Bring ideas to life
VIA University College

Responsive Web Design Continued...

RWD I1

Today's agenda

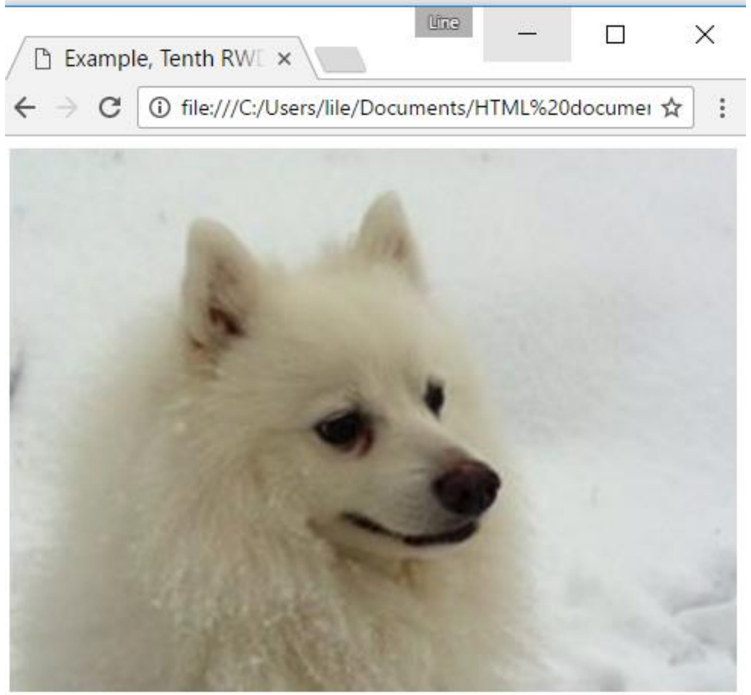
- Recap
- Multiple breakpoints
- The Two Viewports
- Mobile Browsers
- Screen orientation
- Responsive Layout
- Exercise

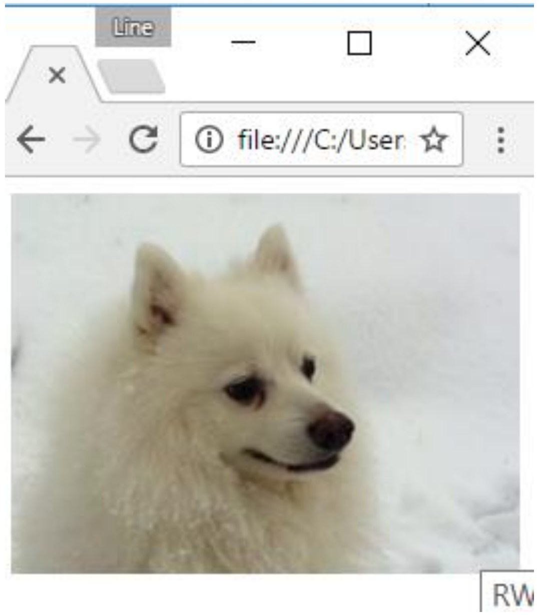
Exercises from last time

Recap:
Relative Size: height

```
img {
        width: 100%;
        height: auto;
}
```

Element size is set relative to size of parent (in this case the browser window view/the body element).





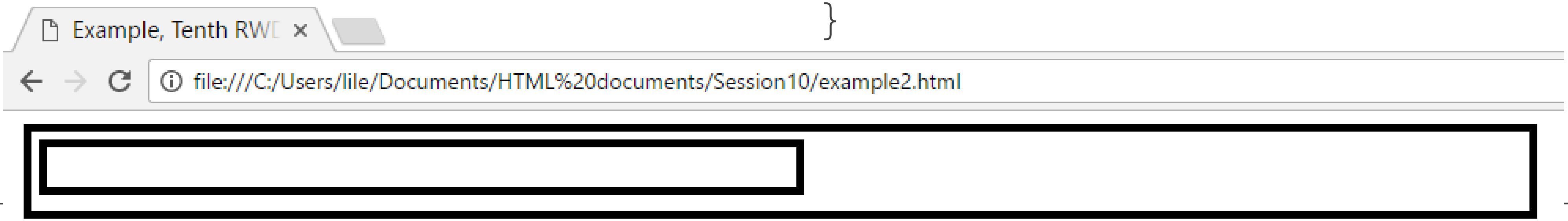
Recap:
Relative Size: divisions

HTML:

```
<body>
      <div id="firstBox“>
         <div id="secondBox“>

         </div>
      </div>
 </body>
```

CSS:

```
#firstBox {
   width: 50%;
   height: 50px;
   margin: 5px;
   border: 5px solid black;
}
#secondBox {
   width: 50%;
   height: 50%;
   margin: 5px;
   border: 5px solid black;
}
```


Example, Tenth RWI
file:///C:/Users/lile/Documents/HTML%20documents/Session10/example2.html

Recap: Media Query (responsive)

Change the CSS styling to adjust to the client media (screen resolution/window size).

Select different stylesheets depending on media:

```
<link rel="stylesheet" media="mediatype and|not|only (media feature)"
href="myStylesheet.css" type="text/css">
```

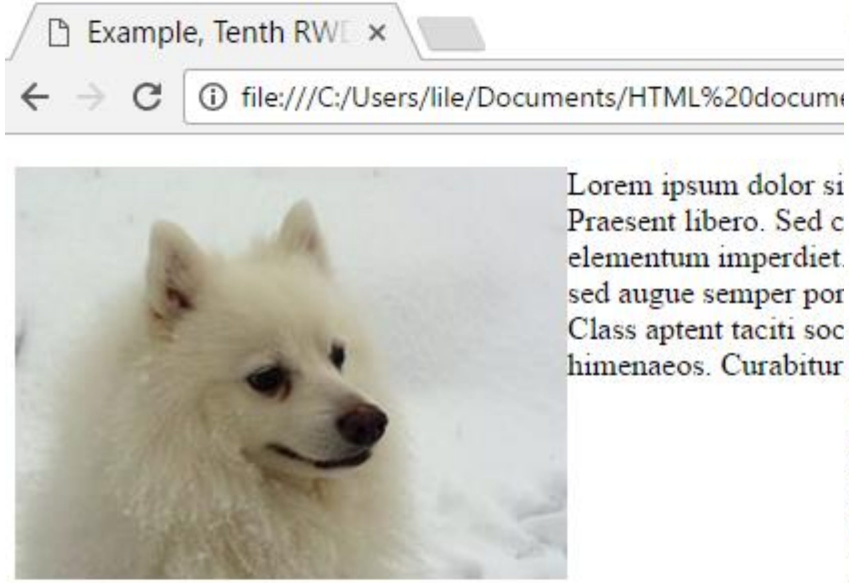
Or manipulate the CSS Styles directly:

```
@media mediatype and|not|only (media feature) {
  CSS-Code;
}
```

