

# Re-introduction to the Industry

CSC 174: Advanced Front-End Web Development

Lecture 1

# How is CSC 174 like and *not* like CSC 170

## **CSC 170**

- Lectures and demos
- Practice (lab assignments)
- Experimentation (projects)
- Exams

## **CSC 174**

- A few CSC 170 -like lectures and demos
- Projects = exams (midterm and final)
- Learn how to learn
- Find your own solutions
- Development in teams

# Since you took CSC 170

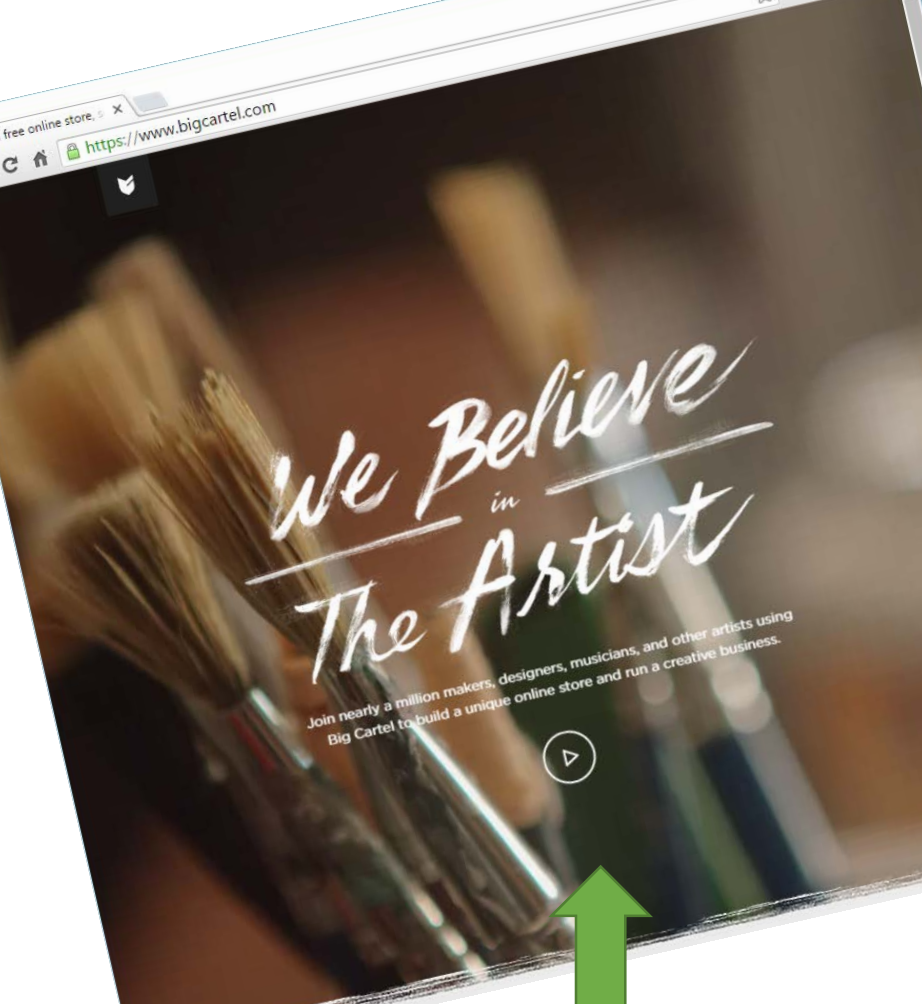
Expected: CSS Grid Layout! (started Fall 2017)

- New concepts – ways of thinking about page layout
  - Lines
  - Tracks (columns and rows)
  - Areas
- 18 new properties
- 3 new functions
  - minmax()
  - fit-content()
  - repeat()
- The "fr" unit

# Professor Kostin

Robert M Kostin, **[robert.kostin@rochester.edu](mailto:robert.kostin@rochester.edu)**

- Morey Hall, room 313
- **Virtual Office Hours:** the professor will publish times when he will be available to answer questions and provide general assistance via [Slack](#).
- **Private Office Hours:** by appointment only (*When students need to meet with the professor privately, send email to [robert.kostin@rochester.edu](mailto:robert.kostin@rochester.edu)*)



Good-enough  
Websites

## WYSIWYG – Package Solutions

- Wix
- Squarespace
- Weebly
- Macaw
- Webflow
- ION Interactive
- Mail Chimp
- Constant Contact

Helps  
...a lot!

Professional, Custom  
Websites

## Templates, Libraries, Frameworks

- jQuery
- Bootstrap
- WordPress
- Usability
- Readability

Still required

CSC 174

Graphic/Visual Design Skills

Goal-directed Design Skills

DMS 104

Hand Coding Skills  
(HTML, CSS, JS)

