

position: absolute;

top: 0; left: 0; bottom: 0; right: 0;

width: 285px;

height: 300px;

line-height: 50px;

color: white;

font-size: 20px;

text-align: center;

-webkit-box-shadow: 2px 2px 5px #000;

-moz-bot-shadow: 2px 2px 5px #000;

}

/\*define canvas property\*/

canvas

{

display: block;

margin: 0 auto;

}

/\*define properties for button 1\*/

.button1

{

border: 5px solid white;

background: #d82800;

padding: 16px 32px;

margin-bottom: 25px;

-webkit-border-radius: 16px;

-moz-border-radius: 16px;

border-radius: 16px;

-webkit-box-shadow: rgba(0,0,0,1) 0 1px 0;

-moz-box-shadow: rgba(0,0,0,1) 0 1px 0;

text-shadow: rgba(0,0,0,.4) 0 1px 0;

color: white;

font-size: 20px;

font-family: Georgia, serif;

text-decoration: none;

vertical-align: middle;

width: 200px;

}

/\*define properties for button 2\*/

.button2

{

border: 5px solid white;

background: #000;

padding: 16px 32px;

margin-bottom: 25px;

-webkit-border-radius: 16px;

-moz-border-radius: 16px;

border-radius: 16px;

-webkit-box-shadow: rgba(0,0,0,1) 0 1px 0;

-moz-box-shadow: rgba(0,0,0,1) 0 1px 0;

text-shadow: rgba(0,0,0,.4) 0 1px 0;

color: white;

font-size: 20px;

font-family: Georgia, serif;

text-decoration: none;

vertical-align: middle;

width: 200px;

padding-bottom: 25px;

}

/\*define properties for button 3\*/

.button3

{

border: 5px solid white;

background: #000;

padding: 16px 32px;

margin-bottom: 25px;

-webkit-border-radius: 16px;

-moz-border-radius: 16px;

border-radius: 16px;

-webkit-box-shadow: rgba(0,0,0,1) 0 1px 0;

-moz-box-shadow: rgba(0,0,0,1) 0 1px 0;

text-shadow: rgba(0,0,0,.4) 0 1px 0;

color: white;

font-size: 20px;

font-family: Georgia, serif;

text-decoration: none;

vertical-align: middle;

width: 200px;

}

Project.js

//display the following message in the "startGame" element

var id = document.getElementById("startGame");

id.innerHTML = "Regi Shehi" + "<br/>" + "INF275a Project" + "<br/>" + "Press left/right arrows to move the object" + "<button class = \"button1\" id=\"btn1\" onclick=\"game()\">Start Game</button>";

//main function of the game

function game()

{

//define ID for different elements used to make the game

var but1 = document.getElementById("btn1");

var id1 = document.getElementById("endGame");

but1.style.display = "none";

id.style.display = "none";

id1.style.display = "none";

//define canvas and its properties

var canvas = document.getElementById('canvas');

var ctx = canvas.getContext('2d');

canvas.width = 500;

canvas.height = 600;

//variable to check if the canvas sides are touched or not

var already\_touched = true;

var playsound = document.getElementById("collide");

var endsound = document.getElementById("end");

var count = 0;

var touchright = false;

var touchleft = true;

//object definition for user controlled block

var mySprite = {

x: 0,

y: 550,

width: 50,

height: 50,

speed: 200,

color: 'red'

};

//object Sprites defines all the other square falling objects and its properties

var Sprites = {

mySprite1: {

x: Math.floor(0 + (1+450-0)\*Math.random()),

y: 35,

width: 50,

height: 50,

speed: 200,

color: 'blue'

},

mySprite2: {

x: Math.floor(0 + (1+460-0)\*Math.random()),

y: 35,

width: 40,

height: 40,

speed: 100,

color: 'green'

},

mySprite3: {

x: Math.floor(0 + (1+480-0)\*Math.random()),

y: 35,

width: 20,

height: 20,

speed: 120,

color: 'yellow'

},

mySprite4: {

x: Math.floor(0 + (1+420-0)\*Math.random()),

y: 35,

width: 80,

height: 80,

speed: 220,

color: 'purple'

}

};

//circle falling object

var ball = {

x: Math.floor(0 + (1+475-0)\*Math.random()),

y: 50,

r: 25,

width: 20,

height: 20,

c: "red",

speed: 150,

draw: function()

{

ctx.beginPath();

ctx.fillStyle = this.c;

ctx.arc(this.x, this.y, this.r, 0, Math.PI\*2, false);

ctx.fill();

}

};

//object that draws the white line that separates the score from the rest of the canvas

var line = {

draw: function()

