
Design & UX

Responsive & CSS Framework

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Agenda

- Introduction to Design and UX
- Responsive Design Web
- Bootstrap
- Icon fonts

Introduction to Design and UX

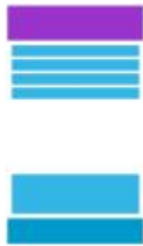
- Front End Developers can not ignore design and user experience (UX). Design is a process for developing solutions that effectively integrate task, context of use, and “user.”
- UX is really about focusing on *three things* -- can the user get done what he/she is trying
 - to do **effectively**
 - to do **efficiently**
 - and with **satisfaction**

Introduction to Design and UX (con't)

- Web design:
 - More than just building "pretty" things
 - About crafting useful and effective experiences for the users
 - Start with making the site fast and reliable.
 - Then , set up the structure and information architecture of the page so users have a logical schema for navigation.
 - Then, build the UI for optimal UX.
 - Finally, about aesthetics.

Responsive Design Web

- Is creating websites that respond to the user's context, whether that is the device they are viewing on, the size of their browser, or their accessibility needs.
- Uses only HTML and CSS.
- Is not a program or a JavaScript
- Design in Mobile first.



Phone



Tablet



Desktop

Responsive Design Web (con't)

Layout

Text Size

Input

Navigation

Images

Responsive Design Web - Viewport

- Is the user's visible area of a web page.
- Varies with the device, and will be smaller on a mobile phone than on a computer screen.
- Take control over the viewport, through the `<meta>` tag.
 - Syntax: `<meta name="viewport" content="width=device-width, initial-scale=1.0">`
- Size Content to The Viewport:
 - Do NOT use large fixed width elements.
 - Do NOT let the content rely on a particular viewport width to render well.
 - Use CSS media queries to apply different styling for small and large screens, consider using relative width values

Responsive Design Web - Grid-View

- Means that the page is divided into columns.
- Using a grid-view is very helpful when designing web pages. It makes it easier to place elements on the page.
- A responsive grid-view often has 12 columns, and has a total width of 100%, and will shrink and expand as you resize the browser window.

1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

Responsive Design Web - Media Queries

- Uses the `@media` rule to include a block of CSS properties only if a certain condition is true.
- Can add a breakpoint where certain parts of the design will behave differently on each side of the breakpoint.
 - Syntax: `min-width: 768px, max-width: 768px`
- Also be used to change layout of a page depending on the orientation of the browser.
 - Syntax: `orientation: landscape, orientation: portrait`

Responsive Design Web - Frameworks

- Bootstrap: <http://getbootstrap.com/>
- W3.CSS: <http://www.w3schools.com/w3css/default.asp>
- Foundation: <http://foundation.zurb.com/>

Twitter Bootstrap

- <http://getbootstrap.com/>
- ☐ A freely available design framework for websites and web applications
- ☐ Based upon HTML5, CSS and JavaScript
- ☐ Supports all major browsers (even IE7!)
- ☐ Released on GitHub in August 2011

Twitter Bootstrap - Created By



Mark Otto

@mdo

Designer at Twitter, creator of Bootstrap (@TwBootstrap).
San Francisco Bay Area · <http://t.co/HqYRIA>



jacob thornton

@fat

I work for twitter... I write comics sometimes (<http://t.co/GucZD6o>)
and javascript (<http://t.co/oFcXhQl>) other times.
San Francisco, CA

Twitter Bootstrap - Why - Reason #1: Rich Features

Designed for everyone, everywhere.

Bootstrap makes front-end web development faster and easier. It's made for folks of all skill levels, devices of all shapes, and projects of all sizes.



Preprocessors

Bootstrap ships with vanilla CSS, but its source code utilizes the two most popular CSS preprocessors, [Less](#) and [Sass](#). Quickly get started with precompiled CSS or build on the source.



One framework, every device.