CSC 170

# Team Roles and Projects

Roles and Responsibilities for Web Teams

Role	Responsibilities	Rubric
<b>Information Architect</b>	<ul style="list-style-type: none"> <li>Prepares all the content and how it's arranged within each page and across pages</li> <li>Designs the navigation and how it's presented in any browser type and size</li> <li>Leads team collaboration (Github) and manages the file structure – unless there is a <i>Backend Hacker</i> on the team</li> </ul>	<ul style="list-style-type: none"> <li>No usability problems</li> <li>The structure layer (content) is coded in HTML so it is arranged and accessible in a way that makes sense for the content</li> <li>Content structure (HTML) meets industry standards and best practices including W3C HTML validation within reason</li> <li>(If no <i>Backend Hacker</i>) the team is coordinated and effective; no complaints</li> </ul>
<b>Design Artist</b>	<ul style="list-style-type: none"> <li>Responsible for everything the user sees, in any browser type and size</li> <li>Decides the graphic design: <ul style="list-style-type: none"> <li>Colors</li> <li>Styles</li> <li>Fonts</li> <li>Layouts</li> </ul> ...for any browser type and size </li> </ul>	<ul style="list-style-type: none"> <li>No readability problems</li> <li>The presentation layer (styles) is coded in CSS so it is visually arranged a way that makes sense for the content and adds value to the structure layer</li> <li>Styles (CSS) meet industry standards and best practices including W3C CSS validation within reason</li> </ul>
<b>Front-end Coder</b>	<ul style="list-style-type: none"> <li>Responsible for everything the user interacts with, from page load to every click and scroll</li> <li>Checks to make sure everything in the front-end (not just JavaScript but also HTML and CSS) must work <i>and</i> work well (optimized)</li> <li>Images must be correctly prepped (optimized)</li> <li>Decides the particulars of plug-in usage and installation, web font installation, and general optimization and usage of all front-end technologies</li> </ul>	<ul style="list-style-type: none"> <li>No interoperability problems</li> <li>The behavior layer (interactions) is coded in JavaScript primarily (may include certain CSS3 interactions) so it adds value to the structure and presentation layers</li> <li>"Page weight" is not excessive, and load time and on-page operations work as expected; includes optimization of images, web fonts, and JavaScript plugins</li> <li>JavaScript implementation meets industry standards and best practices</li> </ul>
<b>Backend Coder</b> [as needed]	<ul style="list-style-type: none"> <li>Responsible for all server interactions using PHP and MySQL including the addition of all code in the HTML documents to handle the server-side interactions (server-side <i>includes</i> too)</li> <li>Responsible for the set up and manipulation of database(s)</li> <li>Leads team collaboration (Github) and manages the file structure</li> </ul>	<ul style="list-style-type: none"> <li>No server-side problems</li> <li>Database tables are setup correctly and normalized and scripts that open, close, read and write data work as expected</li> <li>No scripting errors; no error.log files</li> <li>The team is coordinated and effective; no complaints</li> </ul>

# Information Architect



## Responsibilities

- Prepares all the content and how it's arranged within each page and across pages
- Designs the navigation and how it's presented in any browser type and size
- Leads team collaboration (Github) and manages the file structure – unless there is a Backend Hacker on the team

## Rubric

- No usability problems
- The structure layer (content) is coded in HTML so it is arranged and accessible in a way that makes sense for the content
- Content structure (HTML) meets industry standards and best practices including W3C HTML validation within reason
- (If no Backend Hacker) the team is coordinated and effective; no complaints



# Design Artist

## Responsibilities

- Responsible for everything the user sees, in any browser type and size
- Decides the graphic design:
  - Colors
  - Styles
  - Fonts
  - Layouts
  - ...for any browser type and size

## Rubric

- No readability problems
- The presentation layer (styles) is coded in CSS so it is visually arranged a way that makes sense for the content and adds value to the structure layer
- Styles (CSS) meet industry standards and best practices including W3C CSS validation within reason



# Front-end Coder

## Responsibilities

- Responsible for everything the user interacts with, from page load to every click and scroll
- Checks to make sure everything in the front-end (not just JavaScript but also HTML and CSS) must work and work well (optimized)
- Images must be correctly prepped (optimized)
- Decides the particulars of plug-in usage and installation, web font installation, and general optimization and usage of all front-end technologies



## Rubric

- No interoperability problems
- The behavior layer (interactions) is coded in JavaScript primarily (may include certain CSS3 interactions) so it adds value to the structure and presentation layers
- "Page weight" is not excessive, and load time and on-page operations work as expected; includes optimization of images, web fonts, and JavaScript plugins
- JavaScript implementation meets industry standards and best practices

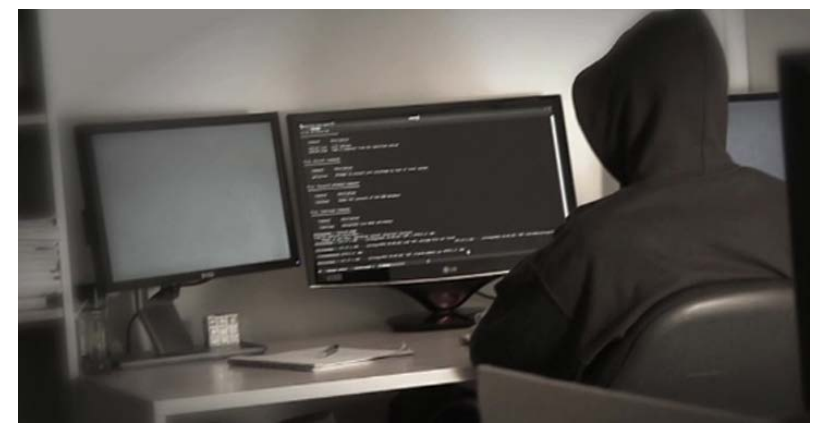
# Backend Coder

## Responsibilities

- Responsible for all server interactions using PHP and MySQL including the addition of all code in the HTML documents to handle the server-side interactions (server-side *includes* too)
- Responsible for the set up and manipulation of database(s)
- Leads team collaboration (Github) and manages the file structure

## Rubric

- No server-side problems
- Database tables are setup correctly and normalized and scripts that open, close, read and write data work as expected
- No scripting errors; no error.log files
- The team is coordinated and effective; no complaints



# Projects

- For each project there must be teams of three students
  - If not enough students to create a full team, students may double-up roles (but only if no one is available)
- Each student must perform all three roles at least once at some point during the semester
- Students that perform the same role more than once will have their scores averaged