Administrivia: The lecturer

Derek Bridge: Room G-61, Western Gateway Building
d stop bridge amphora cs plip ucc plop ie
www.cs.ucc.ie/~dbridge.html

Administrivia: Module delivery

<table>
<thead>
<tr>
<th>Credit weighting</th>
<th>5 credit module</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>2 × 1 hr per week <em>(on average)</em></td>
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<tr>
<td>Labs</td>
<td>1 × 2 hr per week</td>
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<tr>
<td>Private study</td>
<td>At least 2 hrs per week</td>
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<tr>
<td>Course web site</td>
<td><a href="http://www.cs.ucc.ie/~dgb/courses/wd1.html">www.cs.ucc.ie/~dgb/courses/wd1.html</a></td>
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Contains copies of some of the slides
N.B. Slides, not notes!

Administrivia: Assessment

<table>
<thead>
<tr>
<th>Examination</th>
<th>1.5 hr written exam (75% of the marks)</th>
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<tr>
<td>Continuous assessment</td>
<td>Web site project (25% of the marks)</td>
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How to fail:
Skip lectures & labs; avoid private study; cram the night before the exam; expect the exam to be a memory test

How to pass:
Attend lectures & labs; take notes; organize your notes; tackle the lab activities properly; expect a problem-solving exam
Plagiarism

1. Plagiarism is presenting someone else's work as your own. It is a violation of UCC Policy and there are strict and severe penalties.
2. You must read and comply with the UCC Policy on Plagiarism www.ucc.ie/en/exams/procedures-regulations/
3. The Policy applies to all work submitted, including software.
4. You can expect that your work will be checked for evidence of plagiarism or collusion.
5. In some circumstances it may be acceptable to reuse a small amount of work by others, but only if you provide explicit acknowledgement and justification.
6. If in doubt ask your module lecturer prior to submission. Better safe than sorry!

What the web was for — originally

WWW = hypertext + the Internet

Servers and clients

- Web client computers
  - run web client software (e.g. browsers)
  - the software make requests for web resources (e.g. HTML files, CSS files, image files, videos, programs, …)
- Web server computers
  - host web resources (e.g. HTML files, CSS files, image files, videos, programs, …)
  - run web server software that responds to requests

Web requests and responses

- web client hardware, running web client software, e.g. web browser
- web server hardware running web server software
Protocols

- If two computers are to exchange messages, we need to specify and agree the rules of communication.
- In computer networking, such a set of rules is called a communications protocol.
- HTTP - HyperText Transfer Protocol
  - The protocol used for web requests and responses.
  - The protocol is defined by the Internet Engineering Task Force (IETF).

HTTP requests

GET /index.html HTTP/1.1
Date: Fri, 06 Sep 2019 11:12:55 GMT
Connection: Close
Host: www.myfavouritewebsites.com
Accept: text/html, text/plain
User-Agent: Chrome/75.0.3770.142

HTTP requests

HTTP responses

HTTP/1.1 200 OK
Date: Fri, 06 Sep 2019 11:12:55 GMT
Connection: Close
Server: Apache
Accept-Ranges: bytes
Content-Type: text/html
Content-Length: 170
Last-Modified: Tue, 19 Feb 2019 11:15:49 GMT

<html lang="en">
  <head>
    <title>Fab web page</title>
  </head>
  <body>
    ....
</body>
</html>

HTTP response status codes

1XX: Informational:
  e.g. 100 Continue
2XX: Success:
  e.g. 200 OK, 206 Partial Content
3XX: Redirection:
  e.g. 301 Moved Permanently
4XX: Client error:
  e.g. 400 Bad Request, 403 Forbidden, 404 Not Found
5XX: Server error:
  e.g. 500 Internal Server Error, 503 Service Unavailable
Web standards

- Web resources must also comply with rules - otherwise browsers won't know what to do with them
- The World Wide Web Consortium (W3C) is responsible for specifying, e.g.,
  - HTML, the HyperText Markup Language
  - CSS, Cascading StyleSheets
- Other organizations specify other types of resource (images, video, audio, server-side programming languages, client-side programming languages, ...)
