HTML5 & CSS3 FUNDAMENTALS

HTML5, CSS3, jQuery, Bootstrap
網頁設計基礎班

Bootstrap簡介

- **Bootstrap的Grid系統**
- 利用**Bootstrap**製作一個完整的模板並看看**Bootstrap**有哪些組件

Bootstrap

- 下載：**http://getbootstrap.com/**
- 要加載**bootstrap.css**和**bootstrap.js**

```
bootstrap/
├── css/
│       ├── bootstrap.css
│       ├── bootstrap.css.map
│       ├── bootstrap.min.css
│       ├── bootstrap-theme.css
│       ├── bootstrap-theme.css.map
│       └── bootstrap-theme.min.css
├── js/
│       ├── bootstrap.js
│       └── bootstrap.min.js
└── fonts/
        ├── glyphicons-halflings-regular.eot
        ├── glyphicons-halflings-regular.svg
        ├── glyphicons-halflings-regular.ttf
        ├── glyphicons-halflings-regular.woff
        └── glyphicons-halflings-regular.woff2
```

What is Bootstrap?

- **Twitter**的標準化**front-end**設計工具
- 計畫網址：**http://getbootstrap.com/**
- 一些常用的標準網站設計（**CSS**和**js**）都可以直接使用。

```
<a href="http://www.google.com" class="btn btn-primary">Visit Google</a>
```

Visit Google

官方建議的樣本(從網頁複製)

```html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!-- The above 3 meta tags *must* come first in the head; any other head content must come *after* these tags -->
    <title>Bootstrap 101 Template</title>

    <!-- Bootstrap -->
    <link href="css/bootstrap.min.css" rel="stylesheet">

    <!-- HTML5 shim and Respond.js for IE8 support of HTML5 elements and media queries -->
    <!-- WARNING: Respond.js doesn't work if you view the page via file:// -->
    <!--[if lt IE 9]>
      <script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv.min.js"></script>
      <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script>
    <![endif]-->
  </head>
  <body>
    <h1>Hello, world!</h1>

    <!-- jQuery (necessary for Bootstrap's JavaScript plugins) -->
    <script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js"></script>
    <!-- Include all compiled plugins (below), or include individual files as needed -->
    <script src="js/bootstrap.min.js"></script>
  </body>
</html>
```

for IE和mobile

bootstrap依賴於
jquery記得要加載

Bootstrap預設

移除 **body** 的 **margin**

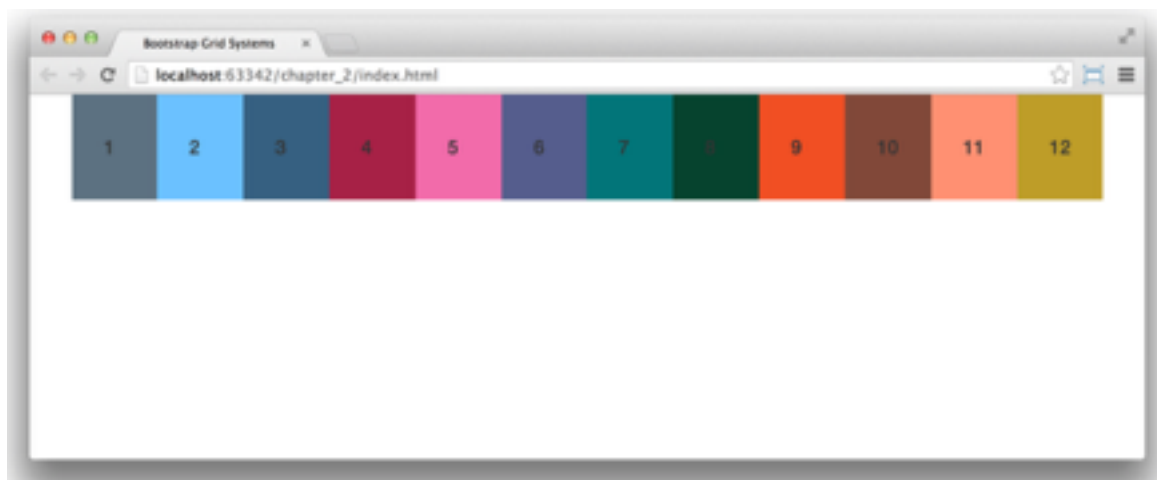設置了 **body** 的背景顏色 **background-color: white;**

使用 **@baseFontFamily**、**@baseFontSize** 和 **@baseLineHeight** 屬性做為佈局的基礎

透過 **@linkColor** 設置全域連結顏色，當連結處於 **:hover** 狀態時才會帶有下劃線 這些樣式可以在 **scaffolding.less** 找到。

Bootstrap Grid System

利用格子狀的基本單元設計網站佈局
可以自己設定列和行，及所佔的寬度
Responsive的設計：這些空間可以隨著裝置的大小切換

container vs container-fluid

- **Bootstrap建議把整個佈局放在一個container或是 container-fluid裡面**
- **container:固定寬，左右會有margin。**
- **container-fluid：寬度會自動佔滿瀏覽器畫面。**

```
<div class="container">

</div>
```

```
<div class="container-fluid">

</div>
```

row

- 先產生列，之後再放入**column**的內容

```
<div class="container">
    <div class="row">
    </div>
</div>
```
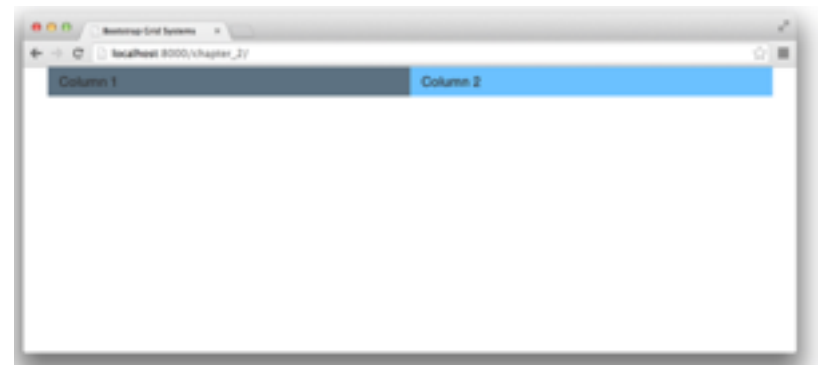
col

- 單位：全部的寬度在**Bootstrap**是**12**個**column**
- 宣告**column**的時候要指定它佔據的寬度。
- 例如：
  - **3 column**寬的時候**class**就是**col-xs-3**
  - **6 column**寬的時候**class**就是**col-xs-6**
  - **12 column**寬的時候**class**就是**col-xs-12**
- 我們等一下再說**xs**的意思

雙欄的設計

- 為了看得到我們多給他顏色

```
<div class="container">
    <div class="row">
        <div class="col-xs-6 col1">
            <h4>Column 1</h4>
        </div>
        <div class="col-xs-6 col2">
            <h4>Column 2</h4>
        </div>
    </div>
</div>
```

```
.col1{
    background: #5C7080;
}
.col2{
    background: #6BC0FF;
}
```
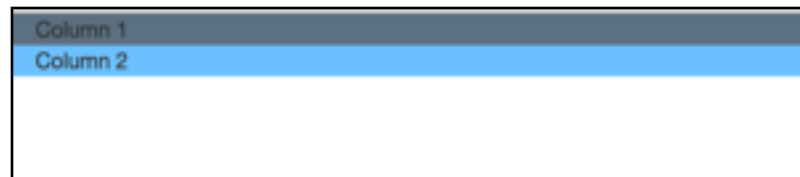
指定display大小

- 現在我們可以來看**xs**是什麼意思了。
- **Bootstrap**是**responsive**的設計，**xs**的位置放的是裝置的螢幕寬度的描述。
- **Bootstrap**會針對不同寬度的螢幕選擇設計者指定的寬。
  1. **col-xs**是**extra small**螢幕（寬度 **< 768px**）
  2. **col-sm**是**small**螢幕（寬度 **>= 768px**）
  3. **col-md**是**medium**螢幕（寬度 **>= 992px**）
  4. **col-lg**是**large**螢幕（寬度 **>= 1200px**）

試試看

- 指定兩個不同大小的**col**寬度

```
<div class="container">
    <div class="row">
        <div class="col-xs-12 col-sm-6 col1">Column 1</div>
        <div class="col-xs-12 col-sm-6 col2">Column 2</div>
    </div>
</div>
```

