

Interaction 2

Navigation

Hello
my name is

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 **A BOOK APART**
Brief books for people who make websites

no
20

Mat Marquis

JAVASCRIPT FOR WEB DESIGNERS

FOREWORD BY Lara Hogan

JAVASCRIPT FOR WEB DESIGNERS

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Mat Marquis
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We can't wait to share what's next with you.



Mike Perham
@mperham

I love Dropbox: great example of a company making easy what should be "easy" but isn't.



Stephane Pred'homme
@stephp

I love you @Dropbox



Ryan Price
@ryan_price

.@Dropbox just saved my butt again!
[#thankgoodness](#)



sarah
@sarah_ross

I love @dropbox - that is all.



Max Beatty
@maxbeatty

Restoring a previous version of a file on Dropbox just saved my marriage

Projects

Deadlines

- ❖ Project 1 — Week 5 (Week of Feb 7)
- ❖ Project 2 — Week 9 (Week of Mar 13)
- ❖ Project 3 & 4
 - ❖ Week 11 (Week of Mar 27) — Preliminary work
 - ❖ Week 14 (Week of Apr 17)

PROJECT 1

- ❖ **ASSIGNMENT 1 (25%) WEEK 5 – Simple Dynamic Data web page**
- ❖ We will develop some simple ways to take input from external sources such as the time, working with variables, animating content and creating random interactions.
- ❖ Your task is to create a dynamic page that Javascript writes into after the page has loaded. Your content can be animated, textual, graphical or can be a mixture of all. It can require user input or just write directly in.

PROJECT 1

- ❖ You can peruse your own project idea or one of the following: Area or perimeter calculator,
Tip calculator,
Grade calculator,
Lottery ticket chooser,
Carousel / slideshow (your own work not a pre-built library),
A browser home screen that changes design based on time of day / year,
What moon phase is tonight.

PROJECT 2

- ❖ **ASSIGNMENT 2 (25%) WEEK 9 – Two dynamic features, web page**
- ❖ Your task is to take **two** of the features from the code we have covered in class and create a simple web page/ web app (it should have one primary goal).
- ❖ You are simply finding a use case for the page based on code we have already created in class. You will custom theme your page and demonstrate it working.

PROJECT 2

- You can pursue your own idea or one of the following:
 - ❖ Magic 8 ball,
 - ❖ Guessing games such as hangman, Rock, Paper, Scissors, Coin flip, Dice games,
 - ❖ Weather finder (click location on map and bring back weather for that location),
 - ❖ Sleep calculator (research sleep patterns), Pet name generator (based on what pet user has),
 - ❖ Daily promotion deals (generate offers based on day / time of the week),
 - ❖ What beer shall I drink,
 - ❖ Childs alphabet toy (click letter, play sound file of the letter spoken),
 - ❖ Baby lullaby player (for parents to help children sleep)
 - ❖ Colour scheme generator

ASSIGNMENT 1 & 2 workflow



1. Identify the Web page. What information do people need that requires writing in to the browser

2. Create HTML pages. CSS defines the look.

3. Add functionality with JS to add dynamic content to page

PROJECT 3

- ❖ **ASSIGNMENT 3 (30%) WEEK 14 – Finished App**
- ❖ **Deliverables**
- ❖ Finished working App project folder with all resources
- ❖ Demonstration of the App on a device for presentation in class week 14.
- ❖ See Word Doc for marking criteria

PROJECT BRIEF

- ❖ App Store Synopsis
- ❖ Affordances of your App
- ❖ Personas/ Scenarios/ Site Maps (App Map)
- ❖ Flow chart
- ❖ Wireframe
- ❖ Paper prototypes
- ❖ Results of paper prototyping testing process documented
- ❖ Digital prototype, tested and recorded as an MP4
- ❖ Final UI Style tiles plus any preliminary work such as mood boards, inspiration and competitor analysis

Project 4 brief 3 – Utility App

- ❖ Identify a utility such as creating a 'to do' list app
- ❖ food tracker app (record what you've eaten in a day)
- ❖ geolocation weather app, direction app (take google maps API further to directions)
- ❖ workout calculator (set a run using a map, calculates distance, start/stop timer)
- ❖ geolocation movie app (brings back which cinema's are around you and what they are showing)
- ❖ pizza ordering app (customize toppings, then hit order)
- ❖ busy people dinner app (what you have in and what you can make with those ingredients)
- ❖ a nearby app (restaurants, café, travel)
- ❖ music suggestion app (user puts in what kind of genre they like, brings back new music suggestions, could work with YouTube or SoundCloud)
- ❖ your own idea (talk to the prof to get it verified).

