

CMPT 165

INTRODUCTION TO THE INTERNET AND THE WORLD WIDE WEB

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UNIT 6: JAVASCRIPT AND GRAPHICS

TOPICS

1. More jQuery Methods
2. JavaScript + SVG: Raphaël
3. About SVG
4. Working with SVG
5. Animating SVG

\$ / jQuery

the jQuery library uses \$
to mean *exactly* the same thing as jQuery

```
jQuery('p').click(say_hello)  
$('p').click(say_hello)
```

```
jQuery('#changeme').html('Somebody clicked me.')
```

```
$('#changeme').html('Somebody clicked me.')
```

DIFFERENT WAYS TO MODIFY THE PAGE

```
$( '#changeme' ).html( 'Somebody <em>clicked</em> me.' )
$( '#changeme' ).attr( 'class', 'active' )
$( 'img#changeme' ).attr( 'src', 'other_img.png' )
$( 'section#expanding' ).append( '<p>new paragraph.</p>' )
newstyle = {
    'font-size': '1.5em',
    'margin-left': '2em'
}
$( '#styling' ).css(newstyle)
$( '#styling' ).animate(newstyle, 2000)
```

* the `.animate()` function can only animate CSS properties that are *numeric*
e.g. it **cannot** animate **font-weight** from normal to bold, or colour values

JAVASCRIPT + SVG: Raphaël

the library used to create and manipulate
SVG graphics on the page

the images are made up of
shapes (vector graphics format) not pixels

JAVASCRIPT + SVG: Raphaël

in **Raphaël**, we will use JavaScript code
to create or manipulate those shapes

working with bitmapped images,
there are libraries to help with that

vector images are just easier to work with to start
with!

let's try Raphaël for the first time in [here!](#)
and [Here](#) is a more complicated example

you can find out more about the Raphaël library
in [this reference](#)

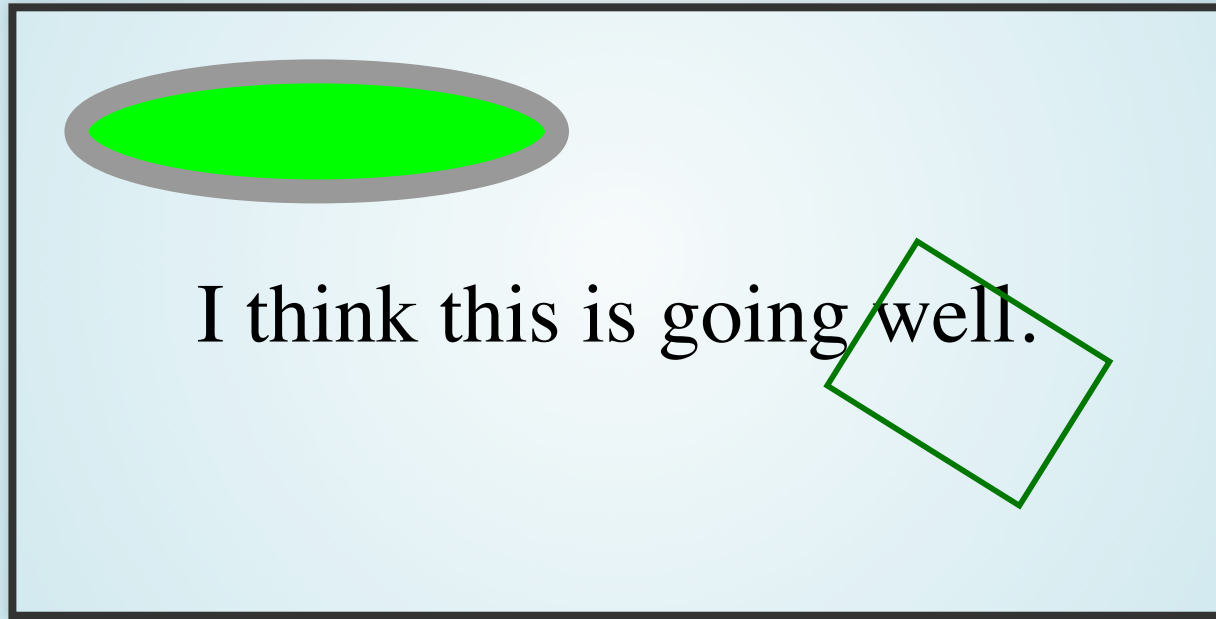
SVG IMAGES

the SVG image format is strange in some ways
you use it like other image formats (PNG, JPEG, etc.)
but it technically has more in common with HTML

THE SVG FORMAT

SVG images are stored as text files, and contain tags and attributes, much like HTML

THE SVG EXAMPLE



THE SVG EXAMPLE - SOURCE CODE

```
<svg height="300" width="600" xmlns="http://www.w3.org/2000/svg">

  <ellipse cx="150" cy="60" rx="120" ry="30"
    fill="#00ff00" stroke="#999999" stroke-width="12">
</ellipse>

  <text x="300" y="150" text-anchor="middle" font-size="42px">
    <tspan dy="15">
      I think this is going well.
    </tspan>
  </text>

  <rect x="450" y="150" rx="0" ry="0" fill="none"
    width="120" height="90" stroke="#007700" stroke-width="3"
    transform="matrix(0.8,0.5,-0.5,0.8,165,-230)">
</rect>

</svg>
```

for editing a SVG file you can use [Inkscape](#);
a free, open-source, vector graphics editor

it is designed as an SVG editor
the format that it works with by default and best is
SVG

Any Questions?