

# Harp.js & Surge

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# Harp & Surge

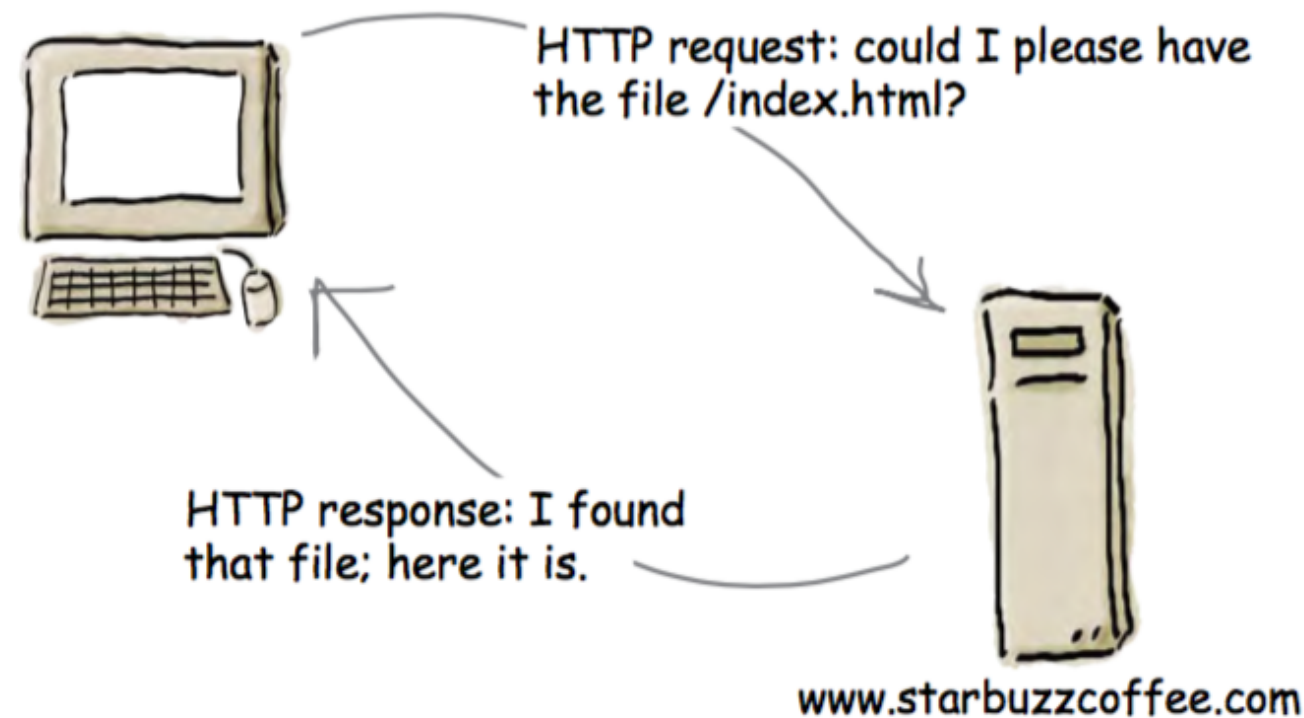
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- The role of a Web Server
- The Harp.js Server
- The Surge.sh Deployment service

# The Role of a Web Server

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- A Web Server is a program which is 'listening' on a particular 'Port' for HTTP Requests
- When a request is received, the server determines if the request can be 'served'
- If it can, then the server packages up a response and sends it
- Requests are generated by browsers (usually), either by:
  - The user entering a url in the address bar of the browser
  - Or the user clicking on a link on a page



# Harp.js

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- For professional web site development, you need a local web server. Otherwise, the site you develop will not be sufficiently tested.
- Harp.js is a web server you can run on your own computer.
- It behaves exactly like a web server used by a hosting company
- You can use it to simulate how your page will behave when it is eventually deployed to a server
- Additionally - the web server can provide a range of additional features you can use in your web development

*harp*

Documentation

The static web  
server with built-  
in preprocessing.