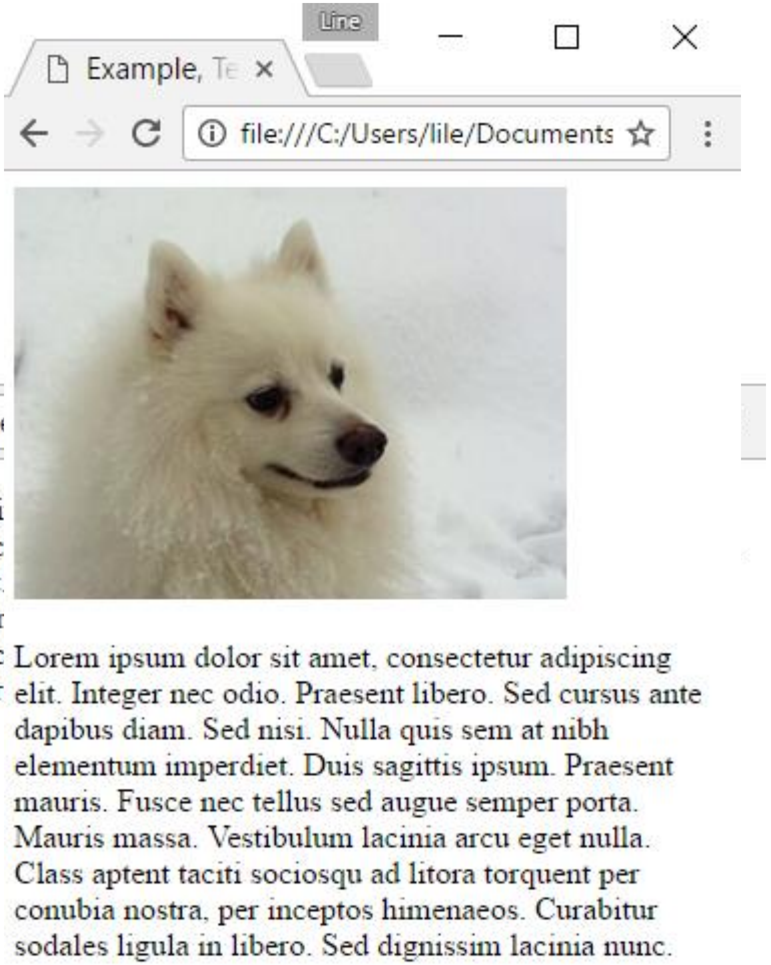
Recap:
Media Query – In the CSS

```
@media screen and (min-width: 800px) {
      img {
            float: left;
      }
      ...
}
```

Breakpoint



Lorem ipsum dolor si
Praesent libero. Sed c
elementum imperdiet.
sed augue semper por
Class aptent taciti soc
himenaeos. Curabitur



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero. Sed dignissim lacinia nunc.

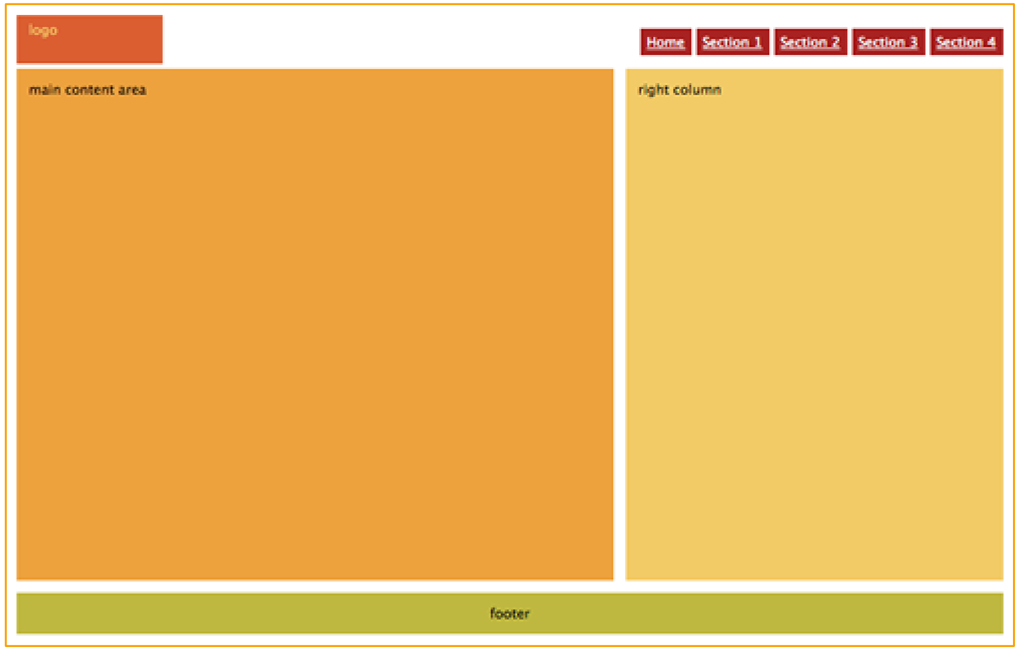
To be Responsive or not to be Responsive

Try out these WEB sites for Life Style Magazines

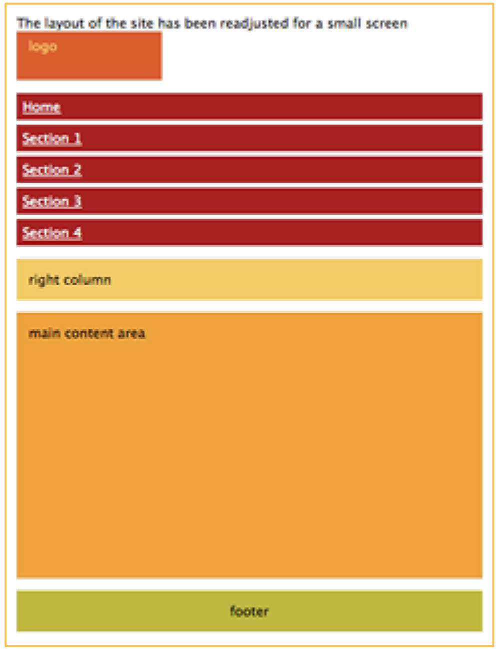
http://www.lifestylesmagazine.com/website/

http://www.lifeandstylemag.com/

Desktop/Mobile



Desktop Version


The layout of the site has been readjusted for a small screen

Mobile Version

Where to Set Breakpoints

- Your instinct might be to write media query breakpoints around common screen resolutions, such as 320px, 480px, 768px, 1024px, 1224px, and so forth,
  - This is a bad idea

- When building a responsive website it should adjust to an array of different window sizes, regardless of the device. Breakpoints should **only** be introduced when a website starts to break, look weird, or the experience is being hampered

- Additionally, new devices and resolutions are being released all the time. Trying to keep up with these changes could be an endless process

Multiple Breakpoints

```
@media screen and (max-width: 480px) {
   …
}

@media screen and (min-width: 481px) and (max-width: 1024px) {
   …
}

@media screen and (min-width: 1025px) {
   …
}
```

