

Materialize CSS



**Programación de Aplicaciones
Interactivas**

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 - What is Materialize?
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- Framework
 - What is a framework?
 - Why to use a framework and not your own code?
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- Examples

Materialize CSS

Materialize CSS - What is it?

- It is a CSS Framework
- Guided by Material Design from Google
- Offers a good CSS and JS basis for our webs
- Colors, tables, icons, floating buttons, forms...



Materialize CSS - Features (I)

- Pretty good documentation ([Materialize Documentation](#))
- Doesn't depend on JQuery
- Relatively light (140kB CSS + 180kB JS)



Materialize CSS - Features (II)

- Supported by a great amount of browsers
 - Chrome 35+
 - Firefox 31+
 - Safari 9+
 - Opera
 - Edge
 - IE 11+
- Follows good practices



Materialize CSS - Features (III)

- Uses ECMAScript 5 terminology
- Partially supported by Internet Explorer 10 and 11



Materialize CSS - Origin

- It was developed in 2014 By a 4-student team from the Carnegie Mellon University (Pennsylvania)



Framework

Framework - What is it?

- It is a standard set of concepts, practices and criteria to focus on a specific type of problem
- Materialize is no more than a set of predetermined interfaces

Framework - Why not your own code? (I). Advantages

 Materialize Admin

Materialize Admin

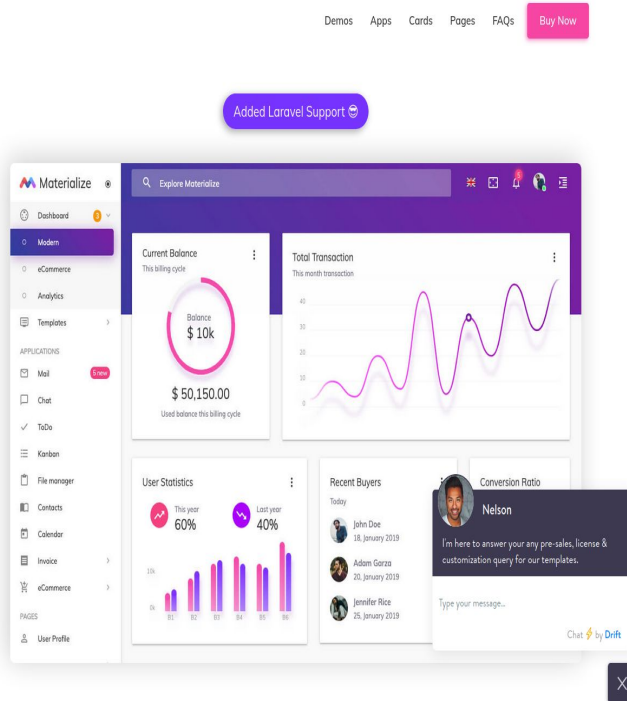
#1 Selling & Most Popular Material Design Admin Template of All Time. Join The 5,500+ Satisfied Customers.

- HTML & HTML + Laravel 7+ Admin Template
- 5 Different layouts
- RTL Ready & Multilingual Support
- Based on latest Materializecss

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- It allows us to save time
- It gives us an attractive aesthetic for our projects
- Consistency

Framework - Why not your own code? (II). Advantages

 Materialize Admin

Materialize Admin

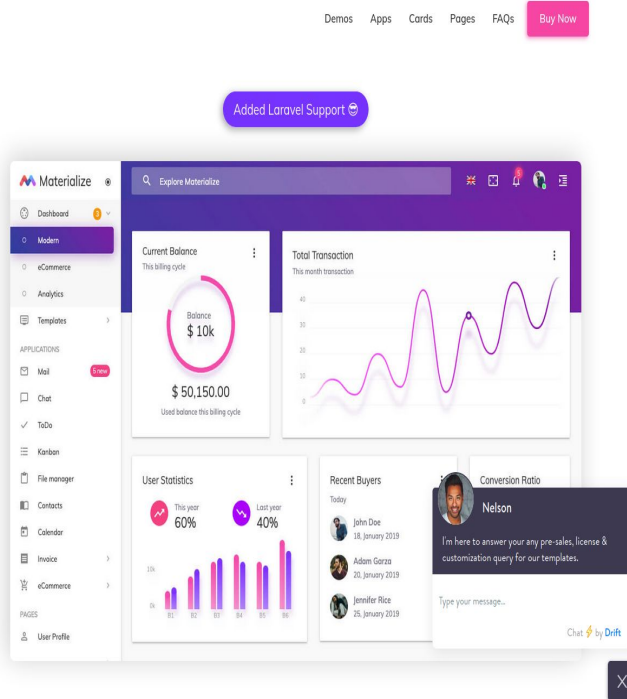
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Admin Template of All Time. Join The 5,500+
Satisfied Customers.

- HTML & HTML + Laravel 7+Admin Template
- 5 Different layouts
- RTL Ready & Multilingual Support
- Based on latest Materializecss

Live Demo

Buy Now

 Hire Us



- Avoid to repeat code
- Good practices
- It gives quality to our project

Framework - Why not your own code? (III).

Disadvantages

- Unused code
- You must learn to use the framework. Not easy



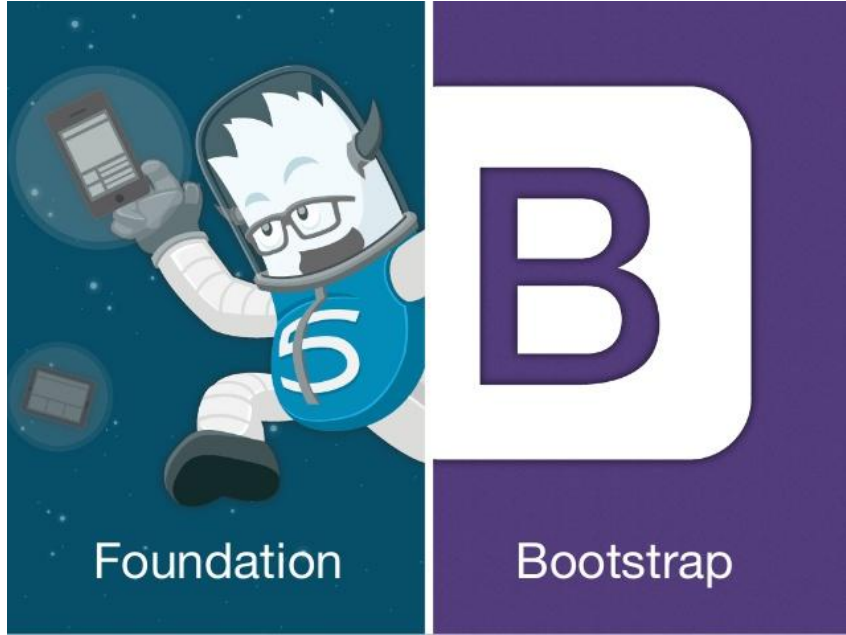
Framework - Why not your own code? (IV).