- 瀏覽

2 row

- 再加一個**row**

```
<div class="container">
      <div class="row">
        <div class="col-xs-12 col-sm-6 col1">Column 1</div>
        <div class="col-xs-12 col-sm-6 col2">Column 2</div>
      </div>
      <div class="row">
        <div class="col-xs-12 col-sm-6 col3">Column 3</div>
        <div class="col-xs-12 col-sm-6 col4">Column 4</div>
      </div>
</div>
```
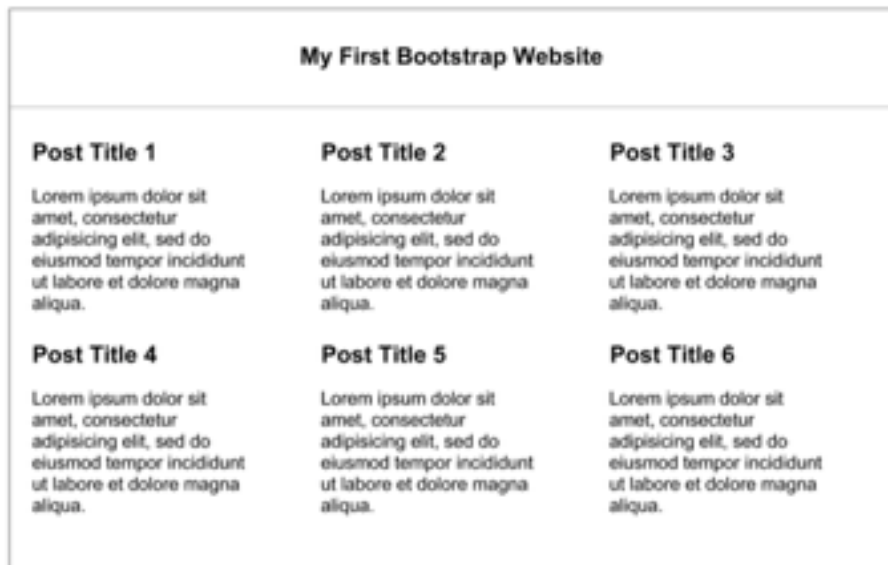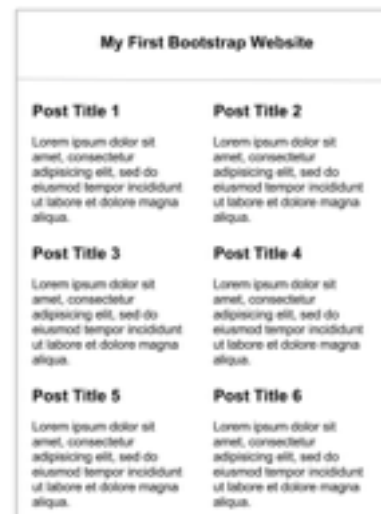
- 給他

```
.col3{
    background: #E8AA4C;
}
.col4{
    background: #FF384E;
}
```

應用

- 利用**Bootstrap**的**Grid**系統來做動態**Layout**
- 幫下面的**blog**做排版的概念設計

桌上型電腦

平板

手機

幫桌上型電腦設計版面

- 先產生**container**
- 產生一個**row**
- 桌上型電腦的大小大約是**md**，標頭的寬度**12**

```
<div class="container">
    <div class="row">
        <div class="col-md-12 text-center">
            <h1>My First Bootstrap Blog</h1>
        </div>
    </div>
</div>
```

text-center是 Bootstrap的 helper class文字 置中

內容骨架

- 根據原來的設計圖，內容區的欄位是一列有三個欄：所以每個欄佔寬：**4**

```
<div class="container">
    <div class="row">
        <div class="col-md-12 text-center">
            <h1>My First Bootstrap Blog</h1>
        </div>
    </div>
<hr>
    <div class="row">
        <div class="col-md-4">
        </div>
        <div class="col-md-4">
        </div>
        <div class="col-md-4">
        </div>
    </div>
</div>
```

假網頁內容可以到這裡找
http://html-ipsum.com/

填入文章

- 文章範例

```
<div class="col-md-4">
   <h3>Post Title 1</h3>
   <p>Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac
turpis egestas. Vestibulum tortor quam, feugiat vitae, ultricies eget, tempor sit
amet, ante. Donec eu libero sit amet quam egestas semper. Aenean ultricies mi vitae
est. Mauris placerat eleifend leo.</p>
</div>
```

為了方便識別增加了
<h3>Post Title #</h3>
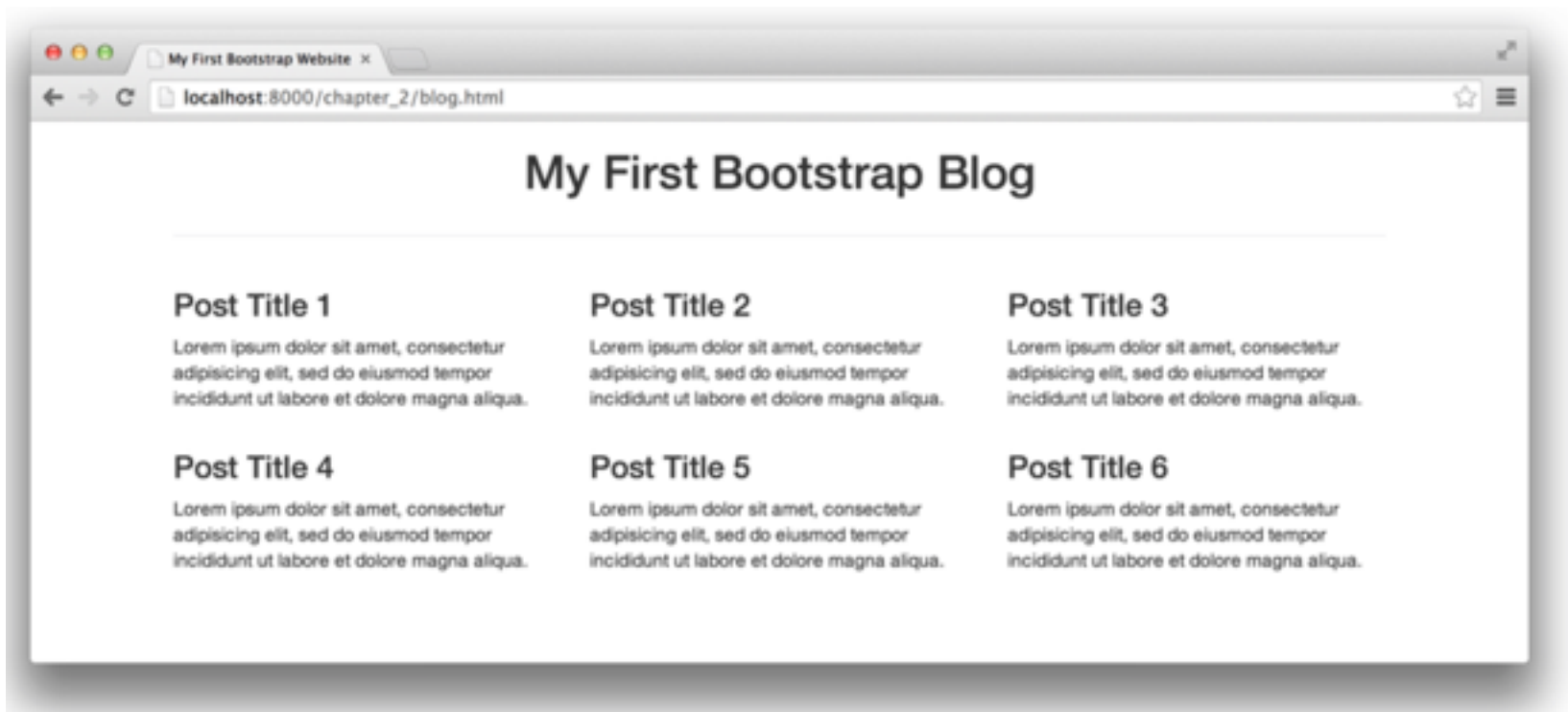
看看結果

- 已經有第一列了，長相跟設計圖的一樣

增加第二列？

- 兩種可能性：
  1. 手動產生一個**row**並把三個**column**放進來（**layout**固定）
  2. 直接把三個**column**的內容貼進第一個**row**