The two viewports

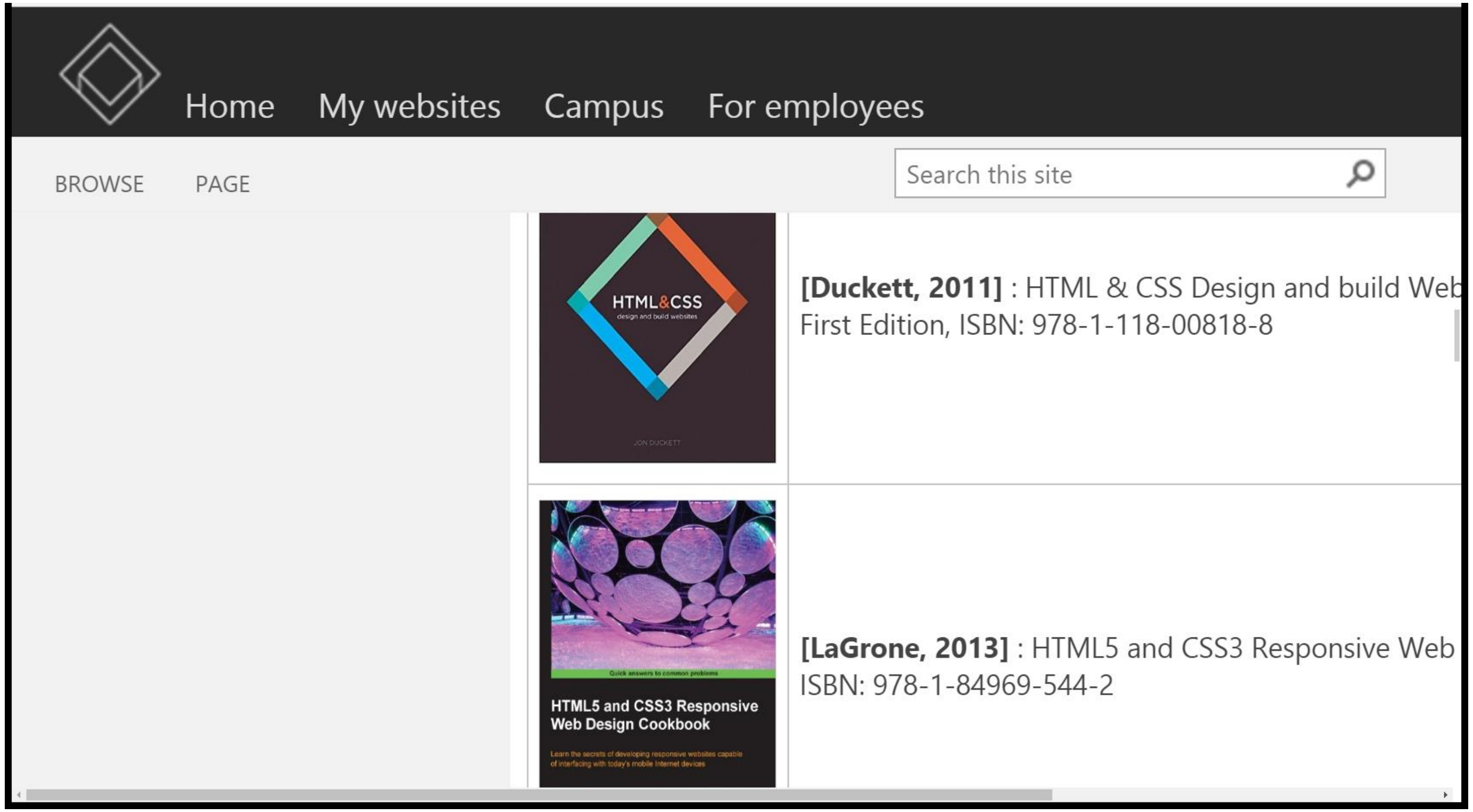
Instead of trying to show the whole webpage on the screen, browsers operate with two viewports instead:

- The Visual Viewport
  - The part of the page that is currently shown on-screen.
  - Same size as the browser window.

- The Layout Viewport
  - Can be considerably bigger than the visual viewport.
  - Contains elements that could not fit into the browser window due to pixel width limitations.

The two viewports

Unless the webpage contains elements with CSS pixel sizes that have greater width than the visual viewport or the user zooms in, the layout viewport will only extend in the vertical direction.

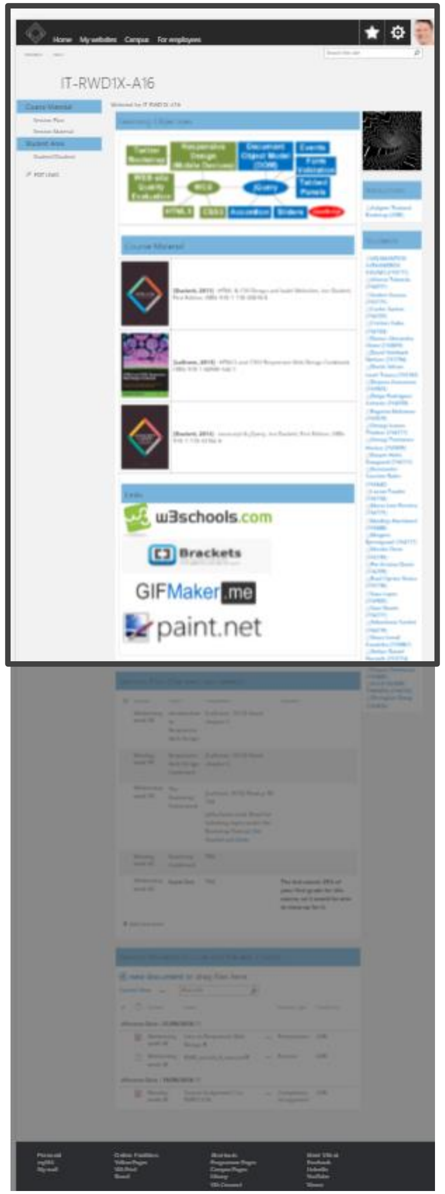


Home
My websites
Campus
For employees
BROWSE
PAGE
Search this site
HTML&CSS
design and build websites
JON DUCKETT
Quick answers to common problems
HTML5 and CSS3 Responsive Web Design Cookbook
Learn the secrets of developing responsive websites capable of interfacing with today's mobile Internet devices

[Duckett, 2011] : HTML & CSS Design and build Web
First Edition, ISBN: 978-1-118-00818-8

[LaGrone, 2013] : HTML5 and CSS3 Responsive Web
ISBN: 978-1-84969-544-2

The two viewports



Home My websites Campus For employees

IT-RWD1X-A16

Course Material

Student Area

Twitter Bootstrap
Responsive Design (Mobile Devices)
Document Object Model (DOM)
Events
Form Validation
WEB-site Quality Evaluation
jQuery
Tabbed Panels
HTML5
CSS3
Accordion
Sliders

Course Material

w3schools.com

Brackets

GIFMaker.me

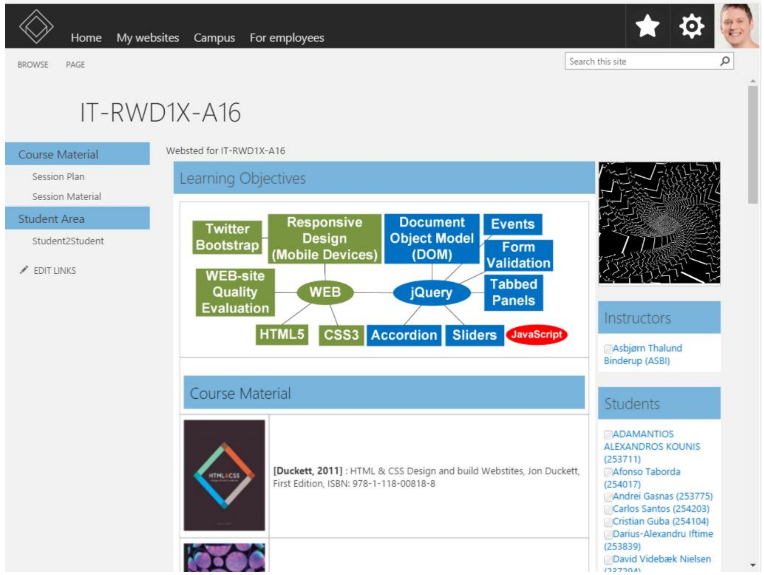
paint.net

The Visual Viewport

The Layout Viewport

Mobile and Tablet Browsers

- Has far less device pixels than a laptop/desktop screen.
- Can quickly switch horizontal/vertical orientation.