Disadvantages

- Content and presentation get mixed
- You don't learn to defend yourself



Framework - Why Materialize?



- It doesn't depend on JQuery
- Based in good practices since the beginning
- More familiar and easier to use
- Visual interface design basics

Materialize vs Bulma

Materialize vs Bulma (I). Similarities

- Flexbox based
- 100% Responsive
- Well documented
- Huge amount of components



Materialize vs Bulma (II). Differences

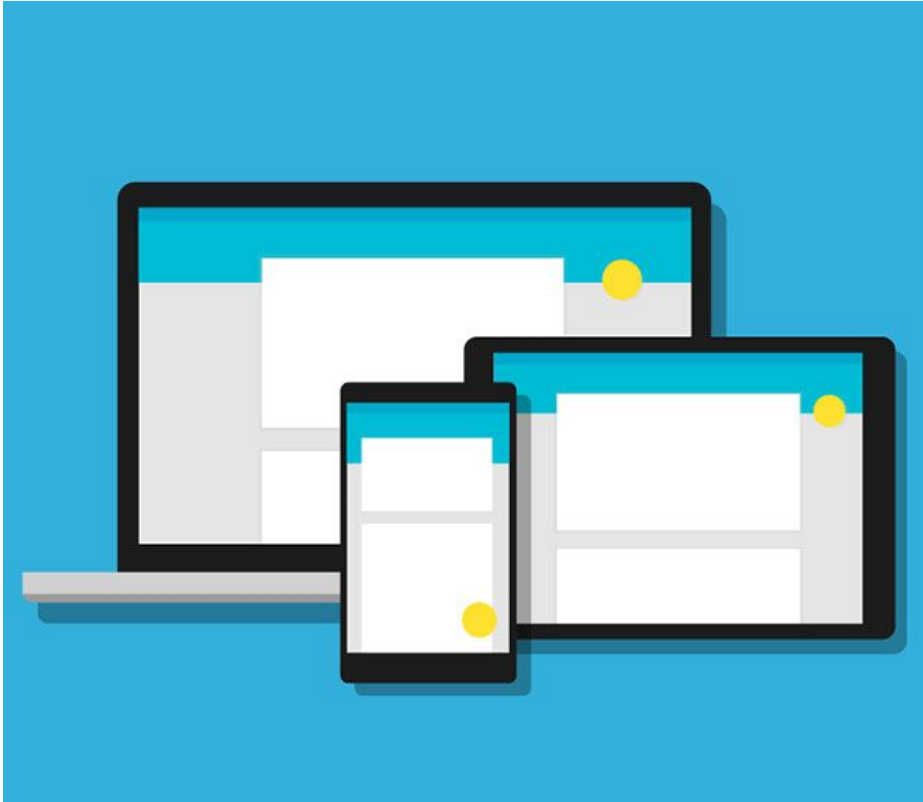
- Bulma is built with SASS. No need of this in Materialize
- Bulma uses “Mobile-first design”
- Bulma doesn't include JS. It needs the BulmaJS extension



BULMA.io

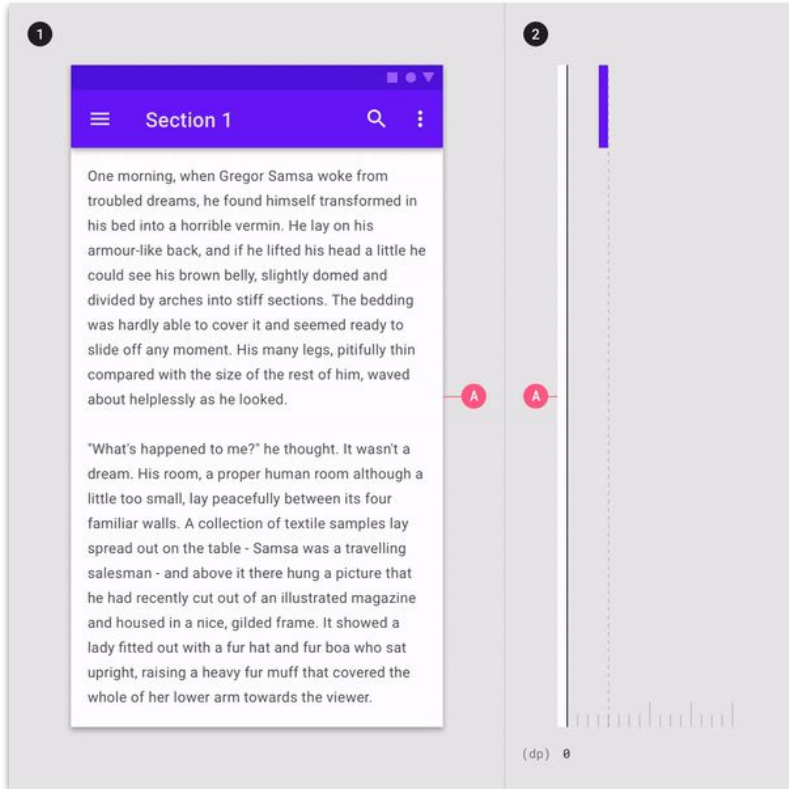
Material Design

Material Design



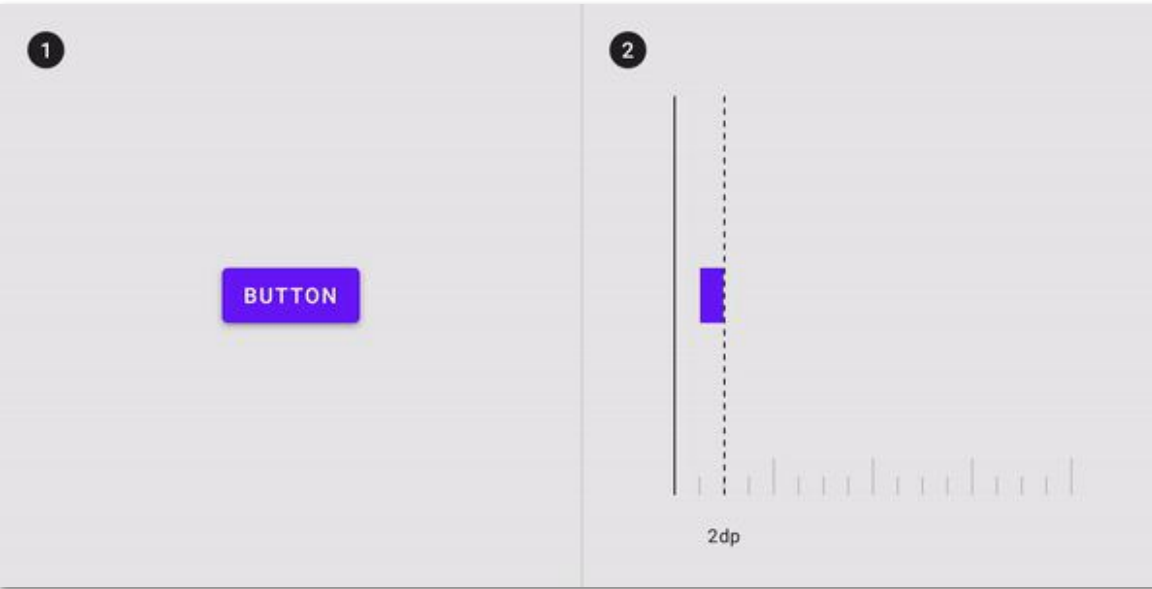
- Created and designed by Google.
- Combines the design principles with innovation and technology.
- System of design that allows for a unified user experience.
- It's thought of in the physical world.