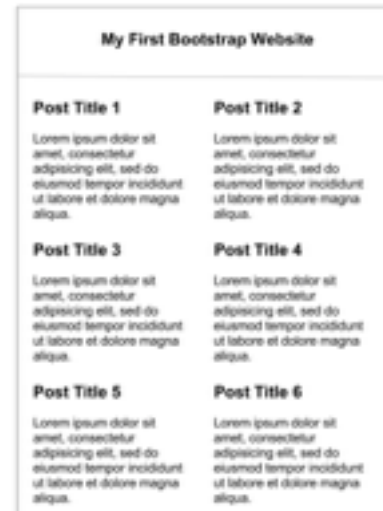 總寬度超過12的時候，Bootstrap會自動決定該把內容換行到新的row。

完成

幫平板設計佈局

- 平板的**landscape**寬度可以用**md (>= 992px)**，所以剛剛的**layout**就**OK**。

- 平板的**portrait**寬度大概就是**sm**的尺寸，所以我們改用另一種**layout**。

Portrait

Landscape

My First Bootstrap Website

Post Title 1
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 2
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 3
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 4
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 5
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 6
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

平板
portrait

6 col寬

幫內文加上sm尺寸的寬

```
<div class="row">
    <div class="col-md-4 col-sm-6">
        <h3>Post Title 1</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
    </div>
    <div class="col-md-4 col-sm-6">
        <h3>Post Title 2</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
    </div>
    <div class="col-md-4 col-sm-6">
        <h3>Post Title 3</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
    </div>
    <div class="col-md-4 col-sm-6">
        <h3>Post Title 4</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
```
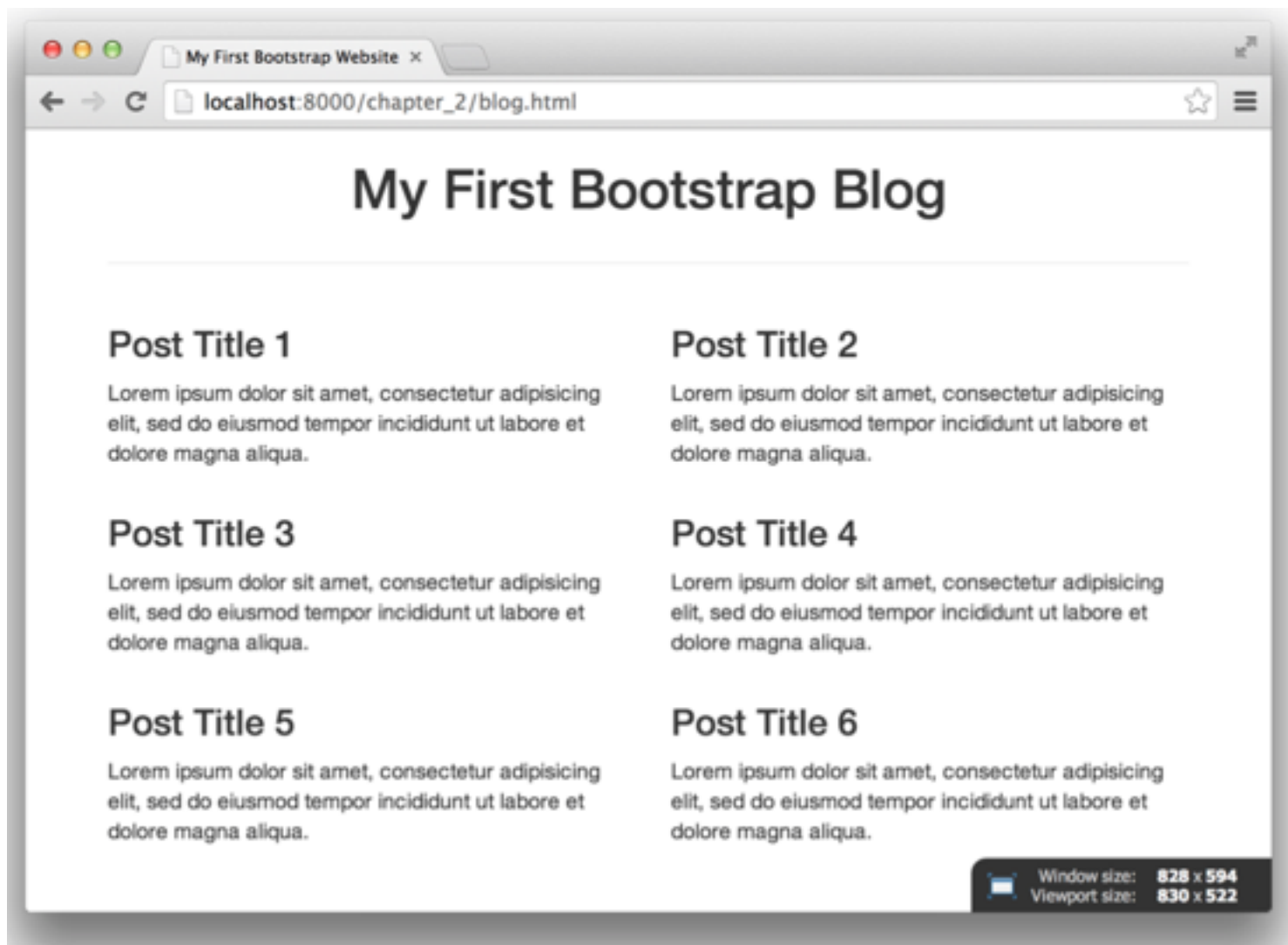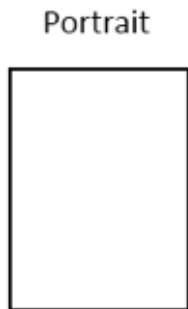
看看結果

幫手機設計佈局

- 手機的**landscape**寬度可以用**sm (>= 768px)**
- 手機的**portrait**寬度則是**xs (< 768px)**

My First Bootstrap Website

Post Title 1

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 2

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Post Title 3

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Portrait

Landscape

手機的
portrait

col寬12

這次加上xs的寬度

```
<div class="row">
    <div class="col-md-4 col-sm-6 col-xs-12">
        <h3>Post Title 1</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
    </div>
    <div class="col-md-4 col-sm-6 col-xs-12">
        <h3>Post Title 2</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
    </div>
    <div class="col-md-4 col-sm-6 col-xs-12">
        <h3>Post Title 3</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
    </div>
    <div class="col-md-4 col-sm-6 col-xs-12">
        <h3>Post Title 4</h3>
        <p>Lorem ipsum dolor sit amet ... </p>
```

完成

更複雜的佈局

- 也可以利用巢狀結構，做出更複查的佈局

```
<div class="container">
    <div class="row">
        <div class="col-md-6 col1">
            <h3>Column 1</h3>
            <!-- 在col裡加新的row -->
            <div class="row">

            </div>
        </div>
        <div class="col-md-6 col2">
            <h3>Column 2</h3>
        </div>
    </div>
</div>
```