Project 4 brief 2 – Orientation App

- ❖ You will identify a location that requires help in navigating in some way and you will come up with a unique solution to this problem, eg Canada's Wonderland, Sheridan campuses, find my car (set geolocation when you park, so you can find it later), where's the washroom, Tick off list of things you want to do at a place.
- ❖ You can ask your prof if you have a different event to have your project verified.

Project 4 brief 1 – Enhance the experience of attending Comic Con

- ❖ You will identify the users of this event and create a single function experience.
- ❖ Stay away from photo sharing, there are enough platforms that cater to those needs, instead focus on a unique problem of the event and how an App might solve this, such as wayfinding, food guide, traveling to and from, attending talks.
- ❖ You can ask your prof if you have a different event to have your project verified.

bit.ly/vdes10918

Citing Code

Project 1 Simple Dynamic Data Web Page

project 1 / worth 25% of your course grade / due week 5 – week commencing 4 February

Overview

This project gives you the opportunity to build dynamic web pages that contain data that changes. As a result we will be using Javascript to update the page and control CSS to give the user updates. We will start simply but these will become web Apps, then eventually we will progress to creating an App for a mobile device, using the same knowledge of HTML, CSS and JS. HTML is the content, CSS is the design and JS becomes the behaviour or controls the page interactions.

You will be using Brackets to develop HTML, CSS and JS with.

Later in the semester you will be using, Vue.JS a frontend framework for easy update and manipulation of content on the page.

You will also learn the simple basics of Adobe XD as prototyping software.

Assessment Brief

We will develop some simple ways to take input from external sources such as the time, working with variables, animating content and creating random interactions. Your task is to create a dynamic page that Javascript writes into after the page has loaded. Your content can be animated, textual, graphical or can be a mixture of all. It can require user input or just write directly in.

You can peruse your own project idea or one of the following: Area or perimeter calculator, Tip calculator, Grade calculator, Lottery ticket chooser, Carousel/slideshow (your own work not a pre-built library), A browser home screen that changes design based on time of day/ year, What moon phase is tonight.

Deliverables

Please hand all of the following:

- **Demonstration of the working web page in a presentation.**
- **The project uploaded to the Firebird server and a URL submitted to Slate.**
- **The code for your web page zipped up and uploaded to Slate.**
- **A PDF citing the source of any images or code snippets used.**

Policy on Use of Sourced Materials

Code can use small sections of code from other sources, ie not a complete page taken from another source. Cite these sources using comments in the code, HTML comments:

<!--Start of code from xxxx --!>

<!--End of code from xxxx --!>

In CSS:

/* Start of code from xxxx */

/* End of code from xxxx */

Please also list the sources and the sources of any images that are not your own on a PDF file submitted to Slate with your URL.

Delivery Format & Instructions

URL submitted to SLATE. Zip file submitted to SLATE. PDF submitted to the Assignment Folder in Slate. PDF must be named:

LastName_FirstName_IXD2_Project2.pdf

Schedule

- week commencing 7-January:** Workflow overview, roles of HTML, CSS and JS. Intro to JS – writing a custom message
- week commencing 14-January:** Ethnography UX research, JS Variables, Forms and Input
- week commencing 21 January:** Don't make me think, CSS animation
- week commencing 28 January:** Video UI Sketching 1 hour 15 min. JS Random responses
- week commencing 4 February:** In class presentation of your assignment. JS Geolocation

Project Learning Outcomes

To achieve the critical performance, students will have demonstrated the ability to:

1. Research and analyze interactive objects to identify elements and relationships.
2. Apply visual design principles to interactive problem solving.
3. Apply the terminology and principles of information architecture in interactive problem solving.
4. Produce process documents such as diagrams, briefs and storyboards.
5. Integrate project concepts into functioning interactions.
6. Apply design principles such as sequence and priority to solving interactive problems.
7. Integrate technical parameters and platforms into the development of design solutions.
8. Exhibit professional behaviours including:
 - openness to peer critiques
 - acceptance of differing viewpoints
 - willingness to work collaboratively
 - commitment to meeting project due dates
 - responsibility for self direction
 - commitment to the responsible use of reference materials.