Material Design - Examples (I)



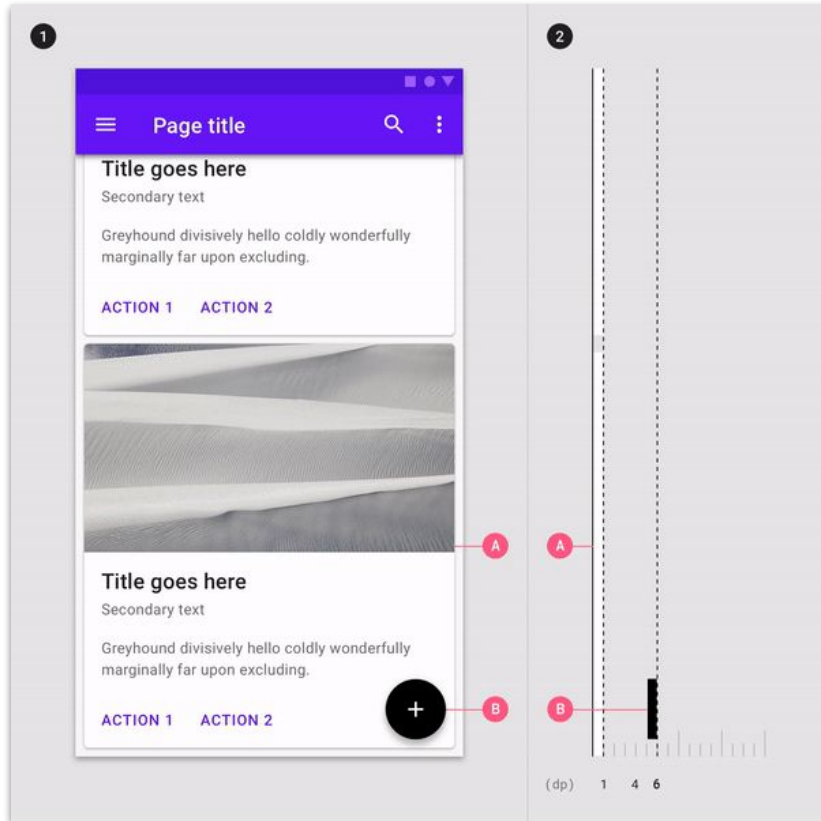
- The **interaction with the objects** seen on the screen gives a sensation of **light, surface and movement**.

Material Design - Examples (II)



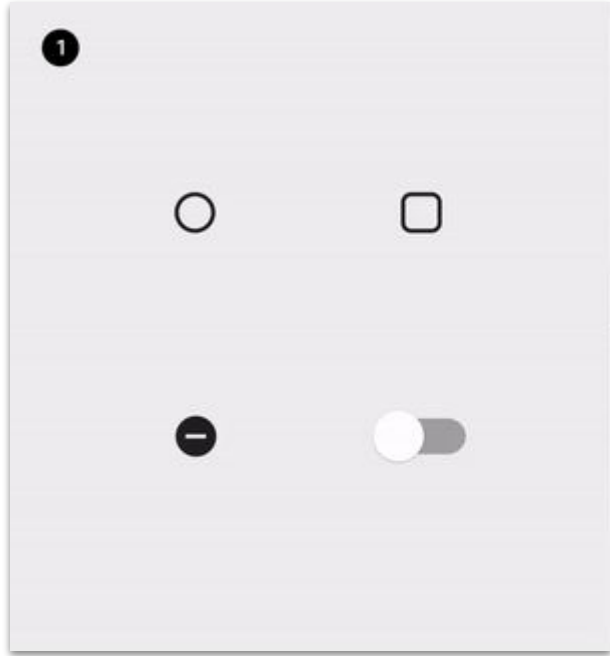
- It is the button that lets us know in a **physically realistic way** that it is being pressed.

Material Design - Examples (III)



- Sometimes it is the user who directs the movement

Material Design - Examples (IV)

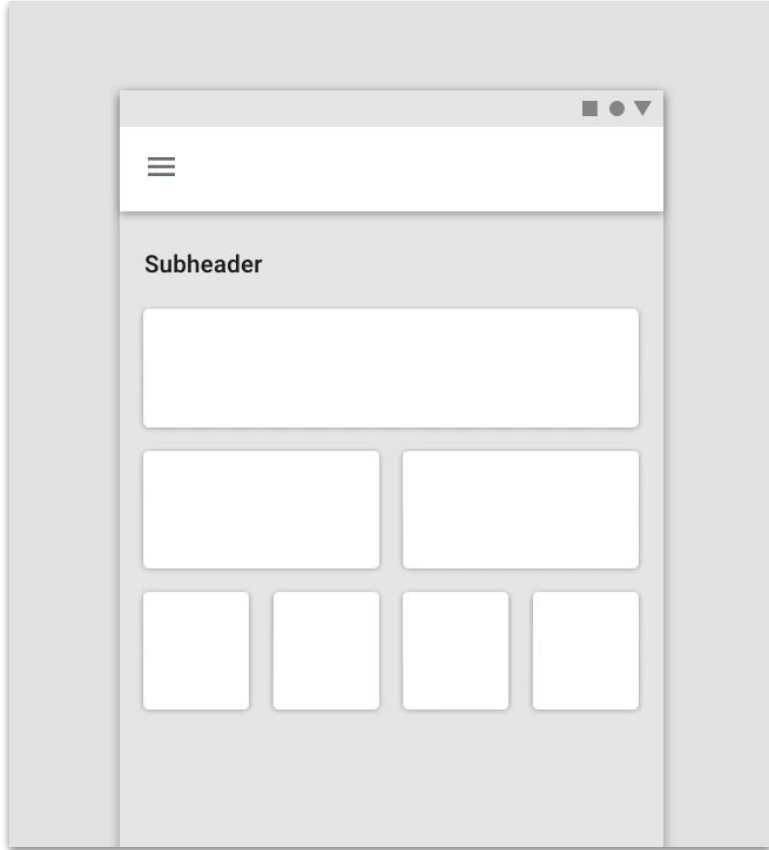


- Aesthetic coherence in the animations.

Material Design

“Animations are not something that interrupts the user experience, but instead enriches and gives meaning to the experience itself.”

