

Responsive Web design

CSS3 and HTML5

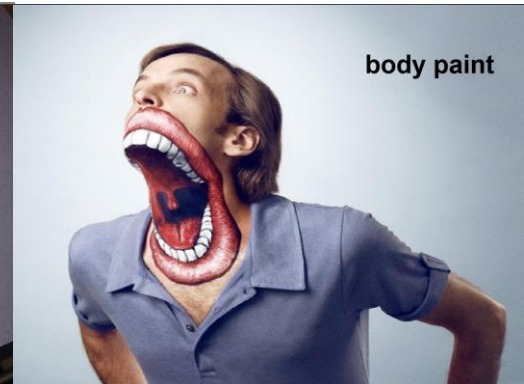
Traditional desing



print



card



body paint

packaging

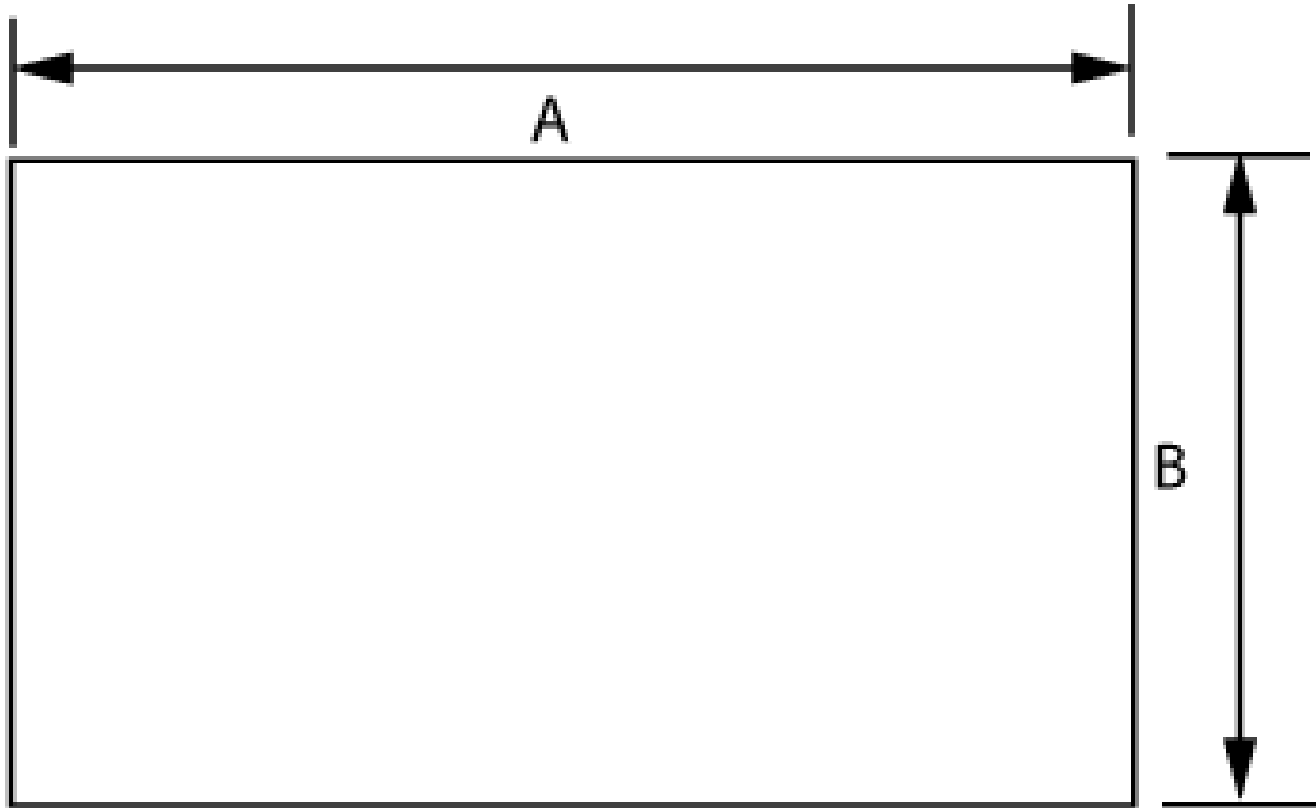


