HTML5 and CSS3 for Mobile Applications

Canvases

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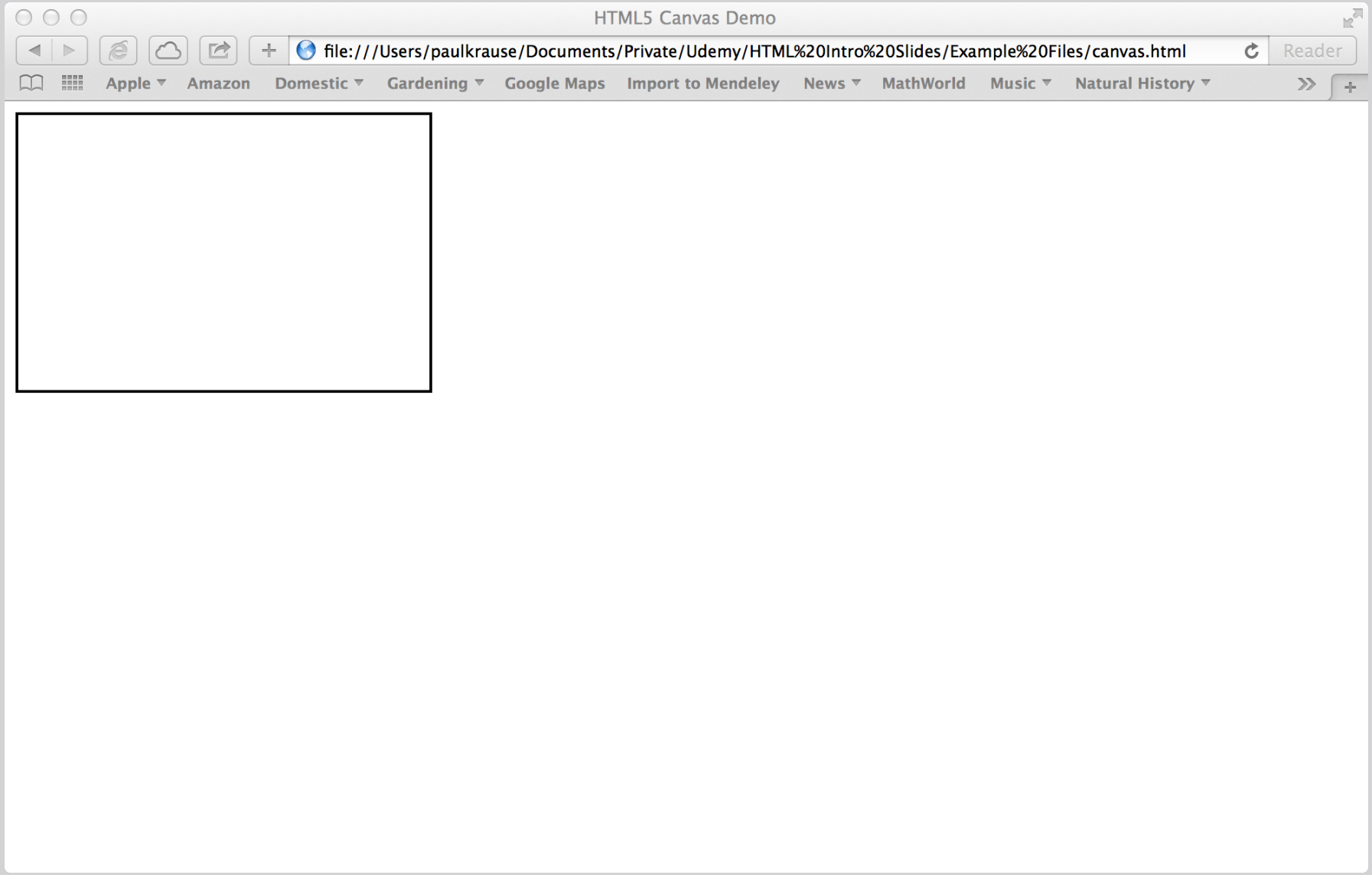
Canvases

