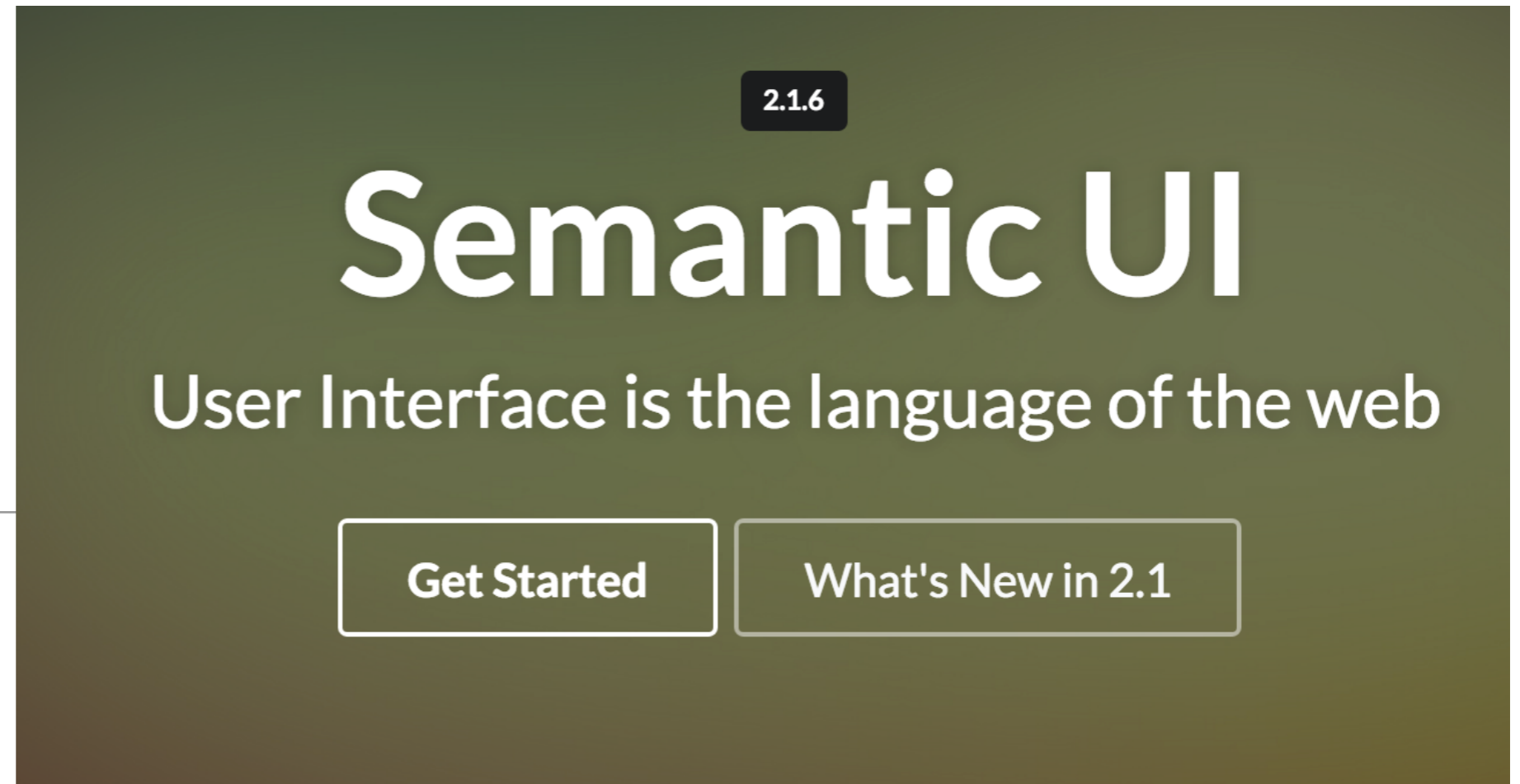


Semantic UI



Getting Started, Containers & Segments

CSS frameworks

From Wikipedia, the free encyclopedia

CSS frameworks are pre-prepared [software frameworks](#) that are meant to allow for easier, more standards-compliant [web design](#) using the [Cascading Style Sheets](#) language. Most of these frameworks contain at least a [grid](#). More functional frameworks also come with more features and additional [JavaScript](#) based functions, but are mostly design oriented and [unobtrusive](#). This differentiates these from functional and full [JavaScript frameworks](#).

Some notable and widely used examples are [Bootstrap](#) or [Foundation](#).

CSS frameworks offer different modules and tools:

- [reset style sheet](#)
- [grid](#) especially for [responsive web design](#)
- [web typography](#)
- set of [icons](#) in [sprites](#) or [icon fonts](#)
- styling for [tooltips](#), [buttons](#), elements of [forms](#)
- parts of [graphical user interfaces](#) like [accordion](#), [tabs](#), [slideshow](#) or [modal windows](#) ([Lightbox](#))
- equalizer to create equal height content
- often used css helper classes (*left*, *hide*)



WIKIPEDIA
The Free Encyclopedia

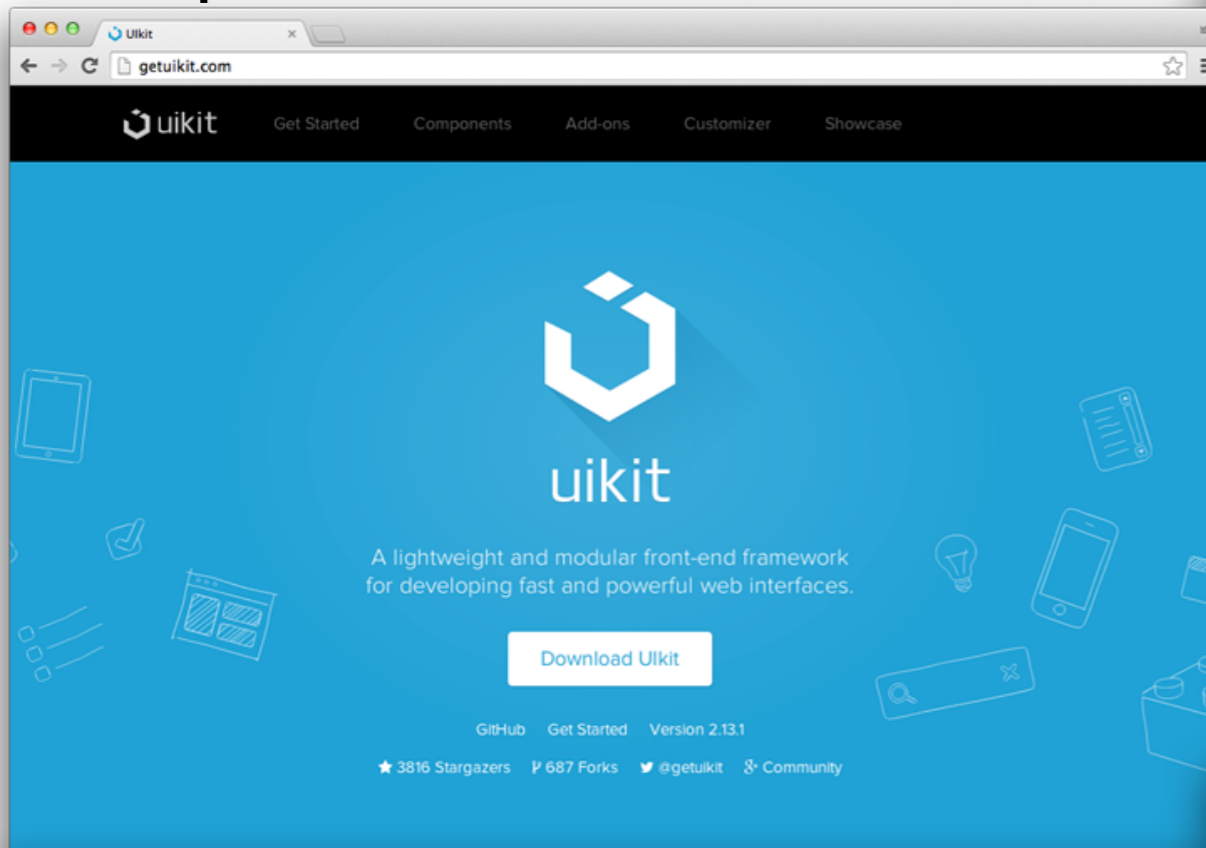
What is a CSS Framework?

