Wild Rabbit Chase – Click the wild rabbit with your pointer to score points. The rabbit runs faster and faster and the chase begins.

The rabbit is represented as a square for now. It will be a rabbit in future updates.

HTML5

<!DOCTYPE html>

<html>

<head>

<title>Wild Rabbit Chase</title>

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

</head>

<body>

<canvas id="viewport" width="640" height="480"></canvas>

</body>

</html>

Script.js

window.onload = function() {

//get canvas and context

var canvas = document.getElementById("viewport");

var context = canvas.getContext("2d");

//timing fps

var lastframe = 0;

var fpstime = 0;

var framecount = 0;

var fps = 0;

//the level defines the area in which the rabbit can run around

var level = {x:1,y:65,width:canvas.width-20,height:canvas.height - 20};

//wild rabbit

var square = {x:0,y:0,width:0,height:0,xdir:0,ydir:0,speed:0};

//score

var score = 0;

//--------------------------------------------------------------------

function init(){

//add mouse events

canvas.addEventListener("mousemove",onMouseMove);

canvas.addEventListener("mousedown",onMouseDown);

canvas.addEventListener("mouseup",onMouseUp);

canvas.addEventListener("mouseout",onMouseOut);

//initialize the running space

square.width = 100;

square.height = 100;

square.x = level.x + (level.width - square.width)/2;

square.y = level.y + (level.height - square.height)/2;

square.xdir = 1;

square.ydir = 1;

square.speed = 200;

//initialize score

score = 0;

//enter main loop

main(0);

}//end function

//--------------------------------------------------------------------------

//main loop

function main(tframe){

//request animation frames

window.requestAnimationFrame(main);

//update and render the game

update(tframe);

render();

}//end function

//------------------------------------------------------------------------

//update the game state

function update(tframe){

var dt = (tframe - lastframe)/1000;

lastframe = tframe;

updateFps(dt);

//move the square, time-based

square.x += dt \* square.speed \* square.xdir;

square.y += dt \* square.speed \* square.ydir;

//handle left and right collisions with the level

if(square.x <= level.x){

//left edge

square.xdir = 1;

square.x = level.x;

} else if (square.x + square.width >= level.x + level.width){

//right edge

square.xdir = -1;

square.x = level.x + level.width - square.width;

}//end if

//handle top and bottom collisions with the level

if(square.y <= level.y){

//top edge

square.ydir = 1;

square.y = level.y;

} else if (square.y + square.height >= level.y + level.height){

//bottom edge

square.ydir = -1;

square.y = level.y + level.height - square.height;

}

}//end function

//----------------------------------------------------------------------

function updateFps(dt){

if(fpstime > 0.25){

//calculate fps

fps = Math.round(framecount/fpstime);

//reset time and framecount

fpstime = 0;

framecount = 0;

}//end if

fpstime += dt;

framecount++;

}//end function

//----------------------------------------------------------------------------

//render the game

function render(){

drawFrame();

//draw the rabbit

context.fillStyle = "#ff0000";

context.fillRect(square.x,square.y,square.width,square.height);

//draw score inside rabbit

context.fillStyle = "#ffffff";

context.font = "30px Arial";

var textdim = context.measureText(score);

context.fillText(score,square.x + (square.width-textdim.width)/2,square.y + 65);

}//end function

//-------------------------------------------------------------------------

function drawFrame(){

//draw bkg and border

context.fillStyle = "#d0d0d0";

context.fillRect(0,0,canvas.width,canvas.height);

context.fillStyle = "#e8eaec";

context.fillRect(1,1,canvas.width-20,canvas.height-20);

//draw header

context.fillStyle = "#0055ff";

context.fillRect(0,0,canvas.width,65);

//draw title

context.fillStyle = "#ffffff";

context.font = "24px Ariel";

context.fillText("Wild Rabbit Chase-Catch the rabbit with your pointer",10,30);

//display fps

context.fillStyle = "#ffffff";

context.font = "12px Ariel";

context.fillText("Fps: " + fps, 13,50);

}//end function

//--------------------------------------------------------

//mouse event handlers

function onMouseMove(e){}

function onMouseDown(e){

//mouse position

var pos = getMousePos(canvas,e);

//check if player catches the rabbit

if(pos.x >= square.x && pos.x < square.x + square.width &&

pos.y >= square.y && pos.y < square.y + square.height){

//if pos of mouse pointer inside target score one point

score += 1;

//increase the speed of the wild rabbit

square.speed \*= 1.1;

//give the wild rabbit a random position within the game board

square.x = Math.floor(Math.random()\*(level.x + level.width - square.width));

square.y = Math.floor(Math.random()\*(level.y + level.height - square.height));

//give the square a random direction

square.xdir = Math.floor(Math.random() \* 2) \* 2 - 1;

square.ydir = Math.floor(Math.random() \* 2) \* 2 - 1;

}//end if

}//end function

//-------------------------------------------------------------------------------------------

function onMouseUp(e){}

function onMouseOut(e){}

//---------------------------------------------------------

//get mouse position

function getMousePos(canvas,e){

var rect = canvas.getBoundingClientRect();

return{

x:Math.round((e.clientX - rect.left)/(rect.right - rect.left)\*canvas.width),

y:Math.round((e.clientY - rect.top )/(rect.bottom - rect.top)\*canvas.height)

};

}//end function

//--------------------------------------------------------

//call init to begin the game

init();

//---------------------------------------------------------

};//end windowload function

GAMEBOARD

Contains a rapidly bouncing object in red. The current player score is displayed in white in the window of the object. Each time the rapidly moving object is clicked with the mouse a point is scored and the object moves even faster making it more difficult to catch.