car wrap

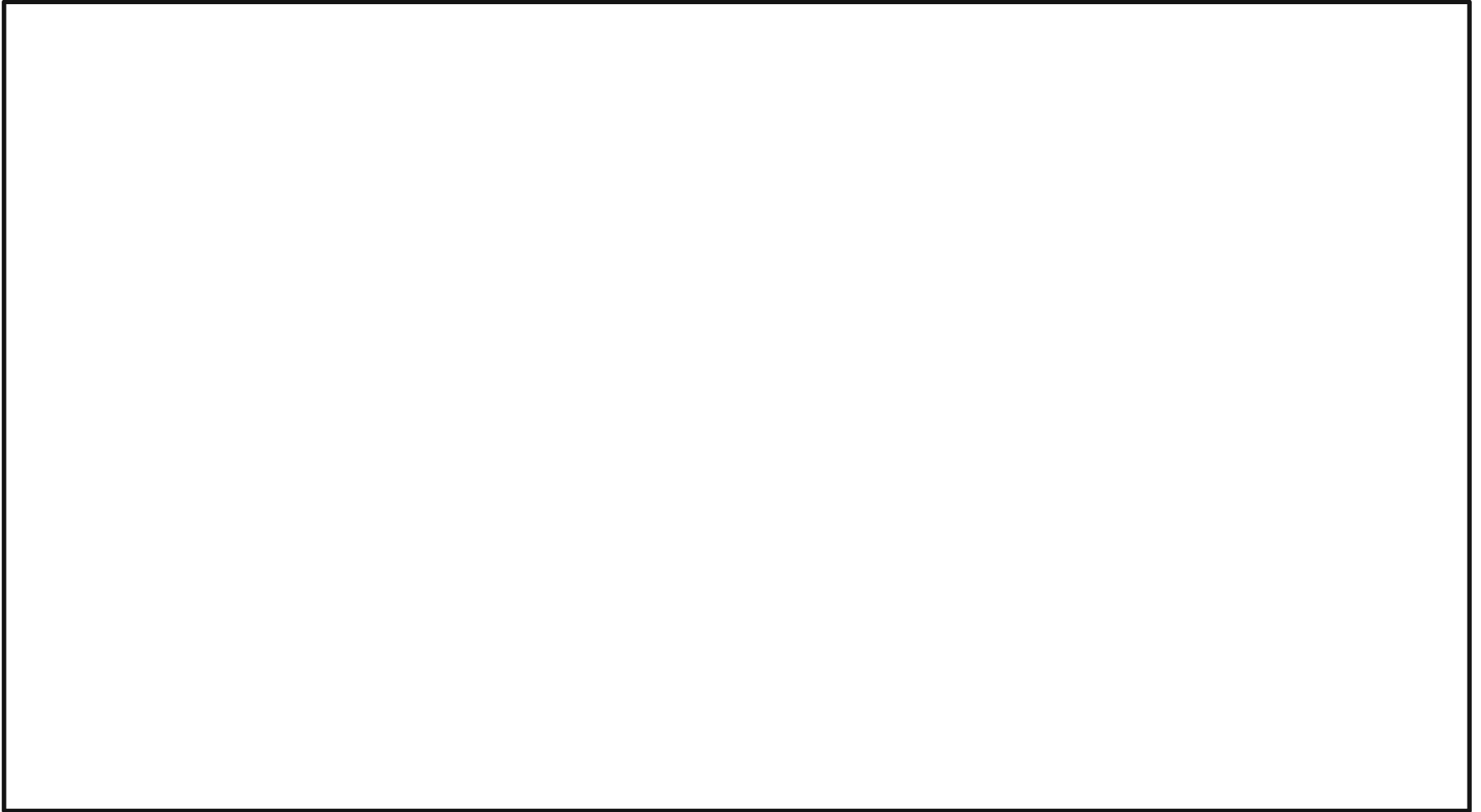
fashion



The common thing

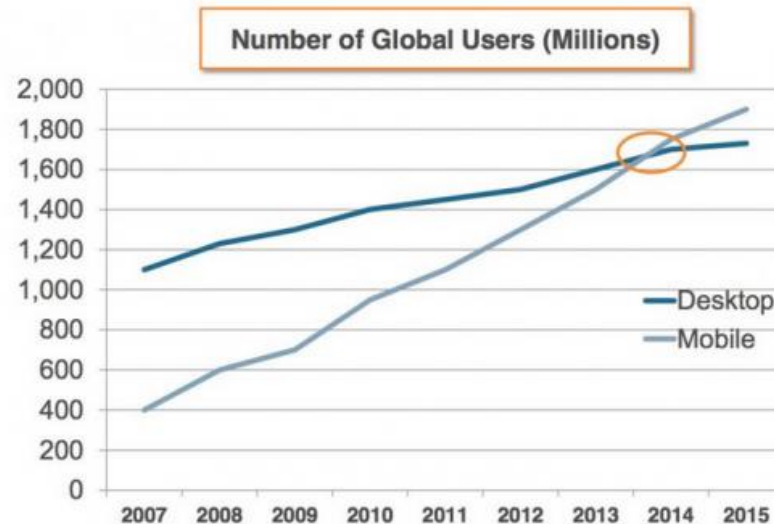


The web



5

Why is important?