“framework is defined as a package made up of a structure of files and folders of standardized code (HTML, CSS, JS etc.) which can be used to support the development of websites, as a basis to start building a site.”

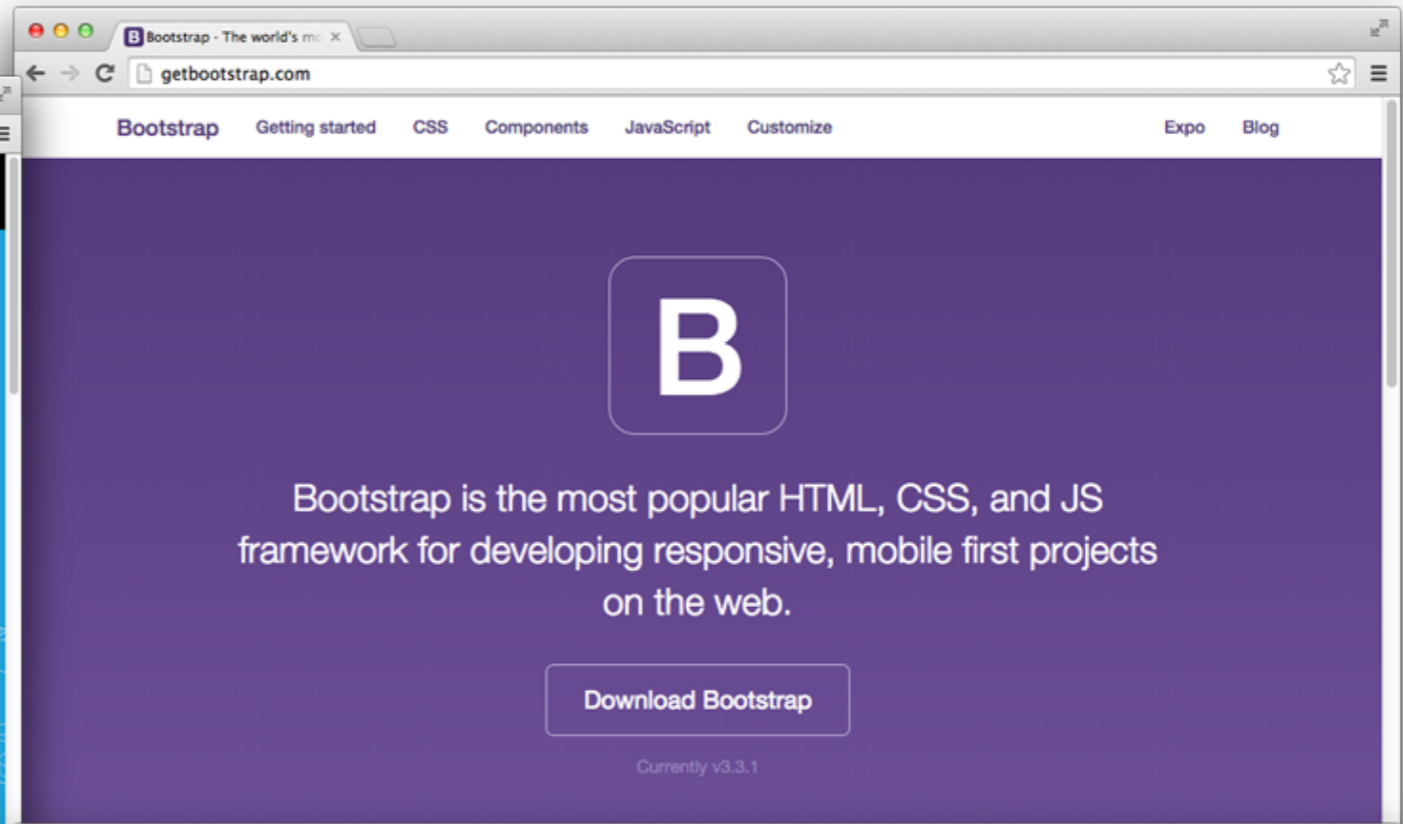
“The aim of frameworks is to provide a common structure so that developers don’t have to redo it from scratch and can reuse the code provided”



