School of Computer Science

Web and Database Computing 2019

Lecture 1: Introduction to Web Systems

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seek LIGHT

Brief Admin

Who we are

Course Coordinator (non-contact) - Cheryl Pope

Lecturer & Course Admin - Ian Knight

Workshop Supervisor - Daniel Cotton

See MyUni for contact details.

Assessment

You can view a more detailed overview on MyUni

Quizzes	Prac Exercises	Group Assignment	Exam (HURDLE: 40%)
5%	15%	25%	55%

Quizzes:

- Random lectures.
- Start in Week 2.
- Availble for 24h following the lecture.

Prac Exercises:

- Start in Week 2.
- Further details in each exercise.

Group Assignment:

- Groups of 4.
- Start in Week 6.
- Further details given in Week 6.

Exam:

- 40% Hurdle.

Plaigerism Detection ...

We check your code:

Plaigerism checker result example

Academic Honesty Policy

You can view the policy at https://www.adelaide.edu.au/policies/230/

In brief summary:

- Don't copy other peoples' work.
- Don't submit work that is not 100% your own.
- Don't do anything that gives you an unfair advantage over other students.

If unsure, speak to your Lecturer

Extensions

- Talk to/email me.
- The sooner the better.
- If in doubt, get one!

Not having an extension when you needed one:

Additional assessment

- If your final result is 45-49, additional assessment is automatically granted if you have completed all required course work.
- If your final result is 40-44, an additional assessment may be offered under exceptional circumstances.
- If you are capped at 44F due to failing the minimum performance criterion, an additional assessment may be offered by the examiners meeting.
- In the case where an additional assessment is granted, the overall result for the course is capped at 50P.
- You must make yourself available during the additional assessment period.

How to get the most out of this course

Everything makes sense when someone else explains it.

- Ability to read a solution != (not equal) ability to write a solution
- This is a hands-on course; try all the things!

Be active in your learning! Come prepared for discussions and to solve problems

- This requires discipline if you're only watching the recordings

Do the practical assignments

- These will help you to gain the skills needed for group project
- Keep up with the milestones

Plan to attend Workshops

- This is where you will get the most individual feedback and is the best opportunity to ask questions.

Questions?

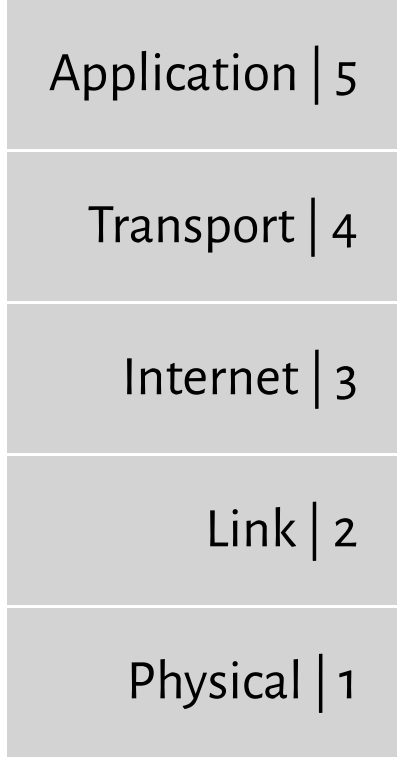
The Internet

"The Internet (contraction of interconnected network) is the global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to link devices worldwide. It is a network of networks that consists of private, public, academic, business, and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies."
-Wikipedia

The TCP/IP layer model

- In networking, the Internet is viewed as a series of layers that perform specific tasks, with each layer at the sender designed to communicate with the corresponding layer at the receiver and with minimal knowledge of the other layers.

- The Application Layer contains the protocols and data representations that are used to allow two processes to communicate across a network.
- The Transport Layer contains the protocols to ensure data on a given host reaches the right process, and tools to ensure reliability.
- The Internet Layer contains the protocols to ensure data from a given host is able to reach the correct destination host.
- The Link Layer contains the protocols that manage the transmission of data between hosts in the same local network.
- The Physical Layer represents the hardware and transmission medium that the data travels over.



But this isn't *Internet and Database Computing*

"The World Wide Web (WWW), commonly known as the Web, is an information space where documents and other web resources are identified by Uniform Resource Locators (URLs, such as https://www.example.com/), which may be interlinked by hypertext, and are accessible via the Internet. The resources of the WWW may be accessed by users via a software application called a web browser."
-Wikipedia

The Web

Information transferred via Application Layer **H**yper**T**ext **T**ransfer **P**rotocol (HTTP)

This is commonly documents written **H**yper**T**ext **M**arkup **L**anguage (HTML),
but may be different types of content, including Media & Images, Files, Style information, and scripts.