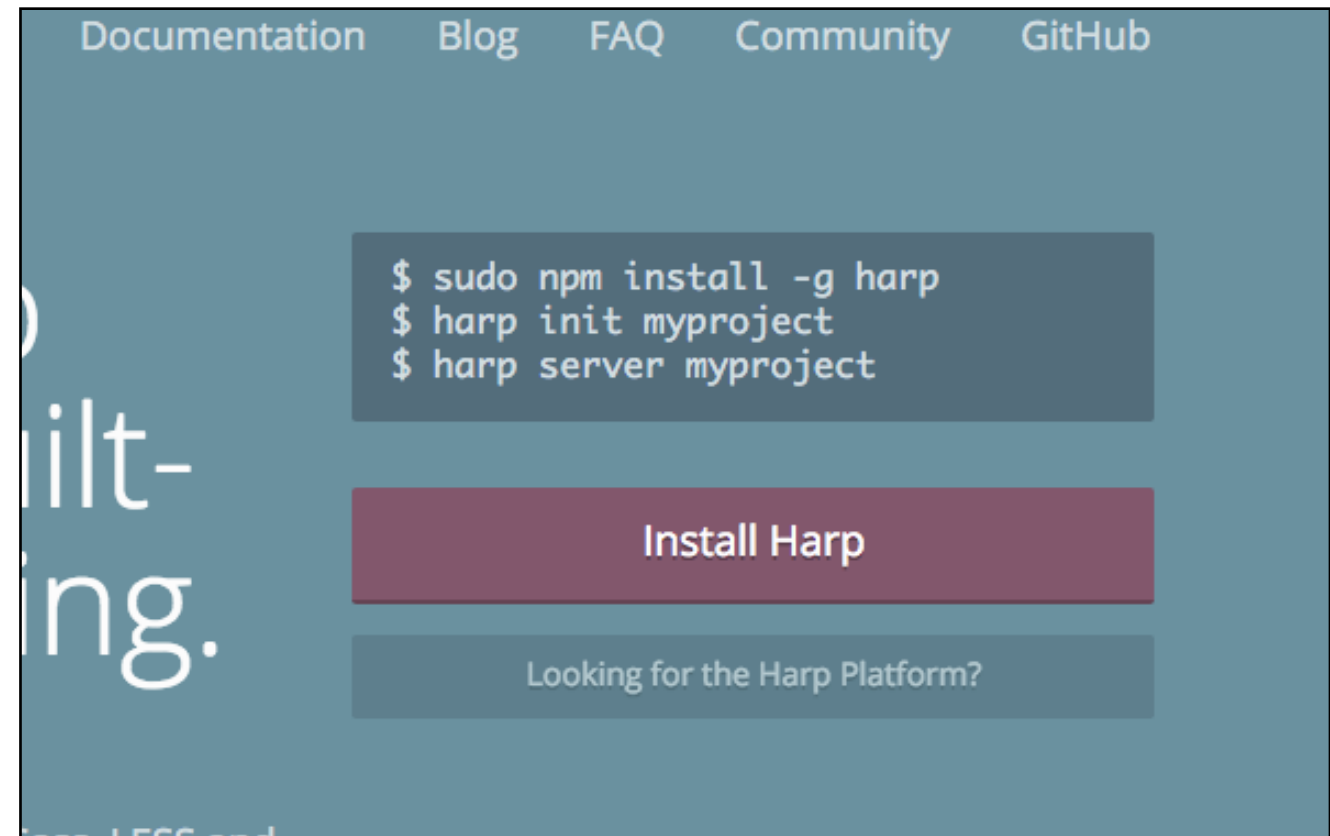
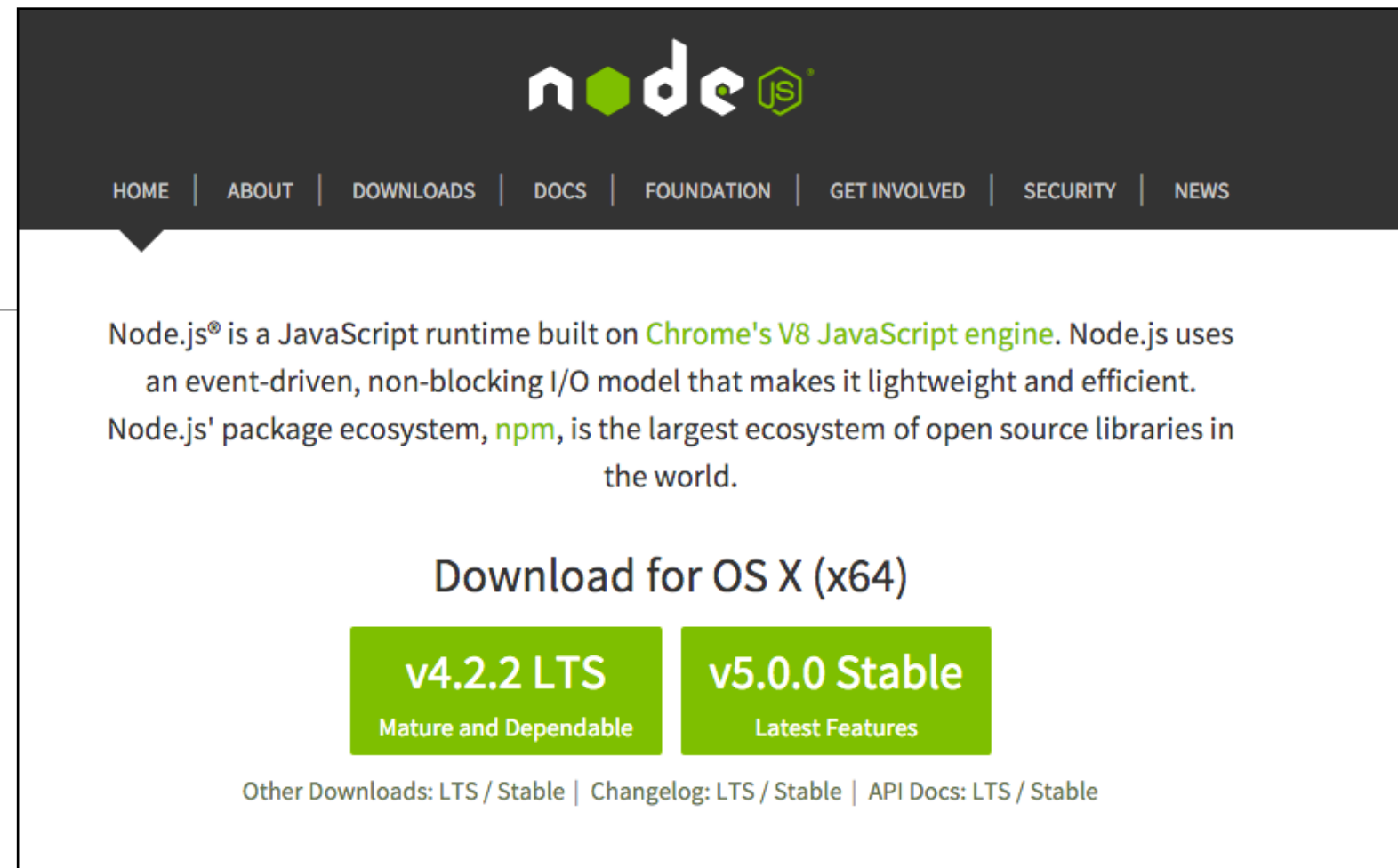
Harp serves Jade, Markdown, EJS, CoffeeScript, Sass, LESS and Stylus as HTML, CSS & JavaScript—no configuration necessary.

