Exercises ▼ Get Certified ▼ PYTHON JAVA PHP BOOTSTRAP HOW TO W3.CSS C C++ C# REACT R JQUERY DJANGO TYPESCRIPT NODEJS MYSQL HTML Graphics **Graphics HOME** HTML Plotting Game Obstacles Plot Graphics Plot Canvas Plot Plotly Previous Next 🕻 Plot Chart.js Plot Google Plot D3.js Push the buttons to move the red square: Google Maps Maps Intro Maps Basic Maps Overlays Maps Events Maps Controls Maps Types Maps Reference UP **SVG Tutorial** LEFT RIGHT SVG Intro SVG in HTML DOWN SVG Rectangle SVG Circle SVG Ellipse SVG Line Add Some Obstacles SVG Polygon SVG Polyline Now we want to add some obstacles to our game. SVG Path SVG Text Add a new component to the gaming area. Make it green, 10px wide, 200px high, and place it 300px to the right and 120px down. SVG Stroking Also update the obstacle component in every frame: SVG Filters Intro SVG Blur Effects SVG Drop Shadows Example SVG Linear SVG Radial var myGamePiece; SVG Examples var myObstacle; SVG Reference function startGame() { Canvas Tutorial myGamePiece = new component(30, 30, "red", 10, 120); myObstacle = new component(10, 200, "green", 300, 120); Canvas Intro myGameArea.start(); Canvas Drawing Canvas Coordinates Canvas Lines function updateGameArea() { Canvas Shapes myGameArea.clear(); Canvas Rectangles myObstacle.update(); Canvas Circles myGamePiece.newPos(); myGamePiece.update(); Canvas Curves Canvas Gradients Canvas Text Try it Yourself » Canvas Images Canvas Clock Clock Intro Clock Face Clock Numbers Hit The Obstacle = Game Over Clock Hands Clock Start In the example above, nothing happens when you hit the obstacle. In a game, that is not very satisfying. HTML Game How do we know if our red square hits the obstacle? Game Intro Game Canvas Create a new method in the component constructor, that checks if the component crashes with another component. This method should be called every time the frames updates, 50 times per second. Game Components Also add a stop() method to the myGameArea object, which clears the 20 milliseconds interval. Game Controllers Game Obstacles Game Score Example Game Images Game Sound var myGameArea = { Game Gravity canvas : document.createElement("canvas"), Game Bouncing start : function() { Game Rotation this.canvas.width = 480; Game Movement this.canvas.height = 270; this.context = this.canvas.getContext("2d"); document.body.insertBefore(this.canvas, document.body.childNodes[0]); this.interval = setInterval(updateGameArea, 20); clear : function() { this.context.clearRect(0, 0, this.canvas.width, this.canvas.height); stop : function() { clearInterval(this.interval); function component(width, height, color, x, y) { this.width = width; this.height = height; this.speedX = 0; this.speedY = 0; this.x = x;this.y = y;this.update = function() { ctx = myGameArea.context; ctx.fillStyle = color; ctx.fillRect(this.x, this.y, this.width, this.height); this.newPos = function() { this.x += this.speedX; this.y += this.speedY; this.crashWith = function(otherobj) { var myleft = this.x; var myright = this.x + (this.width); var mytop = this.y; var mybottom = this.y + (this.height); var otherleft = otherobj.x; var otherright = otherobj.x + (otherobj.width); var othertop = otherobj.y; var otherbottom = otherobj.y + (otherobj.height); var crash = true; if ((mybottom < othertop) ||</pre> (mytop > otherbottom) || (myright < otherleft) || (myleft > otherright)) { crash = false; return crash; function updateGameArea() { if (myGamePiece.crashWith(myObstacle)) { myGameArea.stop(); } **else** { myGameArea.clear(); myObstacle.update(); myGamePiece.newPos(); myGamePiece.update(); Try it Yourself » Moving Obstacle The obstacle is of no danger when it is static, so we want it to move. Change the property value of my0bstacle.x at every update: Example function updateGameArea() { if (myGamePiece.crashWith(myObstacle)) { myGameArea.stop(); } else { myGameArea.clear(); my0bstacle.x += -1; myObstacle.update(); myGamePiece.newPos(); myGamePiece.update(); Try it Yourself » Multiple Obstacles How about adding multiple obstacles? For that we need a property for counting frames, and a method for execute something at a given frame rate. Example var myGameArea = {

canvas : document.createElement("canvas"),

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

this.interval = setInterval(updateGameArea, 20);

document.body.insertBefore(this.canvas, document.body.childNodes[0]);

start : function() {

this.frameNo = 0;

this.canvas.width = 480; this.canvas.height = 270; 50% OFF
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