CS2003 W02
The Web and Web applications

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Slides adapted from Saleem Bhatti

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Web applications

- Understand about WWW-based applications
- Models of communication for applications
- Communication mechanisms
- Limitations
- Learn to create web applications based on "standard" technologies:
  - HTML (5), CSS (3), Javascript, JSON
  - (Also some reference to other technologies, such as Java, XML, …)

Assessment

- 2 practicals for the web stream (4 in total)
- Usual rules for deadlines, lateness, submission etc
- Usual rules for academic misconduct
- Exam:
  - 48 hours assessment
  - More on this later…

This is a very practical subject!

- Lots of "hands on" work in the lab.
- Try things out:
  - learn from your mistakes!
- Talk to each other about what you are doing!
- Some core underlying principles:
  - structure and organisation of applications.
  - but beware … technology moves fast and may be unstable …

Some useful resources – try them!

- http://html5doctor.com
  - HTML5 quick reference
- https://developer.mozilla.org/en/docs/web/Guide/HTML/HTML5
  - Mozilla Developer Network, HTML5 Guide
- http://html5test.com
  - Browser test: not all browsers are equal
- http://html5please.com
  - Guide to HTML5 practical usage
- https://www.w3.org/
  - The definitive reference for HTML – handy lookup: https://www.w3.org/2009/cheatsheet/
  - A roadmap https://www.w3schools.com/whatis

The web as an application platform

- Client-side
- Server-side
- Communication paradigms:
  - application layer mechanisms
- We will cover key underlying **principles**:
  - architecture
- We will cover some key **technologies**:
  - engineering
- The is a very practical topic!

A practical approach

- There will be lots of practical examples!
- Lectures:
  - examples linked to lecture material.
  - please make sure you try them out in the labs.
- Tutorials:
  - some tutorial questions will ask you to complete web programming tasks.
- Coursework:
  - build web applications.
- Code on studres.

Useful things to do today

- Use ssh to connect to your host servers
  - \<username\>.host.cs.st-andrews.ac.uk
- Use ssh to connect to a lab client
  - https://systems.wiki.cs.st-andrews.ac.uk/index.php/Video_tutorials
- scp to copy file from/to remote machines
- Work out how to create your School home page on the Web:
  - ~/nginx_default/index.html

Starter web page – index.html

In the directory ~/nginx_default/, create index.html

```
<!DOCTYPE html>
<html>
<head>
   <title>ZZZZ home page</title>
</head>
<body>
   <p>This is the home page of ZZZZ!</p>
</body>
</html>
```