Follow @HarpWebServer

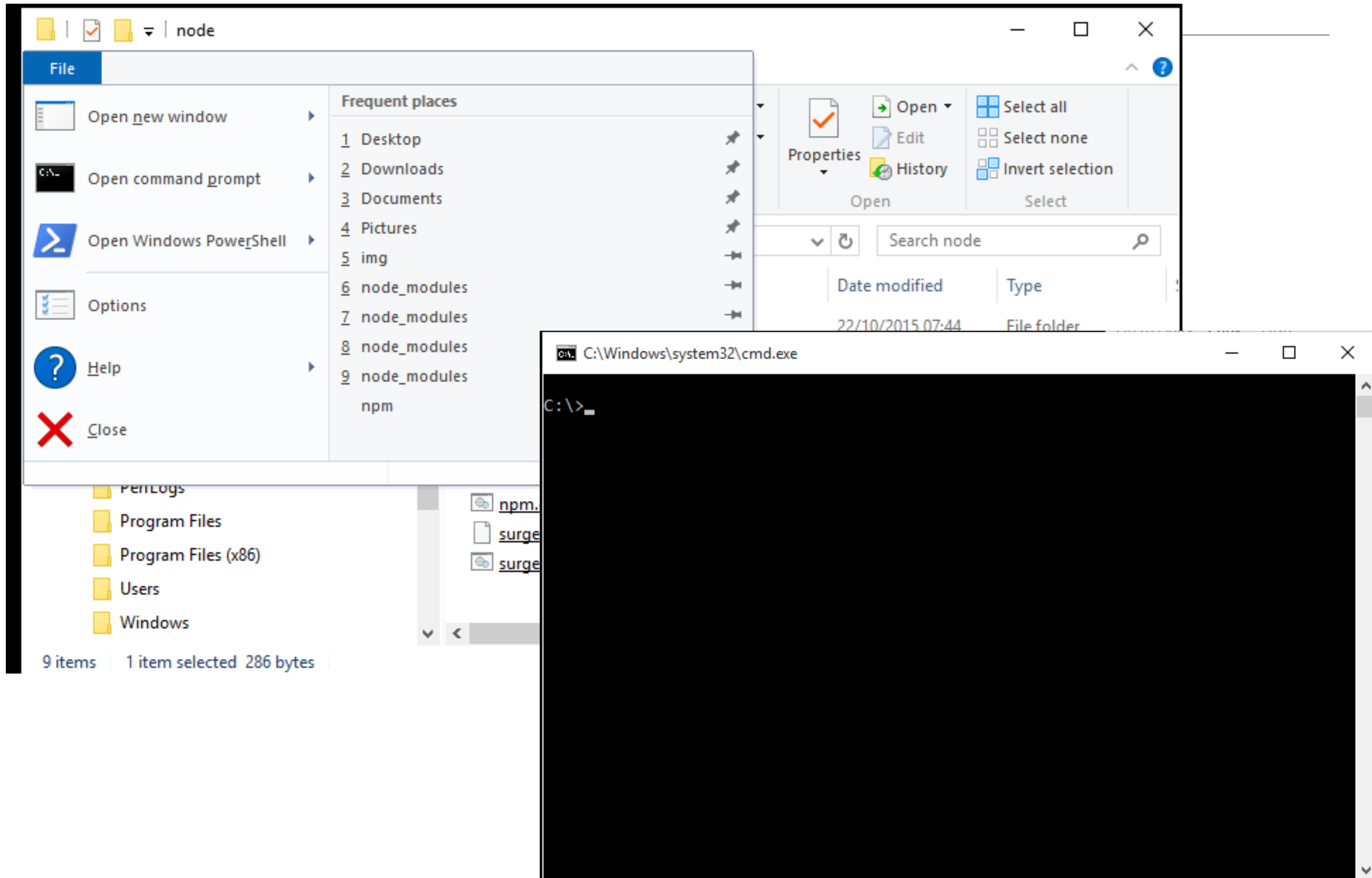
Star Harp on GitHub

# Installing Harp

- On your own machines:
  - First install Node.js
  - Then Install Harp



# Run a Command Prompt



# Create a test Project

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```
C:\Windows\system32\cmd.exe

C:\>

C:\>

C:\>harp init demo
Downloading boilerplate: https://github.com/harp-boilerplates/default
Initialized project at C:\demo