Solutions for mobile media consumption

- native app
 - Tightly attached to an ecosystem.
 - Duplicated content with the web.
 - Only interesting if hardware access is required (e.g. graphics card, accelerometer) ... and think of html5
 - No indexing
- web app
 - Old embedded web browser with limited functionality
- mobile website
 - m site vs www site
 - Duplicated content.
 - Wrong links to desktop webpages
- responsive web design

Web design nowadays...



What is Responsive Web Design?

- Responsive Web Design makes your web page look good on all devices (desktops, tablets, and phones).
- Responsive Web Design is about using CSS and HTML to resize, hide, shrink, enlarge, or move the content to make it look good on any screen

source:w3school

Benefits

- A Single website
- Same content distributed across different devices
- A single url. Good for the SEO
- A single codebase
- Different functionality
- Different layout

Example



Example





STOP
DREAMING
AND GET
BACK TO
REALITY

Responsive design principles

- Stop thinking in pixels
 - Think proportional
 - Think percentages
 - Think modular
- Mobile first
 - Basic formatting to the page (type, colors, margins)
 - Media queries for bigger screens
 - Less capable browsers will always served a readable site

HTML5 - First things first

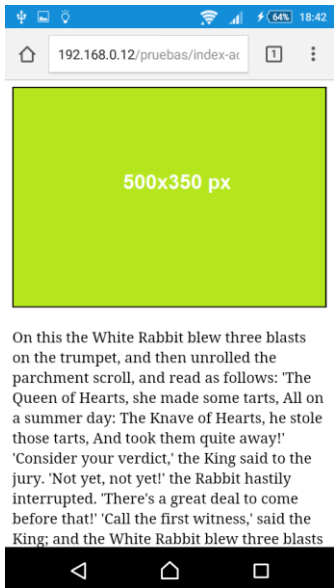
HTML v5 introduces mechanisms to dynamically know the visible part of a webpage.

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

- Name is the name we assign to the element, viewport in this case.
- With the content we state that the width of the page should be the same as the device-width. Will vary between a Tablet and a Smartphone.
- With initial-scale=1.0 starts the visualization of the webpage with no zoom.

Do not forget to use “,” as separation to have full browser compatibility.

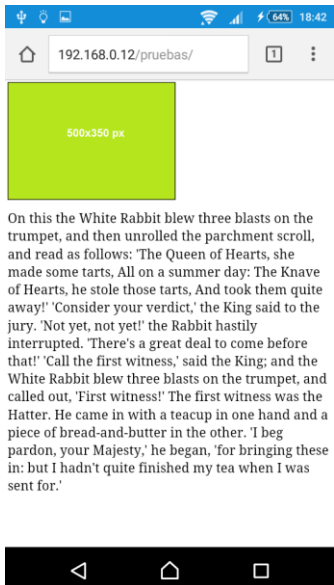
Example



On this the White Rabbit blew three blasts on the trumpet, and then unrolled the parchment scroll, and read as follows: 'The Queen of Hearts, she made some tarts, All on a summer day: The Knave of Hearts, he stole those tarts, And took them quite away!' 'Consider your verdict,' the King said to the jury. 'Not yet, not yet!' the Rabbit hastily interrupted. 'There's a great deal to come before that!' 'Call the first witness,' said the King; and the White Rabbit blew three blasts

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0"/>
<style>
img {
  max-width:100%;
  height:auto;
}
</style>
</head>
<body>

<p>
Unicorns, dragons, sprites, will-o'-the-wisps: the inhabitants of an enchanted world. And into
this world -- through the pages of an old book -- ventures Bastian, a lonely boy of ten or twelve. But
Fantastica is slowly decaying, its Childlike Empress dying. Only a real human being can set things right
by giving the Empress a new name. Bastian takes up the challenge, and finds himself crossing the
Swamps of Sadness and the Silver Mountains, meeting sorcerers and giants, bats and night-hobs,
gnomes and racing snails, as he journeys bravely toward the Ivory Tower. Bastian's quest is filled with all
the wonders of myth and fairy tale. It is a fantasy adventure that will capture your heart -- and recapture
the magical dreams of childhood.
</p>
</body>
</html>
```



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```
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</html>
```

Fluid grids



What we need for this:

- Box-sizing
- A grid system
- Media-queries

Box-Sizing: CSS3

```
<!DOCTYPE html>
<html>
<head>
<style>

```

Without box-sizing

This div is smaller (width is 300px and height is 100px).