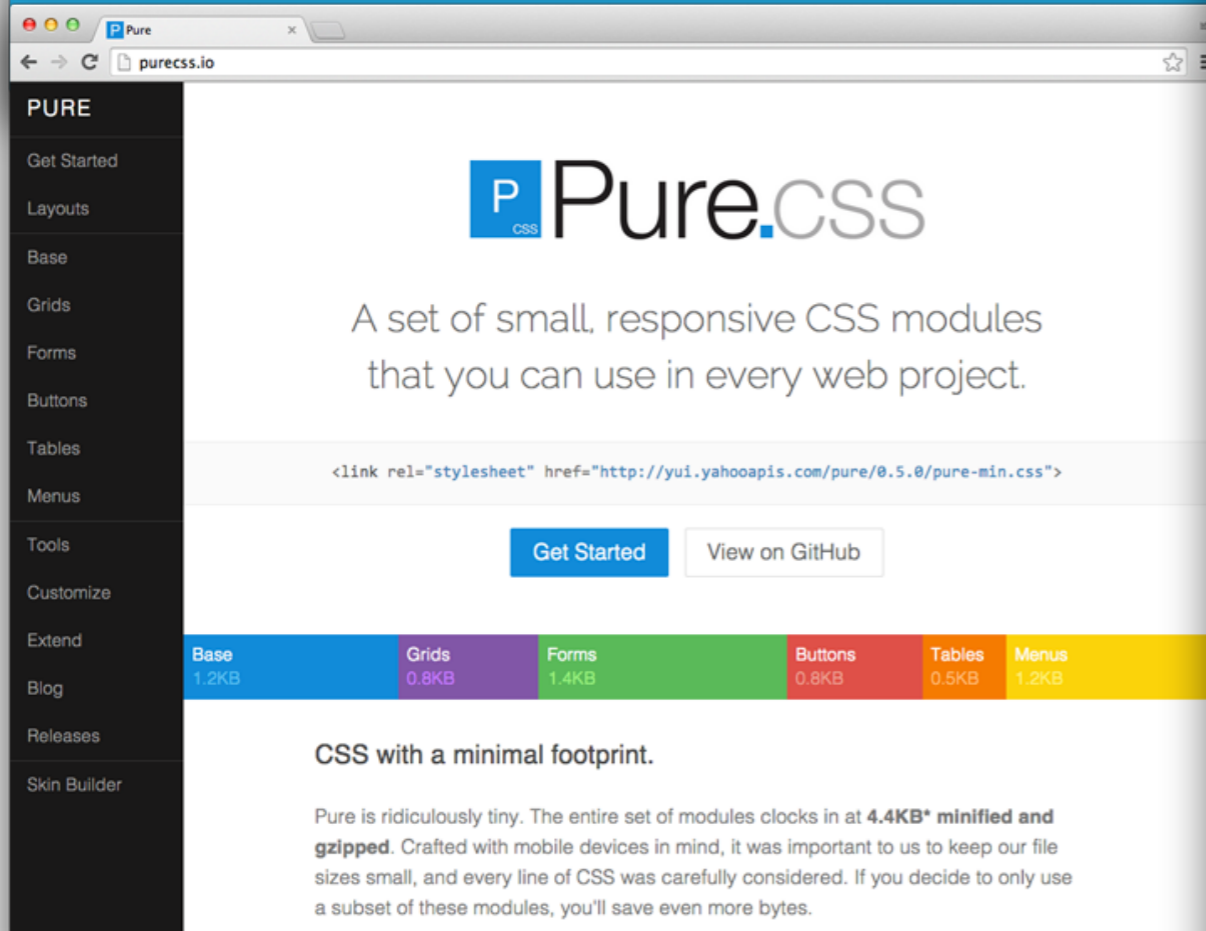
Popular Frameworks



The screenshot shows the uikit website at getuikit.com. The page has a blue background with a white uikit logo in the center. Below the logo, it says "A lightweight and modular front-end framework for developing fast and powerful web interfaces." There is a "Download Uikit" button. At the bottom, it lists "3816 Stargazers" and "687 Forks".



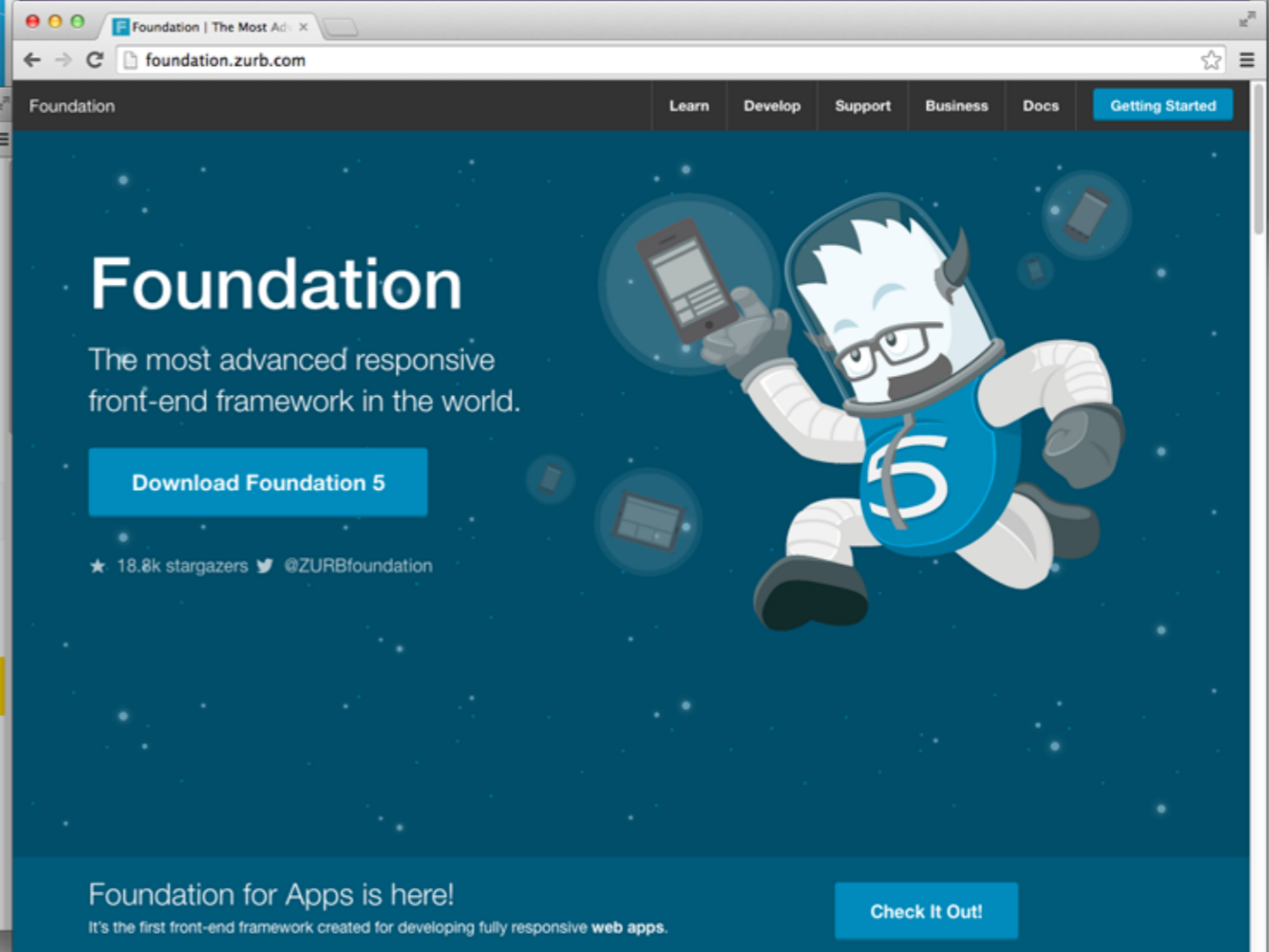
The screenshot shows the Bootstrap website at getbootstrap.com. The page has a purple background with a large white "B" logo in a rounded square. Below the logo, it says "Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web." There is a "Download Bootstrap" button and the text "Currently v3.3.1".



The screenshot shows the Pure CSS website at purecss.io. The page has a white background with a dark sidebar on the left. The main content area features the "Pure.CSS" logo and the text "A set of small, responsive CSS modules that you can use in every web project." There is a "Get Started" button and a "View on GitHub" button. Below this, there is a table of modules and their sizes:

Module	Size
Base	1.2KB
Grids	0.8KB
Forms	1.4KB
Buttons	0.8KB
Tables	0.5KB
Menus	1.2KB

Below the table, it says "CSS with a minimal footprint." and "Pure is ridiculously tiny. The entire set of modules clocks in at 4.4KB* minified and gzipped."