Adding a canvas

```
<!DOCTYPE html>
<html lang="en-GB">
  <head>
    <meta charset="utf-8" />
    <title>HTML5 Canvas Demo</title>
    <meta name="description" content="Gradient fill circle in JavaScript" />
  </head>
  <body>
    <canvas id="myspace" width="300" height="200" style="border:2px solid #000;">
      If you can see this then you are not supporting Canvases!!
    </canvas>
  </body>
</html>
```

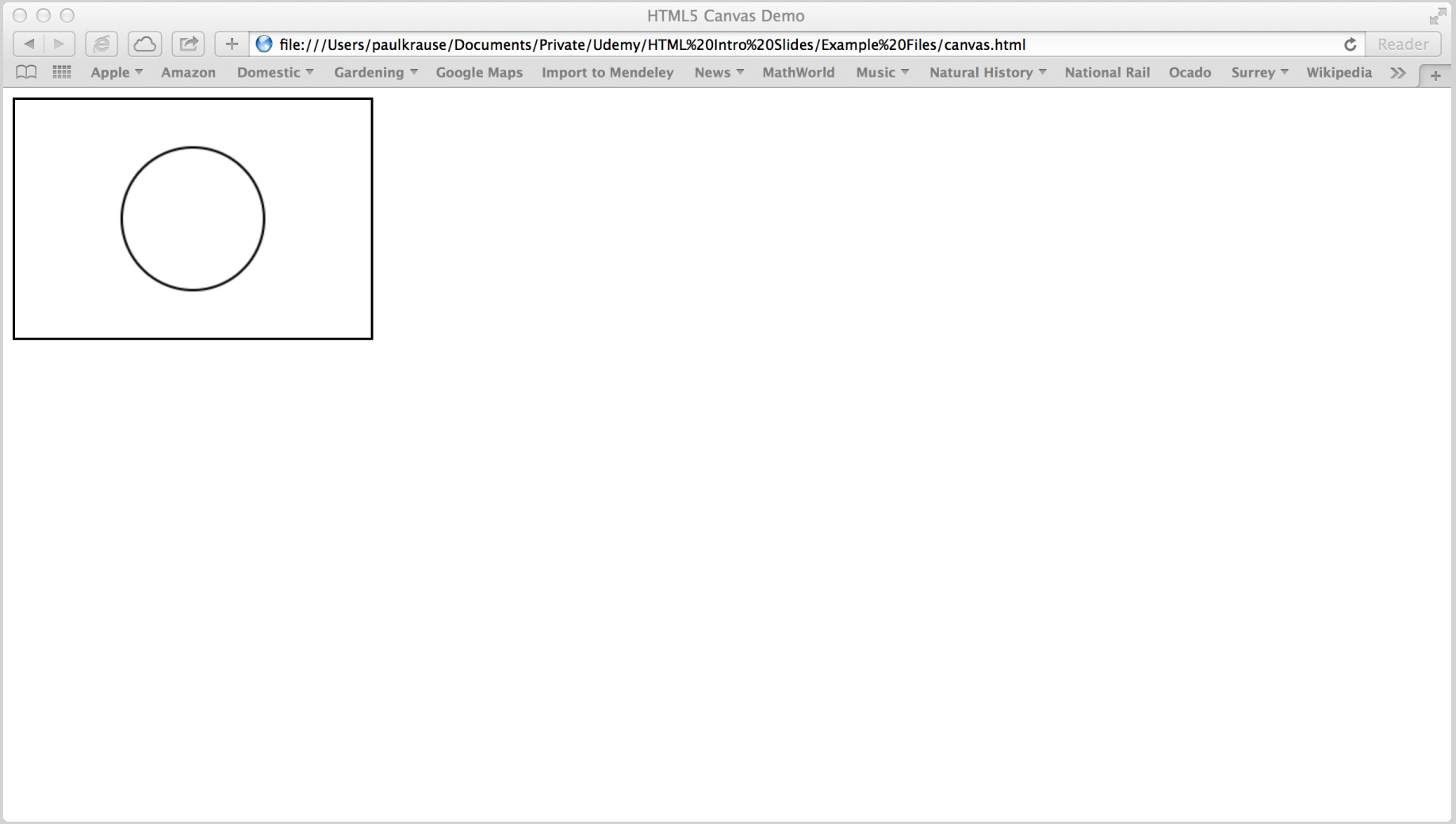

HTML5 Canvas Demo
file:///Users/paulkrause/Documents/Private/Udemy/HTML%20Intro%20Slides/Example%20Files/canvas.html
Reader
Apple
Amazon
Domestic
Gardening
Google Maps
Import to Mendeley
News
MathWorld
Music
Natural History

Importing the JavaScript

```
<!DOCTYPE html>
<html lang="en-GB">
  <head>
    <meta charset="utf-8" />
    <title>HTML5 Canvas Demo</title>
    <script src="scripts/jquery-2.1.1.min.js"></script>