Material Design



- **Hierarchy and visual reading**
 - Color
 - Spacing
 - Typographical hierarchies
 - **Grid**

Material Design



[Material.io](https://material.io)

Material Design - Strengths



- **Adaptability**
- **Simplicity and minimalism**

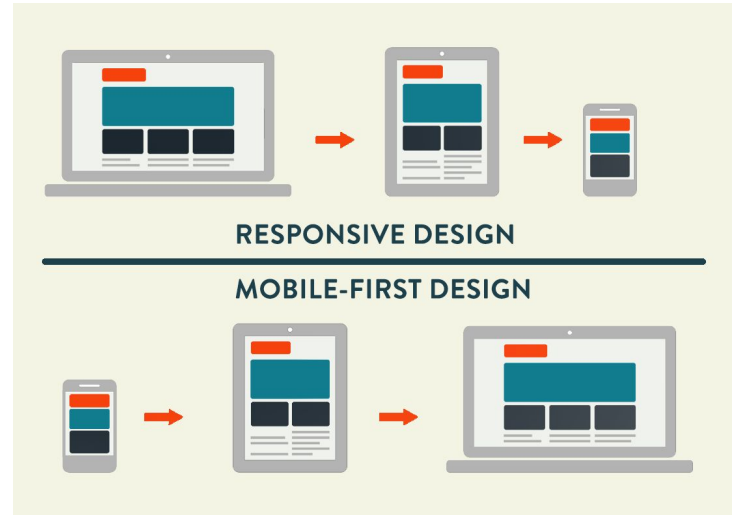
Material Design - Other web design examples



Flat design



Modern design



Mobile first design

GRID

Grid

- Is a grid or structure on which elements of the page are laid out or positioned.
- Helps the webpage design to be carried out in an orderly and relatively simple way.
- It has rows in which there are 12 columns.

Grid

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

There are countless ways to combine the column layout!

```
<div class="row">
  <div class="col s1">1</div>
  <div class="col s1">2</div>
  <div class="col s1">3</div>
  <div class="col s1">4</div>
  <div class="col s1">5</div>
  <div class="col s1">6</div>
  <div class="col s1">7</div>
  <div class="col s1">8</div>
  <div class="col s1">9</div>
  <div class="col s1">10</div>
  <div class="col s1">11</div>
  <div class="col s1">12</div>
</div>
```


Grid

This div is 12-columns wide on all screen sizes

6-columns (one-half)

6-columns (one-half)

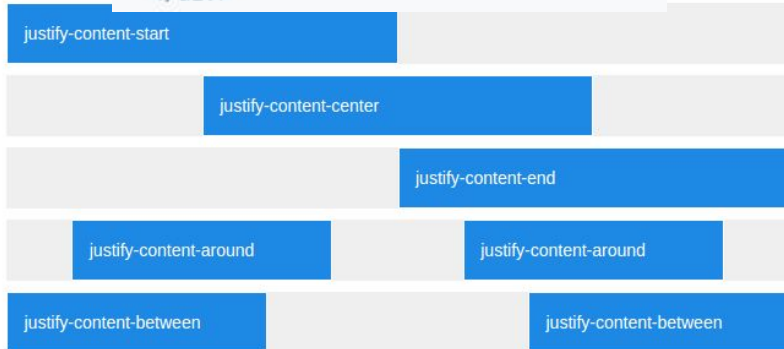
```
<div class="row">
  <div class="col s12">This div is 12-columns wide on all screen sizes</div>
  <div class="col s6">6-columns (one-half)</div>
  <div class="col s6">6-columns (one-half)</div>
</div>
```

- If the sum of the columns of two containers is greater than 12, the second container will be placed under the first one.

Grid

```
#flex-container {  
  display: flex;  
  justify-content: space-around;  
  align-items: center;  
}
```

```
<div class="row justify-content-center">  
  <div class="col-4">  
    One of two columns  
  </div>  
</div>
```



- Materialize doesn't use “justify-content”
- Materialize uses **Offset, Push and Pull.**

```
<div class="card-panel col s7 push-s5">  
  <span class="blue-text text-darken-2">This is a card panel with dark blue text</span>  
</div>  
<div class="card-panel red accent-4 col s5 pull-s7">  
  <span class="yellow-text">This is a card panel with a red background and yellow text</span>  
</div>
```

Grid - Offset

This div is 12-columns wide on all screen sizes

6-columns (offset-by-6)

```
<div class="row">  
  <div class="col s12"><span class="flow-text">This div is 12-columns wide on all sc  
  <div class="col s6 offset-s6"><span class="flow-text">6-columns (offset-by-6)</spa  
</div>
```

Grid - Push & Pull

5-columns wide pulled to the left by 7-

columns.

This div is 7-columns wide on pushed to the right by 5-

columns.

```
<div class="row">
  <div class="col s7 push-s5"><span class="flow-text">This div
  <div class="col s5 pull-s7"><span class="flow-text">5-columns
</div>
```

Grid - But... Aren't Offset and Push the same?

No. Since Offset uses `margin-left`, and push uses `left`:

- Offset will force neighboring columns to move.
- Push (and Pull) will overlap other columns.

Grid - Responsive

Screen Sizes				
	Mobile Devices <= 600px	Tablet Devices > 600px	Desktop Devices > 992px	Large Desktop Devices > 1200px
Class Prefix	.s	.m	.l	.xl
Container Width	90%	85%	70%	70%
Number of Columns	12	12	12	12

- With responsive design we are able to adapt our site to all devices.

Grid - Responsive

Screen Sizes

	Mobile Devices <= 600px	Tablet Devices > 600px	Desktop Devices > 992px	Large Desktop Devices > 1200px
Class Prefix	<code>.s</code>	<code>.m</code>	<code>.l</code>	<code>.xl</code>
Container Width	90%	85%	70%	70%
Number of Columns	12	12	12	12

- We said that 's' is class prefix corresponding to the resolution of mobile devices.
- So... Why has this distribution been applied to higher resolutions?
- This is because the rules propagates upwards.

