

Web Project Structure

Project Structure

- harp.son
- 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
```

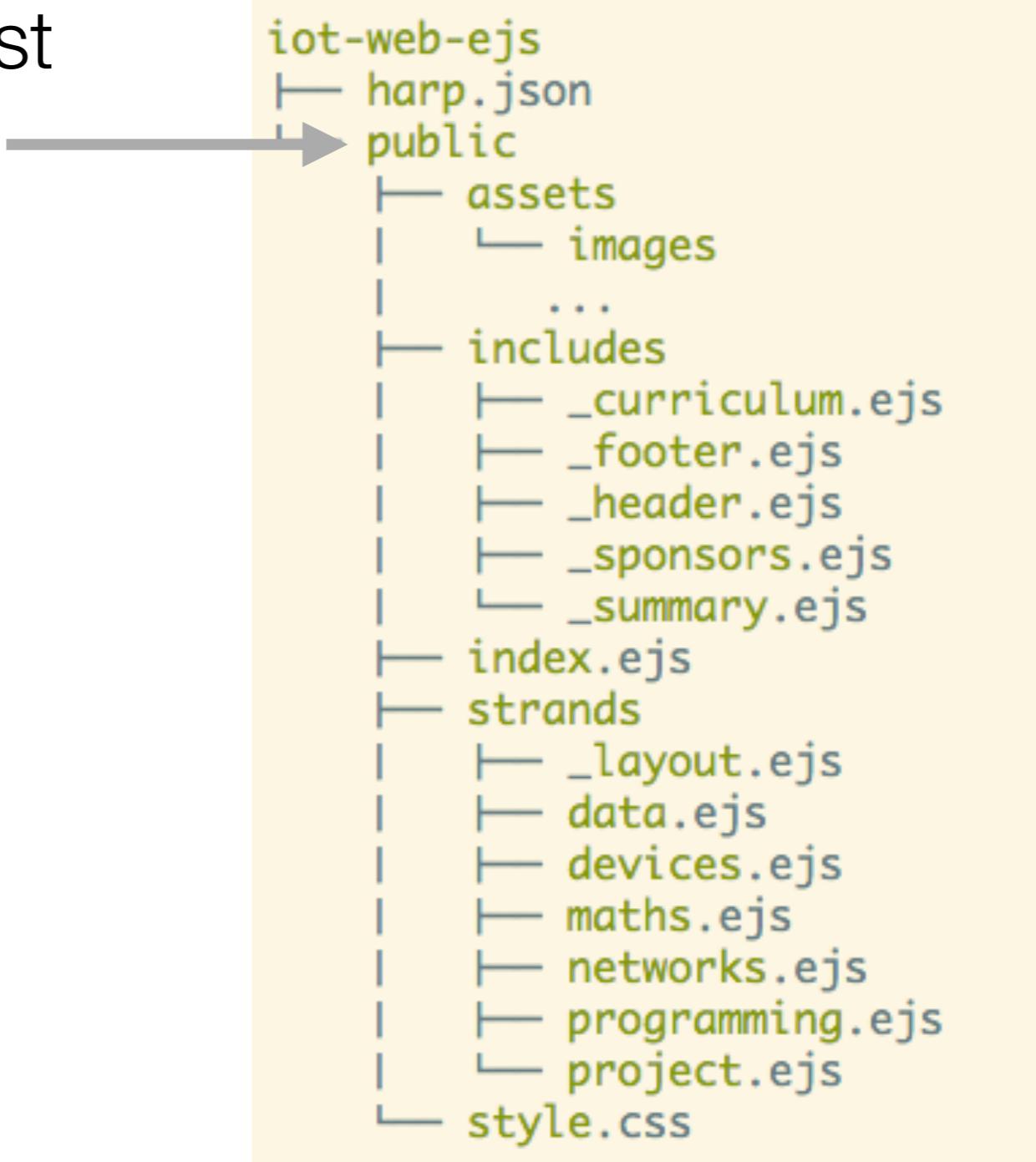
harp.json

- Required for Harp server
- Can be used to store information available to the web pages
- We will leave blank for the moment

