

D3: Rough Sketches

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github.com/
ayrenay/
d3-rough-sketches-
class

Setup

Why learn D3?

What are we doing here?

- Introducing key vocabulary and concepts of visualization library D3.js
- Identifying fundamentals of writing code for the web
- Creating an example visualization using D3
- Preparing to make use of the vast library of D3 resources and knowledge available to you

So, what is D3?

D3: Data-Driven Documents

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D3.js is a JavaScript
library for manipulating
documents based on
data. [\[d3js.org\]](https://d3js.org)

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So, what is D3?

***helps you build interactive, dynamic, and scalable data viz**

In order to use D3, we
have to understand
coding for the web.

SVG
HTML
CSS
JS

Open-source web frameworks

[the languages
of the web]

SVG

[scalable vector
graphics]

structure
for graphics

Open-source web frameworks

HTML

[hypertext
markup
language]
structure for
webpages
(documents)

Open-source web frameworks

CSS

[cascading
style sheets]
presentation
for webpages

Open-source web frameworks

JS

Open-source web frameworks

[javascript]
scripting for
webpages

So, what is D3?

Purpose? Skills needed?

Let's write some basic code for the web.

Practice HTML + CSS

HTML provides structure to webpages.

Practice HTML + CSS

HTML provides structure to webpages.

pages → text documents

structure → elements

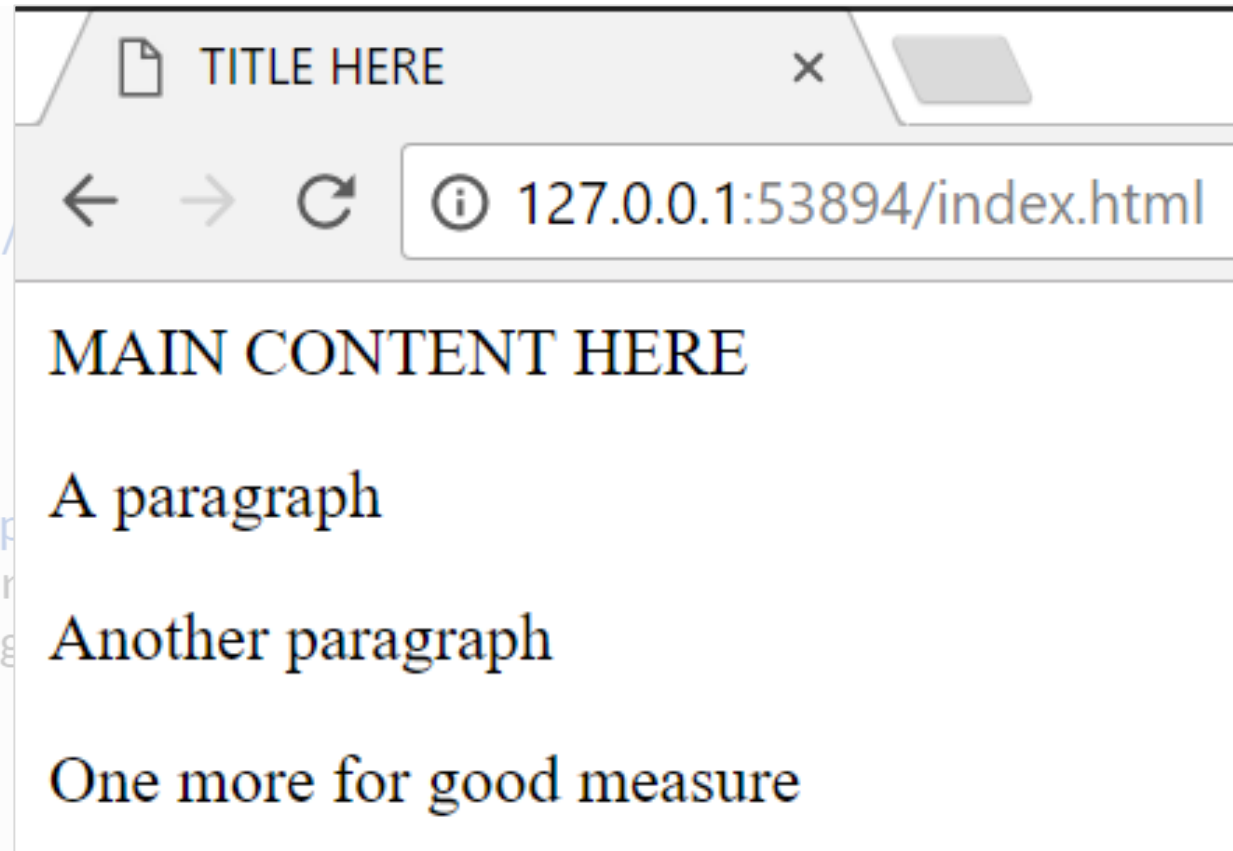
Practice HTML + CSS: HTML elements

```
1  <!DOCTYPE html>
2  ▼ <html>
3  ▼   <head>
4      <title>TITLE HERE</title>
5   </head>
6  ▼   <body>
7      MAIN CONTENT HERE
8  ▼   <div>
9      <p>A paragraph</p>
10     <p>Another paragraph</p>
11     <p>One more for good measure</p>
12   </div>
13 </body>
14 </html>
```