現在col1裡面我們家了新的row

結果
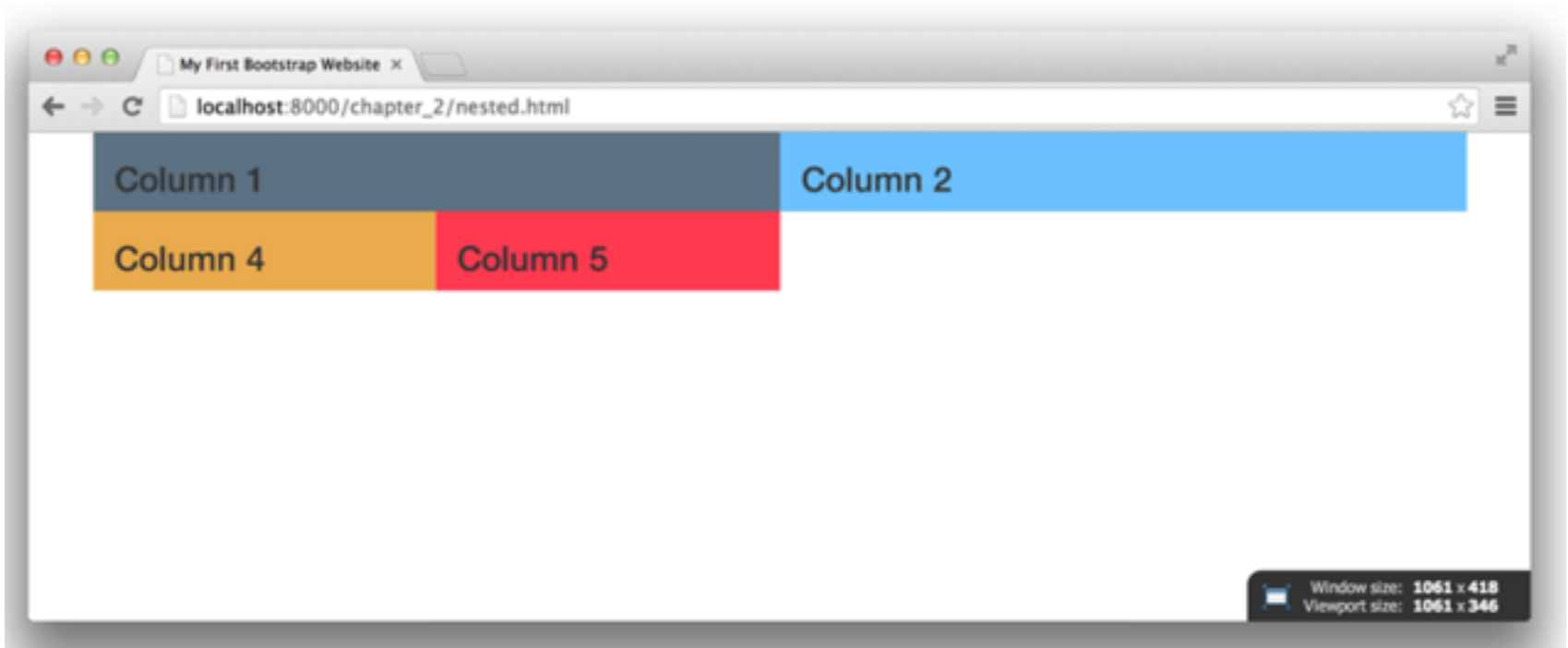
遊歷**Bootstrap**組件

- 我們用完整的一個頁面來介紹**Bootstrap**組建能做些什麼

主頁面

- **navbar**
- **jumbotron**
- 三欄文字
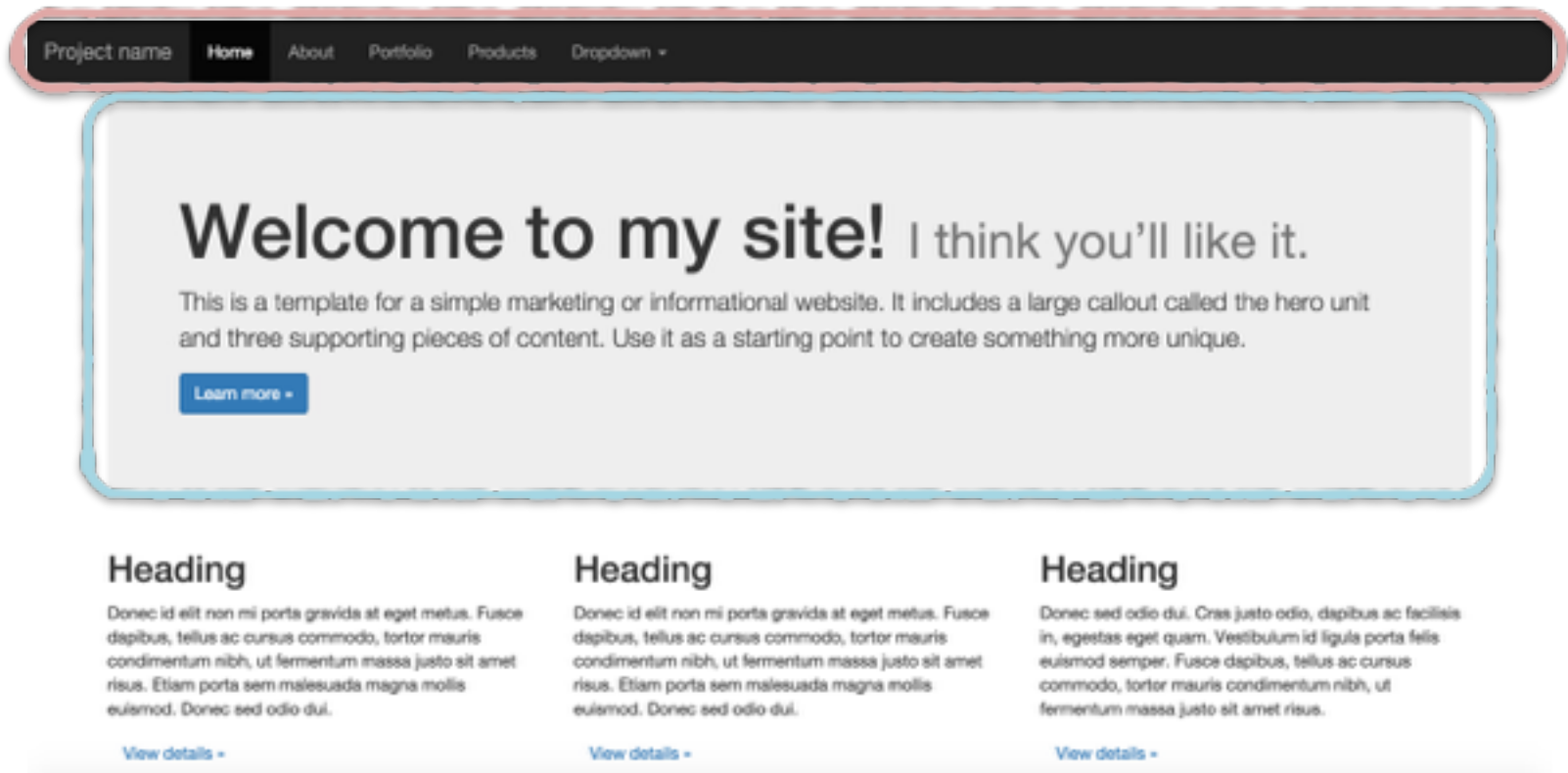
Jumbotron

- 簡單又有彈性的特殊內容展示區塊


```html
<div class="jumbotron">
    <h1>Welcome to my site! <small>I think you'll like it.</small></h1>
    <p>This is a template for a simple marketing or informational website. It includes a large callout called the hero unit and three supporting pieces of content. Use it as a starting point to create something more unique.</p>
    <p><a class="btn btn-primary btn-large">Learn more &raquo;</a></p>
</div>
```

heading

- **Heading有h1到h6，也可以用.h1到.h6類別。**
- 在大標題裡用**<small>**標籤可以加副標題。


```
<div class="jumbotron">
    <h1>Welcome to my site! <small>I think you'll like it.</small></h1>
    <p>This is a template for a simple marketing or informational
website. It includes a large callout called the hero unit and three
supporting pieces of content. Use it as a starting point to create something
more unique.</p>
    <p><a class="btn btn-primary btn-large">Learn more &raquo;</a></p>
</div>
```

button

- 可以在**a, button**或**input**使用**btn**類別。
- 在大標題裡用**<small>**標籤可以加副標題。


```
<div class="jumbotron">
        <h1>Welcome to my site! <small>I think you'll like it.</small></h1>
        <p>This is a template for a simple marketing or informational
website. It includes a large callout called the hero unit and three
supporting pieces of content. Use it as a starting point to create something
more unique.</p>
        <p><a class="btn btn-primary btn-large">Learn more &raquo;</a></p>
</div>
```

button顏色

EXAMPLE

Default Primary Success Info Warning Danger Link

```html
<!-- Standard button -->
<button type="button" class="btn btn-default">Default</button>

<!-- Provides extra visual weight and identifies the primary action in a set of buttons -->
<button type="button" class="btn btn-primary">Primary</button>

<!-- Indicates a successful or positive action -->
<button type="button" class="btn btn-success">Success</button>

<!-- Contextual button for informational alert messages -->
<button type="button" class="btn btn-info">Info</button>

<!-- Indicates caution should be taken with this action -->
<button type="button" class="btn btn-warning">Warning</button>

<!-- Indicates a dangerous or potentially negative action -->
<button type="button" class="btn btn-danger">Danger</button>

<!-- Deemphasize a button by making it look like a link while maintaining button behavior -->
<button type="button" class="btn btn-link">Link</button>
```
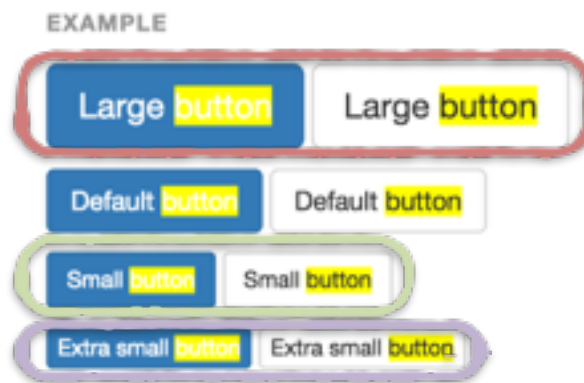
button尺寸