Grid - Responsive

I am always full-width (col s12)

I am full-width on mobile
(col s12 m6)

```
<div class="row">
  <div class="grid-example col s12"><span class="flow-text">I a
  <div class="grid-example col s12 m6"><span class="flow-text">
</div>
```

- By just saying s12, we are essentially saying "col s12 m12 l12".
- But by explicitly defining the size we can make our website more responsive

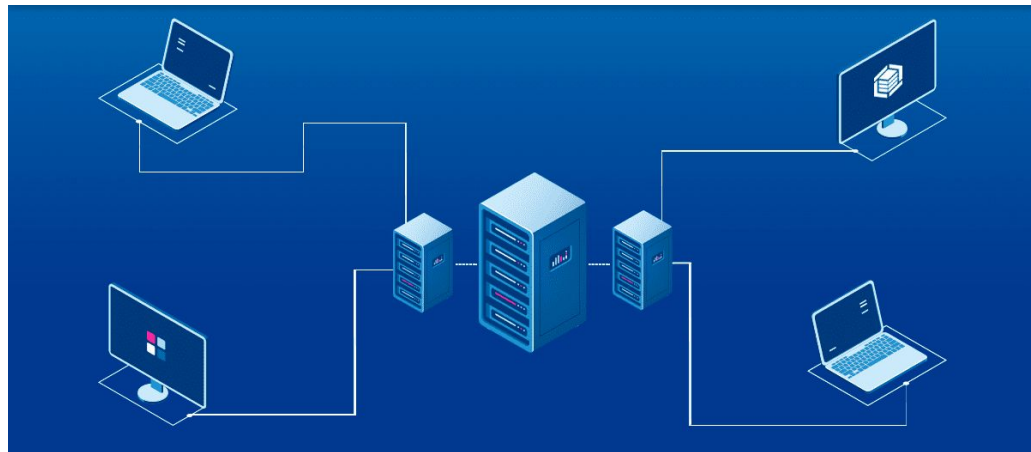
First Steps

First Steps

The first thing we must do is to include Materialize in our project:

- Materialize comes in two different forms
 - Standard Version
 - SASS

- Two ways to include it:
 - Downloading CSS and JS files
 - Via CDN



Examples

[GitHub Repo](#)

CSS

Examples - Colors

This is a card panel with a red background and yellow text

This is a card panel with dark blue text

```
<div class="card-panel">
| <span class="blue-text text-darken-2">This is a card panel with dark blue text</span>
</div>
<div class="card-panel red accent-4">
| <span class="yellow-text">This is a card panel with a red background and yellow text</span>
</div>
```

[Materialize Colors](#)

[01-colors.html](#)

Examples - Grid (I)

This is a card panel with a teal lighten-2 class

This is a card panel with dark blue text

This is a card panel with a red background and yellow text

This is a card panel with a teal lighten-2 class

This is a card panel
with dark blue text

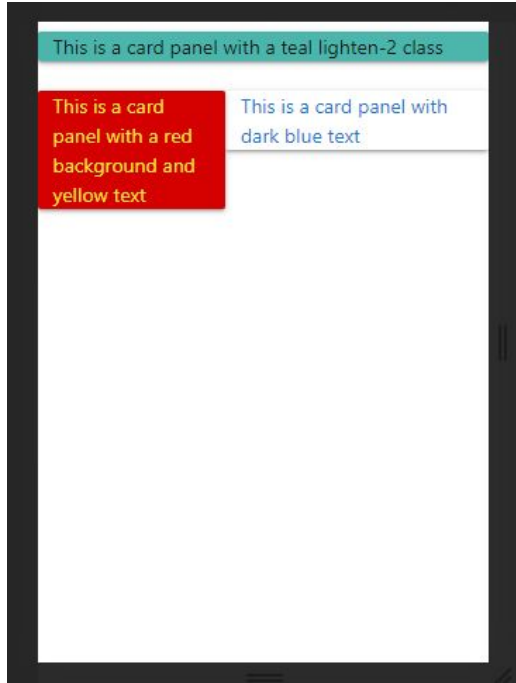
This is a card panel
with a red
background and
yellow text

```
<div class="row">
  <div class="card-panel teal lighten-2 col s12">This is a card panel with a teal lighten-2 class</div>
  <div class="card-panel col s6">
    <span class="blue-text text-darken-2">This is a card panel with dark blue text</span>
  </div>
  <div class="card-panel red accent-4 col s6">
    <span class="yellow-text">This is a card panel with a red background and yellow text</span>
  </div>
</div>
```

[Materialize Grid](#)

[02-grid.html](#)

Examples - Grid (II)

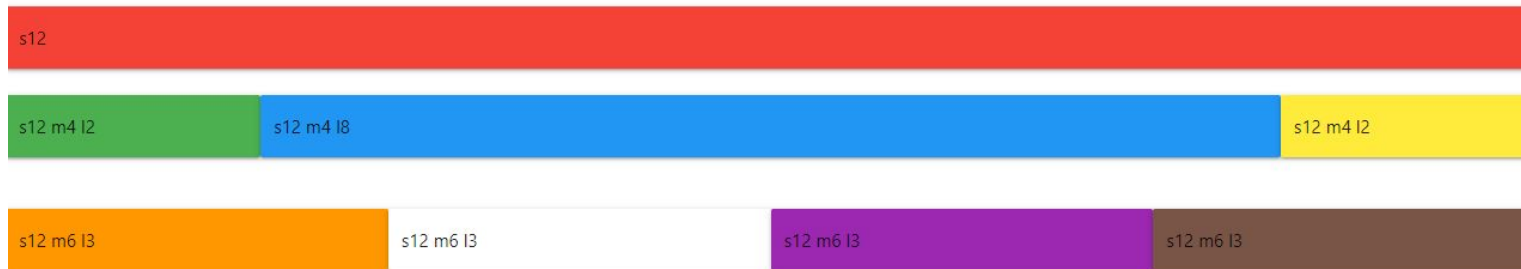


```
<div class="row">
  <div class="card-panel teal lighten-2 col s12">This is a card panel with a teal lighten-2 class</div>
  <div class="card-panel col s7 push-s5">
    <span class="blue-text text-darken-2">This is a card panel with dark blue text</span>
  </div>
  <div class="card-panel red accent-4 col s5 pull-s7">
    <span class="yellow-text">This is a card panel with a red background and yellow text</span>
  </div>
</div>
```

[Materialize Grid](#)

[03-grid-push-pull.html](#)

Examples - Grid (III)



```
<div class="row">
  <div class="card-panel red col s12"><p>s12</p></div>
  <div class="card-panel green col s12 m4 l2"><p>s12 m4 l2</p></div>
  <div class="card-panel blue col s12 m4 l8"><p>s12 m4 l8</p></div>
  <div class="card-panel yellow col s12 m4 l2"><p>s12 m4 l2</p></div>
</div>
<div class="row">
  <div class="card-panel orange col s12 m6 l3"><p>s12 m6 l3</p></div>
  <div class="card-panel white col s12 m6 l3"><p>s12 m6 l3</p></div>
  <div class="card-panel purple col s12 m6 l3"><p>s12 m6 l3</p></div>
  <div class="card-panel brown col s12 m6 l3"><p>s12 m6 l3</p></div>
</div>
```

[Materialize Grid](#)

[03-grid-responsive.html](#)

Examples - Alignment

This should be left aligned

This should be right aligned

This should be center aligned

```
<div class="hide-on-small-only">
  <div class="card-panel red">
    <h5 class="left-align">This should be left aligned</h5>
  </div>
  <div class="card-panel blue">
    <h5 class="right-align">This should be right aligned</h5>
  </div>
  <div class="card-panel green">
    <h5 class="center-align">This should be center aligned</h5>
  </div>
</div>
```

[Materialize Helpers](#)

[05-alignment.html](#)

Examples - Images



This is a circular image.