The information is rendered by a Web Browser to generate the Web Pages and content that we see.

Originally mostly static pages

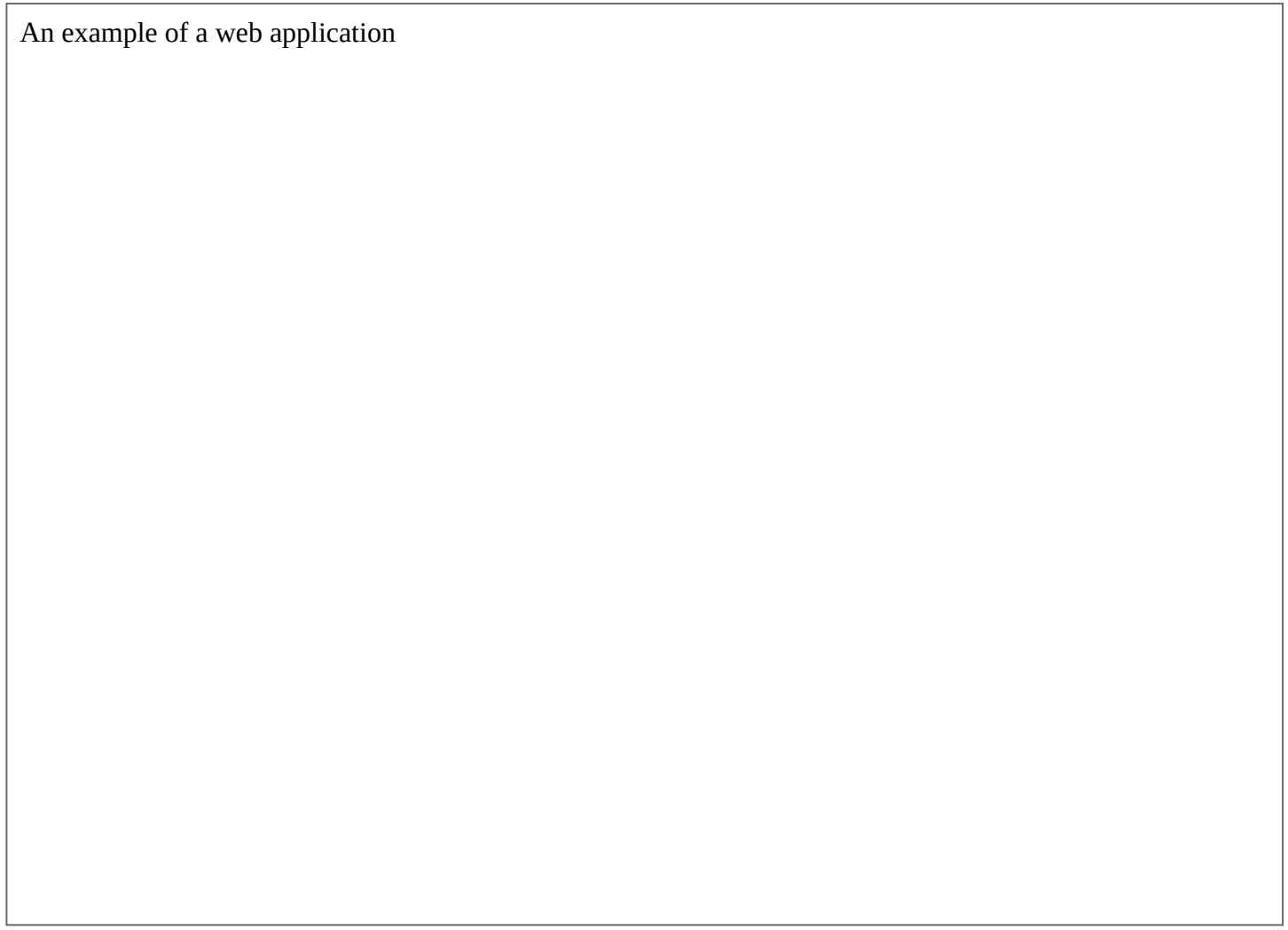
- Information on pages fixed, unchanging.
- Webpages primarily as a way to present information.

Soon evolved into dynamic content

- Information on pages changes depending on user input.
- Webpages provide services.
  - Search engines
  - Online shopping
  - Online banking

Web applications

- Interactive pages change in real time with information that may be unique to each user.
- Webpages provide same functionality as a desktop application.
  - Social Media
  - Webmail
  - Streaming websites
  - In browser games



What does that look like?

Web applications in your life

By the end of this course you will have built your own web application

An example of a web application

This week

Due:

- Ensure you've completed the tasks in the `Course Outline` section of MyUni

Next lecture:

- We will start learning to write our own Web pages in HTML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