    <script src="scripts/circle.js"></script>
    <meta name="description" content="Gradient fill circle in JavaScript" />
  </head>
  <body>
    <canvas id="myspace" width="300" height="200" style="border:2px solid #000;">
      If you can see this then you are not supporting Canvases!!
    </canvas>
  </body>
</html>
```

Drawing the circle in JavaScript

```
1  $(function() {
2    var el= document.getElementById("myspace");
3
4    if (el && el.getContext) {
5      var context = el.getContext("2d");
6      context.beginPath();
7      context.strokeStyle = "#000";
8      context.lineWidth = 2;
9      context.arc(150, 100, 60, 0, Math.PI*2, false);
10     context.closePath();
11     context.stroke();
12     }
13   })
14
```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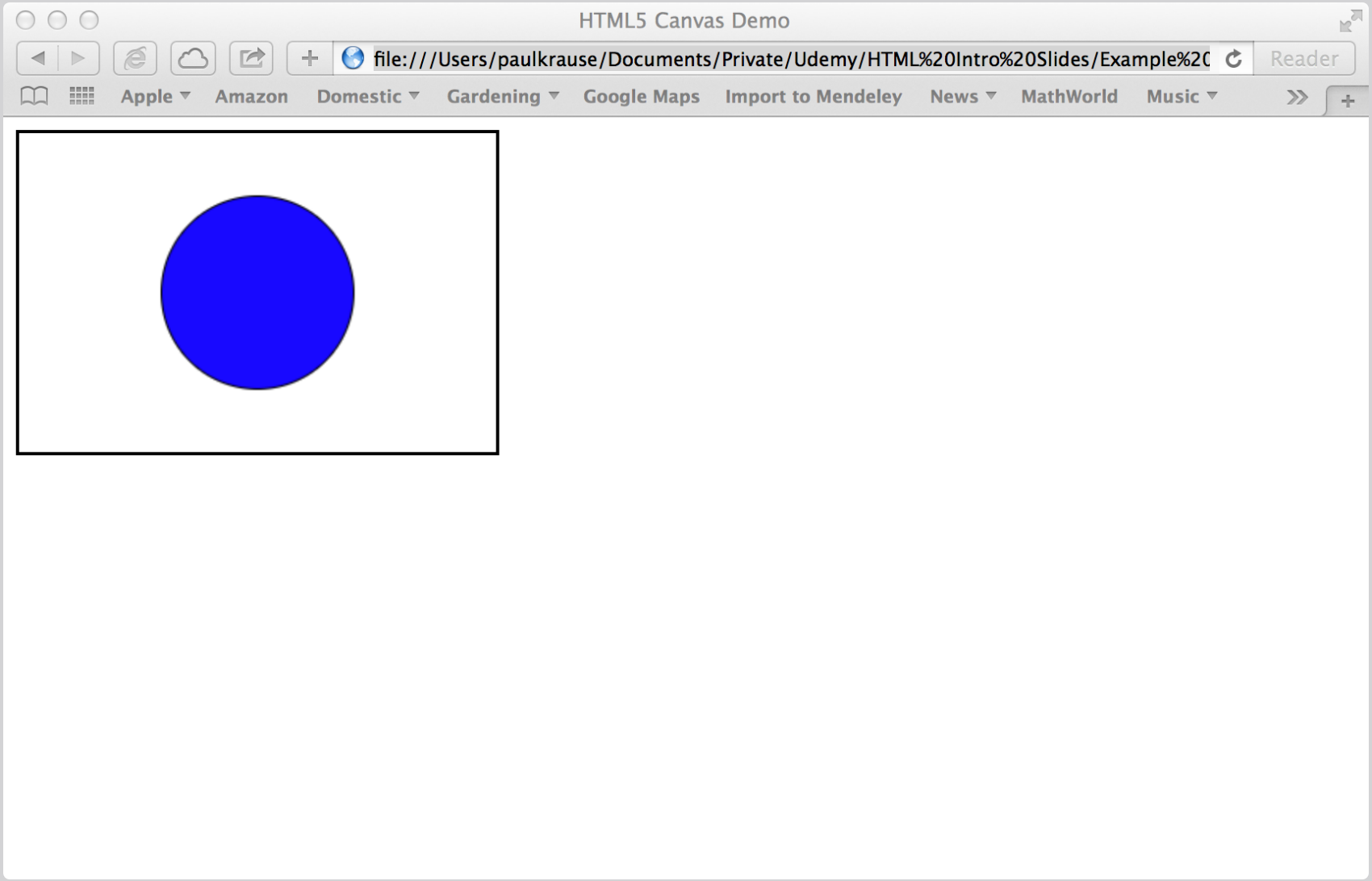
National Rail
Ocado
Surrey
Wikipedia