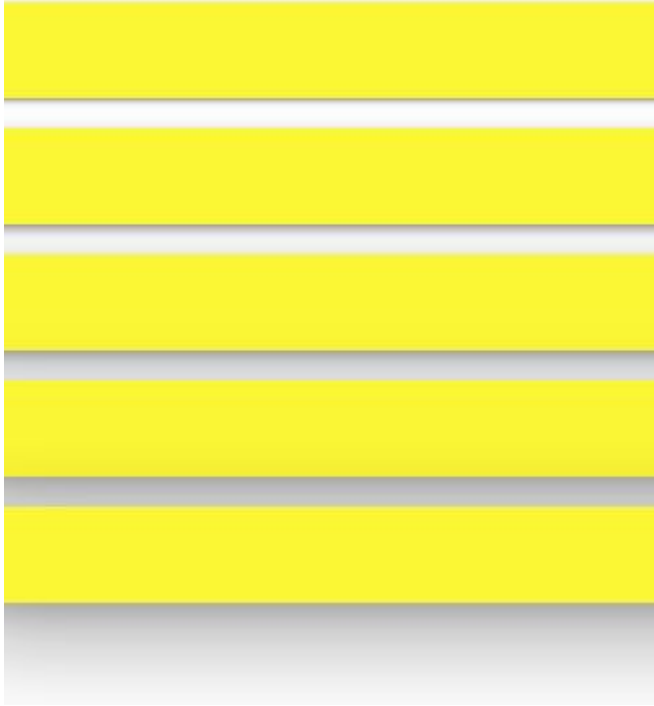
```

```

[Materialize Media](#)

[07-images.html](#) 50 / 76

Examples - Shadows



```
<div class="card-panel yellow col s12 m2 z-depth-1"></div>  
<div class="card-panel yellow col s12 m2 z-depth-2"></div>  
<div class="card-panel yellow col s12 m2 z-depth-3"></div>  
<div class="card-panel yellow col s12 m2 z-depth-4"></div>  
<div class="card-panel yellow col s12 m2 z-depth-5"></div>
```

[Materialize Shadows](#)

[08-shadows.html](#)

Examples - Tables

Name	Subject
David	PAI
David	PL
David	DAA
Rafa	PAI
Rafa	IAA
Rafa	DAA

[Materialize Table](#)

[09-table.html](#)

Examples - Blockquotes

Lorem ipsum, dolor sit amet consectetur adipisicing elit.
Porro ratione at quas consequatur distinctio maiores alias,
minus voluptate odit animi dicta, voluptas reiciendis ex! Quidem
dolor similique necessitatibus qui architecto.

```
<blockquote>  
  Lorem ipsum, dolor sit amet consectetur adipisicing elit. <br>  
  Porro ratione at quas consequatur distinctio maiores alias, <br>  
  minus voluptate odit animi dicta, voluptas reiciendis ex! Quidem <br>  
  dolor similique necessitatibus qui architecto.<br>  
</blockquote>
```

[Materialize Typography](#)

[10-blockquotes.html](#)

Components

Examples - Badges

ULL	PAI	PL 4 new	DAA	IAA 2 new
	PAI			1
	PL	4 new		
	DAA			
	IAA	2 new		

```
<li><a href="">PAI</a></li>
<li><a href="">PL <span class="new badge">4</span></a></li>
<li><a href="">DAA</a></li>
<li><a href="">IAA<span class="new badge">2</span></a></li>
```

[Materialize Badges](#)

[11-badges.html](#)

Examples - Footer

© 2020 Copyright Text

```
<footer class="page-footer purple">
  <div class="footer-copyright">
    © 2020 Copyright Text
  </div>
</footer>
```

```
body {
  display: flex;
  min-height: 100vh;
  flex-direction: column;
}

main {
  flex: 1 0 auto;
}
```

[Materialize Footer](#)

[11-badges.html](#)

Examples - Floating buttons

```
<div class="fixed-action-btn">
  <a class="btn-floating btn-large red waves-effect waves-light">
    <i class="large material-icons">mode_edit</i>
  </a>
  <ul>
    <li><a class="btn-floating red waves-effect waves-light"><i class="material-icons">insert_chart</i></a></li>
    <li><a class="btn-floating yellow darken-1 waves-effect waves-light"><i class="material-icons">format_quote</i></a></li>
    <li><a class="btn-floating green waves-effect waves-light"><i class="material-icons">publish</i></a></li>
    <li><a class="btn-floating blue waves-effect waves-light"><i class="material-icons">attach_file</i></a></li>
  </ul>
</div>
```

```
document.addEventListener('DOMContentLoaded', function () {
  var elems = document.querySelectorAll('.fixed-action-btn');
  var instances = M.FloatingActionButton.init(elems, {
    direction: 'top'
  });
});
```



[Materialize Floating Action Buttons](#)

[11-badges.html](#)

Examples - Cards







```
<div class="card">
  <div class="card-image">
    
    <span class="card-title">Card Title</span>
    <a class="btn-floating halfway-fab waves-effect waves-light red"><i class="material-icons">add</i></a>
  </div>
  <div class="card-content">
    <p>I am a very simple card. I am good at containing small bits of information. I am convenient because
  </p>
  </div>
</div>
```

[Materialize Cards](#)

[12-cards.html](#)

Examples - Collections

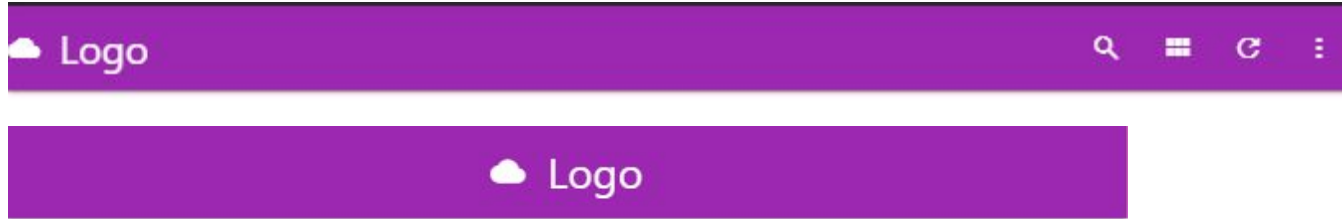
	Title First Line Second Line	★
	Title First Line Second Line	★
	Title First Line Second Line	★
	Title First Line Second Line	★

```
<ul class="collection">  
  <li class="collection-item avatar">
```

[Materialize Collections](#)

[13-collections.html](#)

Examples - Navbar



```
<header>
  <nav>
    <div class="nav-wrapper purple">
      <a href="#" class="brand-logo"><i class="material-icons">cloud</i>Logo</a>
      <ul class="right hide-on-med-and-down">
        <li><a href=""><i class="material-icons">search</i></a></li>
        <li><a href=""><i class="material-icons">view_module</i></a></li>
        <li><a href=""><i class="material-icons">refresh</i></a></li>
        <li><a href=""><i class="material-icons">more_vert</i></a></li>
      </ul>
    </div>
  </nav>
</header>
```

[Materialize Navbar](#)

[14-navbar.html](#)

Examples - Icons

```
<link href="https://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
```



```
<i class="material-icons circle green">insert_chart</i>
```



```
<i class="material-icons circle red">play_arrow</i>
```



```
<i class="material-icons circle">pause</i>
```

Material.io - Icons

Action



3d_rotation



accessibility



accessibility...



accessible



accessible_fo...



account_box



account_circ...



add_shopping_...



alarm



alarm_add



all_inbox



all_out



android



announcement



arrow_right_a...



assignment



assignment_in...



assignment_la...



assignment_re...



assignment_re...