EXAMPLE

Large button | Large button

Default button | Default button

Small button | Small button

Extra small button | Extra small button

```
<p>
  <button type="button" class="btn btn-primary btn-lg">Large button</button>
  <button type="button" class="btn btn-default btn-lg">Large button</button>
</p>
<p>
  <button type="button" class="btn btn-primary">Default button</button>
  <button type="button" class="btn btn-default">Default button</button>
</p>
<p>
  <button type="button" class="btn btn-primary btn-sm">Small button</button>
  <button type="button" class="btn btn-default btn-sm">Small button</button>
</p>
<p>
  <button type="button" class="btn btn-primary btn-xs">Extra small button</button>
  <button type="button" class="btn btn-default btn-xs">Extra small button</button>
</p>
```

navbar

- 製作**navbar**
- 外圍容器

```
<div class="navbar navbar-inverse">
</div>
```

navbar-inverse
色調相反
navbar-default
正常顏色

- 再用一層**container-fluid**包住

```
<div class="navbar navbar-default">
        <div class="container-fluid">
        </div>
</div>
```

navbar

- 在**navbar**內加一個隱藏的**button**，只有在小螢幕上出現
- **navbar-toggle**：標示切換的行為
- **data-toggle**：表示按鈕被點擊的時候要做的事
- **data-target**：標示哪一個區塊要被**toggle**
- **navbar-brand**：用來網站名稱或**logo**

```
<div class="navbar navbar-inverse">
        <div class="container-fluid">
            <div class="navbar-header">
                <button type="button" class="navbar-toggle collapsed" data-
toggle="collapse" data-target="#mynavbar-content">
                    <span class="sr-only">Toggle navigation</span>
                    <span class="icon-bar"></span>
                    <span class="icon-bar"></span>
                    <span class="icon-bar"></span>
                </button>
                <a class="navbar-brand" href="#">Brand</a>
            </div>
        </div>
    </div>
```

navbar的內容

- 產生新的**div**類別是**collapse**和**navbar-collapse**，**id**就是我們剛剛說的**mynavbar-content**

```
<div class="collapse navbar-collapse" id="mynavbar-content">
</div>
```

- 導航條的內容放在**ul**裡，類別是**nav**和**navbar-nav**

```
<div class="collapse navbar-collapse" id="mynavbar-content">
        <ul class="nav navbar-nav">
            <li><a href="#">Home</a></li>
            <li><a href="#">About</a></li>
            <li><a href="#">Portfolio</a></li>
            <li><a href="#">Products</a></li>
        </ul>
</div>
```
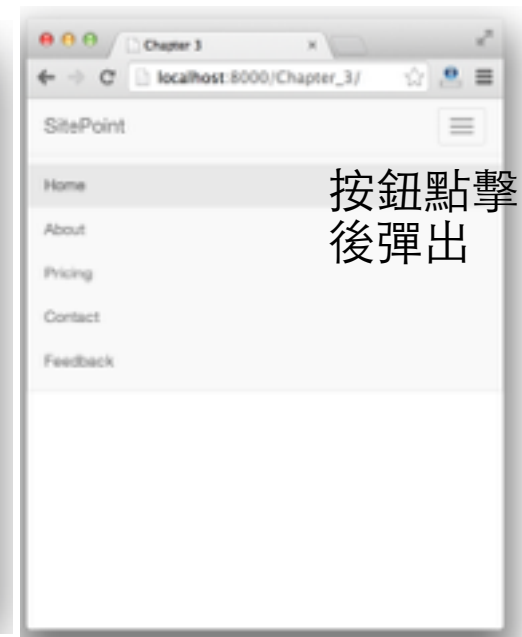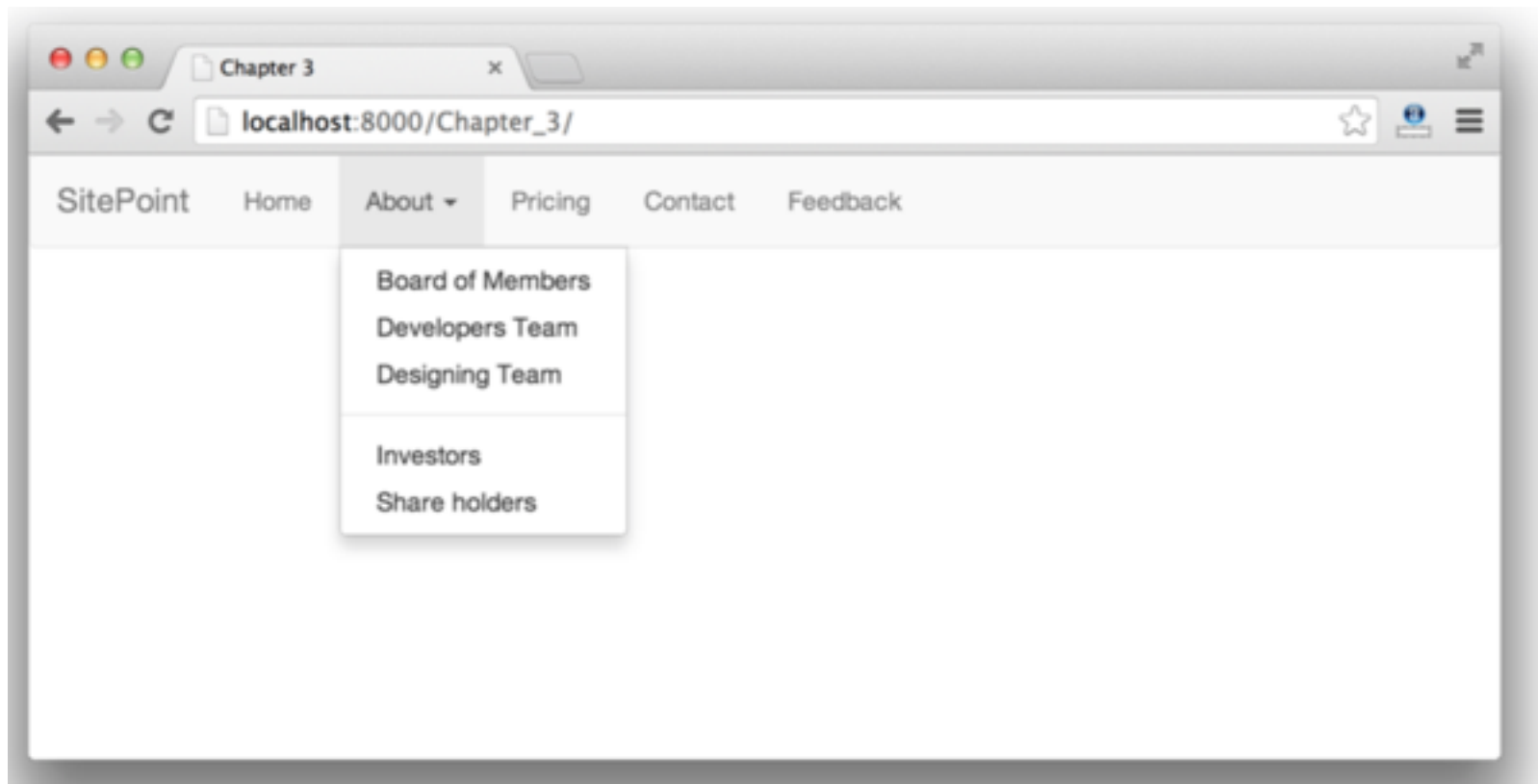
結果