Add the fill

```
1  $(function() {
2    var el= document.getElementById("myspace");
3
4    if (el && el.getContext) {
5      var context = el.getContext("2d");
6      context.beginPath();
7      context.fillStyle = "#1808ff";
8      context.strokeStyle = "#000";
9      context.lineWidth = 2;
10     context.arc(150, 100, 60, 0, Math.PI*2, false);
11     context.closePath();
12     context.stroke();
13     context.fill();
14     }
15   })
16
```


HTML5 Canvas Demo
file:///Users/paulkrause/Documents/Private/Udemy/HTML%20Intro%20Slides/Example%20
Reader
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Domestic
Gardening
Google Maps
Import to Mendeley
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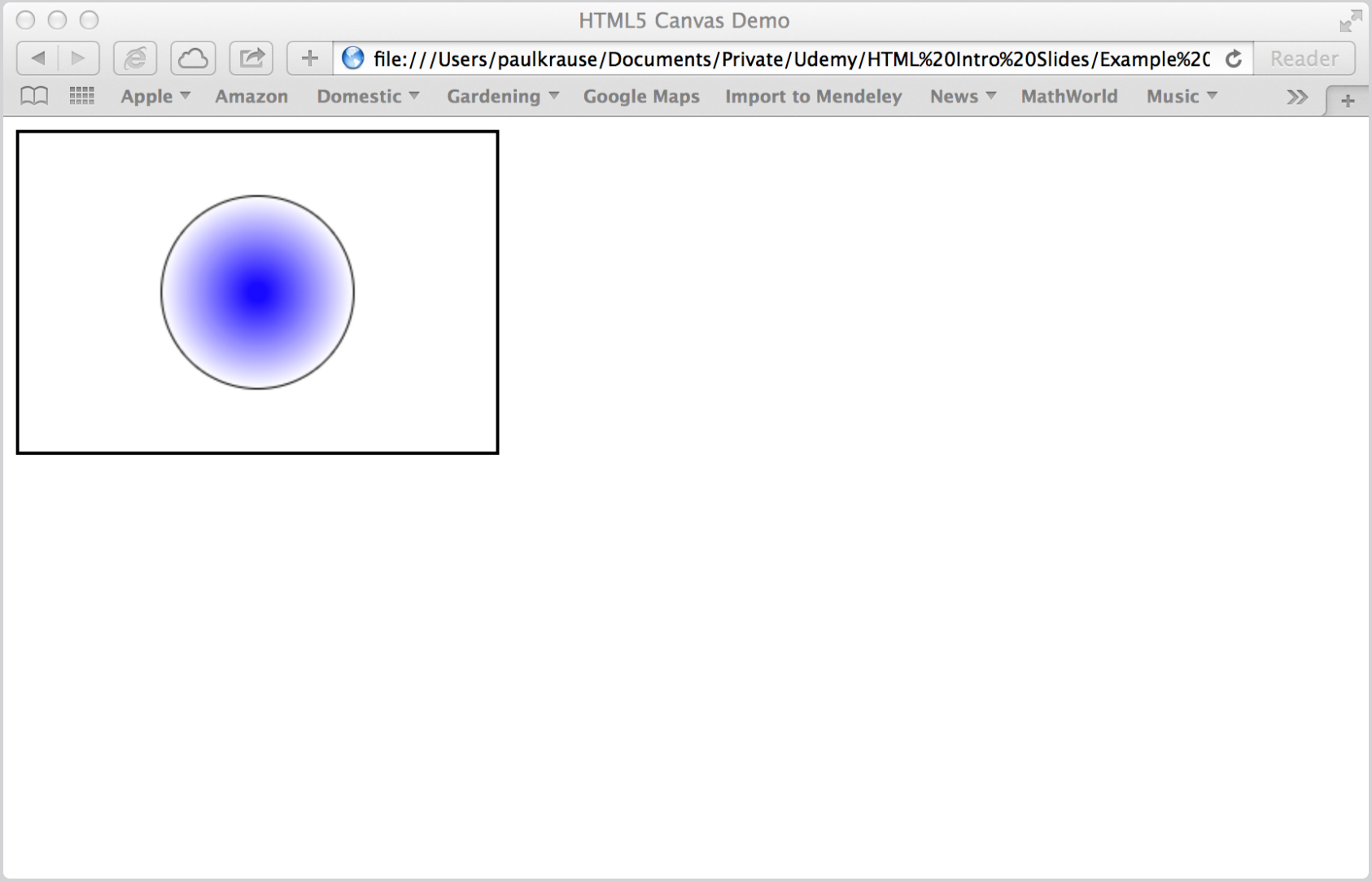
MathWorld
Music

Adding a gradient fill

```
1  $(function() {
2    var el= document.getElementById("myspace");
3
4    if (el && el.getContext) {
5      var context = el.getContext("2d");
6      // Create gradient
7      var grd = context.createRadialGradient(150,100,5,150,100,60);
8      grd.addColorStop(0,"#1808ff");
9      grd.addColorStop(1,"#fff");
10
11     context.beginPath();
12     context.fillStyle = grd;
13     context.strokeStyle = "#000";
14     context.lineWidth = 2;
15     context.arc(150, 100, 60, 0, Math.PI*2, false);
16     context.closePath();
17     context.stroke();
18     context.fill();
19     }
20   })
```


HTML5 Canvas Demo
file:///Users/paulkrause/Documents/Private/Udemy/HTML%20Intro%20Slides/Example%2C
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Compare and contrast

- SVG you draw in XML; with Canvas, you draw in JavaScript;
- SVG creates DOM nodes that can be manipulated, and is resolution independent;
- Canvas draws in pixels so pixilates on zooming;
- No animation API with Canvases
- But SVG can perform badly - especially an issue on mobile devices