The screenshot shows the Foundation website at foundation.zurb.com. The page has a dark blue background with a cartoon character in a space suit holding a smartphone. The main content area features the "Foundation" logo and the text "The most advanced responsive front-end framework in the world." There is a "Download Foundation 5" button and the text "18.8k stargazers @ZURBfoundation". At the bottom, it says "Foundation for Apps is here!" and "It's the first front-end framework created for developing fully responsive web apps." There is a "Check It Out!" button.

<http://www.sitepoint.com/5-most-popular-frontend-frameworks-compared/>



Menu

Tweet

Star

21,445

English

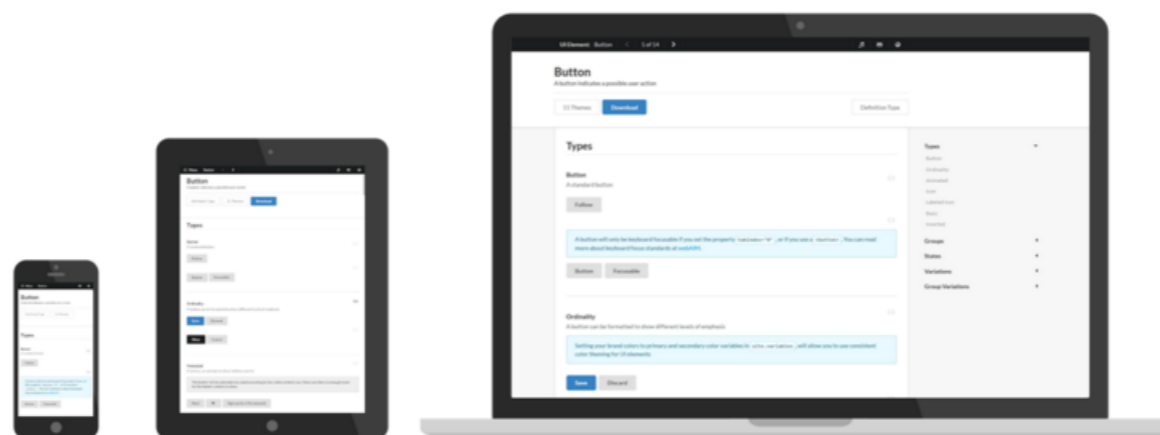
2.1.6

Semantic UI

User Interface is the language of the web

Get Started

What's New in 2.1



Design Beautiful Websites Quicker

Semantic UI Starter

- Semantic css defines a large number of classes
- Your elements take on Semantic-UI styles by adopting specific classes
- All classes are preceded by “ui” to mark them as part of the framework

class =“ui container”

class =“ui segment”

class=“ui header”

class=“ui image”

class =“ui grid”

class “ui row”

class=“ui column”

Project Structure

- harp.json
- public
 - assets folder
 - includes folder
 - other content folder(s)
 - index.ejs
 - style.css

```
iot-web-ejs
├── harp.json
├── public
│   ├── assets
│   │   └── images
│   │   ...
│   ├── includes
│   │   ├── _curriculum.ejs
│   │   ├── _footer.ejs
│   │   ├── _header.ejs
│   │   ├── _sponsors.ejs
│   │   └── _summary.ejs
│   ├── index.ejs
│   ├── strands
│   │   ├── _layout.ejs
│   │   ├── data.ejs
│   │   ├── devices.ejs
│   │   ├── maths.ejs
│   │   ├── networks.ejs
│   │   ├── programming.ejs
│   │   └── project.ejs
│   └── style.css
```

Incorporating Semantic-UI into the project

- Download the semantic-ui archive
- unzip and copy to the assets folder - inside a css folder
- The semantic-ui archive is provided in the lab
- (dont try to build it from the semantic-ui instructions)

```
iot-web-ejs
├── harp.json
├── public
│   ├── assets
│   │   ├── css
│   │   │   ├── semantic.css
│   │   │   └── themes
│   │   │       ├── basic
│   │   │       ├── default
│   │   │       └── github
│   │   └── images
│   └── ...
├── includes
│   ├── _curriculum.ejs
│   ├── _footer.ejs
│   ├── _header.ejs
│   ├── _sponsors.ejs
│   └── _summary.ejs
├── index.ejs
├── strands
│   ├── _layout.ejs
│   ├── data.ejs
│   ├── devices.ejs
│   ├── maths.ejs
│   ├── networks.ejs
│   ├── programming.ejs
│   └── project.ejs
└── style.css
```


First Steps...

```
<head>
  <meta charset="UTF-8">
  <link rel="stylesheet" type="text/css" href="http://fonts.googleapis.com/css?family=Open+Sans"
  <link rel="stylesheet" href="/assets/css/semantic.css">
  <link type="text/css" rel="stylesheet" href="style.css" media="screen"/>
  <title>BSc in the Internet of Things</title>
</head>
```

- Link to the semantic.css stylesheet we have just included.
- This makes most of the Semantic-UI components available to your project

First Steps - remove existing stylesheet

- Delete almost all CSS rules we have built up in the page so far
- Leave just the 'banner' rule:

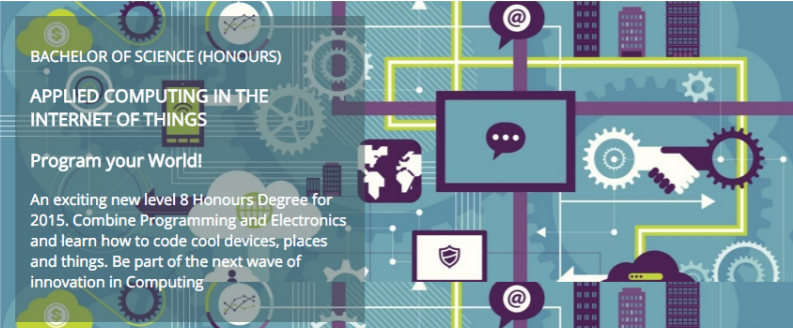
```
.banner {  
  background: url("/assets/images/banner.jpg") top center;  
  background-position: top center;  
  color: white;  
  height:300px;  
}
```

BSc in the Internet of Things X Eamonn
localhost:9000

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BACHELOR OF SCIENCE (HONOURS)
APPLIED COMPUTING IN THE INTERNET OF THINGS
Program your World!

An exciting new level 8 Honours Degree for 2015. Combine Programming and Electronics and learn how to code cool devices, places and things. Be part of the next wave of innovation in Computing

Programming
Learn a broad range of programming and problem solving skills, including exciting new platforms, software tools and languages. Use these skills to build apps for mobile, cloud and device based IoT applications. Evolve a portfolio of fascinating applications.

