

CS1116/CS5018

Web Development 2

Dr Derek Bridge

School of Computer Science & Information Technology
University College Cork

Administrivia: Module delivery

Credit weighting:	5 credit module
Prerequisites:	CS1117/CS5222, CS1106/CS5021, CS1115/CS5002
Lectures:	2 x 1 hr per week
Labs:	1 x 2 hr per week
Private study:	At least 2 hrs per week
Course web site:	www.cs.ucc.ie/~dgb/courses/wd2.html Contains copies of some of the slides N.B. Slides, not notes!

Administrivia: The lecturer

Derek Bridge:	Room 2.64, Western Gateway Building d stop bridge amphora cs plip ucc plop ie www.cs.ucc.ie/dbridge.html
---------------	--

Administrivia: Assessment

Examination:	1.5 hr written exam (75% of the marks)
Continuous assessment:	Programming project (25% of the marks)
How to fail:	Skip lectures & labs; avoid private study; cram the week 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 programming 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!

Programs on the Web

- **Server-side:** the program executes on the server
 - E.g. Google search, Amazon — anything that must consult a large database, stored on the server
 - Programming languages: e.g. Python, PHP, Java, C, ...
- **Client-side:** the program executes on the client
 - E.g. simple calculators, simple games, programs to make Web pages more interactive
 - Programming languages: e.g. JavaScript

Revision



Programs on the Web

- **Server-side**

This diagram shows a 'client computer, running a browser' on the left and a 'Web server computer' on the right. A green arrow labeled 'request to execute a program' points from the client to the server. A return green arrow labeled 'response — the output from the program' points from the server back to the client. A box on the server is labeled 'program executes here'.
- **Client-side**

This diagram shows a 'Web server computer' on the left and a 'client computer, running a browser' on the right. A green arrow labeled 'request for a program' points from the client to the server. A return green arrow labeled 'response — a copy of the program' points from the server back to the client. A box on the client is labeled 'program executes here'.
- Often, both server-side and client-side programs are involved, e.g. Facebook

A server-side Python program

```
#!/usr/local/bin/python3
from datetime import datetime
print('Content-Type: text/html')
print()
print("""
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>Greetings!</title>
  </head>
  <body>
    <p> Hello world. It is %s, right now.
    </p>
  </body>
</html>""") % (datetime.now().strftime( '%H:%M: %d-%m-%Y' ))
```

Check your understanding

- (Trick question:) What will the browser do with this Python program?
- What is that ugly comment doing there?
- Why do we need the Content - Type?
- Why do we need to print a blank line?
- Why are we using three (double) quotes for the string?
- Suppose this program is on our server in Cork. Someone in Australia requests it. Whose time/date do they see?