Comp 125 - Visual Information Processing

Spring Semester 2019 - Week 1 - Wednesday

Dr Nick Hayward

Getting started

- basic building blocks include HTML, CSS, and JS
- many tools available to work with these technologies
- three primary tools help with this type of development
- web browser
  - *such as Chrome, Edge (IE?), Firefox, Opera, Safari...*
- editor
  - *such as Atom, Sublime, Microsoft's Visual Studio Code...*
- version control
  - *Git, (Mercurial, Subversion)*
  - *GitHub, Bitbucket...*

Getting started - Web Browsers

- choose your favourite
  - *Chrome, Firefox, Safari, Edge...*
  - *not IE*
- developer specific tools
  - *Chrome etc view source, developer tools, JS console*
  - *Firefox also includes excellent developer tools*
  - *Firebug*
- cross-browser extension for web developers
  - *Web Developer*

Video - Microsoft Edge

Source - YouTube - Introducing Microsoft Edge

Getting started - Editors

Many different choices including

Linux, OS X, and Windows

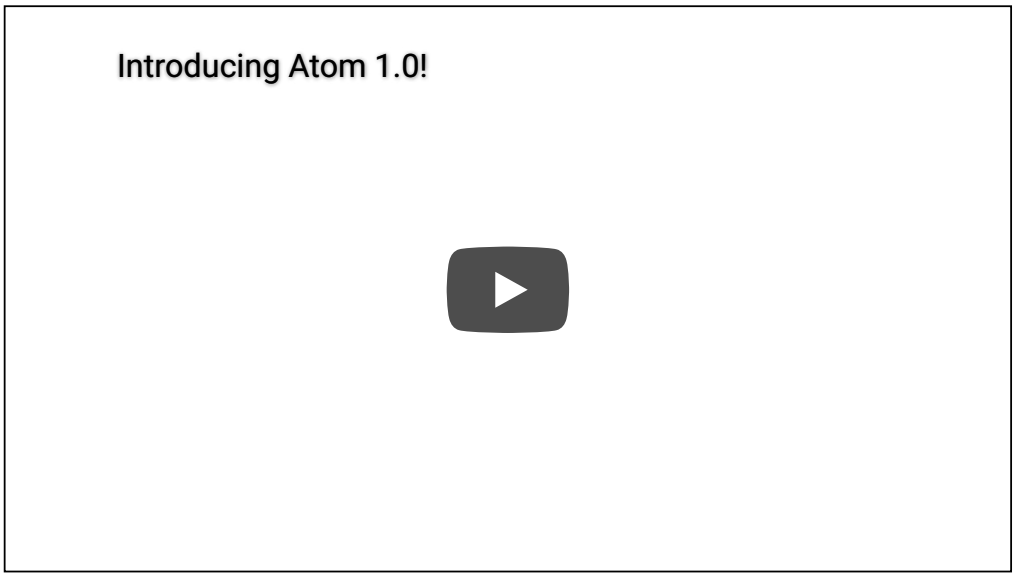
- Atom
- Sublime
- Visual Studio Code

OS X specific

- BBEdit
  - *TextWrangler*

and so on.

Video - Atom 1.0



Source - YouTube - Introducing Atom 1.0

JS Intro

- JavaScript (JS) a core technology for client-side design and development
- now being used as a powerful technology to help us
  - *rapidly prototype and develop web, mobile, and desktop apps*
- libraries such as jQuery, React, AngularJS, and Node.js
- helps develop cross-platform apps
  - *Apache Cordova*
  - *Electron*
- Embedded systems
  - *Espruino - http://www.espruino.com/*
  - *Tessel - https://tessel.io/*

JS Intro - what is JavaScript?

- JavaScript is a programming, or scripting, language for computers
- need programming languages to develop application
  - *effectively tell a computer what to do*
- a programming language defines a set of instructions for a computer to follow
  - *computers are inherently dumb machines*
- JavaScript allows a developer to write a set of instructions
  - *a computer is able to read and understand*
- JavaScript is commonly used to
  - *add interaction to a website*
  - *create fun animations*
  - *add advanced controls and features to a website*
  - ...
- JavaScript is a good language to learn
  - *used everywhere - easily used and tested with standard web browsers*
  - *lots of jobs for JS developers*
- with JavaScript, we can build
  - *web pages*
  - *play games*
  - *create our own music*
  - *design graphics and animations*
  - ...
- to begin writing and testing JS apps
  - *all we need is a modern Web Browser*
  - *provides a JavaScript* ***interpreter***