Data Science
At the heart of many IoT applications is data: measurements, events alarms and other information that must be relayed, stored and ultimately turned into knowledge. Learn the fundamentals of modern approaches to data in this strand.

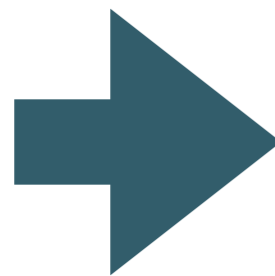
Devices
The 'Things' we connect to are often physical devices. These can range from simple temperature sensors to sophisticated control systems like traffic lights or cameras. Connecting to and interacting with the physical world is the subject of this strand.

Networks
This strand will explore modern networks and cloud technology. Be able to configure, network and manage all categories of computer systems from simple controllers to single board computers, mobiles and full workstations.

Project
Building exciting IoT projects in every semester of the programme. Your projects will combine skills acquired from the other strands and enable you to build a comprehensive an compelling portfolio of IoT applications and services.

Mathematics
Introduce foundation concepts for many of the more applied concepts in the other Strands. Learn mathematical techniques in a modern context and apply core principles in new an interesting ways.

Supported by leading edge research at...



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Supported by leading edge research at...

TSSG

ctr g
convergent technologies research group

AUTOMOTIVE CONTROL GROUP
Software Engineering for the Connected Car

[facebook](#) [twitter](#) [linkedin](#)

margin: auto;

```
#main {  
  width: 600px;  
  margin: 0 auto;  
}
```

CSS

- Setting the width of a block-level element will stop it stretching out to the edges left and right. Then set the margin to auto left and right. This horizontally centres that element within its container.

margin: auto;

Lorem ipsum dolor sit amet, eos ut diam interesset, cu modo necessitatibus pri. Ne sit elit dicit, eum dico autem convenire an. Sed ei clita nullam, elit legimus voluptatibus ei his. Duo facilisi cotidieque at, invidunt platonem incorrupte ut has.

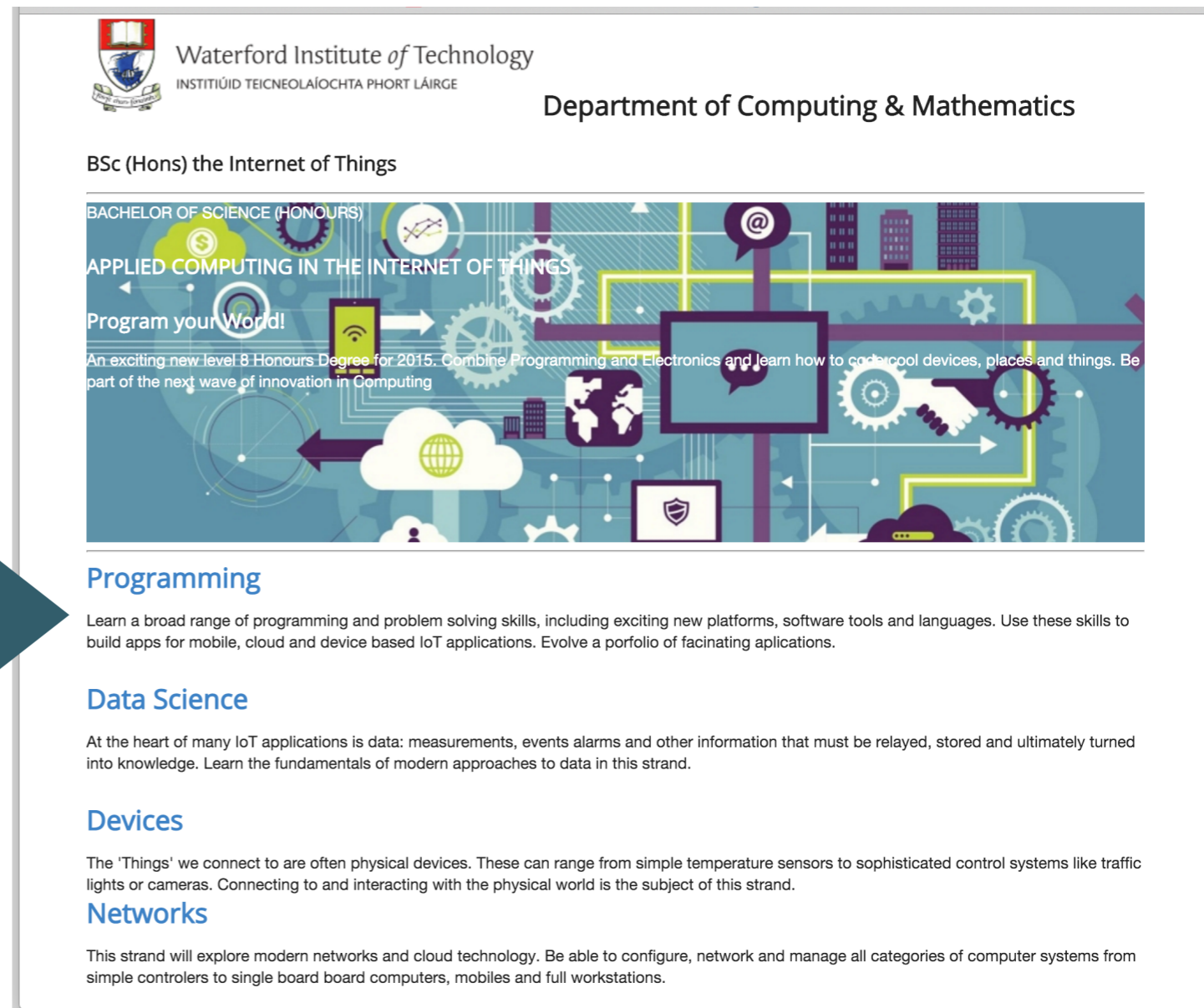
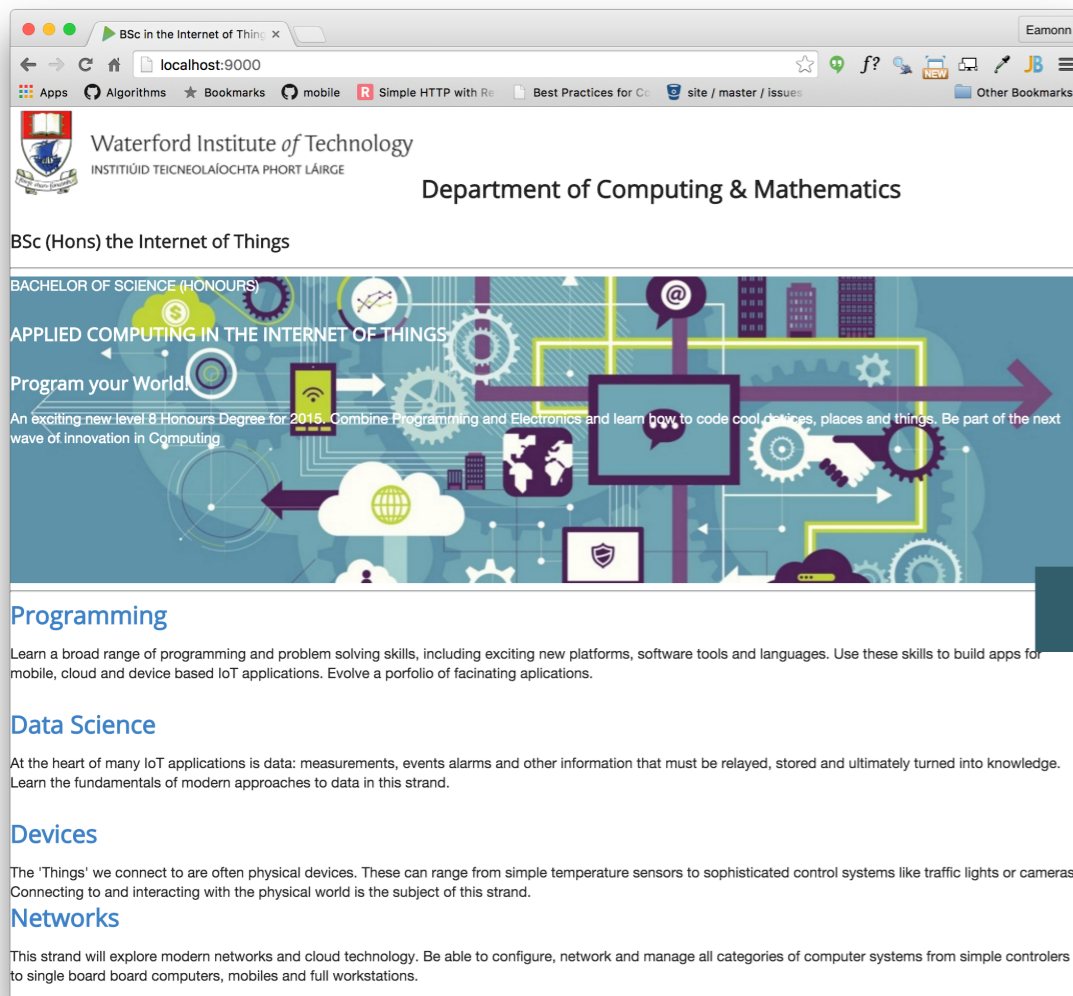
Vel et enim consulatu. Te civibus copiosae salutandi vel. Adhuc sonet libris ad eam, mundi affert mea ex. Dicunt feugiat patrioque et mel, id qui nusquam maluisset, ei vim justo ceteros vituperata. Mei saepe mediocrem ut. Repudiare definitiones ea ius, sint commodo est ea, nam no nemore diceret.