Materialize Icons

13-collections.html

JavaScript

Examples - Carousel



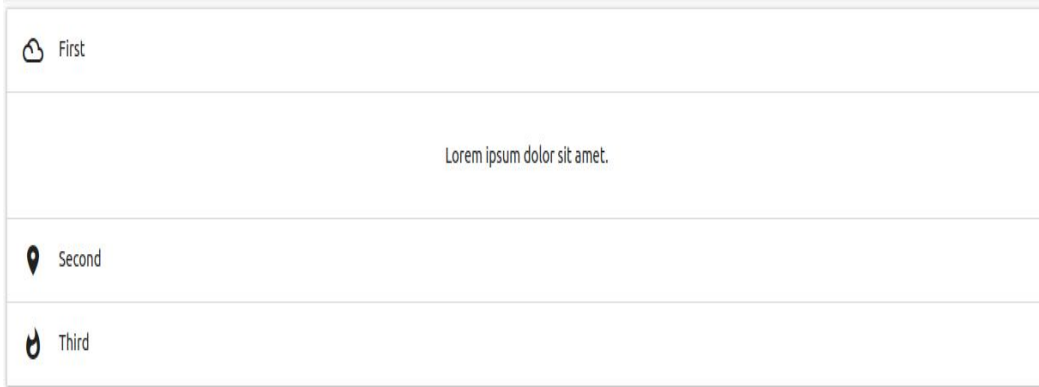
```
document.addEventListener('DOMContentLoaded', function() {  
  var elems = document.querySelectorAll('.carousel');  
  var instances = M.Carousel.init(elems, {  
    // numVisible: 3  
  });  
});
```

```
<div class="carousel">  
  <a class="carousel-item"></a>
```

[Materialize Carousel](#)

[15-carousel.html](#)

Examples - Collapsible



```
var elem = document.querySelector('.collapsible.expandable');  
var instance = M.Collapsible.init(elem, {  
  inDuration: 400, /* 300 by default */  
  // accordion: false  
});
```

```
<ul class="collapsible expandable">  
  <li>  
    <div class="collapsible-header"><i class="material-icons">filter_drama</i>First</div>  
    <div class="collapsible-body"><span>Lorem ipsum dolor sit amet.</span></div>  
  </li>  
  <li>
```

[Materialize Collapsible](#)

[16-collapsible.html](#)

Examples - Modals

MODAL

Modal Header

Lorem ipsum dolor sit, amet consectetur adipisicing elit. Eos ducimus reiciendis, eius temporibus vitae necessitatibus officiis possimus quas? Quidem fugiat enim error excepturi odit omnis magni, eius temporibus neque! Nemo maxime ab eius nobis ipsum obcaecati, doloreque deserunt quo temporibus voluptatem voluptas illum consequatur laborum, aliquid, commodi praesentium quas asperiores consequuntur modi! Neque fugiat nobis placeat. Nobis aspernatur obcaecati fugit, enim facere harum officia esse adipisci quas dolorum quibusdam sint quaerat est exercitationem ullam quo? Aliquam, laudantium facere! Minima quos odio dolor recusandae ab voluptas libero quisquam veritatis incidunt. Aspernatur, ad cumque itaque quibusdam sequi possimus, impedit modi, dolor iusto sint nemo. Deserunt illo nemo accusamus corporis cupiditate recusandae accusantium tempora dicta quasi est officiis ea consequatur repellendus excepturi, magnam et? Laudantium animi quaerat tempora. Repudiandae, quibusdam! Recusandae, itaque. Voluptate maxime totam, delectus deserunt corporis quas aperiam ea. Eaque quasi voluptate nam eius laborum obcaecati quibusdam quia voluptas nostrum, dicta odit sequi cupiditate dolor! Praesentium veritatis facere quisquam quia vitae, in animi nam dolorum, officia quidem ad doloreque culpa? Impedit tempora ipsa beatae sed perspiciatis sint voluptas consequatur sit aspernatur optio, accusantium totam dolores corrupti explicabo nemo! Beatae, amet? Unde praesentium animi deserunt facere aliquam tenetur, dolore aut consequuntur libero eum harum officiis obcaecati corporis at reprehenderit. Ipsam blanditiis ea eveniet fugiat recusandae, est, quaerat inventore hic sint at eaque officiis nesciunt nulla mollitia maiores. Reiciendis nemo odit porro nesciunt aperiam quo quam labore illum enim doloribus quisquam magnam nihil veritatis magni consequatur eum, harum deleniti eligendi. Dolores velit sit similique iusto maxime quo cupiditate distinctio facere eligendi ipsa, reprehenderit, libero tempora voluptas adipisci. Quidem corrupti sed ut voluptates quis praesentium, veritatis doloribus aspernatur? Iste, possimus expedita debitis voluptatem mollitia aut cumque quia quam aliquid qui assumenda quae delectus, eveniet, eum a aliquam unde error velit sed. Quaerat et excepturi placeat cum reiciendis sunt, incidunt similique voluptas! At exercitationem, saepe id maiores vel, ipsum quisquam cumque odit soluta ut perspiciatis ad dolor impedit quibusdam? Molestiae illo laborum debitis maiores sed. Ratione veniam possimus at ex

```
/* Inicialización del elemento Modal */
document.addEventListener('DOMContentLoaded', function() {
  var elems = document.querySelectorAll('.modal');
  var instances = M.Modal.init(elems);
});
```

```
<!-- Modal Trigger -->
<a class="waves-effect waves-light btn modal-trigger" href="#modal1">Modal</a>

<!-- Modal Structure -->
<div id="modal1" class="modal">
  <div class="modal-content">
    <h4>Modal Header</h4>
    <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Eos ducimus reiciendis, eius tempo
  </div>
  <div class="modal-footer">
    <a href="#" class="modal-close waves-effect waves-green btn-flat">Agree</a>
  </div>
</div>
```

[Materialize Modals](#)

