Web Front-End Development
Week 5: JavaScript libraries

All web developers need a solid foundation in HTML, CSS, and JavaScript. Although some developers use "vanilla JavaScript", many use tools, libraries, and frameworks in their development. These terms are often used interchangeably, which can make figuring them out even more complicated.

JavaScript Tools

Tools aid in development and should make the development process easier, but they are not an integral part of your project. David Schaal covers many popular web dev tools in his Web Creative Development Tools course offered in the spring.

JavaScript Libraries

Libraries package together functions aimed at handling some specific functionality. There are libraries for animation, data visualization, typography, and a lot of other functionality.
https://www.javascripting.com/
Libraries normally provide a higher level of abstraction which smooths over implementation details and inconsistencies.

JavaScript Frameworks

Frameworks are more involved than just bundling functions together in a library. There are many different types of frameworks but in general they provide more of an overall design pattern for an application. Many are also more "opinionated" meaning that you can't just pick and choose the functionality you need, you have to adopt the entire framework and adhere to their design pattern and methodologies.
We'll be looking at the React framework later in the semester.

We're going to look at the Typed.js library so we can understand what it means to use a library and how to approach development with a library.

Typed.js

https://mattboldt.com/demos/typed-js/
Install/Github https://github.com/mattboldt/typed.js/
Different ways to include the library in your web page.
- Link to a version hosted at a CDN (content delivery network)
  https://cdn.jsdelivr.net/npm/typed.js@2.0.12
    - Must be connected to the Internet
    - Might already be cached in the user's browser

Test with demo code to get it working
- What do you think we need in our HTML? JavaScript file?

https://repl.it/@aileenjp/Typed-js-example
HTML:
CDN `<script src="https://cdn.jsdelivr.net/npm/typed.js@2.0.11"></script>`

Someplace in the page for the typed script `<section id="typed"></section>`

JS:
```
let options = {
    strings: ["<i>First</i> sentence.", "&amp; a second sentence."],
  typeSpeed: 40
};


let typed = new Typed("#typed", options);
```

Once you get the basics working, play around with it and try some different options. strings is an array with 2 values, what if the array had just one value?
```
strings: ["<i>First</i> sentence. a second sentence."]
```

<u>Options</u>
typeSpeed
- Try different values, how do you make it faster? Slower?
- What if you removed this option?

Smart backspacing
- How does smart backspacing work?
```
strings: ["This is my first sentence.", "This is my second sentence."] ,
smartBackspace: true
```

Pausing
- Use the escape character to pause. Value in milliseconds
```
strings: ["First ^1000 sentence.", "Second sentence."]
```

Bulk typing
```
strings: ["git push --force ^1000 `pushed to origin with option force`"]
```

This would be a good proof of concept – got the library working and confirmed it has the functionality I need.
Now I'm ready to build my actual example.
https://typed-js-whos-on-first--aileenjp.repl.co/
Switched to SEO friendly structure.
Found the text and decided against using backspacing.
Played around the speed, wanted it to match the speed of the comedy skit.
CSS for font style and size, and page layout.
Wanted to have the cursor on the same line
```
display: inline;
```

Who's on First https://www.youtube.com/watch?v=sShMA85pv8M