ui container

- Replaces the need for “margin:auto” if we are using Semantic-UI

index.ejs

```
<section class="ui container">
  <%- partial("includes/_header.ejs") %>
  <%- partial("includes/_summary.ejs") %>
  <%- partial("includes/_curriculum.ejs") %>
  <%- partial("includes/_sponsors.ejs") %>
  <%- partial("includes/_footer.ejs") %>
</section>
```



Containers

<http://semantic-ui.com/elements/container.html>

When To Use

A container is an element designed to contain page elements to a reasonable maximum width based on the size of a user's screen. This is useful to couple with other UI elements like [grid](#) or [menu](#) to restrict their width to a reasonable size for display.

Container Sizes

Containers are designed to responsively adjust their maximum width based on the size of the screen they are appearing.

	Mobile	Tablet	Small Monitor	Large Monitor
Width	100%	723px ?	933px ?	1127px ?
Gutter Size	1em	Fluid	Fluid	Fluid
Responsive Visibility	mobile only	tablet only	small monitor only	large monitor only
Device Width	below 768px	768px - 991px	992px - 1200px	above 1200px

ui segment

- Use to group related content
- remove all of the ids and classes currently all files.
- Give the enclosing articles/sections the class
 - class="ui segment":

_header.ejs

```
<header class="ui segment">
  <h2>
    
  <p class="footer-social-links">
    <a href="http://www.facebook.com/witcomp"> facebook </a>
    <a href="http://twitter.com/ComputingAtWIT"> twitter </a>
    <a href="https://ie.linkedin.com/pub/computing-at-wit/a9/221/1
  </p>
</footer>
```

_sponsors.ejs

```
<section class="ui segment">
  <h4> Supported by leading edge research at... </h4>
  <p>
    
</section>
```

ui segment

```
<article class="ui segment">  
<hr>
```

```
<section>
```

```
<h2><a href="strands/programming.html"> Programming </a></h2>
```

```
<p>
```

```
Learn a broad range of programming and problem solving skills, including exc  
</p>
```

```
<h2><a href="strands/data.html"> Data Science </a></h2>
```

```
<p>
```

```
At the heart of many IoT applications is data: measurements, events alarms a  
</p>
```

```
<h2><a href="strands/devices.html"> Devices </a></h2>
```

```
<p>
```

```
The 'Things' we connect to are often physical devices. These can range from  
</p>
```

```
</section>
```

```
<section>
```

```
<h2><a href="strands/networks.html"> Networks </a></h2>
```

```
<p>
```

```
This strand will explore modern networks and cloud technology. Be able to co  
</p>
```

```
<h2><a href="strands/project.html"> Project </a></h2>
```

```
<p>
```

```
Building exciting IoT projects in every semester of the programme. Your proj  
</p>
```

```
<h2><a href="strands/maths.html"> Mathematics </a></h2>
```

```
<p>
```

```
Introduce foundation concepts for many of the more applied concepts in the o  
</p>
```