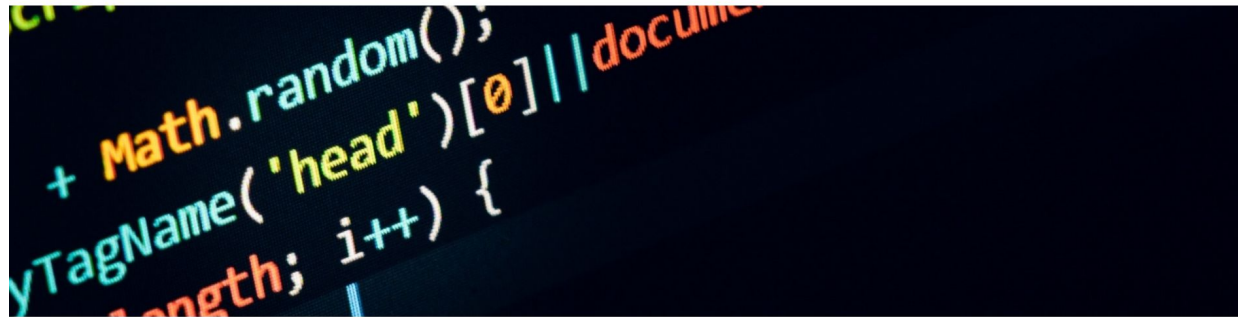
[18-modal.html](#)

Examples - Parallax

Images
Shadows
Tables
Quotes

jQuery α
ScrollSpy

```
/* Inicialización del Parallax */  
document.addEventListener('DOMContentLoaded', function() {  
  var elems = document.querySelectorAll('.parallax');  
  var instances = M.Parallax.init(elems);  
});
```



Contact Us

Rafael Cala González

```
<div class="parallax-container">  
  <div class="parallax"></div>  
</div>
```

[Materialize Parallax](#)

[19-parallax.html](#)

Examples - Sidenav



Introduction

First Section

Subheader

Second Section

```
<ul id="slide-out" class="sidenav">
  <li>
    <div class="user-view">
      <div class="background">
        
      </div>
      <a href="#user"></a>
      <a href="#name"><span class="white black-text text-accent-4 name"><strong><strong>Einstein,
        Albert</strong></span></a>
      <a href="#email"><span class="white black-text text-accent-4 email">einsteinalbert@ull.edu.es</span></a>
    </div>
  </li>
```

[Materialize Sidenav](#)

[20-sidenav.html](#)

Examples - ScrollSpy

```
<div id="introduction" class="section scrollspy">  
  <h3>Introduction</h3>
```

```
<div class="col hide-on-small-only pinned offset-s10">  
  <ul class="section table-of-contents">  
    <li><a href="#introduction">Introduction</a></li>  
    <li><a href="#first-section">First section</a></li>  
    <li><a href="#second-section">Second section</a></li>  
  </ul>  
</div>
```

Introduction

First section

Second section

[Materialize ScrollSpy](#)

[20-sidenav.html](#)

Examples - Waves-effect buttons



Second Section

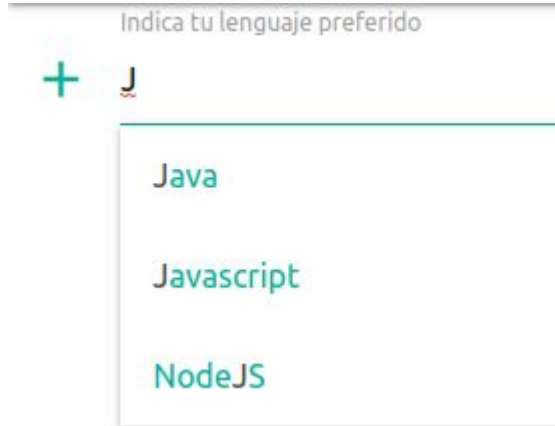
```
<li><a class="waves-effect" href="#second-section">Second Section</a></li>
```

[Materialize Waves](#)

[11-badges.html](#) 69 / 76

Forms

Examples - Autocomplete



```
var options = {
  data: {
    "Java": "../img/logo-java.png",
    "Javascript": "../img/logo-js.png",
    "CSS": "../img/logo-css.png",
    "HTML": "../img/logo-html.png",
    "NodeJS": "../img/logo-nodejs.png",
    "PHP": "../img/logo-php.png",
    "Python": "../img/logo-python.png",
    "C++": "../img/logo-cpp.png",
    "C#": "../img/logo-csharp.png"
  },
};

/* Evento que inicializa el autocompletado */
document.addEventListener('DOMContentLoaded', function() {
  var elems = document.querySelectorAll('.autocomplete');
  var instances = M.Autocomplete.init(elems, options);
});
```

```
<input type="text" id="autocomplete-input" class="autocomplete">
<label for="autocomplete-input">Indica tu lenguaje preferido</label>
```

[Materialize Autocomplete](#)

[21-autocomplete.html](#)

Examples - Forms

Formulario

☒ Filled in

Fecha de nacimiento

Materialize Select

Choose your option

Materialize Multiple Select

Choose your option

Optgroups

Option 1

First Name

Placeholder

Last Name

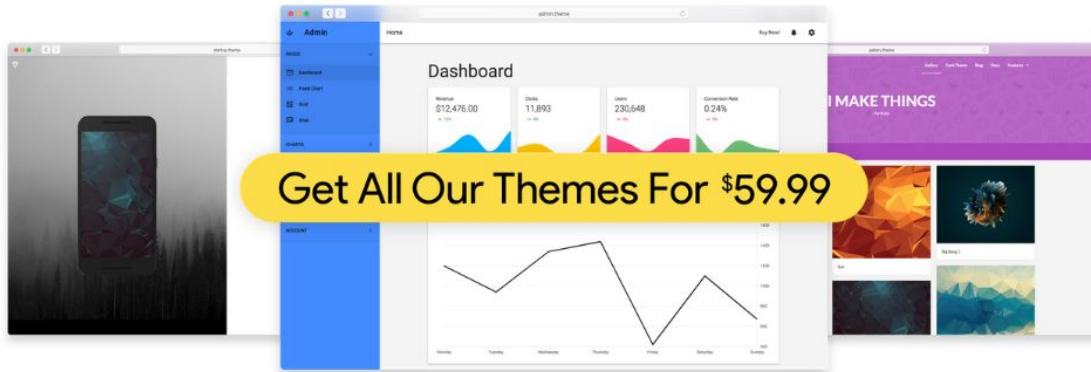
Password

Email

[Materialize Autocomplete](#)

[22-form.html](#)

Examples - Templates



- In order to see the Materialize potential, we also share these payment templates.

[Materialize - Templates](#)

Bibliography

- [Materialize CSS Documentation](#)
- [Introduction to Materialize](#)
- [Materialize course](#)
- [Framework](#)
- [Framework VS Own Code](#)
- [Material.io](#)
- [Material Design meaning](#)
- [Material Design Information](#)
- [GRID](#)
- [GitHub Repo](#)

Materialize CSS



Questions?

Materialize CSS



**Programación de Aplicaciones
Interactivas**

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