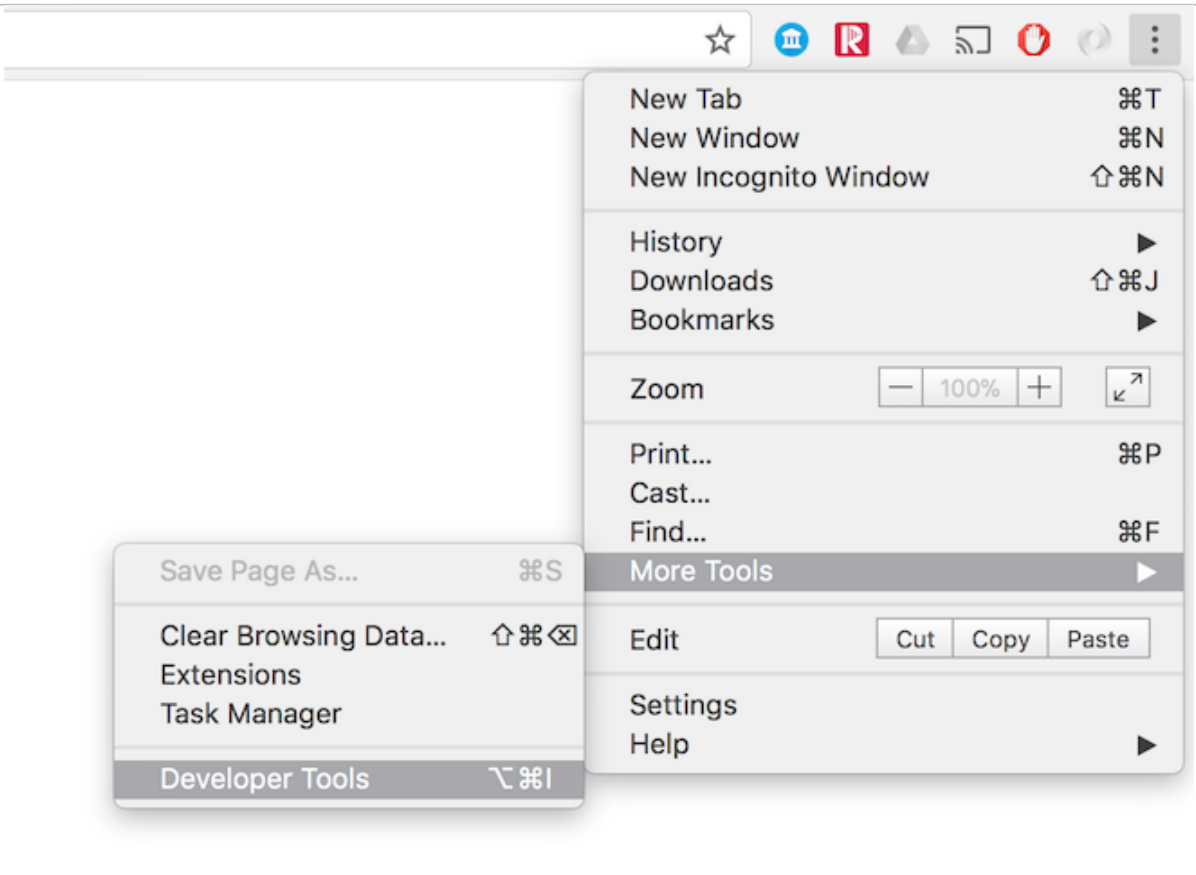
JS Intro - fun example

- Blocks Game

JS Intro - Google Chrome developer tools

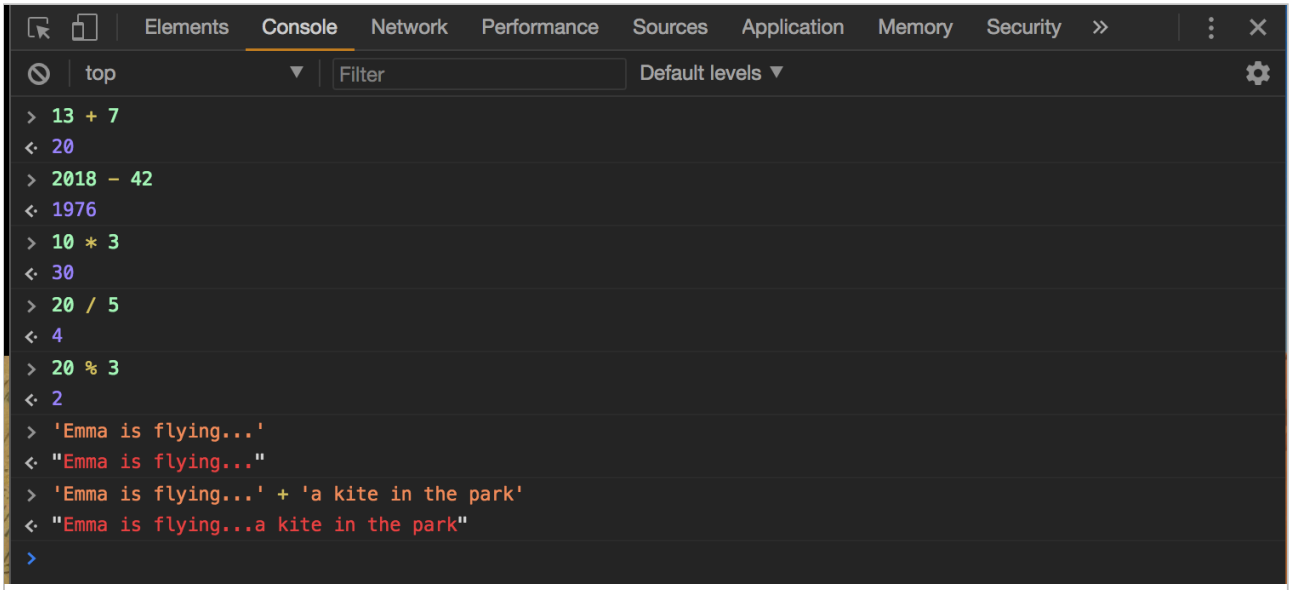
A quick and easy way to test and run JavaScript code is using the built-in **console** of a modern web browser, such as Google Chrome.

Open the JS console by using the **developer tools**,



JavaScript - Google Chrome Developer Tools

JS Intro - console usage



JavaScript Console