Practice HTML + CSS

[basic-webpage/index.html]

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4    <title>TITLE HERE</title>
5  </head>
6  <body>
7    MAIN CONTENT HERE
8  <div>
9    <p>A paragraph</p>
10   <p>Another paragraph</p>
11   <p>One more for good measure</p>
12 </div>
13 </body>
14 </html>
```



Practice HTML + CSS

[basic-webpage/index.html]

HTML uses elements
to provide structure
to webpages.

Practice HTML + CSS: HTML elements

<html></html>

<head></head>

<body></body>

<div></div>

<p></p>

Practice HTML + CSS: HTML elements

`<html>` web document

`<head>` document info

`<body>` main content

`<div>` group of related content

`<p>` paragraph

Practice HTML + CSS: HTML elements

HTML uses elements to provide structure to webpages.

<html>

<head>

<body>

<div>

<p>

Practice HTML + CSS: HTML elements

CSS formats webpages.

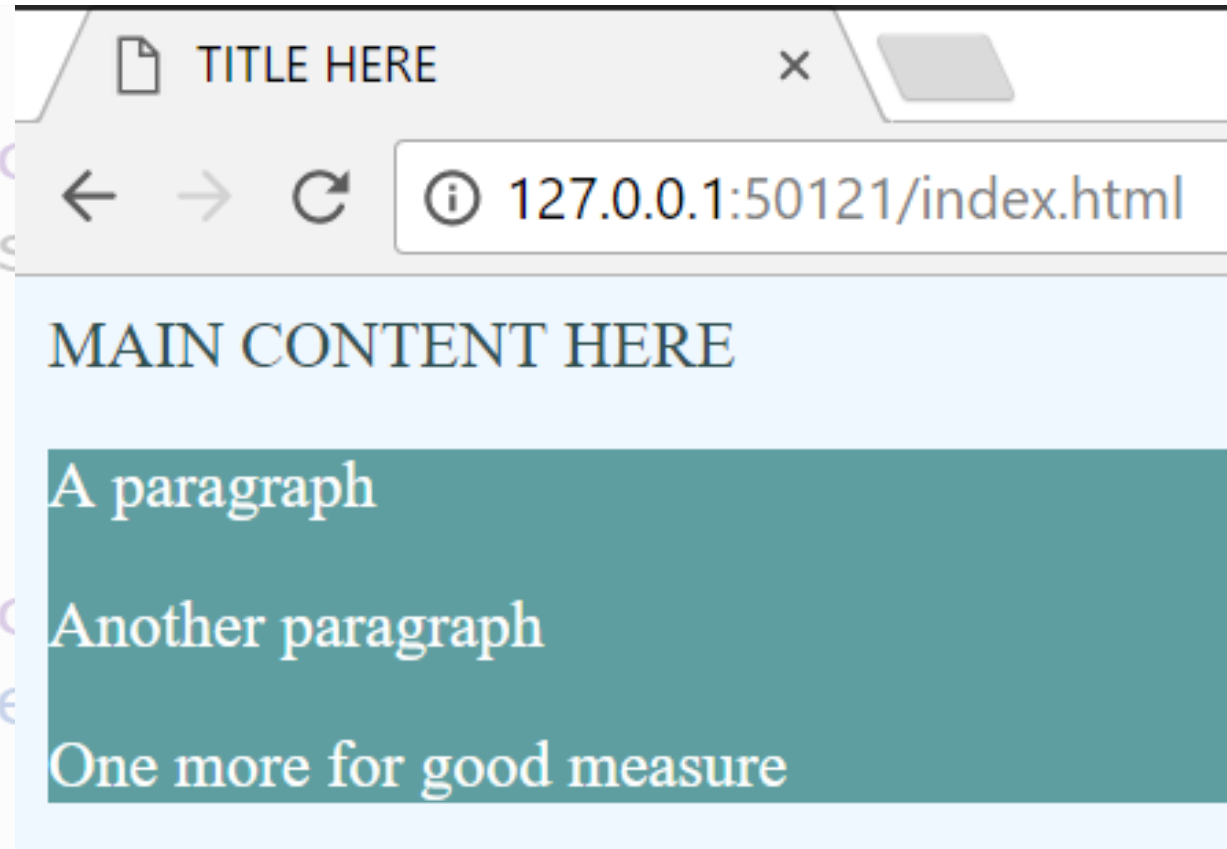
Practice HTML + CSS

