

HTML5 Canvas

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What is the canvas?

- The HTML5 canvas is used to draw graphics in the browser
- A canvas is a rectangular area on an HTML page, and it is specified with the `<canvas>` element
- The upper-left corner of the canvas has coordinate (0,0)
- Canvas objects provide lots of methods for drawing paths, boxes, circles, text and images

Creating a canvas

- Always specify the id attribute to allow finding the canvas from JavaScript
- You should also specify the width and height attributes of the canvas
- To add a border, use the style attribute

Creating a canvas

```
<html>
```

```
<body>
```

```
<canvas id="myCanvas" width="500" height="500" style="border:1px solid black;">
```

```
</canvas>
```

```
</body>
```

```
</html>
```

Drawing a red square

```
<script>
var c = document.getElementById("myCanvas");
var ctx = c.getContext("2d");
ctx.fillStyle = "red";
ctx.fillRect(0, 0, 100, 50);
</script>
```

Drawing a red line

```
ctx.beginPath();  
ctx.strokeStyle = "red";  
ctx.lineWidth = 3;  
ctx.moveTo(150, 50);  
ctx.lineTo(250, 100);  
ctx.stroke();
```

Drawing a circle

```
ctx.beginPath();  
ctx.arc(250, 250, 40, 0, 2 * Math.  
PI);  
ctx.stroke();
```

Drawing purple text

```
ctx.fillStyle = "purple";  
ctx.font = "30px Arial";  
ctx.fillText("Hello World!!!", 200,  
400);
```


Creating a linear gradient

```
var grd = ctx.createLinearGradient(0, 0,  
200, 0);  
grd.addColorStop(0, "red");  
grd.addColorStop(1, "white");  
  
ctx.fillStyle = grd;  
ctx.fillRect(10, 200, 150, 80);
```

Creating a radial gradient

```
var grd = ctx.createRadialGradient(125, 350,  
5, 100, 50, 350);  
grd.addColorStop(0, "green");  
grd.addColorStop(1, "blue");  
  
ctx.fillStyle = grd;  
ctx.fillRect(50, 300, 150, 100);
```