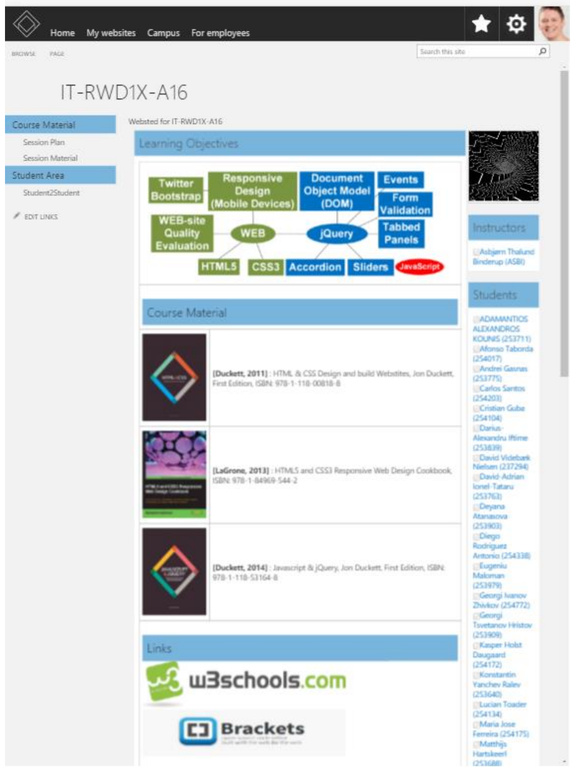


Websted for IT-RWD1X-A16

[Duckett, 2011] : HTML & CSS Design and build Webstites, Jon Duckett, First Edition, ISBN: 978-1-118-00818-8

Asbjørn Thalund Binderup (ASBI)

ADAMANTIOS ALEXANDROS KOUNIS (253711)
Afonso Taborda (254017)
Andrei Gasnas (253775)
Carlos Santos (254203)
Cristian Guba (254104)
Darius-Alexandru Iftime (253839)
David Videbæk Nielsen (237294)



Websted for IT-RWD1X-A16

[Duckett, 2011] : HTML & CSS Design and build Webstites, Jon Duckett, First Edition, ISBN: 978-1-118-00818-8

[LaGrone, 2013] : HTML5 and CSS3 Responsive Web Design Cookbook, ISBN: 978-1-84969-544-2

[Duckett, 2014] : Javascript & jQuery, Jon Duckett, First Edition, ISBN: 978-1-118-53164-8

Asbjørn Thalund Binderup (ASBI)

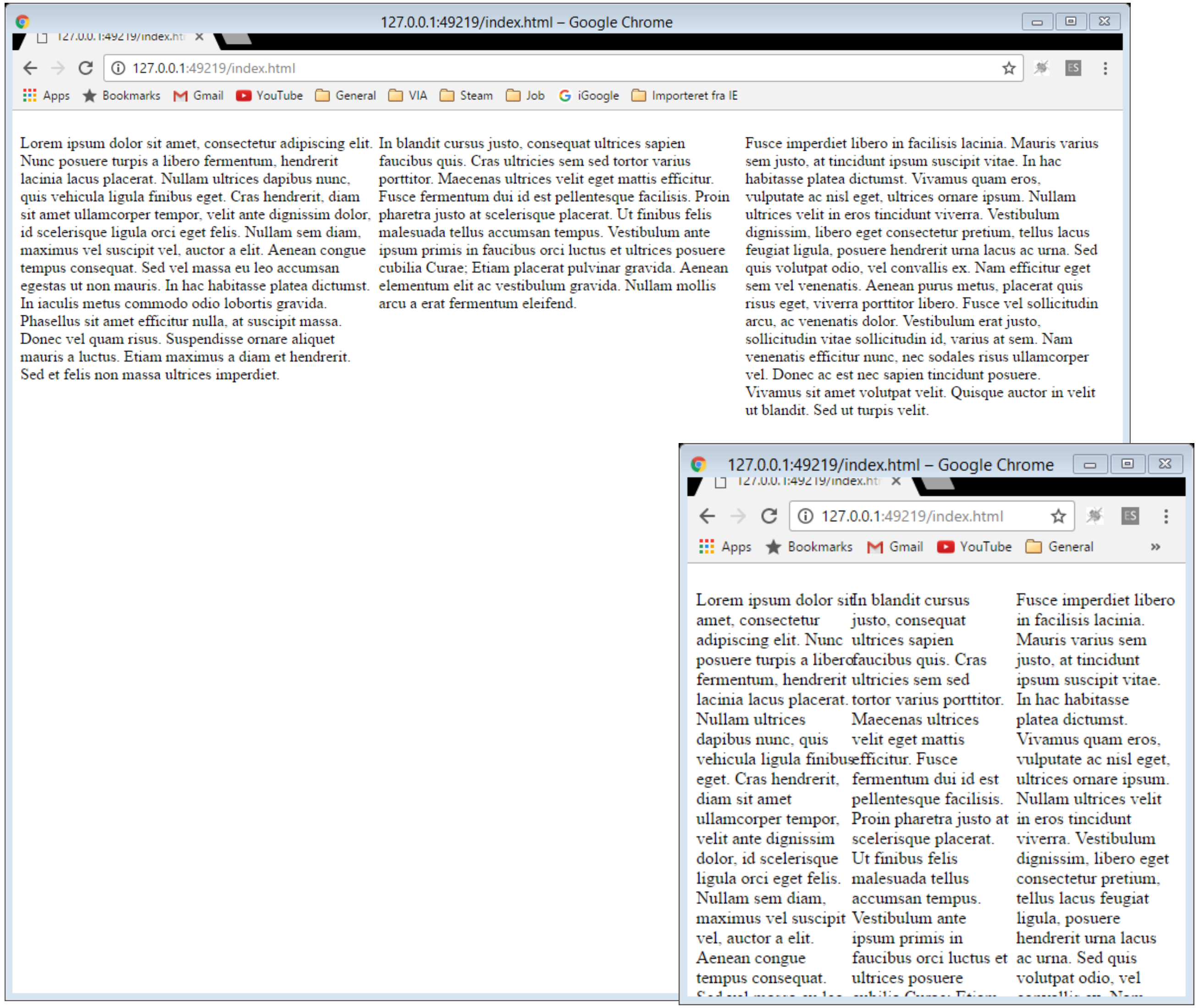
ADAMANTIOS ALEXANDROS KOUNIS (253711)
Afonso Taborda (254017)
Andrei Gasnas (253775)
Carlos Santos (254203)
Cristian Guba (254104)
Darius-Alexandru Iftime (253839)
David Videbæk Nielsen (237294)
David-Adrian Ionel-Tataru (253763)
Deyana Atanasova (253903)
Diego Rodriguez Antonio (254338)
Eugeniu Maloman (253979)
Georgi Ivanov Zhivkov (254772)
Georgi Tsvetanov Hristov (253909)
Kasper Holst Daugaard (254172)
Konstantin Yanchev Ralev (253640)
Lucian Toader (254134)
Maria Jose Ferreira (254175)
Matthijs Hartskeerl (253688)