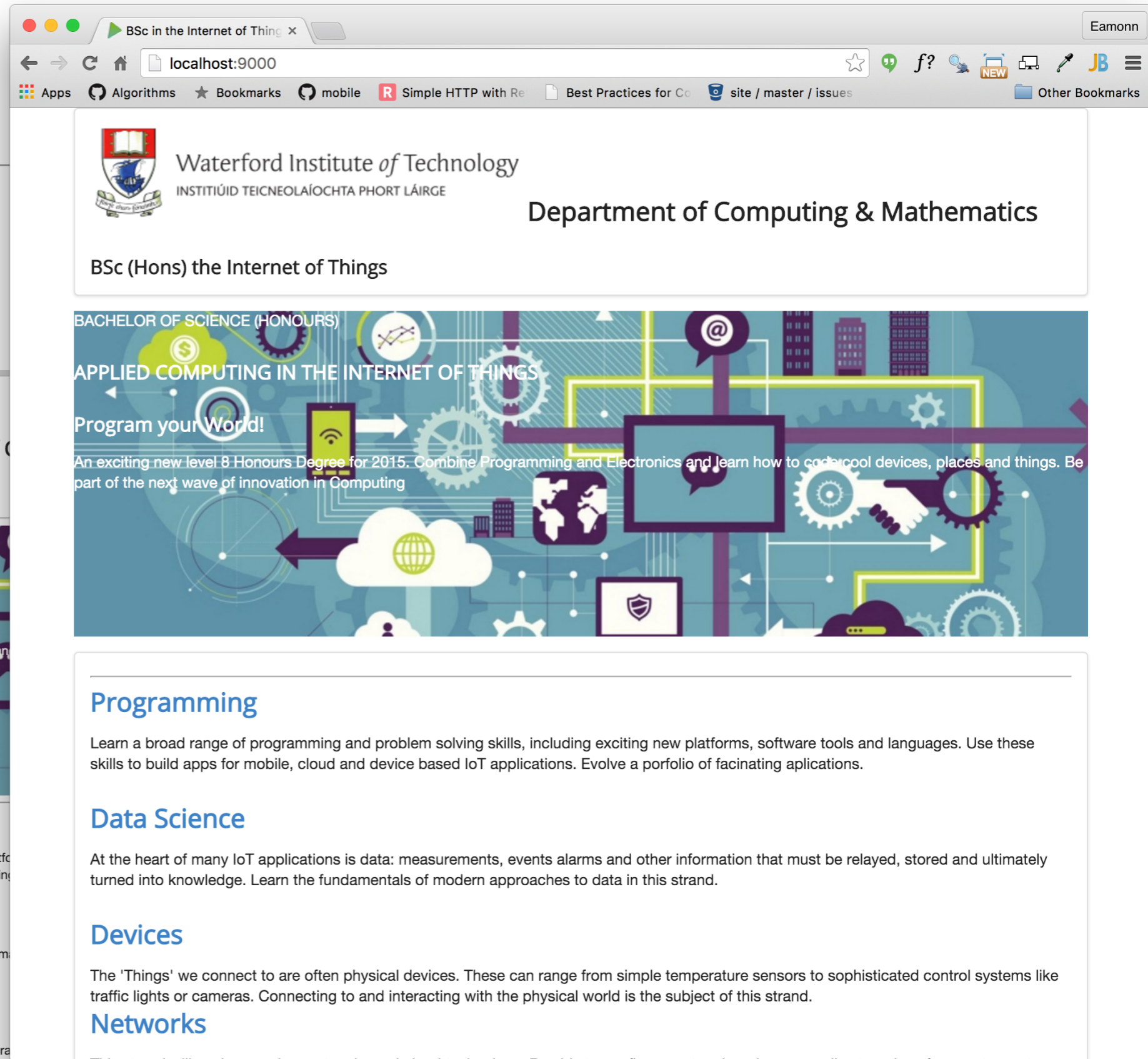
```
</section>
```

```
</article>
```

curriculum.ejs

Segments

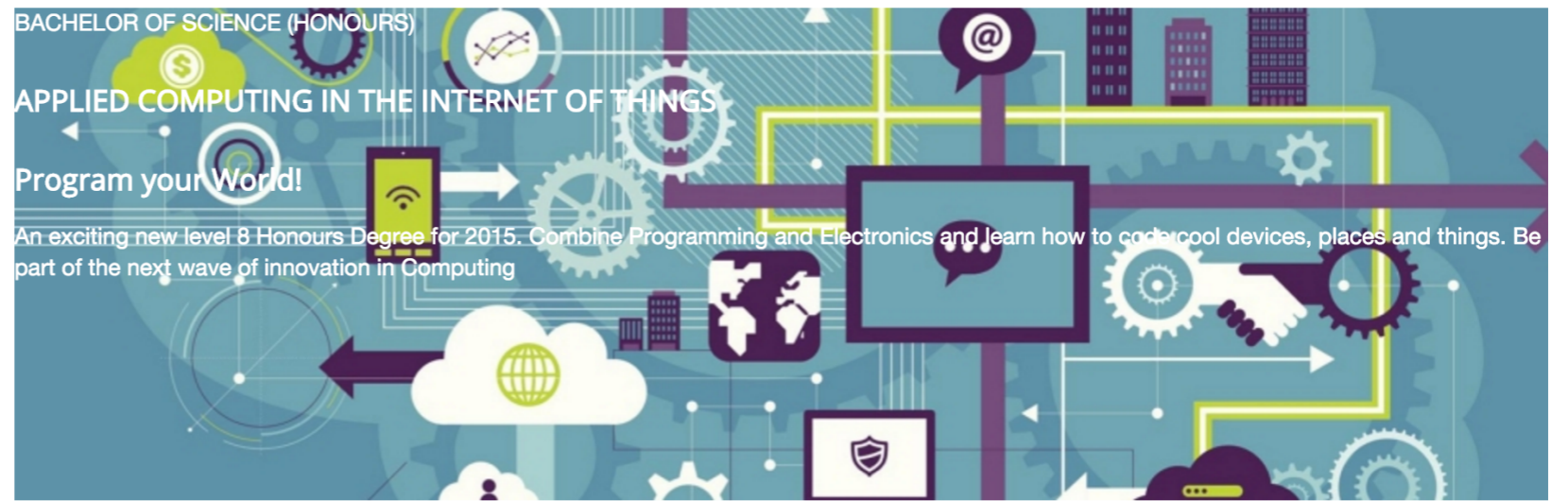
- Introduces extra padding + a light border around the sections.



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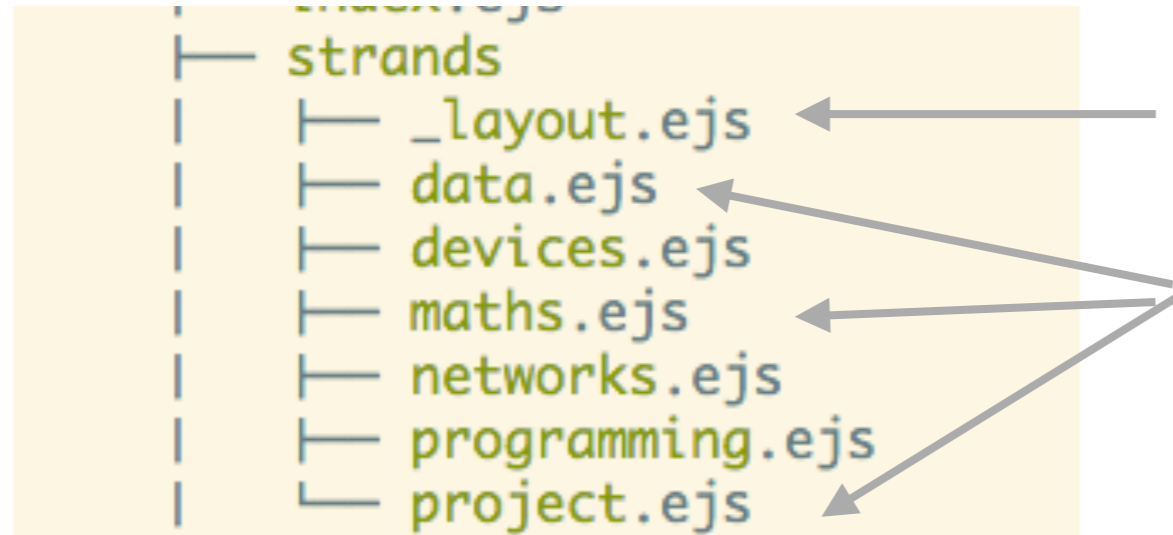
Devices

The 'Things' we connect to are often physical devices. These can range from simple temperature sensors to sophisticated control systems like traffic lights or cameras. Connecting to and interacting with the physical world is the subject of this strand.