Your code *can* use
small sections of code
from other sources,
(i.e. not a complete
page taken from
another source).

Even if you do not
copy the code
verbatim, you must still
cite where concepts/
references came from

List code sources and
the sources of any
images that are not
your own in a PDF file
submitted to Slate

JS



// start of code from <https://example.com/code-sample.html>

```
function doNotCheat() {  
    alert("I cited my code");  
}
```

// end of code from <https://example.com/code-sample.html>

HTML



```
<!-- start of code from https://example.com/code-sample.html -->
```

```
<header>
```

```
  <h1>This code is not mine</h1>
```

```
  
```

```
</header>
```

```
<!-- end of code from https://example.com/code-sample.html -->
```

CSS



```
/* start of code from https://example.com/code-sample.html */
```

```
.cited:nth-child(1) {  
  color: red;  
  font-family: Helvetica, Arial, sans-serif;  
  background-image: url(/images/citation.gif);  
}
```

```
/* end of code from https://example.com/code-sample.html */
```

Expectations

- Things I expect Ryan will do
- Things I expect Ryan will NOT do
- Things I expect my peers will do
- Things I expect my peers NOT to do
- Things I will do
- Things I will not do

What you can expect from me

- Clarity
- Timeliness
- Accessible
- Respect

What I expect from you

- Attendance & Punctuality
- Participation & Respect
- Focus

Policies

- Using Technology in class
- Assignments



Javascript

How it works

HTML

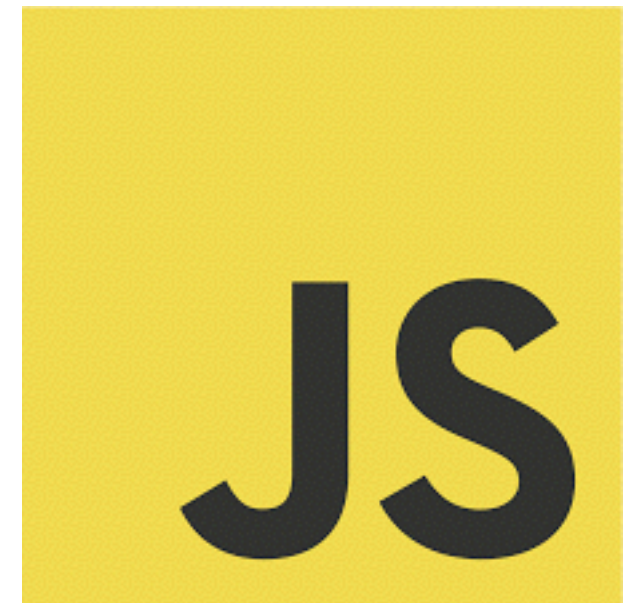


HTML
Content

CSS



CSS
Design



Javascript
behaviour

Interaction with JS

- ❖ Use JS to:
- ❖ **Access Content** - can select any element, attribute or text on a HTML page
- ❖ **Modify Content** - add elements, attributes or text to the page or remove them
- ❖ **Program** - specify steps for the browser to follow to change a page
- ❖ **React to events** - do something to the page if a button has been pressed, a cursor is moved, information is added to a form

“JavaScript allows us to add interaction to our pages as a complement to the structural layer that is markup and the presentational layer that is CSS.”