C:\>
```

harp init demo

# Launch the Web Server for this demo project

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```
C:\>harp init demo
Downloading boilerplate: https://github.com/harp-boilerplates/default
Initialized project at C:\demo

C:\>cd demo

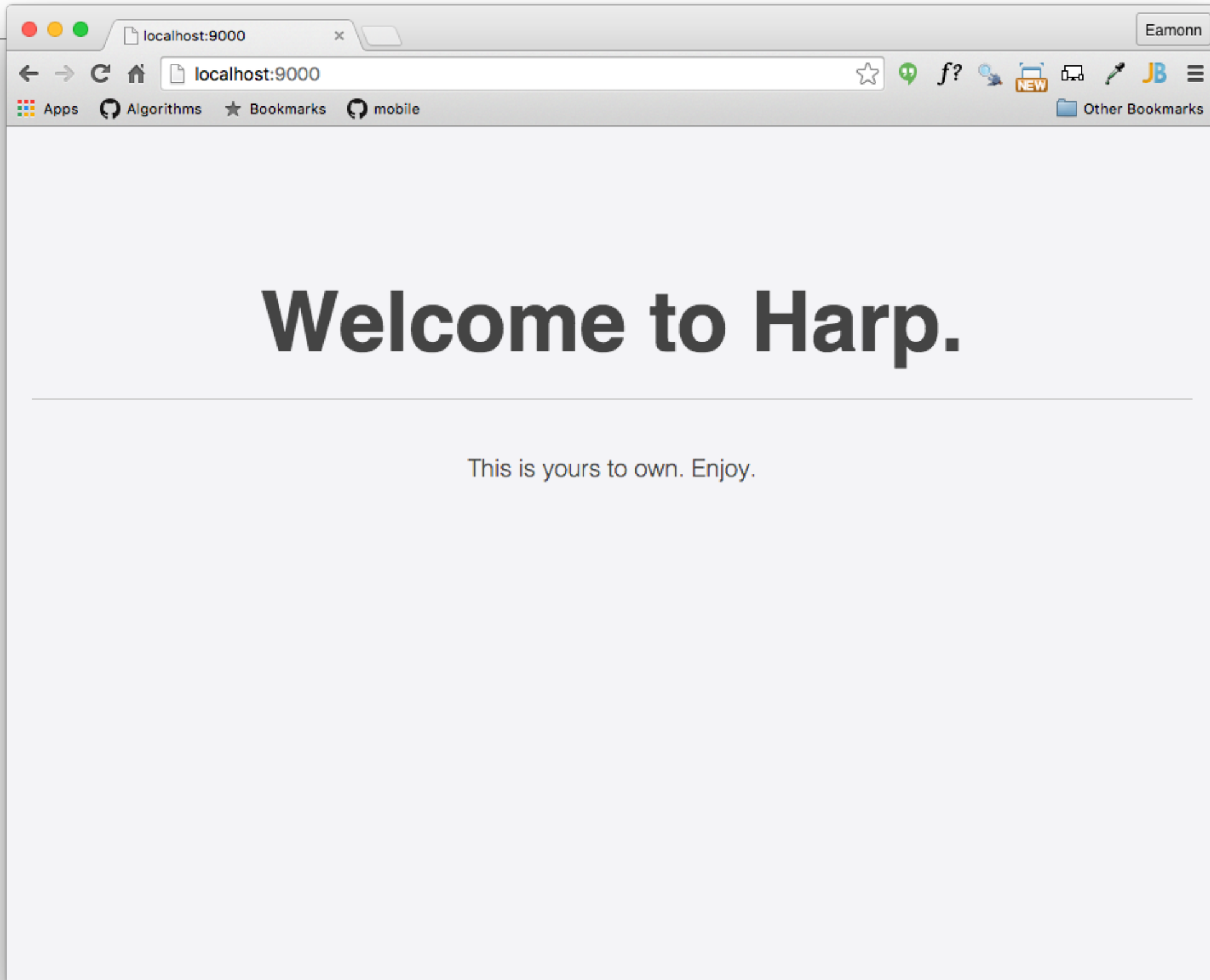
C:\demo>harp server
-----
Harp v0.19.0 - Chloi Inc. 2012-2015
Your server is listening at http://localhost:9000/
Press Ctl+C to stop the server
-----
```