寬螢幕   窄螢幕

按鈕點擊
後彈出
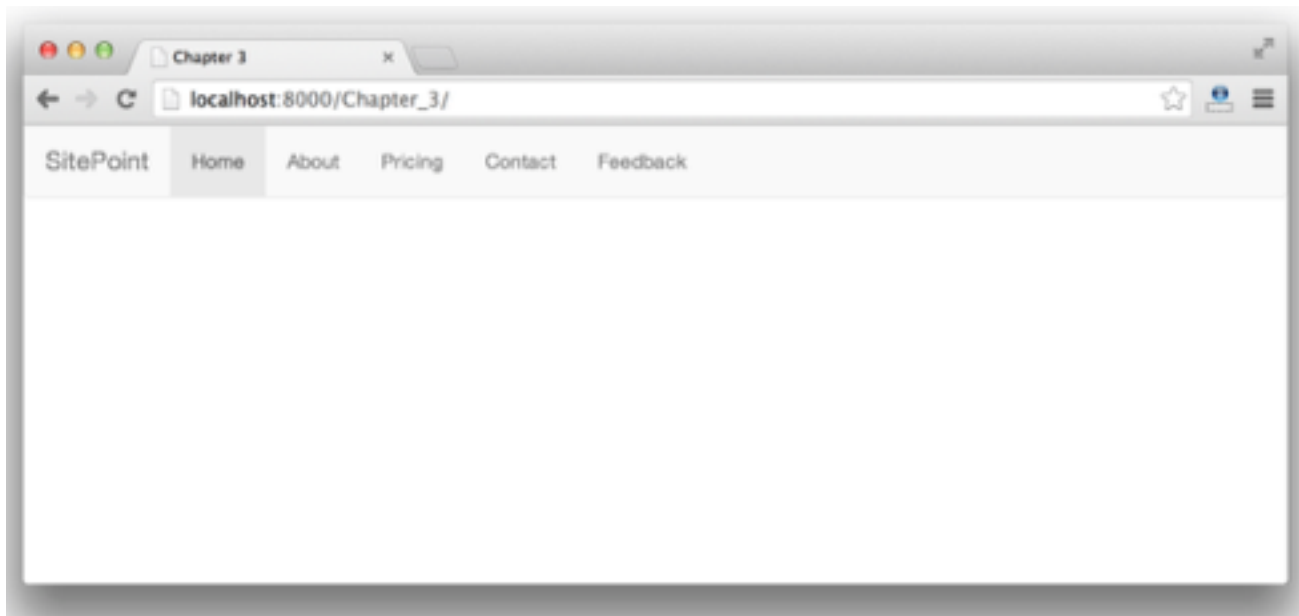
navbar增加下拉式選單

- 新增一個**More**如下**.dropdown**表示是下拉選單

```
<li class="dropdown">
    <a href="#" class="dropdown-toggle" data-toggle="dropdown">More<b
class="caret"></b></a>
</li>
```

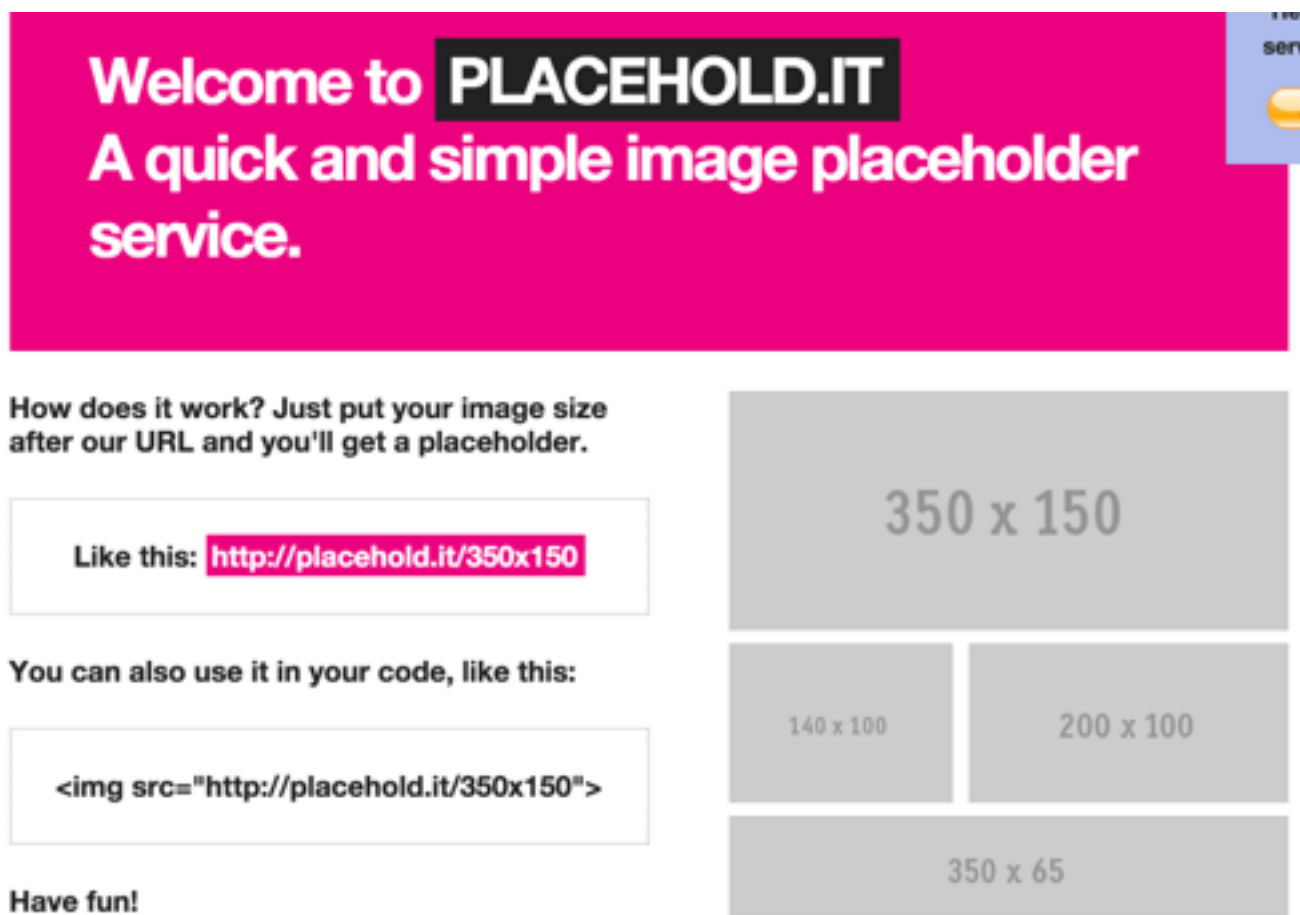- 下拉式選單的內容**dropdown-menu**

```
<li class="dropdown">
                <a href="#" class="dropdown-toggle" data-toggle="dropdown">More <b
class="caret"></b></a>
                <ul class="dropdown-menu">
                    <li><a href="#">Board of Members</a></li>
                    <li><a href="#">Developers Team</a></li>
                    <li><a href="#">Designing Team</a></li>
                    <li class="divider"></li>
                    <li><a href="#">Investors</a></li>
                    <li><a href="#">Share holders</a></li>
                </ul>
            </li>
```

About頁面的範例

- 兩欄：一個**main**，一個**sidebar** **(**比例**8:4)**
- 同一個**navbar**：設定**active**於**About**
- 一個**page header**

placehold.it

- 產生假圖片的網站
- **http://placehold.it/600x300就可以產生600x300的假圖片**。

Page Header

- 包含頁面主標題的**h1**的**header**容器

```
<div class="page-header">
  <h1>Example page header <small>Subtext for header</small></h1>
</div>
```