```
{  
  "globals":  
  {}  
}
```

public folder

- All of our project files must be in the public folder.

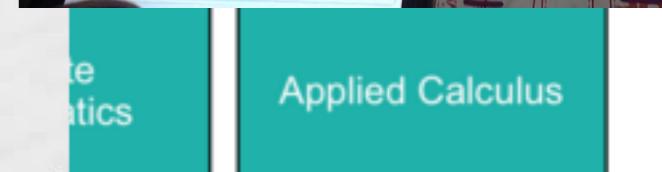
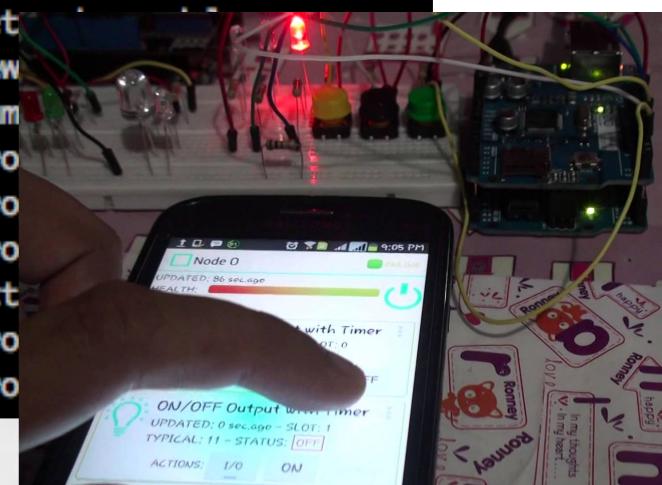
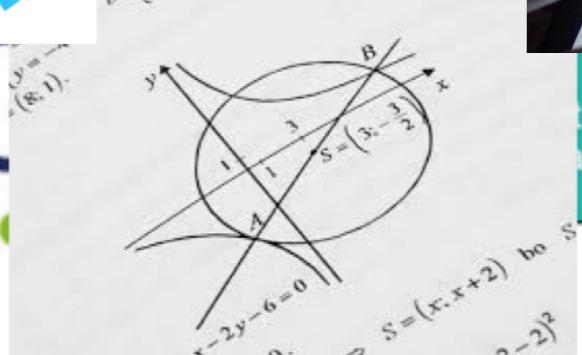


Assets folder

- Contains all ‘read only’ files for your project. i.e. files you will not edit or modify
- Typically:
 - images
 - css libraries
 - js libraries

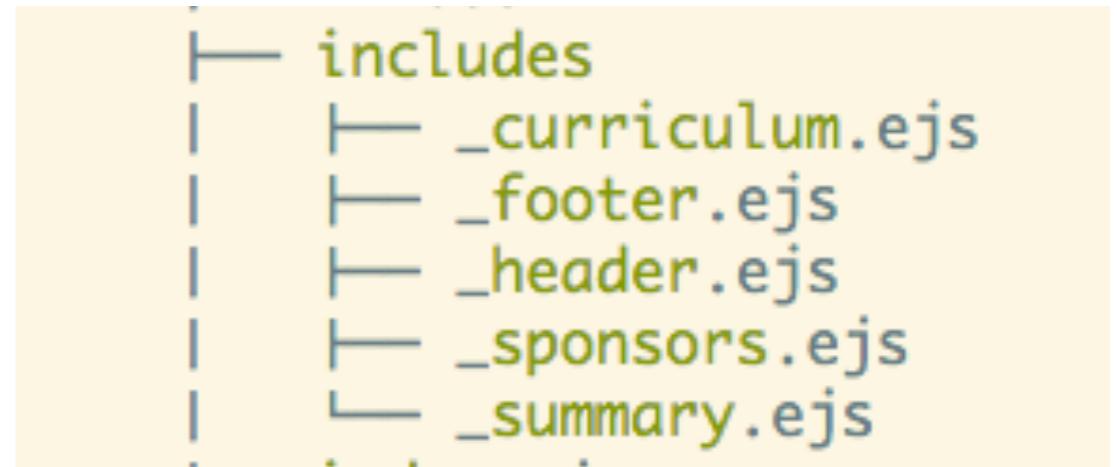


TSSC



Includes Folder

- Reusable ‘fragments’ of pages
- Deliberately given the “_” prefix (explained later)
- These template become available in other pages via the ‘partial’ mechanism



Department of Computing &
Mathematics



BSc (Hons) the Internet of Things

Waterford Institute of Technology
INSTITIÚD TEICNEOLAÍOCHTA PHORT LÁIRGE

[Programming](#)

Learn a broad range of programming and problem solving skills including exciting new platforms

[Networks](#)

This strand will explore modern networks and cloud technologies. Be able to configure network and

Supported by leading edge research at...



At the heart of many IoT applications is data: measurements, events alarms and other information that must be relayed, stored and ultimately turned

programme. Your projects will combine skills acquired from the other strands and enable you to build a comprehensive and compelling portfolio of IoT

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[MATHEMATICS](#)

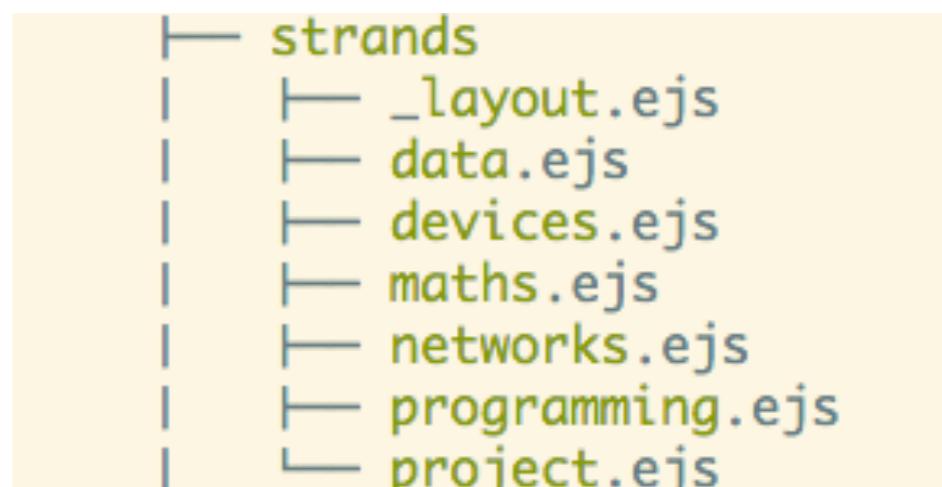
Introduce foundation concepts for many of the more applied concepts in the other Strands. Learn mathematical techniques in a modern context and apply core principles in new and interesting ways.

[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.

Other Content folders

- Groups related parts of your content into folders
- These can share a common “`_layout.ejs`”
- ‘strands’ is a name selected for the IOT web site
 - your project should select a different name
 - You may have more than one such folder



The screenshots illustrate the structure and content of the Waterford Institute of Technology's Computing & Mathematics website, specifically focusing on the 'Mathematics' and 'Networks' strands.

Top Screenshot: Shows the main navigation menu for the Department of Computing & Mathematics, BSc (Hons) the Internet of Things. It includes links for Mathematics, Networks, and other academic areas.

Middle Screenshot: Shows the 'Mathematics Learning Path'. It includes a graph of a circle and a line, with equations $x^2 + y^2 = 1$ and $x - 2y - 6 = 0$. The learning path is divided into Year 1, Year 2, Year 3, and Year 4, each with Semester 1, Semester 2, Semester 3, Semester 4, Semester 5, Semester 6, and Semester 7.

