Project Related Important Concepts

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- Jennifer Robbins, Learning Web Design, O'Reilly, 5th edition, May 2018, ISBN 978-1-491-96020-2.

1

OVERVIEW

▶ **Website creation roles**

▶ **Equipment**

▶ **Software**

▶ **Multitude of devices**

▶ **Web standards**

▶ **Progressive enhancement**

▶ **Responsive web design**

▶ **Accessibility**

▶ **Site performance**

2

Website Creation Roles

➢ Content

➢ Design

➢ Coding: Frontend

➢ Coding: Backend

3

Content

▶ **Information architecture**
   Organizes content logically for ease of findability

▶ **Content strategy**
   Ensures that text supports the brand/marketing goals;
   may include data modeling and updating schedules as well
   as extending brand voice to social media

4

Design

▶ **User Experience (UX)**
  Makes sure whole experience with the site and the product is favorable based on user testing

▶ **Interaction Design (IxD)**
  Focuses on how to use the site, including its User Interface (UI)

▶ **Visual Design**
  Creates the "look and feel" of the site

5

Coding: Frontend Development

▶ **Authoring/Markup (HTML) Assignment 2**

▶ **Styling (CSS) Assignment 3**

▶ **JavaScript and DOM Scripting Frameworks Assignment 4**

6

Coding: Backend Development

▶ Server software (ex: Apache, MS IIS)

▶ Web application languages (ex: PHP, Ruby, .NET)

▶ Database software (ex: MySQL, Oracle)

7

Other Web Roles

▶ Product manager
Guides product in a way that meets business goals

▶ Project manager
Coordinates team, schedule, and processes

▶ SEO (Search Engine Optimization) specialist
Ensures site is highly ranked in web searches

▶ Multimedia producer
Creates sound, video, animation, and interactive media

8

Typical Equipment

- ▶ Solid up-to-date computer

- ▶ Large monitor (or several)

- ▶ Second computer for testing

- ▶ Mobile devices for testing

- ▶ Scanner and/or camera (for artwork)

9

Software Typically Used

- ▶ Coding tools

- ▶ User Interface/layout tools

- ▶ Web graphic creation tools

- ▶ Variety of browsers

- ▶ File management/transfer tools

10

Some Important Concepts

▶ **Multitude of devices**

▶ **Web standards**

▶ **Progressive enhancement**

▶ **Responsive web design**

▶ **Accessibility**

▶ **Site performance**

11

A Multitude of Devices

- Your web pages will be viewed on all manner of devices, large and small, fast and slow, visual and non-visual.

- One of the challenges of being a web designer is creating a good experience regardless of the browsing device.

Brad Frost's depiction of the web viewing environment.

12

Web Standards

▶ The World Wide Web Consortium (W3C) writes the specifications for web technologies:
w3.org/standards

▶ Sticking with web standards ensures **consistency** across browsers and **forward-compatability**.

13

Progressive Enhancement

Progressive enhancement is a strategy for coping with unknown browser capabilities.

▶ Start with baseline experience that provides content and basic functionality even on minimal browsers and assistive devices

▶ Layer on styles, scripts, and advanced features for browsers that can handle them

▶ Finish with "nice to have" effects (like animation) that aren't critical to the brand or functionality

14

Progressive Enhancement (cont'd)

▶ HTML strategy
Write in a logical order, with elements marked up in a meaningful way

▶ Style strategy
Use universally supported properties as the baseline and add cutting-edge styles as embellishment

▶ Scripting strategy
Make sure basic functionality (like content display, linking, and forms) are possible when JavaScript is turned off. Enhance the experience when JavaScript is available

15

Responsive Web Design

Responsive web design is a strategy for dealing with unknown screen size:

▶ The heart of the method is using one HTML source for all devices and swapping out the styles based on the size of the browser window (viewport)

▶ It is preferred to building separate sites just for mobile devices ("m.dot" sites)

▶ It may not be the solution for all sites, but making sites that adapt to screen size is now common practice
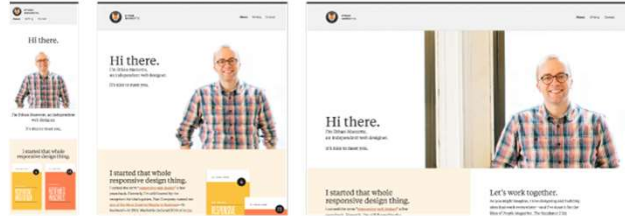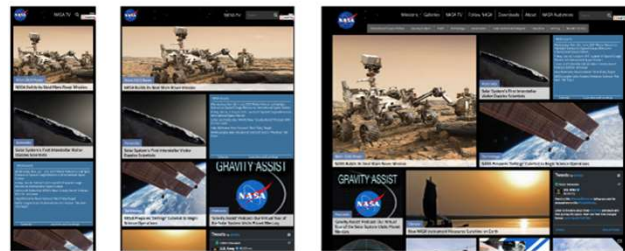
16

Responsive Web Design (cont'd)

Page layout changes
based on the
width of the screen.

Ethan Marcotte personal site
ethanmarcotte.com

NASA
nasa.gov

17

Accessibility

▶ **Users access web content in many ways:** Keyboard, mouse,
  voice commands, screen readers, Braille output, magnifiers,
  joysticks, foot pedals, and so on

▶ **Four broad categories of disabilities** affect how people interact
  with computers:

  ▶ Vision impairment

  ▶ Mobility impairment

  ▶ Auditory impairment

  ▶ Cognitive impairment

18

Accessibility (cont'd)

- ▶ There are measures you can take to improve the accessibility of your web pages.
- ▶ The Web Accessibility Initiative (WAI) is the group responsible for making web technologies accessible: www.w3.org/WAI.
- ▶ The WAI-ARIA (Accessible Rich Internet Applications) specification documents accessibility features.

19

Site Performance

- ▶ It is critical that web pages display as quickly as possible.
- ▶ Users on mobile devices generally leave a page if it does not display in 3 seconds.
- ▶ Even milliseconds can affect the bottom line on retail sites.

20

Site Performance Tips

▶ Make image files as small as possible.

▶ Streamline HTML markup.

▶ Keep JavaScript to a minimum.

▶ Add scripts in a way that they don't block page rendering.

▶ Don't load unnecessary assets.

▶ Reduce the number of times the browser makes requests of the server.

21

Site Performance Tools

▶ Use a **waterfall chart** to see what assets are downloading for your page and how many milliseconds they take.

▶ This tool is built into the Chrome browser (Developer > Developer Tools).
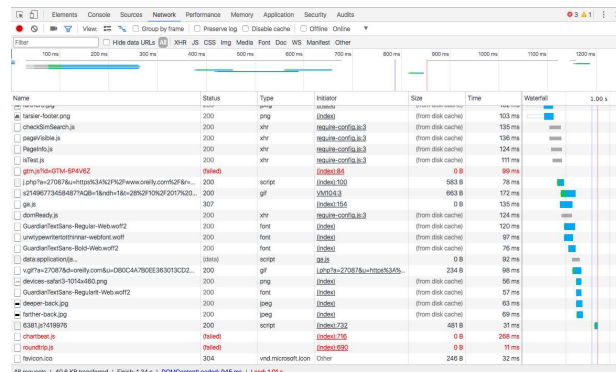
22

Development Environment - Editor

▶ Download and install Brackets editor for Macbook and Windows

▶ http://brackets.io/

23

Development Environment - Hosting

▶ Free unlimited web hosting

▶ http://infinityfree.net/

24

Questions?

25