cd demo

harp server



# Visit the Site

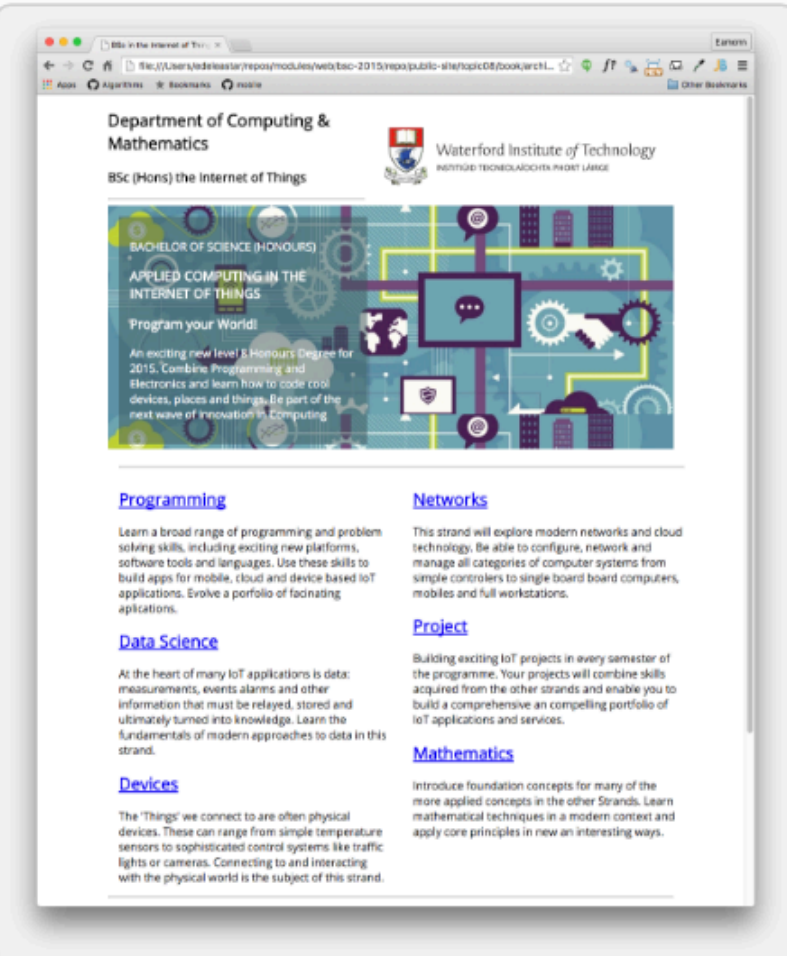


# Serve the site from Lab-1.1 Case Study

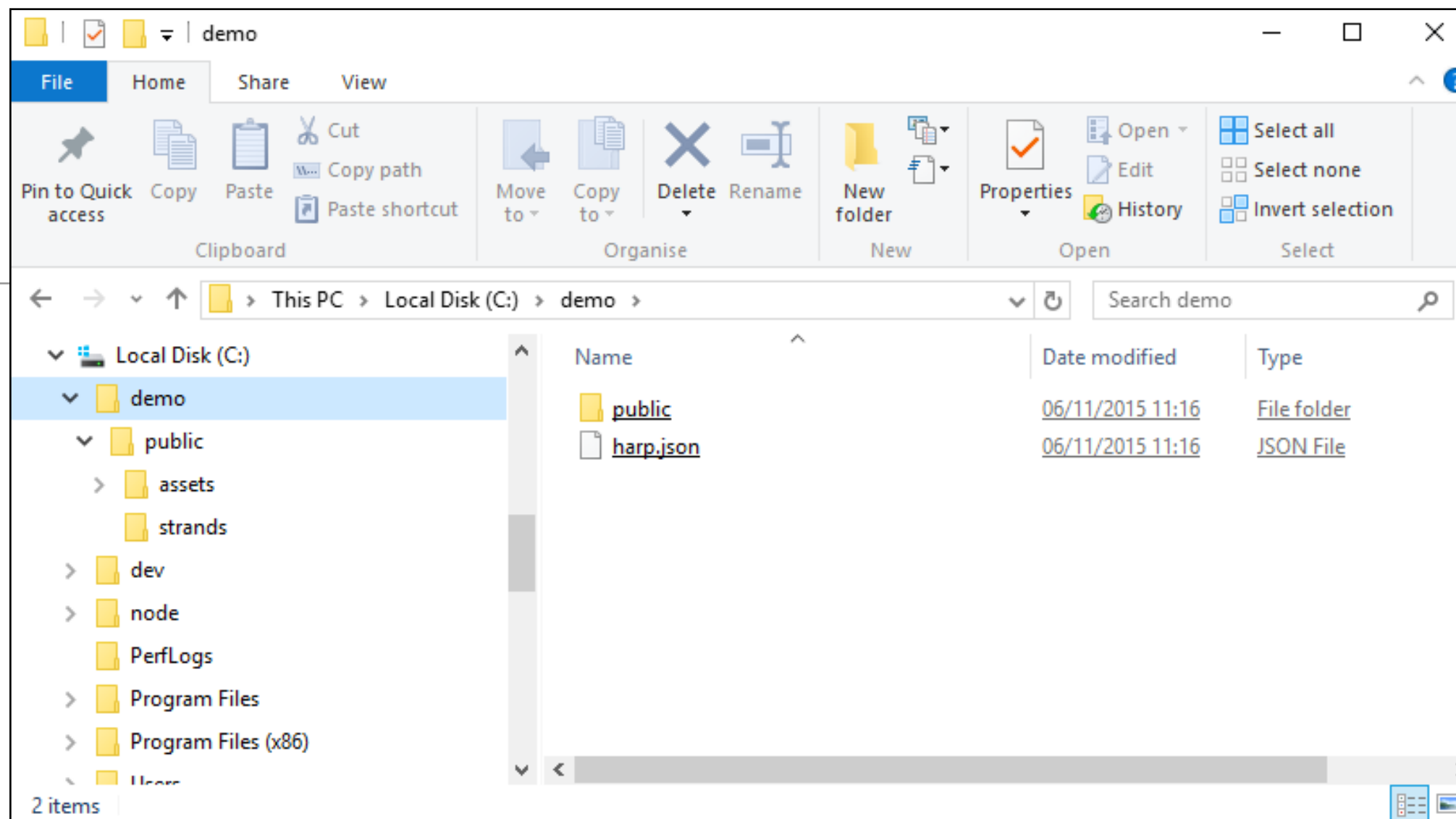
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- Lab-1.1 Case Study generated a web site we will use as an initial test

## Lab-1.1 Case Study



In the lab the web is evolved from unstyled content to a reasonably elegant and clean design. The site employs basic CSS formatting.



