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
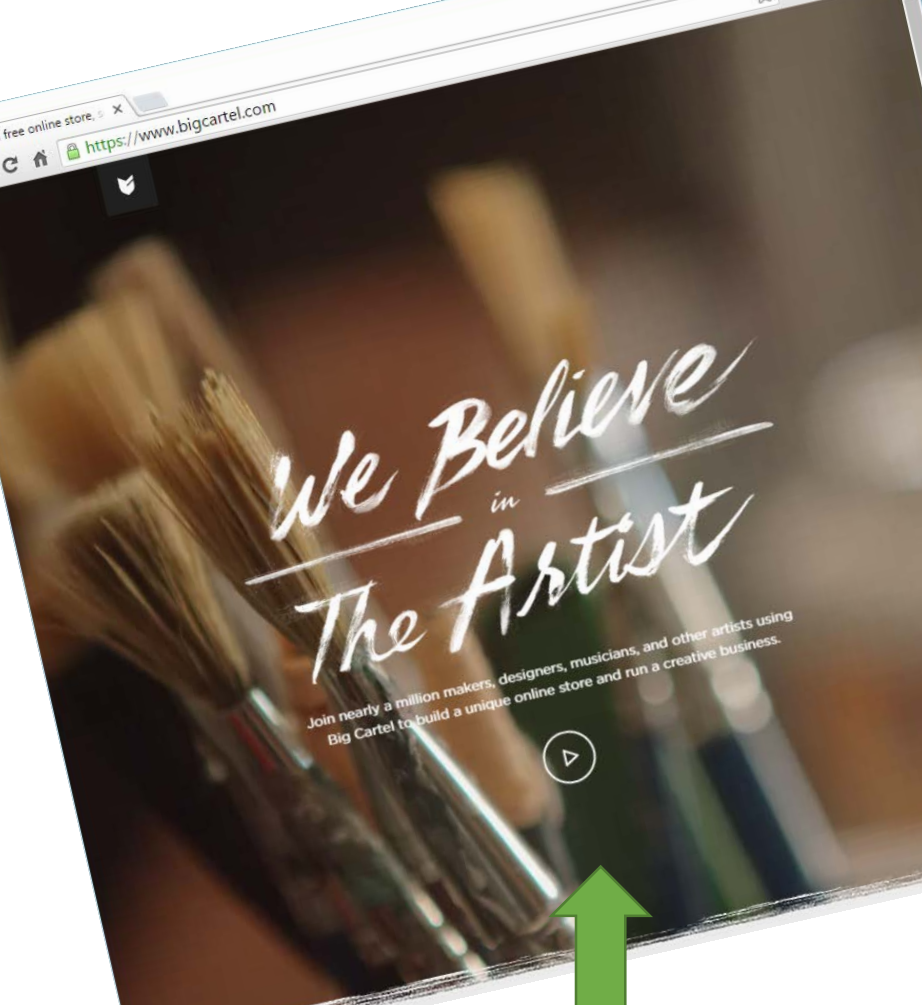- Find your own solutions
- Development in teams

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: [Slack](), **#help** channel; Mondays and Thursdays, 9:00 to 10:00 AM

- **Regular Office Hours** for *non-technical help:* Morey 313; Tuesdays and Wednesdays at 9:00 to 10:00 AM.

- **Private Office Hours:** email to [robert.kostin@rochester.edu]()

Team Roles and Projects

Roles and Responsibilities for Web Teams

Role	Responsibilities	Rubric
Information Architect	• 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	• 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	• 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
		• 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	• 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	• 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]	• 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	• 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

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Front-end Coder

Responsibilities

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Rubric

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- "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
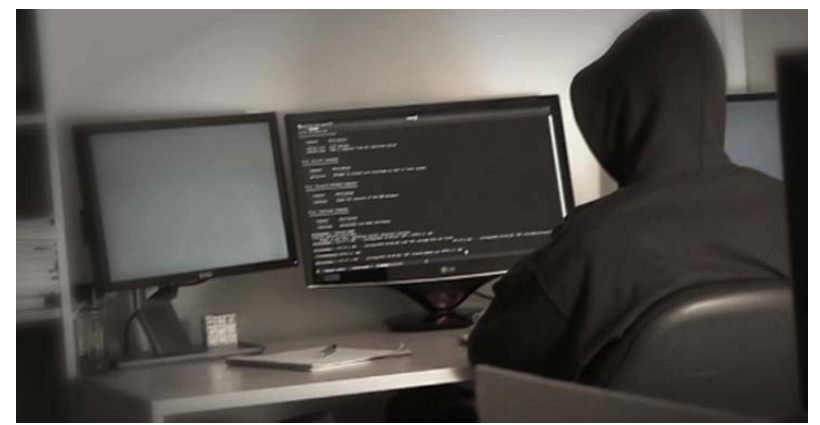
Projects

- 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