

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

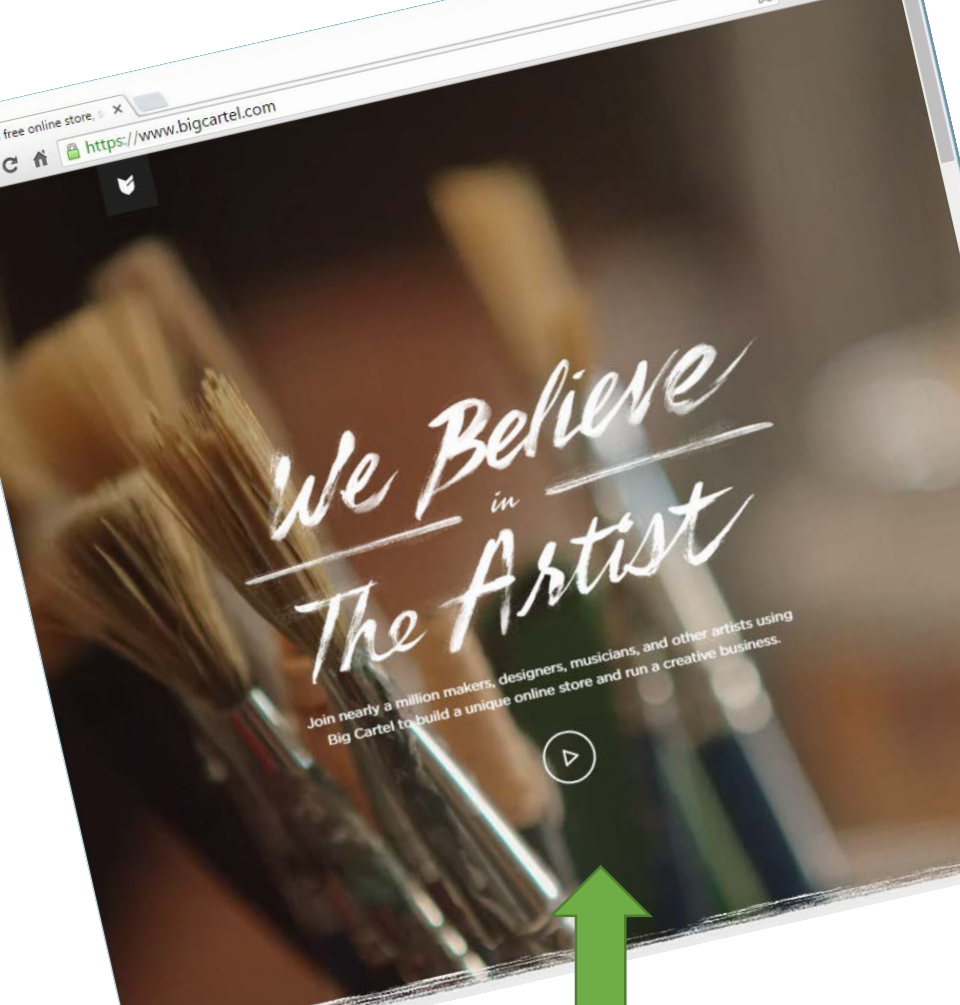
Since you took CSC 170

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

- **Virtual Office Hours:** for technical help, the professor will be online, answering questions via [Slack](#). Students can leave questions at *any time*. The professor will answer them Mondays and Thursdays, 9:30 to 10:30 AM
- **Regular Office Hours:** for non-technical help, the professor will be in his office in Morey 313, Tuesdays and Wednesdays at 9:30 to 10:30 AM.
- **Private Office Hours:** when the other office hours aren't possible, send email to robert.kostin@rochester.edu to schedule an appointment



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
Information Architect	<ul style="list-style-type: none"> • 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 <i>Backend Hacker</i> on the team 	<ul style="list-style-type: none"> • 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 <i>Backend Hacker</i>) the team is coordinated and effective; no complaints
Design Artist	<ul style="list-style-type: none"> • Responsible for everything the user sees, in any browser type and size • Decides the graphic design: <ul style="list-style-type: none"> • Colors • Styles • Fonts • Layouts ...for any browser type and size 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 <i>and</i> 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 	<ul style="list-style-type: none"> • 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 [as needed]	<ul style="list-style-type: none"> • 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) • Responsible for the set up and manipulation of database(s) • Leads team collaboration (Github) and manages the file structure 	<ul style="list-style-type: none"> • 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

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
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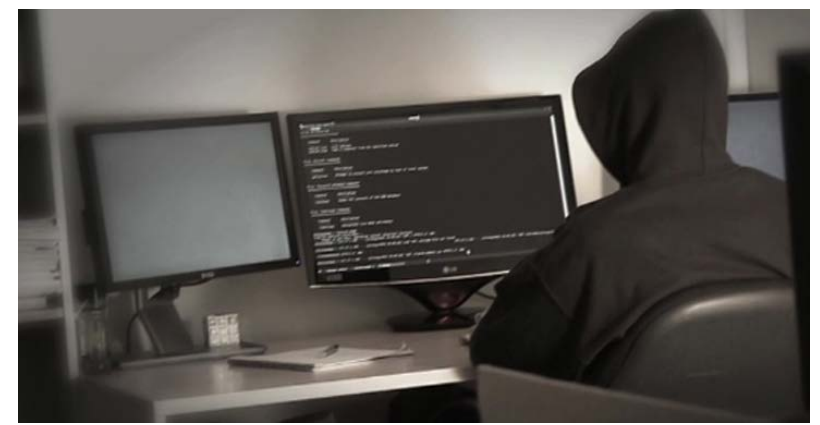
Backend Coder

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