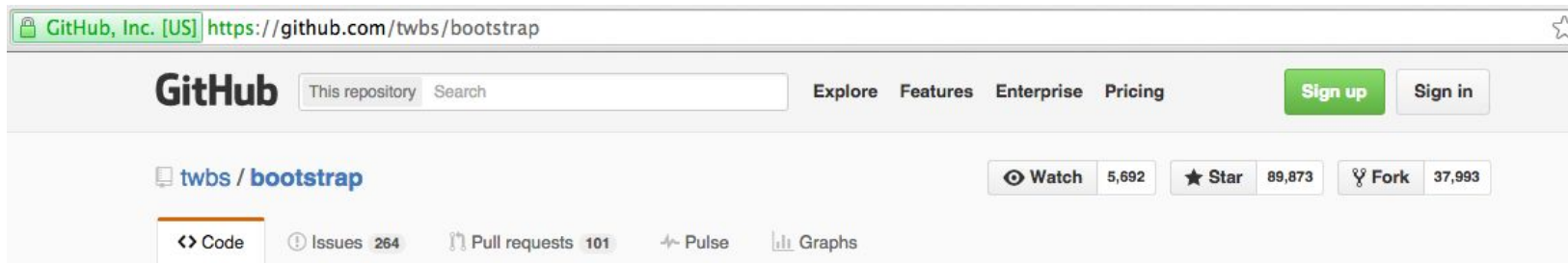
Bootstrap easily and efficiently scales your websites and applications with a single code base, from phones to tablets to desktops with CSS media queries.



Full of features

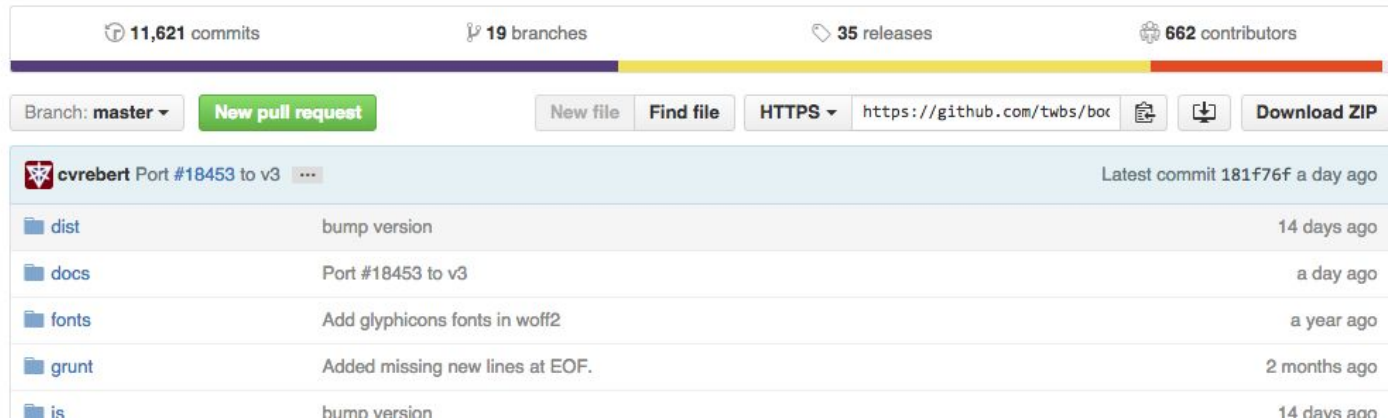
With Bootstrap, you get extensive and beautiful documentation for common HTML elements, dozens of custom HTML and CSS components, and awesome jQuery plugins.

Twitter Bootstrap - Why - Reason #2: Popularity



The screenshot shows the GitHub repository page for twbs/bootstrap. The browser address bar displays 'GitHub, Inc. [US] https://github.com/twbs/bootstrap'. The GitHub header includes the logo, a search bar for 'This repository', and navigation links for Explore, Features, Enterprise, and Pricing. Sign up and Sign in buttons are on the right. The repository name 'twbs / bootstrap' is shown with icons for Watch (5,692), Star (89,873), and Fork (37,993). Below the repository name are tabs for Code, Issues (264), Pull requests (101), Pulse, and Graphs.

The most popular HTML, CSS, and JavaScript framework for developing responsive, mobile first projects on the web.
<http://getbootstrap.com>