Screen orientation

```
@media screen and (max-width: 680px) and (orientation:
landscape) {
    …
}

@media screen and (max-width: 680px) and (orientation:
portrait) {
    …
}
```

Responsive Positioning

```
p {
    width: 32%;
    position: fixed;
}

#paragraph2 {
    left: 33%;
}

#paragraph3 {
    left: 66%;
}
```


127.0.0.1:49219/index.html – Google Chrome
127.0.0.1:49219/index.ht ×
127.0.0.1:49219/index.html
Apps
Bookmarks
Gmail
YouTube
General
VIA
Steam
Job
iGoogle
Importeret fra IE

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc posuere turpis a libero fermentum, hendrerit lacinia lacus placerat. Nullam ultrices dapibus nunc, quis vehicula ligula finibus eget. Cras hendrerit, diam sit amet ullamcorper tempor, velit ante dignissim dolor, id scelerisque ligula orci eget felis. Nullam sem diam, maximus vel suscipit vel, auctor a elit. Aenean congue tempus consequat. Sed vel massa eu leo accumsan egestas ut non mauris. In hac habitasse platea dictumst. In iaculis metus commodo odio lobortis gravida. Phasellus sit amet efficitur nulla, at suscipit massa. Donec vel quam risus. Suspendisse ornare aliquet mauris a luctus. Etiam maximus a diam et hendrerit. Sed et felis non massa ultrices imperdiet.

In blandit cursus justo, consequat ultrices sapien faucibus quis. Cras ultricies sem sed tortor varius porttitor. Maecenas ultrices velit eget mattis efficitur. Fusce fermentum dui id est pellentesque facilisis. Proin pharetra justo at scelerisque placerat. Ut finibus felis malesuada tellus accumsan tempus. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Etiam placerat pulvinar gravida. Aenean elementum elit ac vestibulum gravida. Nullam mollis arcu a erat fermentum eleifend.

Fusce imperdiet libero in facilisis lacinia. Mauris varius sem justo, at tincidunt ipsum suscipit vitae. In hac habitasse platea dictumst. Vivamus quam eros, vulputate ac nisl eget, ultrices ornare ipsum. Nullam ultrices velit in eros tincidunt viverra. Vestibulum dignissim, libero eget consectetur pretium, tellus lacus feugiat ligula, posuere hendrerit urna lacus ac urna. Sed quis volutpat odio, vel convallis ex. Nam efficitur eget sem vel venenatis. Aenean purus metus, placerat quis risus eget, viverra porttitor libero. Fusce vel sollicitudin arcu, ac venenatis dolor. Vestibulum erat justo, sollicitudin vitae sollicitudin id, varius at sem. Nam venenatis efficitur nunc, nec sodales risus ullamcorper vel. Donec ac est nec sapien tincidunt posuere. Vivamus sit amet volutpat velit. Quisque auctor in velit ut blandit. Sed ut turpis velit.

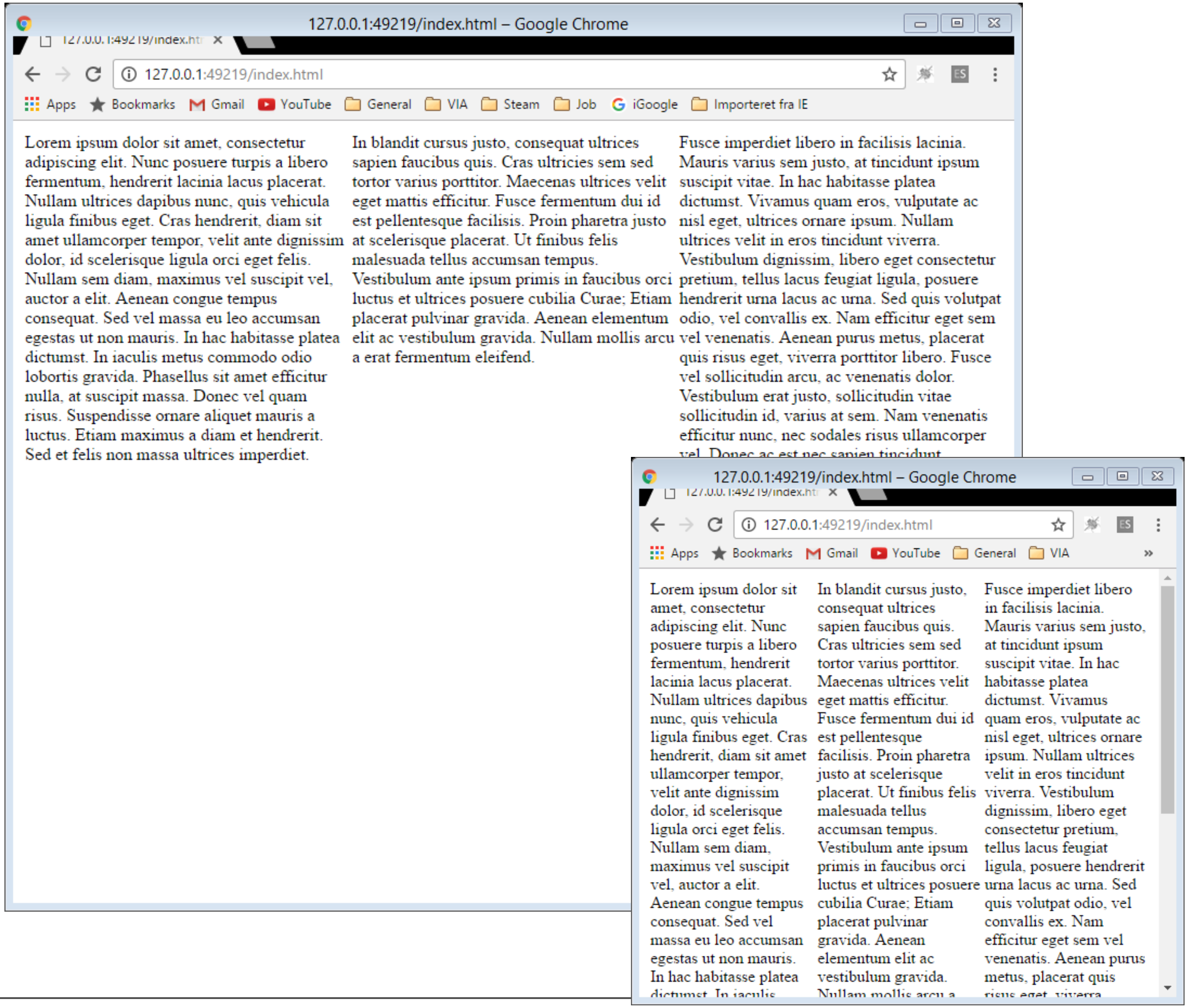
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc posuere turpis a libero fermentum, hendrerit lacinia lacus placerat. Nullam ultrices dapibus nunc, quis vehicula ligula finibus eget. Cras hendrerit, diam sit amet ullamcorper tempor, velit ante dignissim dolor, id scelerisque ligula orci eget felis. Nullam sem diam, maximus vel suscipit vel, auctor a elit. Aenean congue tempus consequat.