EXAMPLE

Example page header Subtext for header

完成

- 超簡單的**2 column**排版

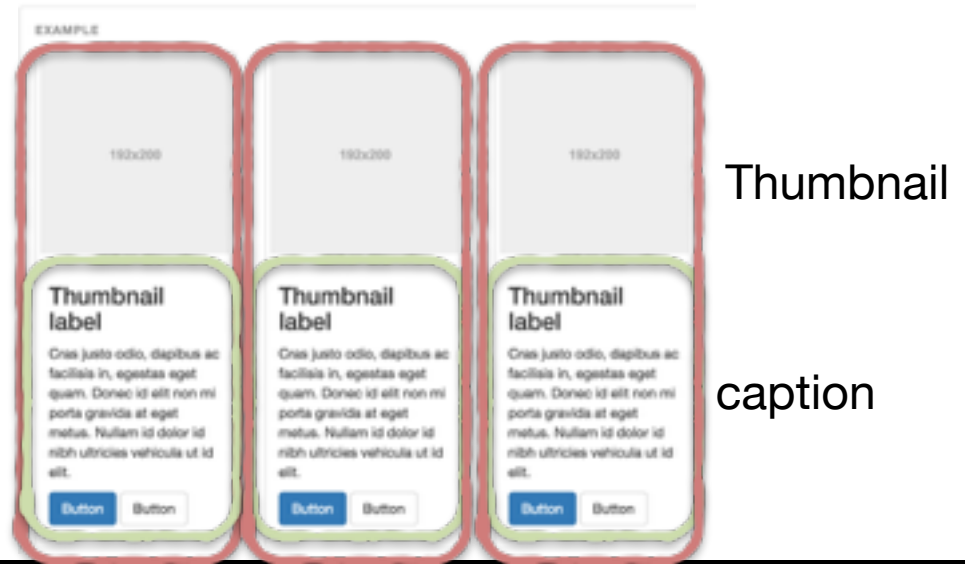# Portfolio分頁

- **navbar**同前面的
- 標題
- 醒目的大圖，下面有段落等文字敘述
- 下面有放很多縮圖的列表

Thumbnail

- 放置縮圖的容器
- 可以增加**caption**在裡面

全部包在row和column
裡面就可以做
responsive的設計

Thumbnail

caption

```
<div class="row">
  <div class="col-sm-6 col-md-4">
    <div class="thumbnail">
      <img src="..." alt="...">
      <div class="caption">
        <h3>Thumbnail label</h3>
        <p>...</p>
        <p><a href="#" class="btn btn-primary" role="button">Button</a> <a
href="#" class="btn btn-default" role="button">Button</a></p>
      </div>
    </div>
  </div>
</div>
```

產品分頁

- **navbar**同前面的
- 標題
- 用表格介紹產品的屬性
- 介紹的文字在表單的左側

table

- **Bootstrap也有表單的CSS設定**

```
<table class="table table-striped table-bordered">
        <thead>
            <tr>
                <th>Heading</th>
                <th>Heading</th>
                <th>Heading</th>
                <th>Heading</th>
                <th>Heading</th>
            </tr>
        </thead>
        <tbody>
            <tr>
                <td>Info</td>
                <td>Info</td>
                <td>Info</td>
                <td>Info</td>
                <td>Info</td>
            </tr>
            …
        <thead>
</table>
```

表頭用thead包住

裡面的標頭每個row用tr包住，表頭文字用th

表的內容用tbody包住

每一個row放在<tr>裡
每一個對應的column的內容放在<td>裡面

table

- **.table-striped(帶狀陰影的表)**

EXAMPLE

#	First Name	Last Name	Username
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter

- **.table**

EXAMPLE

#	First Name	Last Name	Username
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter

- # 文字區**3**：表單區 **9**的設計

Products

What we have to offer

Donec id elit non mi porta gravida at eget metus. Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Etiam porta sem malesuada magna mollis euismod. Donec sed odio dui.

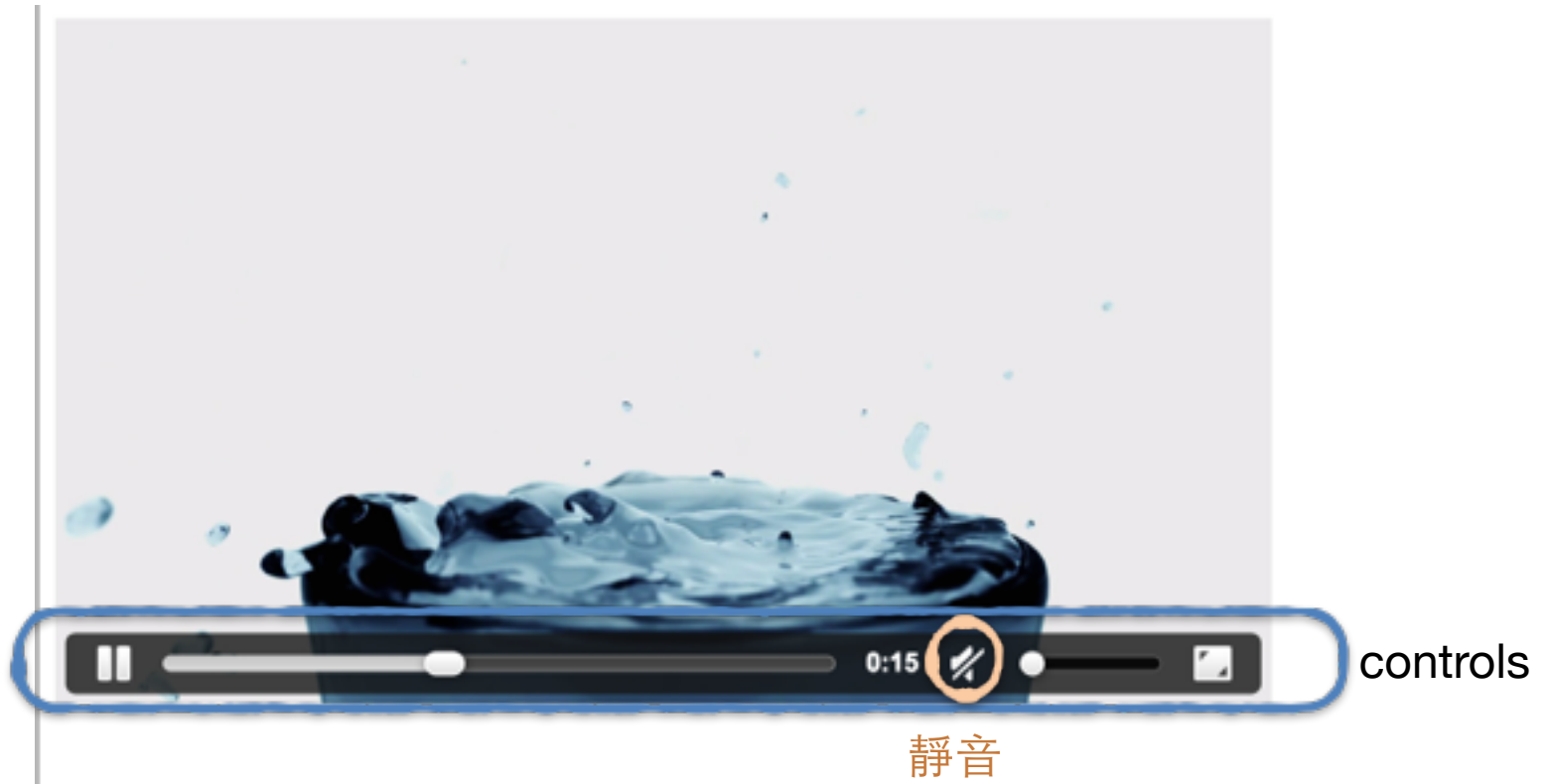| Heading	Heading	Heading	Heading	Heading
Info	Info	Info	Info	Info
Info	Info	Info	Info	Info
Info	Info	Info	Info	Info
Info	Info	Info	Info	Info
Info	Info	Info	Info	Info

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HTML5 video

- 在**HTML**裡面播放影片，不用**flash**
- **<video>**標籤：選項**controls**控制器**, autoplay**自動播放，**loop**重複播放，**poster**下載時代替的圖檔，**muted**靜音，**width**，**height**寬和高。
- **<source>**標籤，主流瀏覽器支援的檔案格式**MP4, WebM,** 和**Ogg**。

範例

自動播放 重複播放

```
<video autoplay loop width="600" controls muted>
        <source src="assets/water_drop.mp4" type="video/mp4">
</video>
```

寬度600px

controls

靜音

固定影片背景

- ## 用前面的**site.html**做示範

實作網站最好不要用loop，動態背景會干擾人。

HTML

```
<video autoplay poster="assets/water_drop.jpg" id="bgvid" loop>
    <source src="assets/water_drop.mp4" type="video/mp4">
</video>
```