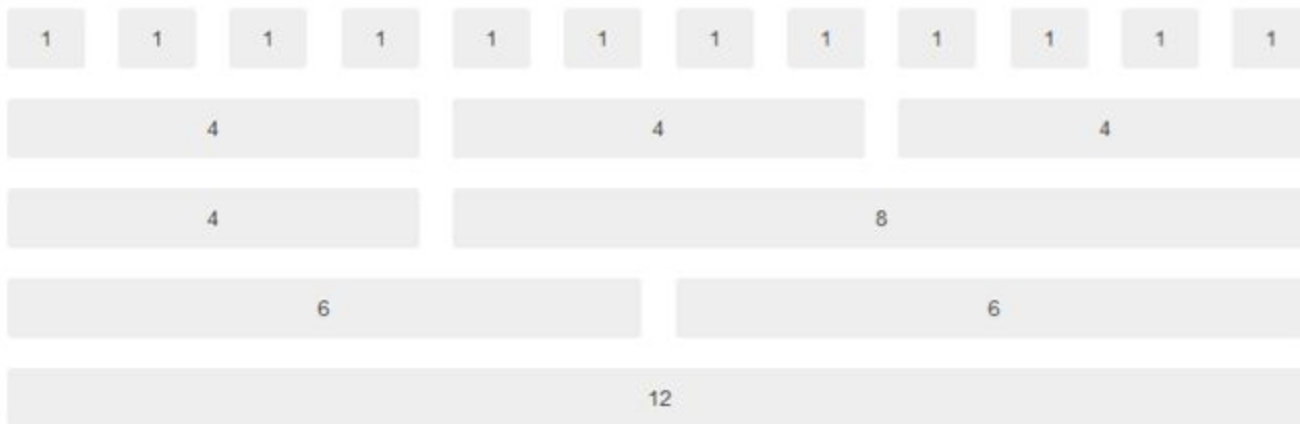
This section displays the commit history of the repository. It includes a summary bar with 11,621 commits, 19 branches, 35 releases, and 662 contributors. Below this is a table of recent commits.

Branch: master	New pull request	New file	Find file	HTTPS	https://github.com/twbs/boo	Download ZIP
cvrebert Port #18453 to v3 ... Latest commit 181f76f a day ago						
dist	bump version					14 days ago
docs	Port #18453 to v3					a day ago
fonts	Add glyphsicons fonts in woff2					a year ago
grunt	Added missing new lines at EOF.					2 months ago
is	bump version					14 days ago

Twitter Bootstrap - Why - Reason #3: Browser Support



Twitter Bootstrap - Why - Reason #4: Grid System



Twitter Bootstrap - Why - Reason #5: Components

➤ Buttons:



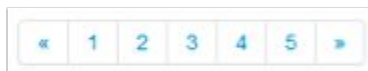
➤ Tabs:



➤ Breadcrumb:



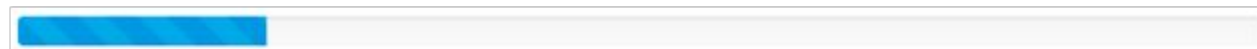
➤ Pagination:



➤ Alerts:



➤ Progress bar:



Icon fonts

- Are just fonts.
- Instead of containing letters or numbers, they contain symbols and glyphs.
- can be styled with CSS in the same way you style regular text which has made them a popular choice on the web.

Advantages of Icon Fonts

- Can apply any CSS effects to them.
- Because they are vector graphics, they're scalable. That means you can scale them up or down without losing their quality.
- Send one single or few HTTP request(s) to load them instead of multiple HTTP requests that bitmap images might require.
- They load fast because of their small size.
- They're supported in all browsers (even back to IE6).

Icon fonts Libraries

- Font Awesome: <http://fontawesome.github.io/Font-Awesome/>
 - Rich collection of 439 icons.
 - Free either for personal or commercial use.
 - It was designed for Bootstrap, however you can use it in any of your favorite frameworks.
- IcoMoon: <https://icomoon.io/>
 - It comes with two icon packs, one open source and one premium (essential and ultimate options).
 - Depending on the package you choose, the number and the format of the available icons will be different. (the number of the icons for the free pack is 450, but for the ultimate pack it's 1266)

Assignment

- Create the responsive landing page following:
 - Using Bootstrap
 - Using awesome font
 - Or Using Material UI font
- Output of the responsive landing page: <https://drive.google.com/drive/folders/0B-5E-PEHLOziS21GSzR6ZURpSDg>
 - Width $\geq 1200\text{px} \Rightarrow 1170\text{px}$ folder
 - Width $< 1200\text{px}$ and $\geq 768\text{px} \Rightarrow 740\text{px}$ folder
 - Width $< 768\text{px} \Rightarrow 320\text{px}$

Assignment

- Cutout of the component: <https://drive.google.com/drive/folders/0B-5E-PEHLOzibDROLVBtaDYwc0E>



Q&A



Thanks for your listening!