–Javascript for Web Designers

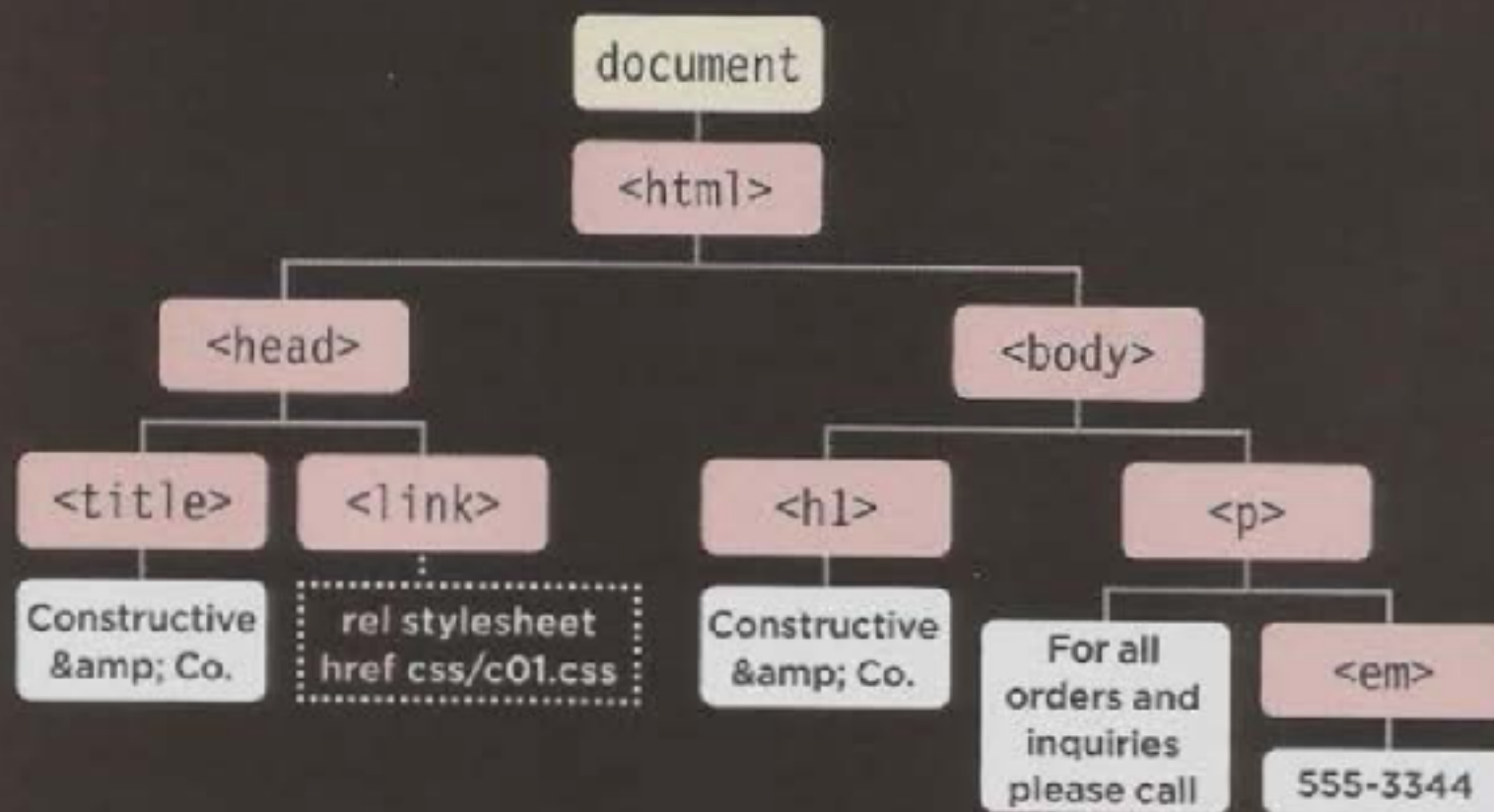
The DOM

- ❖ Document Object Model
- ❖ Provides JS a “map” of the Web page

```

<!DOCTYPE html>
<html>
  <head>
    <title>Constructive & Co.</title>
    <link rel="stylesheet" href="css/c01.css" />
  </head>
  <body>
    <h1>Constructive & Co.</h1>
    <p>For all orders and inquiries please call
      <em>555-3344</em></p>
  </body>
</html>

```





“A variable is a symbolic name for a value.”

–Javascript for Web Designers