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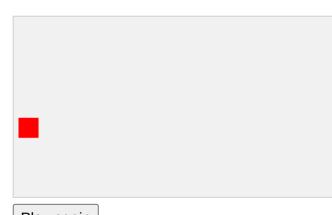
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Game Movement

With the new way of drawing components, explained in the Game Rotation chapter, the movements are more flexible.



Play again

How to Move Objects?

By default, the components are facing up, and by setting the speed property to 1, the component will start moving forward.

function component(width, height, color, x, y) { this.gamearea = gamearea;

this.x = x;this.y = y;ctx.save();

Canvas Gradients Canvas Text

Canvas Clock

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**COLOR PICKER** 



ctx.rotate(this.angle);

ctx.fillStyle = color;

this.newPos = function() {

this.x += this.speed \* Math.sin(this.angle);

this.y -= this.speed \* Math.cos(this.angle);

ctx.restore();

Add a speed property to the component constructor, which represents the current speed of the component.

ctx.fillRect(this.width / -2, this.height / -2, this.width, this.height);

Also make some changes in the newPos() method, to calculate the position of the component, based on speed and angle.

Example

this.width = width; this.height = height; this.angle = 0; this.speed = 1;this.update = function() { ctx = myGameArea.context; ctx.translate(this.x, this.y);

Making Turns

Try it Yourself »

We also want to be able to make left and right turns. Make a new property called moveAngle, which indicates the current moving value, or rotation angle. In the newPos() method calculate the angle based on the moveAngle property:

Example

Set the moveangle property to 1, and see what happens: function component(width, height, color, x, y) { this.width = width; this.height = height; this.angle = 0; this.moveAngle = 1; this.speed = 1; this.x = x;this.y = y;this.update = function() { ctx = myGameArea.context; ctx.save(); ctx.translate(this.x, this.y); ctx.rotate(this.angle); ctx.fillStyle = color; ctx.fillRect(this.width / -2, this.height / -2, this.width, this.height); ctx.restore(); this.newPos = function() { this.angle += this.moveAngle \* Math.PI / 180; this.x += this.speed \* Math.sin(this.angle);

Try it Yourself »

Use the Keyboard

this.y -= this.speed \* Math.cos(this.angle);

How does the red square move when using the keyboard? Instead of moving up and down, and from side to side, the red square moves forward when you use the "up" arrow, and turns left and right when pressing the left and right arrows.

Example Make sure the gamearea has focus, and use the arrow keys to move the red square around. Try it Yourself »

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