In blandit cursus justo, consequat ultrices sapien faucibus quis. Cras ultricies sem sed tortor varius porttitor. Maecenas ultrices velit eget mattis efficitur. Fusce fermentum dui id est pellentesque facilisis. Proin pharetra justo at scelerisque placerat. Ut finibus felis malesuada tellus accumsan tempus. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere

Fusce imperdiet libero in facilisis lacinia. Mauris varius sem justo, at tincidunt ipsum suscipit vitae. In hac habitasse platea dictumst. Vivamus quam eros, vulputate ac nisl eget, ultrices ornare ipsum. Nullam ultrices velit in eros tincidunt viverra. Vestibulum dignissim, libero eget consectetur pretium, tellus lacus feugiat ligula, posuere hendrerit urna lacus ac urna. Sed quis volutpat odio, vel

Responsive Table

```
td {
      width: 32%;
      vertical-align: top;
}
```


127.0.0.1:49219/index.html – Google Chrome
127.0.0.1:49219/index.ht ×
127.0.0.1:49219/index.html
Apps
Bookmarks
Gmail
YouTube
General
VIA
Steam
Job
iGoogle
Importeret fra IE

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc posuere turpis a libero fermentum, hendrerit lacinia lacus placerat. Nullam ultrices dapibus nunc, quis vehicula ligula finibus eget. Cras hendrerit, diam sit amet ullamcorper tempor, velit ante dignissim dolor, id scelerisque ligula orci eget felis. Nullam sem diam, maximus vel suscipit vel, auctor a elit. Aenean congue tempus consequat. Sed vel massa eu leo accumsan egestas ut non mauris. In hac habitasse platea dictumst. In iaculis metus commodo odio lobortis gravida. Phasellus sit amet efficitur nulla, at suscipit massa. Donec vel quam risus. Suspendisse ornare aliquet mauris a luctus. Etiam maximus a diam et hendrerit. Sed et felis non massa ultrices imperdiet.

In blandit cursus justo, consequat ultrices sapien faucibus quis. Cras ultricies sem sed tortor varius porttitor. Maecenas ultrices velit eget mattis efficitur. Fusce fermentum dui id est pellentesque facilisis. Proin pharetra justo at scelerisque placerat. Ut finibus felis malesuada tellus accumsan tempus. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Etiam placerat pulvinar gravida. Aenean elementum elit ac vestibulum gravida. Nullam mollis arcu a erat fermentum eleifend.

Fusce imperdiet libero in facilisis lacinia. Mauris varius sem justo, at tincidunt ipsum suscipit vitae. In hac habitasse platea dictumst. Vivamus quam eros, vulputate ac nisl eget, ultrices ornare ipsum. Nullam ultrices velit in eros tincidunt viverra. Vestibulum dignissim, libero eget consectetur pretium, tellus lacus feugiat ligula, posuere hendrerit urna lacus ac urna. Sed quis volutpat odio, vel convallis ex. Nam efficitur eget sem vel venenatis. Aenean purus metus, placerat quis risus eget, viverra porttitor libero. Fusce vel sollicitudin arcu, ac venenatis dolor. Vestibulum erat justo, sollicitudin vitae sollicitudin id, varius at sem. Nam venenatis efficitur nunc, nec sodales risus ullamcorper vel. Donec ac est nec sapien tincidunt

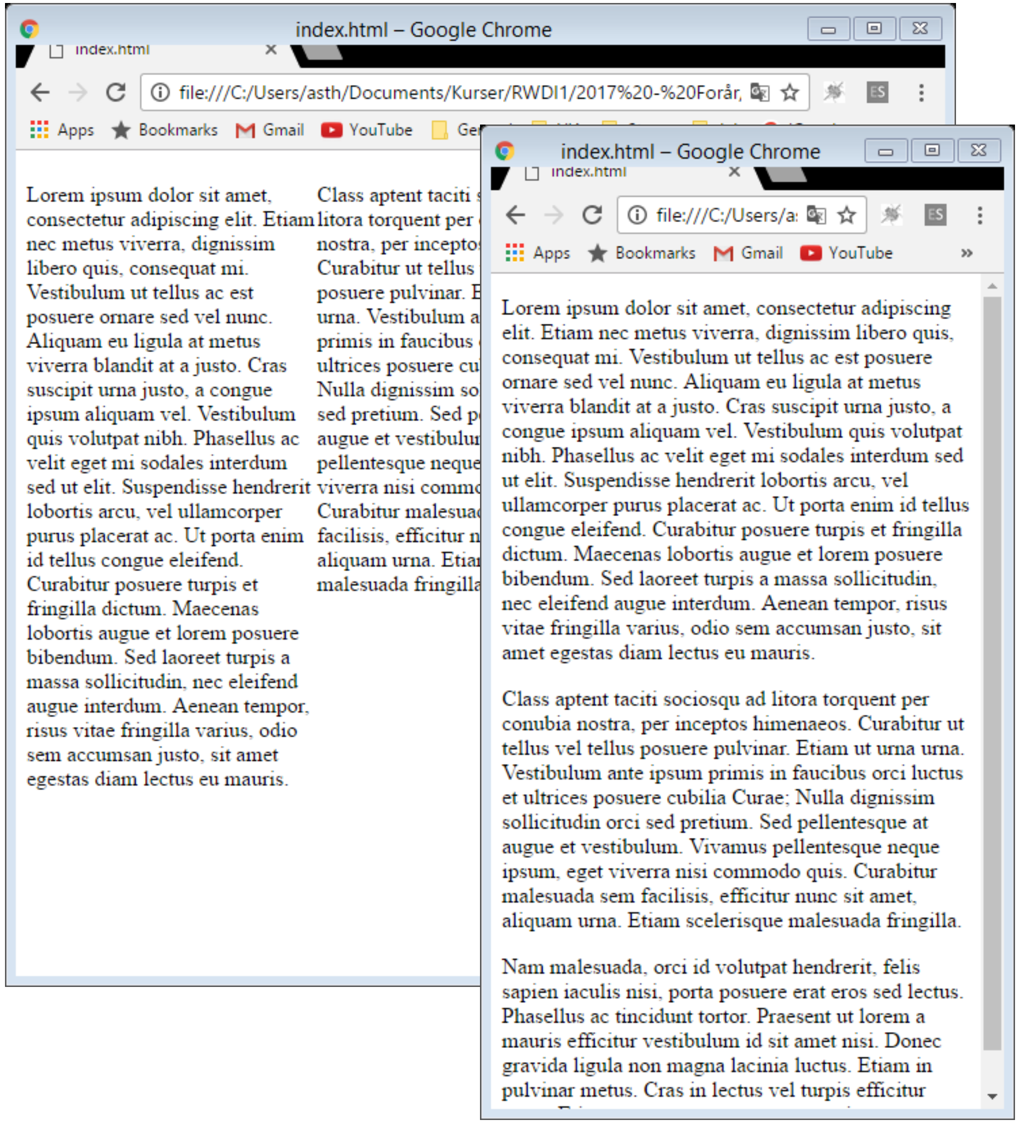
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc posuere turpis a libero fermentum, hendrerit lacinia lacus placerat. Nullam ultrices dapibus nunc, quis vehicula ligula finibus eget. Cras hendrerit, diam sit amet ullamcorper tempor, velit ante dignissim dolor, id scelerisque ligula orci eget felis. Nullam sem diam, maximus vel suscipit vel, auctor a elit. Aenean congue tempus consequat. Sed vel massa eu leo accumsan egestas ut non mauris. In hac habitasse platea dictumst. In iaculis

In blandit cursus justo, consequat ultrices sapien faucibus quis. Cras ultricies sem sed tortor varius porttitor. Maecenas ultrices velit eget mattis efficitur. Fusce fermentum dui id est pellentesque facilisis. Proin pharetra justo at scelerisque placerat. Ut finibus felis malesuada tellus accumsan tempus. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Etiam placerat pulvinar gravida. Aenean elementum elit ac vestibulum gravida. Nullam mollis arcu a