Networks

This strand will explore modern networks and cloud technology. Be able to configure, network and manage all categories of computer systems from simple controllers to single board computers, mobiles and full workstations.

Modifying _layout.ejs



- `_layout` defines the structure of all pages in the strands folder
- Any change here effects all of the strand pages

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <link rel="stylesheet" type="text/css" href="http://fonts.googleapis.com/css?family=Open+Sans">
    <link type="text/css" rel="stylesheet" href="../../style.css" media="screen"/>
    <title> IoT Strands </title>
  </head>
  <body>
    <%- partial("../includes/_header.ejs") %>
    <%- yield %>
    <%- partial("../includes/_footer.ejs") %>
  </body>
</html>
```

Modifying _layout.ejs

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <link rel="stylesheet" type="text/css" href="http://fonts.googleapis.com/css?family=Open+Sans">
  <link rel="stylesheet" href="/assets/css/semantic.css">
  <link type="text/css" rel="stylesheet" href="../../style.css" media="screen"/>
  <title> IoT Strands </title>
</head>
<body>
  <section class="ui container">
    <%- partial("../includes/_header.ejs") %>
    <section class="ui segment">
      <%- yield %>
    </section>
    <%- partial("../includes/_footer.ejs") %>
  </section>
</body>
</html>
```

- Introduce container + segment

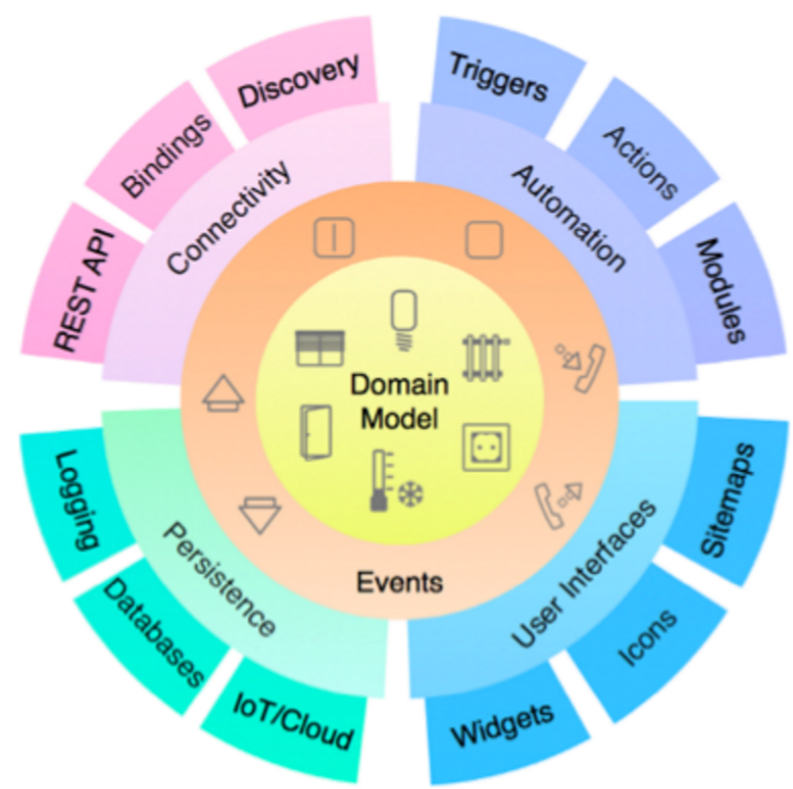


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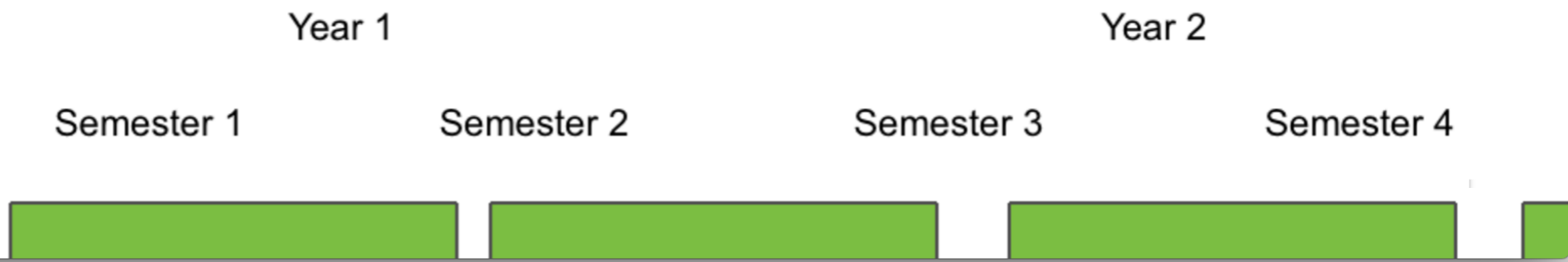
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Programming



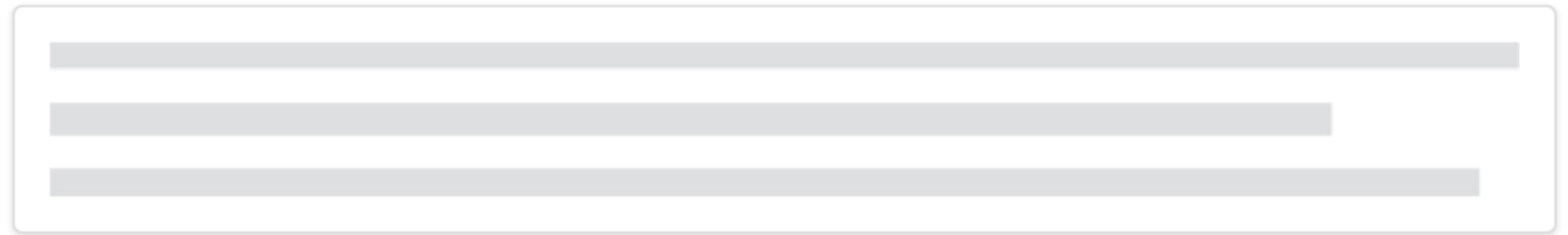
The IoT requires a new breed of software skills, with an emphasis on flexible, reactive, and highly networked applications and services. This software runs on a diverse range of systems, is frequently connected to clouds services, and may be capable of leveraging large data sets to deliver inferences and decision support in an informed manner. The software is designed and implemented using agile techniques, with an emphasis on test driven development and quality user experiences..



Segment Types

Segment

A segment of content



Raised

A segment may be formatted to raise above the page.



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.

Stacked

A segment can be formatted to show it contains multiple pages



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.



Eg: Raised Segments

This button reveals source

Raised

A segment may be formatted to raise above the page.



Example



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.

```
<div class="ui raised segment">  
  <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>
```