This div is bigger (width is also 300px and height is 100px).

With box-sizing

Both divs are the same size now!

Hooray!

http://www.w3schools.com/CSSref/css3_pr_box-sizing.asp

Por defecto el tamaño de un elemento es ancho+padding+borde para el ancho y alto+padding+borde para el alto, Box-sizing es una propiedad de CSS3 que permite incluir padding y bordes en el cálculo del tamaño total de un elemento.

How to build up a grid system?

Divide the view-port in n **equal** columns

- No more pixel-based divisions.
- Traditionally, we divide in 10 or 12 columns

- They should have the form

```
[class*="col-"] {  
    float: left;  
    padding: 15px;  
}
```

```
.col-1 {width: 10%;}  
.col-2 {width: 20%;}  
.col-3 {width: 30%;}  
.col-4 {width: 40%;}  
.col-5 {width: 50%;}  
.col-6 {width: 60%;}  
.col-7 {width: 70%;}  
.col-8 {width: 80%;}  
.col-9 {width: 90%;}  
.col-10 {width: 100%;}
```

- We need a container for all columns

```
<div class="columnas">  
    <div class="col-2">...</div>  
    <div class="col-9">...</div>  
</div>
```

```
.columnas::after {  
    content: "";  
    clear: both;  
    display: block;  
}
```

Example

RESPONSIVE WEB DESIGN

A

B

C

D

Grid View

Grid-View es una forma de gestionar el espacio de nuestra página web mediante columnas de un tamaño porcentual al total de la pantalla.

Acerca o aleja el zoom para ver como cambia de tamaño.

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Media Queries

- The spirit of if-else
 - if media query test is met > css will be applied
- common breakpoints: 320 480 600 768 960 1200
 - responsivexp.com ← for testing different viewport sizes

Media Queries

Mobile

```
[class*="col-"] {  
float:left;  
width: 100%;  
}
```

Tablets

```
@media only screen  
and (min-width:  
600px) {
```

```
.col-tab-1 {width: 10%;}  
.col-tab-2 {width: 20%;}  
.col-tab-3 {width: 30%;}  
.col-tab-4 {width: 40%;}  
.col-tab-5 {width: 50%;}  
.col-tab-6 {width: 60%;}  
.col-tab-7 {width: 70%;}  
.col-tab-8 {width: 80%;}  
.col-tab-9 {width: 90%;}  
.col-tab-10 {width: 100%;}  
}
```

Laptops

```
@media only screen  
and (min-width: 768px) {
```

```
.col-1 {width: 10%;}  
.col-2 {width: 20%;}  
.col-3 {width: 30%;}  
.col-4 {width: 40%;}  
.col-5 {width: 50%;}  
.col-6 {width: 60%;}  
.col-7 {width: 70%;}  
.col-8 {width: 80%;}  
.col-9 {width: 90%;}  
.col-10 {width: 100%;}  
}
```

Images and video

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

```
video {  
    max-width: 100%;  
    height: auto;  
}
```

```
<picture>  
  <source media="(min-width: 768px)" srcset="mas768.png" >  
  <source media="(min-width: 600px)" srcset="mas600.png">  
    
</picture>
```

Frameworks

- Bootstrap 3
- Foundation
- Skeleton
- ...

Guidelines and conclusions

- Los usuarios no deberían de tener que desplazarse de forma horizontal por la página o alejar el zoom si hay contenido demasiado ancho para mostrar por lo que deberemos añadir una serie de reglas adicionales a la hora de diseñar nuestra web adaptable.
- Nunca usar elementos con un gran ancho de tipo fijo, en su lugar utilizar atributos como `maxwidth:100%` o `height:auto`.
- El contenido no deberá estar optimizado para un cierto tipo de Viewport.
- Usar CSS Media Queries para aplicar un estilo distinto en pantallas grandes o pequeñas.
- De esta forma conseguiremos que el contenido se muestre correctamente sin importar desde donde estemos visualizando nuestra web.

Let's do some exercise!

<https://jagalindo.github.io/issii-responsive-design/>