Fusce imperdiet libero in facilisis lacinia. Mauris varius sem justo, at tincidunt ipsum suscipit vitae. In hac habitasse platea dictumst. Vivamus quam eros, vulputate ac nisl eget, ultrices ornare ipsum. Nullam ultrices velit in eros tincidunt viverra. Vestibulum dignissim, libero eget consectetur pretium, tellus lacus feugiat ligula, posuere hendrerit urna lacus ac urna. Sed quis volutpat odio, vel convallis ex. Nam efficitur eget sem vel venenatis. Aenean purus metus, placerat quis risus eget, viverra

Responsive Float

```
@media screen and (min-width: 600px) {
   p {
        width: 32%;
        float: left;
   }
}
```


index.html – Google Chrome
index.html
file:///C:/Users/asth/Documents/Kurser/RWDI1/2017%20-%20Forår,
Apps
Bookmarks
Gmail
YouTube
Ge
index.html – Google Chrome
index.html
file:///C:/Users/a
Apps
Bookmarks
Gmail
YouTube

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam nec metus viverra, dignissim libero quis, consequat mi. Vestibulum ut tellus ac est posuere ornare sed vel nunc. Aliquam eu ligula at metus viverra blandit at a justo. Cras suscipit urna justo, a congue ipsum aliquam vel. Vestibulum quis volutpat nibh. Phasellus ac velit eget mi sodales interdum sed ut elit. Suspendisse hendrerit lobortis arcu, vel ullamcorper purus placerat ac. Ut porta enim id tellus congue eleifend. Curabitur posuere turpis et fringilla dictum. Maecenas lobortis augue et lorem posuere bibendum. Sed laoreet turpis a massa sollicitudin, nec eleifend augue interdum. Aenean tempor, risus vitae fringilla varius, odio sem accumsan justo, sit amet egestas diam lectus eu mauris.

Class aptent taciti s
litora torquent per
nostra, per inceptos
Curabitur ut tellus
posuere pulvinar. E
urna. Vestibulum a
primis in faucibus
ultrices posuere cu
Nulla dignissim so
sed pretium. Sed p
augue et vestibulu
pellentesque neque
viverra nisi commo
Curabitur malesua
facilisis, efficitur n
aliquam urna. Etia
malesuada fringilla

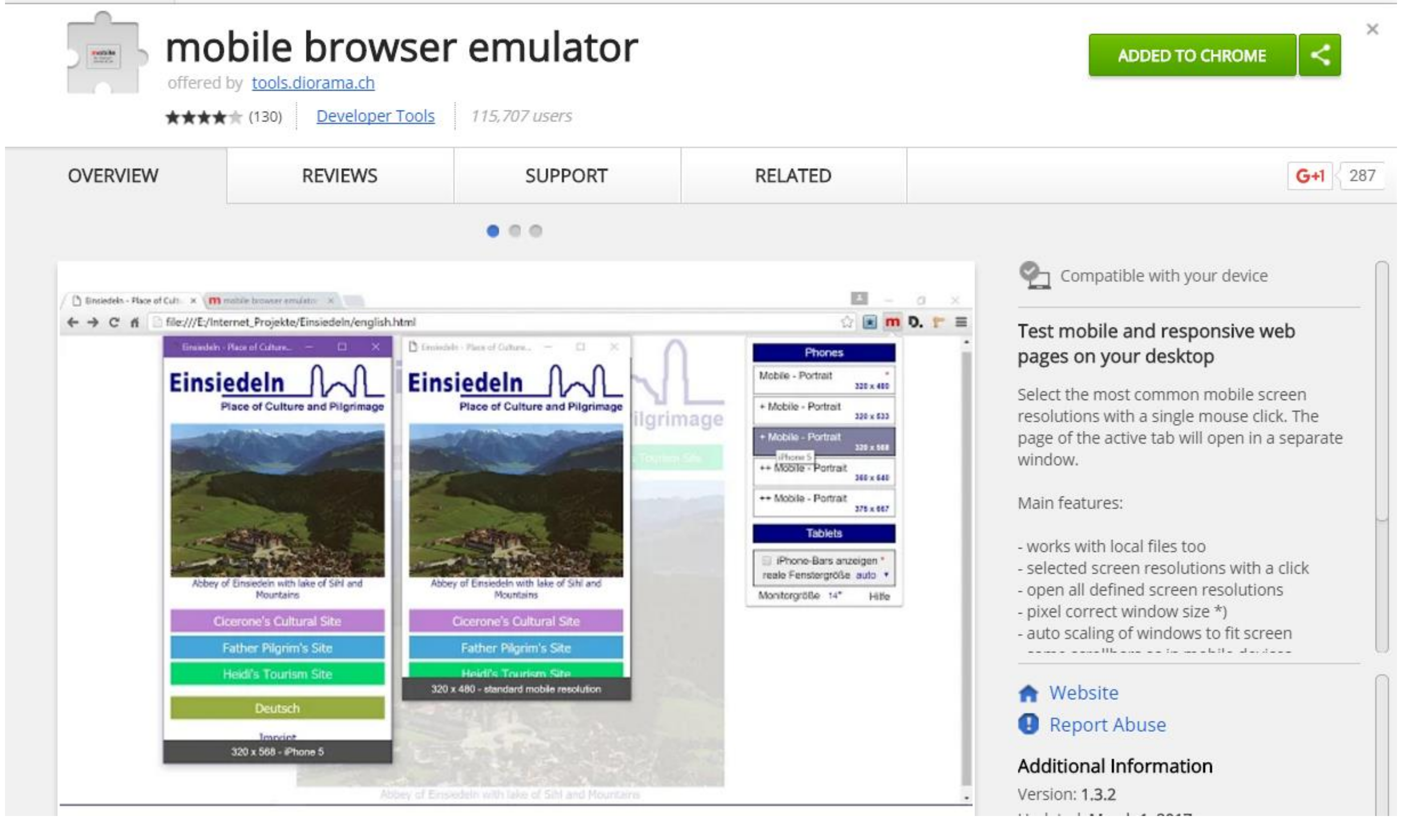
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam nec metus viverra, dignissim libero quis, consequat mi. Vestibulum ut tellus ac est posuere ornare sed vel nunc. Aliquam eu ligula at metus viverra blandit at a justo. Cras suscipit urna justo, a congue ipsum aliquam vel. Vestibulum quis volutpat nibh. Phasellus ac velit eget mi sodales interdum sed ut elit. Suspendisse hendrerit lobortis arcu, vel ullamcorper purus placerat ac. Ut porta enim id tellus congue eleifend. Curabitur posuere turpis et fringilla dictum. Maecenas lobortis augue et lorem posuere bibendum. Sed laoreet turpis a massa sollicitudin, nec eleifend augue interdum. Aenean tempor, risus vitae fringilla varius, odio sem accumsan justo, sit amet egestas diam lectus eu mauris.

Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur ut tellus vel tellus posuere pulvinar. Etiam ut urna urna. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Nulla dignissim sollicitudin orci sed pretium. Sed pellentesque at augue et vestibulum. Vivamus pellentesque neque ipsum, eget viverra nisi commodo quis. Curabitur malesuada sem facilisis, efficitur nunc sit amet, aliquam urna. Etiam scelerisque malesuada fringilla.