CSS

```
video {
        position: fixed;
        z-index: -100;
}
```

結果

把影片當作某區背景

- ## 把video放進jumbotron內

```html
<div id="jumbo" class="jumbotron">
        <div>
           <!- 內容在此 ->
        </div>
        <video autoplay poster="assets/water_drop.jpg" id="bgvid" loop>
                        <source src="assets/water_drop.mp4" type="video/mp4">
        </video>
</div>
```
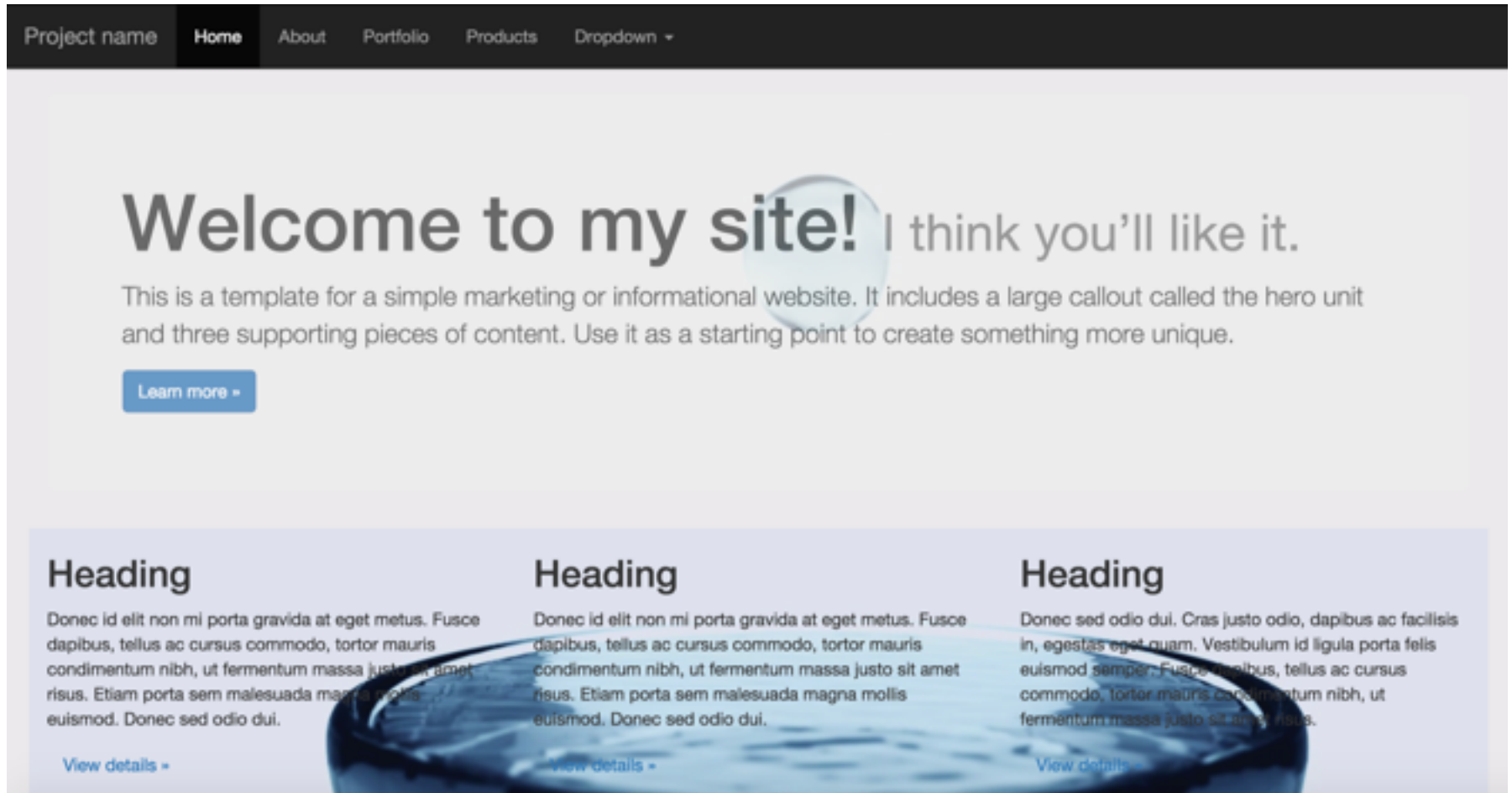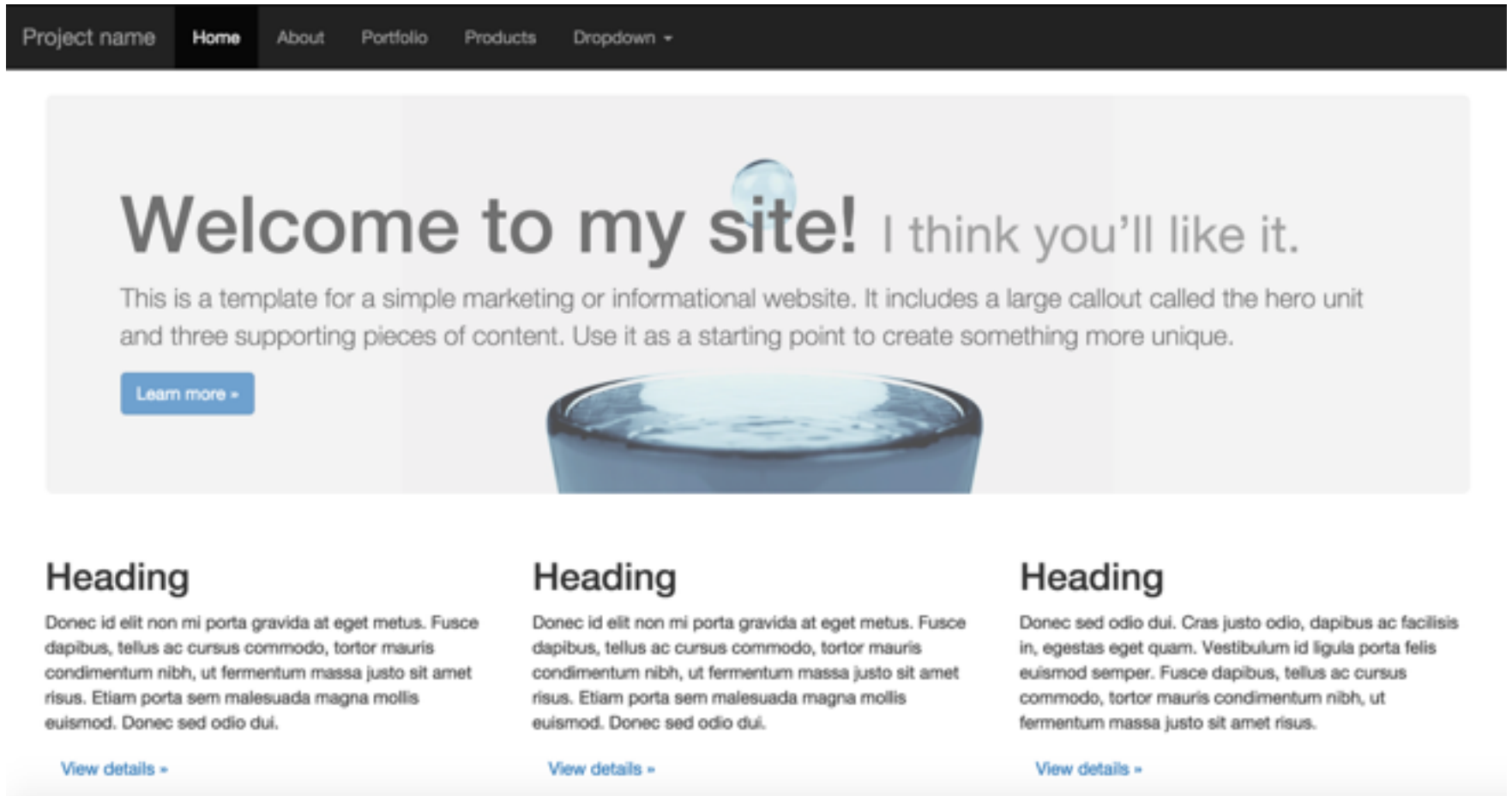
- 使用相對和絕對的技巧

```css
#jumbo {
        position: relative;
        opacity: 0.7;
    }
#jumbo video{
        position: absolute;
        top:0;
        left:0;
        width: 100%;
        height: 100%;
        z-index: -100;
}
```

要當成參考
原點的
div#jumbo

裡面的影片
使用絕對座
標，z-index
要調很小

把影片當作某區背景

圖示

https://fortawesome.github.io/Font-Awesome/examples/

```
<div class="col-md-4">
            <span class="fa-stack fa-4x">
                <i class="fa fa-circle fa-stack-2x text-primary"></i>
                <i class="fa fa-shopping-cart fa-stack-1x fa-inverse"></i>
            </span>
            <h4 class="service-heading">E-Commerce</h4>
            <p class="text-muted">Lorem ipsum dolor sit amet, consectetur adipisicing elit. Minima maxime quam architecto quo inventore harum ex magni, dicta impedit.</p>
        </div>
```

1.首頁置入背景影片

2.services, our portfolio, team

3. 自適應排版

4.加入圖片

5.上方加入自適應選單

note：挑戰看看小圖示和時間軸