CS4011 Advanced Web Dev with Javascript!

Time: MW 6:55 - 8:10pm

Room: Social Science Building - 328

Instructor: Matt Lane

Who am I?

- Matt Lane.
- Software Developer @ Bayer
 - Working with React in some form or another for the past 3 years.
 - Current Work: React-Native for GIS applications.
- Office Hours:
 - o In person: Monday and Wednesday 8:10PM 9:10PM or by appointment
 - Virtual: Thursday 5-6PM
- Contact:

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Javascript History!

- In 1995, Javascript was created at Netscape with the intention of being a scripting tool within the Netscape Navigator, intended to be a java-like language.
 - Javascript was written over a period of 10 days By Brendan Eich.
 - NOTE: Javascript was originally developed as "Mocha", and was release as "LiveScript" in the beta version of Netscape Navigator 2.0. LiveScript was then renamed Javascript in the 3rd beta version of Netscape Navigator 2.0. Many believe that it was a publicity stunt. The language is in no way related to Java other than that they both use a C-like syntax.

Javascript History!

• In 1996, Microsoft released JScript, a reverse engineered version of Javascript. The differences between Javascript and JScript ultimately led to sites being coded for either one or the other (often leading to "beest viewed <BROWSER>" logos).

Javascript History!

- 1996: Netscape submitted JavaScript to the European Computer Manufacturers Association (ECMA), an organization geared toward standardization of technologies/protocols for information and communication systems
- 1997: **ECMAScript** published in June. Major implementations of ECMAScript were implemented between Javascript (the most popular), JScript and more.

Javascript History!

...(Browser wars)...

Javascript History!

- 2005:
 - Brendan Eich and Mozilla join ECMA International and began to work on ECMAScript for XML, and ultimately built ECMAScript 4, which was later competed against by Yahoo developer Douglas Crockford, leading the ECMAScript 3.1 effort, leading to the ultimate death of ECMAScript 4
 - Jesse James Garrett releases whitepaper for AJAX, describing technologies (javascript based) which can load in the background, removing the necessity for full page reloads). The open source world goes nuts!

Javascript History!

• 2008/2009: After a parle in Oslo, all parties eventually agreed to continue work on the ECMAScript 3.1 project, ultimately renaming it to ECMAScript 5 to push the language forward.

Javascript History!

• 2009: ECMAScript 5 released!

Javascript History!

History!

But what is javascript?

- Javascript is a high level portable language that allows users to ignore what machine their program is running on. The language has **automatic garbage collection** and **memory management**.
- Javascript is a dynamically typed language. Ultimately this means that variables do not enforce types, and can be reassigned to any different type at any given time.
- Javascript is an **interpreted language**, in that the language does not "compile" as do C/Java programs. Javascript is interpreted by the engines immediately before execution.
- Javascript is **multiparadigm**. Javascript has been written to be treated as both an object oriented language and a functional programming language

ECMAScript (ES):

- ES is the standard. There are often many new implementations written for Javascript engines, however, in order for JS functionality to be added to all engines, the TC39 committee must agree.
- The <u>TC39</u> committee consists of companies/vendors such as: Mozilla Foundation, Google, Apple, Microsoft, Facebook, Intel etc.
- In order to gain approval from the committee, a consensus must be made primarily through proposal stages.

But why do people use javascript?

Why indeed...

But why do people use javascript?

It was in the right place at the right time. (Javascript was the true winner of the browser wars)