Bottom Screenshot: Shows the 'Networks Learning Path'. It features a graphic of network nodes and icons, including a smartphone, laptop, and network symbols. The learning path is also divided into Year 1, Year 2, Year 3, and Year 4, each with Semester 1, Semester 2, Semester 3, Semester 4, Semester 5, Semester 6, and Semester 7.

index.ejs

- The “Home” or “Start” page
- Must be called index.ejs (not home)
- Will be the default page loaded when the site is deployed

Department of Computing & Mathematics
BSc (Hons) the Internet of Things



Waterford Institute of Technology
INSTITIÚD TEICNEOLAIOCHTA PHORT LÁIRGE

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.

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.

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.

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 and 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 and interesting ways.

Supported by leading edge research at...

TSSG
convergent technologies research group

ctr g
AUTOMOTIVE CONTROL GROUP
Software Engineering for the Connected Car

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index.ejs

style.css

- The main stylesheet for your site
- You may have additional stylesheets in certain circumstances

```
body {  
    max-width: 80%;  
    margin: 0 auto;  
    font-family: 'Open Sans';  
}  
  
.header-crest-img {  
    float: right;  
    margin: 1em;  
}  
  
.footer-social-links {  
    text-align: center  
}  
  
.footer-img {  
    height: 90px;  
}  
  
.strand-right-img {  
    float: right;  
    margin: 1em;  
    height: 350px;  
}  
  
.strand-left-img {  
    float: left;  
    margin: 1em;  
    height: 350px;  
}  
  
.strand-timeline-img {  
    height: 80px;  
}  
  
.strand-modules-img {  
    height: 75px;  
}  
  
.strand-modules-double-img {  
    height: 150px;  
}  
  
.strand-modules-treble-img {  
    height: 310px;  
}
```

└ style.css

Motivation

- Maintaining a coherent and consistent structure significantly simplifies the management and evolution of the web project
- Every type of file having its place simplifies decision making and keeps the project on track

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Compiling pages

- “harp compile” command will generate a ‘build’ of the web site in **www** folder, replacing all templates with a generated static version of the site

`harp compile`

- Useful for deployment...
- .. although not necessary for surge, as the surge service includes an ejs template engine