- Expand the IoT Archive into the demo folder.
- Create an additional file - harp.json

harp.json

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

Run the harp server again

- harp server

Browse to  
localhost:9000

The site is “served”  
here and can be  
browsed as  
expected

The screenshot shows a web browser window with the address bar set to `localhost:9000`. The page displays the header for the Department of Computing & Mathematics at the Waterford Institute of Technology, including the institution's crest and name in English and Irish. The main heading is "BSc (Hons) the Internet of Things". Below this is a large, colorful graphic with the text "BACHELOR OF SCIENCE (HONOURS) APPLIED COMPUTING IN THE INTERNET OF THINGS" and "Program your World".

In the foreground, a terminal window titled "Select harp server" is open, showing the following commands and output:

```
C:\>\node\init
C:\>set PATH=\node;PATH$
C:\>harp init demo
Downloading boilerplate: https://github.com/harp-boilerplates/default
Initialized project at C:\demo
C:\>cd demo
C:\demo>harp server
-----
Harp v0.19.0 - Chloi Inc. 2012-2015
Your server is listening at http://localhost:9000/
Press Ctl+C to stop the server
-----
^CTerminate batch job (Y/N)? y
C:\demo>harp server
-----
Harp v0.19.0 - Chloi Inc. 2012-2015
Your server is listening at http://localhost:9000/
Press Ctl+C to stop the server
```

# Deployment - Surge.sh



surge

[Pricing](#) [Tour](#) [Help](#) [Blog](#) [@surge\\_sh](#)

## Static web publishing *for* Front-End Developers

Zero-bullshit, single-command, bring your own source control web publishing CDN. Yes, it's free.

**78,872**

deployments

**596.64 GB**

published

**10,809**

projects

```
$ npm install --global surge
# In your project directory, just run...
$ surge
```

# One Command!

- surge
- Will create an account on first run (remember password) and deploy all files
- Subsequently, will just update site changes.
- Also generates a Domain Name

```
C:\Windows\system32\cmd.exe

^CTerminate batch job (Y/N)? y

C:\demo>harp server

-----
Harp v0.19.0 - Chloi Inc. 2012-2015
Your server is listening at http://localhost:9000/
Press Ctrl+C to stop the server
-----
^CTerminate batch job (Y/N)? y

C:\demo>surge
      email: edeleastar@gmail.com
      token: *****
      project path: C:\demo\
      size: 34 files, 2.3 MB
      domain: ceaseless-anger.surge.sh
      upload: [=====] 100%, eta: 0.0s
propagate on CDN: [===] 14% /assets/images/iot/data/data-1.
propagate on CDN: [=====] 28% /assets/images/iot/devices/devi
propagate on CDN: [=====] 47% /assets/images/iot/devices/devi
propagate on CDN: [=====] 57% /assets/images/iot/networks/net
propagate on CDN: [=====] 70% /assets/images/iot/programming/
propagate on CDN: [=====] 85% /assets/images/iot/project/proj
propagate on CDN: [=====] 100%
      plan: Free
      users: edeleastar@gmail.com
      IP address: 192.241.214.148

  Success! Project is published and running at ceaseless-anger.surge.sh

C:\demo>
```