```
1 ▼ body {  
2     background-color: aliceblue;  
3     color: darkslategrey;  
4 }  
5  
6 ▼ div {  
7     background-color: cadetblue;  
8     color: white;  
9 }
```

Practice HTML + CSS

[basic-style/index.html]

```
1 ▼ body {  
2     background-color: darkslategray;  
3     color: white;  
4 }  
5  
6 ▼ div {  
7     background-color: white;  
8     color: darkslategray;  
9 }
```



Practice HTML + CSS
[basic-style/index.html]

CSS uses rules to format webpages.

Practice HTML + CSS

CSS Rule

```
div {  
    background-color: cadetblue;  
    color: white;  
}
```

Practice HTML + CSS: CSS rules

CSS Selector

```
div {  
    background-color: cadetblue;  
    color: white;  
}
```

Practice HTML + CSS: CSS rules

CSS Declaration

```
div {  
  ■ background-color: cadetblue;  
  ■ color: white;  
}
```

Practice HTML + CSS: CSS rules

CSS Property

```
div {  
  background-color: cadetblue;  
  color: white;  
}
```

Practice HTML + CSS: CSS rules

CSS Value

```
div {  
    background-color: cadetblue;  
    color: white;  
}
```

Practice HTML + CSS: CSS rules

CSS uses rules to format webpages.

selectors +
declarations +
property-value pairs

Practice HTML + CSS

Let's talk about JavaScript and D3.js.

JS + D3.js

JavaScript interacts with webpages.

JS + D3.js

JavaScript interacts with webpages.

javascript.com/try

JS + D3.js: JavaScript Syntax

D3.js

JS + D3.js: About D3

D3.js is a JavaScript library for manipulating documents based on data. D3 helps you bring data to life using HTML, SVG, and CSS. [d3js.org]

JS + D3.js: About D3

Let's try it out.

JS + D3.js: Code Along

What else do you
need to know?

What else do you need to know?

a little more HTML/SVG/JS

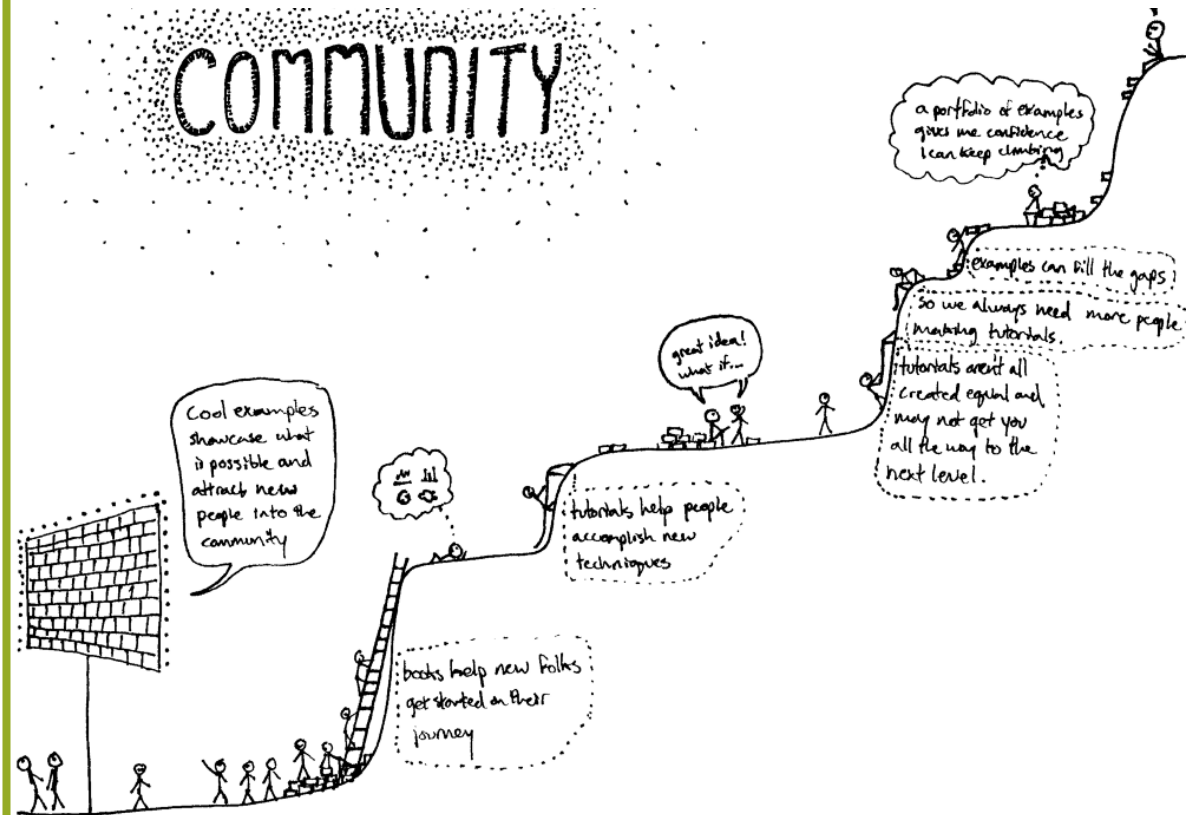
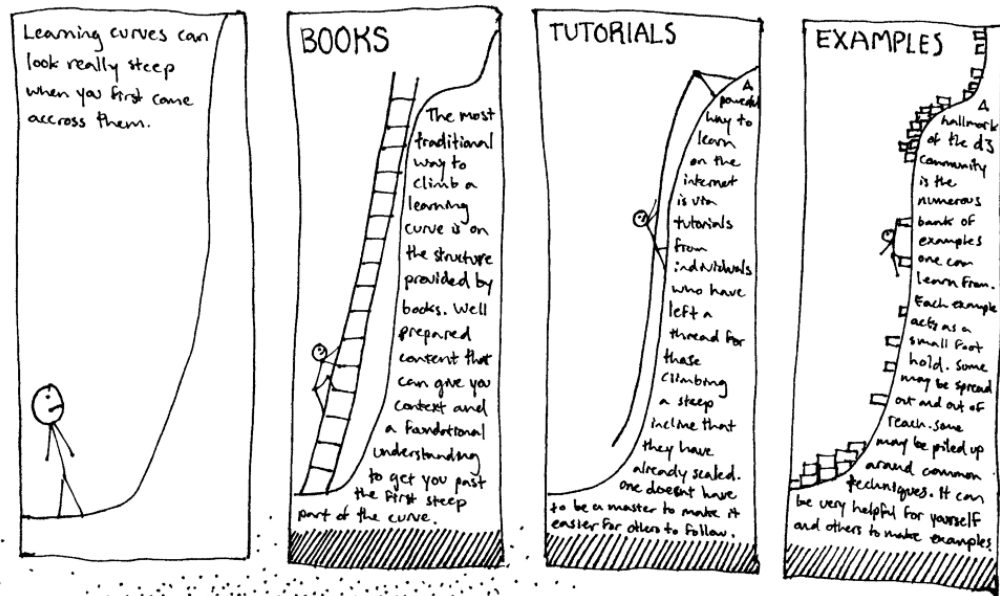
d3.exit()

drawing other shapes

using other scales

events and transitions

troubleshooting



[ian johnson on medium.com]

Thank you!