Nam malesuada, orci id volutpat hendrerit, felis sapien iaculis nisi, porta posuere erat eros sed lectus. Phasellus ac tincidunt tortor. Praesent ut lorem a mauris efficitur vestibulum id sit amet nisi. Donec gravida ligula non magna lacinia luctus. Etiam in pulvinar metus. Cras in lectus vel turpis efficitur

The mobile device emulator in Chrome

https://chrome.google.com/webstore/detail/mobile-browser-emulator/lbofcampnkjmiomohpbaihdcbjhbfepf



mobile browser emulator

offered by tools.diorama.ch

★★★★☆ (130) | Developer Tools | 115,707 users

ADDED TO CHROME

OVERVIEW | REVIEWS | SUPPORT | RELATED | G+1 287

Compatible with your device

Test mobile and responsive web pages on your desktop

Select the most common mobile screen resolutions with a single mouse click. The page of the active tab will open in a separate window.

Main features:

- works with local files too
- selected screen resolutions with a click
- open all defined screen resolutions
- pixel correct window size *)
- auto scaling of windows to fit screen

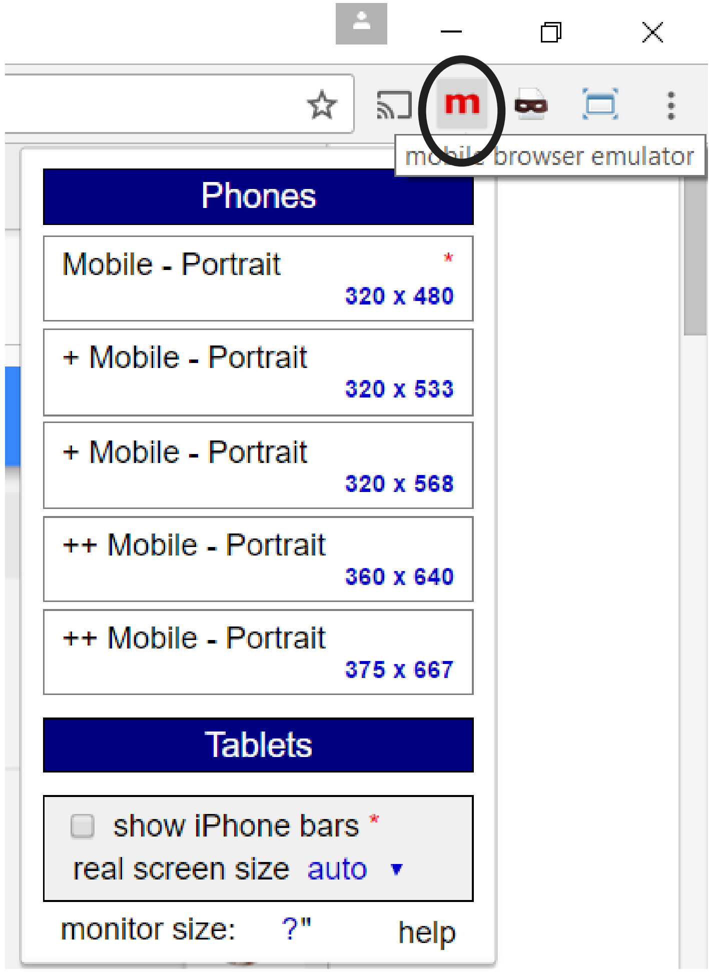
Website

Report Abuse

Additional Information

Version: 1.3.2

Einsiedeln
Place of Culture and Pilgrimage
Abbey of Einsiedeln with lake of Sihl and Mountains
Cicerone's Cultural Site
Father Pilgrim's Site
Heidi's Tourism Site
Deutsch
320 x 568 - iPhone 5
320 x 480 - standard mobile resolution



mobile browser emulator

Phones

Mobile - Portrait * 320 x 480

+ Mobile - Portrait 320 x 533

+ Mobile - Portrait 320 x 568

++ Mobile - Portrait 360 x 640

++ Mobile - Portrait 375 x 667

Tablets

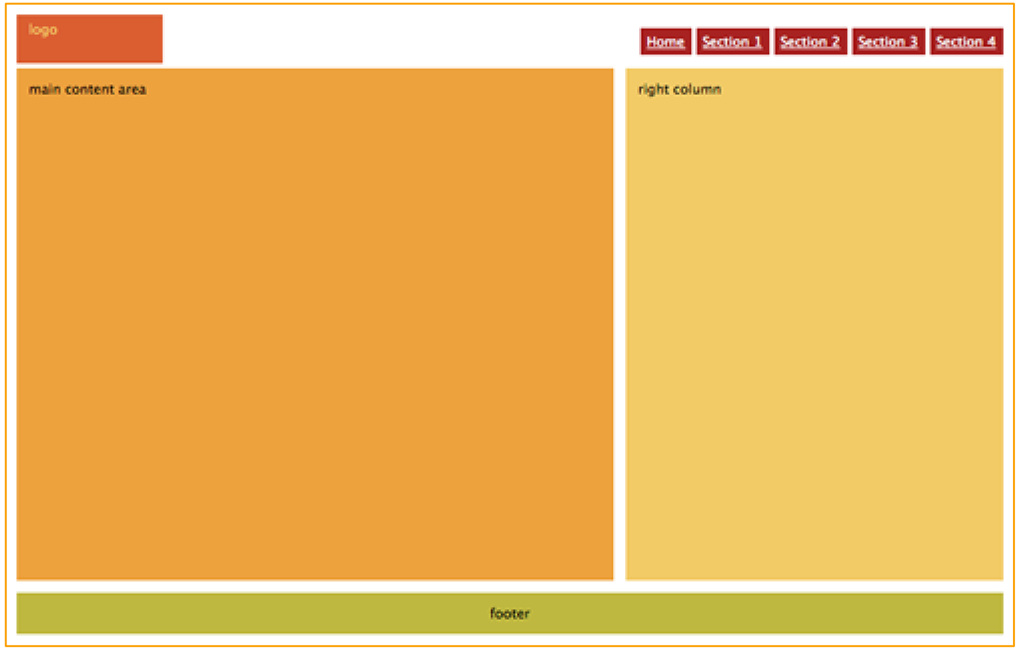
□ show iPhone bars *

real screen size auto ▾

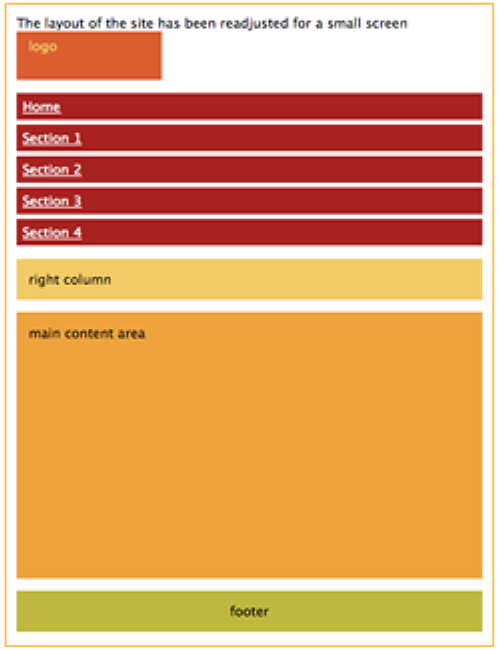
monitor size: ?" help

Exercises

- Make layouts that look something like this:



Desktop Version


The layout of the site has been readjusted for a small screen

Mobile Version