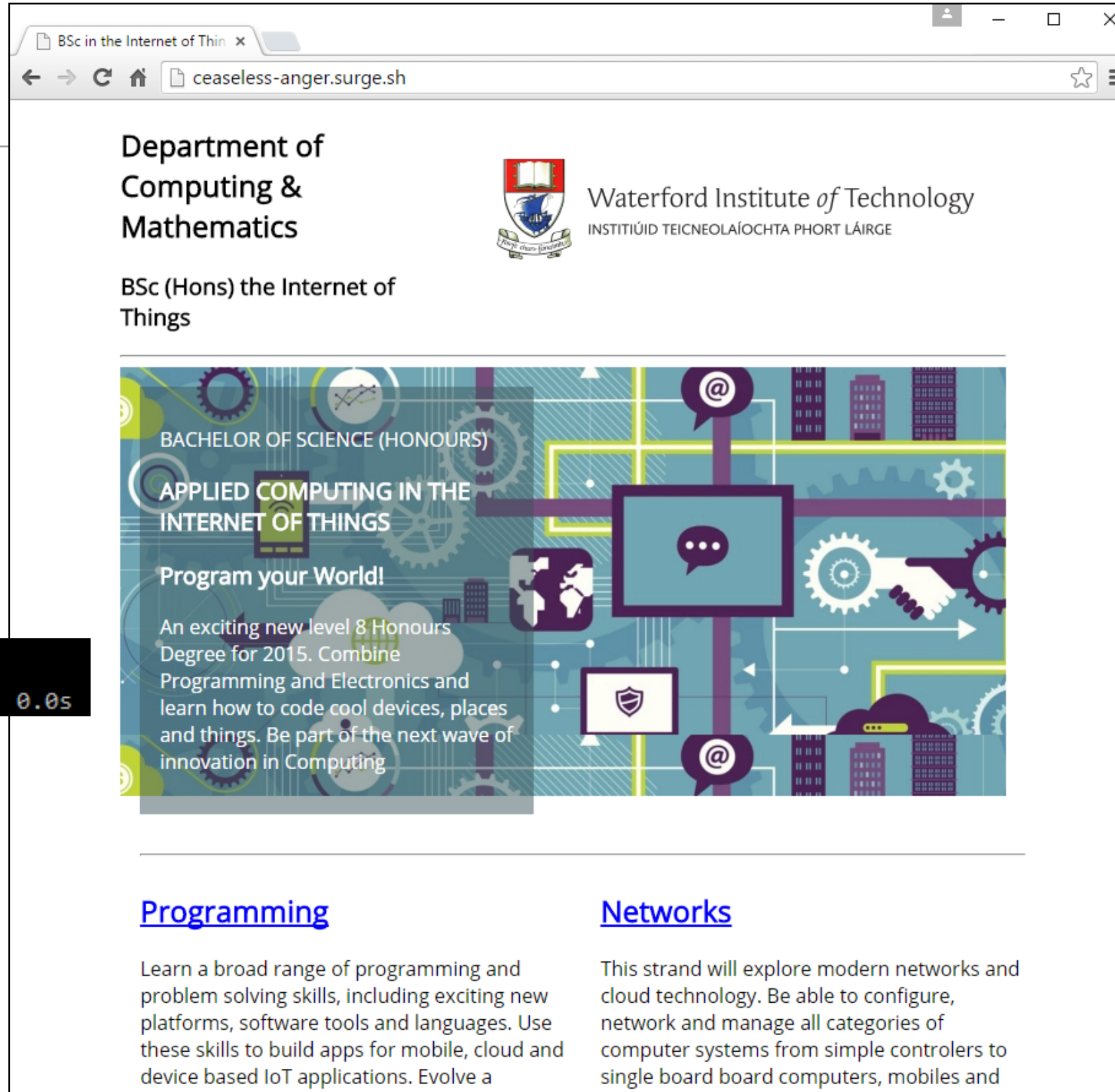


# Domain Name

- You can change part of the domain name before publishing

```
size: 34 files, 2.3 MB  
domain: ceaseless-anger.surge.sh  
upload: [=====] 100%, eta: 0.0s
```

- Must end in surge.sh (for free service)



The screenshot shows a web browser window with the address bar displaying "ceaseless-anger.surge.sh". The page header includes the "Department of Computing & Mathematics" and the "Waterford Institute of Technology" logo and name. The main content area features a large graphic with the text "BACHELOR OF SCIENCE (HONOURS) APPLIED COMPUTING IN THE INTERNET OF THINGS" and "Program your World!". Below this, it states: "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". At the bottom, there are two columns of text: "Programming" and "Networks".

Department of Computing & Mathematics

Waterford Institute of Technology  
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

BSc (Hons) the Internet of Things

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

[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

# Pricing

Surge is free to use.

Upgrade your project to bolster it with server-side features.

## Surge

For publishing any folder easily

# Free

- Unlimited publishing
- Custom domain
- Basic SSL

Get started for free

## Surge Plus

For professional front-end projects

only **\$13**/mo.

PER PROJECT

- Unlimited publishing
- Custom domain
- Custom SSL
- Force HTTP to HTTPS
- Cross-Origin Resource Sharing
- Custom redirects
- Password protection
- Stats & Insights SOON

Upgrade to Surge  
Plus