{

ctx.beginPath();

ctx.moveTo(0, 35);

ctx.lineTo(500, 35);

ctx.lineWidth = 5;

// set line color

ctx.strokeStyle = '#ff0000';

ctx.stroke();

}

};

//function to draw canvas

function paintCanvas()

{

ctx.fillStyle = "black";

ctx.fillRect(0,0,500,600);

}

//function to draw user controlled object

function player()

{

ctx.fillStyle = mySprite.color;

ctx.fillRect(mySprite.x, mySprite.y, mySprite.width, mySprite.height);

}

//function to draw the falling objects

function fallingObjects()

{

ctx.fillStyle = Sprites[index].color;

ctx.fillRect(Sprites[index].x, Sprites[index].y, Sprites[index].width, Sprites[index].height);

ball.draw();

}

//definition for event listener

var keysDown = {};

window.addEventListener('keydown', function (e)

{

keysDown[e.keyCode] = true;

});

window.addEventListener('keyup', function (e)

{

delete keysDown[e.keyCode];

});

//function to recognize the key pressed and update score each time the moving block makes a full trip from side to side

function update(mod)

{

if (37 in keysDown)

{

mySprite.x -= mySprite.speed \* mod;

if(mySprite.x<0)

mySprite.x = 0;

if(mySprite.x == 0 && !touchleft)

{

count+=10;

var alert1 = document.getElementById("score");

updateScore();

touchright=false;

touchleft=true;

}

}

if (39 in keysDown)

{

mySprite.x += mySprite.speed \* mod;

if(mySprite.x>450)

mySprite.x = 450;

if(mySprite.x == 450 && !touchright)

{

count+=10;

var alert1 = document.getElementById("score");

updateScore();

touchright=true;

touchleft=false;

}

}

}

//function to make the falling objects fall vertically

function update1(mod)

{

for (index in Sprites)

{

if (Sprites.hasOwnProperty(index))

{

Sprites[index].y += Sprites[index].speed \* mod;

}

}

ball.y += ball.speed \* mod;

}

//function that updates score each time a full trip is made

function updateScore()

{

ctx.fillStyle = "white";

ctx.font = "16px Arial, sans-serif";

ctx.textAlign = "left";

ctx.textBaseline = "top";

ctx.fillText("Score: " + count, 10, 10 );

line.draw();

}

//main function to draw the canvas and every element in it

function render()

{

playsound.play();

//canvas

paintCanvas();

//moving red object

player();

updateScore();

//falling objects

for (index in Sprites)

{

fallingObjects();

if (Sprites[index].y > 600) //Repeat the object when it falls out of view

{

Sprites[index].y = 30; //Account for the image size

Sprites[index].x = Math.floor(0 + (1+420-0)\*Math.random()); //Make it appear randomly along the width

}

//if condition to detect collision for falling rectangle objects

if (Sprites[index].x < mySprite.x + mySprite.width && Sprites[index].x + Sprites[index].width > mySprite.x && Sprites[index].y < mySprite.y + mySprite.height && Sprites[index].y + Sprites[index].height > mySprite.y)

{

playsound.pause();

clearInterval(collision);

id1.style.display = "block";

id1.innerHTML = "Game Over" + "<br/>" + "You scored " + count + " points" + "<button class = \"button2\" id=\"btn2\" onclick=\"refresh()\">Replay</button>"

+ "<button class = \"button3\" id=\"btn2\" onclick=\"closeWin()\">Close</button>"

endsound.play();

}

if (ball.y > 600) //Repeat the object when it falls out of view

{

ball.y = 50; //Account for the image size

ball.x = Math.floor(0 + (1+475-0)\*Math.random()); //Make it appear randomly along the width

}

//if condition to detect collision for falling circle object

if (ball.x < mySprite.x + mySprite.width && ball.x + ball.width > mySprite.x && ball.y < mySprite.y + mySprite.height && ball.y + ball.height > mySprite.y)

{

playsound.pause();

clearInterval(collision);

id1.style.display = "block";

id1.innerHTML = "Game Over" + "<br/>" + "You scored " + count + " points" + "<button class = \"button2\" id=\"btn2\" onclick=\"refresh()\">Replay</button>"

+ "<button class = \"button3\" id=\"btn2\" onclick=\"closeWin()\">Close</button>"

endsound.play();

}

}

}

//run the game at the given time

function run()

{

update(0.01);

update1(0.01);

render();

}

var collision = setInterval(run, 10);

}

//function to start e new game

function refresh()

{

window.location.reload();

}

//function to end game

function closeWin()

{

window.close();

}