

CSC 309 Introduction

Karen Reid

Welcome!

Karen Reid



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CSC108 Fall 2009: Introduction to Computer Programming admin admin (a) Log out

MarkUs Dashboard Assignments Users Notes Summary Key Pairs

A1 Settings Groups Graders Submissions Summaries

Assignment A1 : c8mahler A1 (c8mahler) Download

Previous Submission Notes (0) | (Total Mark: 8.25 / 17.0) Set to Complete Release Next Submission

Source Code Annotations

A1/reactors.py New Annot.

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```
15. class IReactorInstaller(Interface):
16.     """
17.     Definition of a reactor which can probably be installed.
18.     """
19.     shortName = Attribute("""
20.         A brief string giving the user-facing name of this reactor.
21.         """)
22.
23.     description = Attribute("""
24.         A longer string giving a user-facing description of this reactor.
25.         """)
```

Marks Summary Tags

Expand All Collapse All Expand Unmarked

+ Aliquam dolor dolore est libero at.
vel Molestias dolor nemo repellat. 0.0 / 2.0

+ Non.
quo distinctio necessitatibus nihil Corporis qui incident. 0.0 / 3.0

+ Doloremque.

MarkUs

- Ruby on Rails
- written by undergrads (+150)

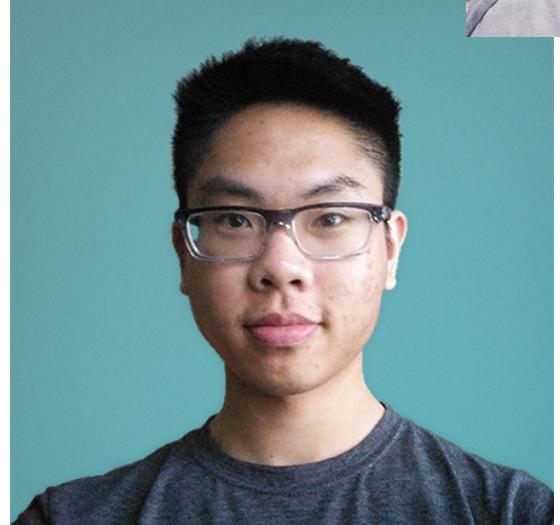
Course Team



Nishant Arora



Eugene Cheung



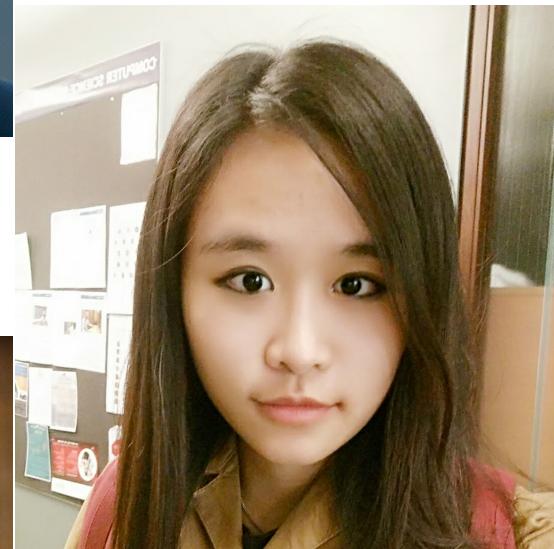
Nigel Fong



Yizheng Ding



Simon Cook



Rachel Franz

Candice Lin

Goals

- Build a complete web application that you can include in a portfolio to show off your work.

Goals

- Describe the components of a web application.
- Explain the basic architecture of a web server.
- Compare different frameworks.
- Write and debug programs that manipulate the DOM.
- Use browser developer tools to analyze and debug.
- Describe and use multiple models for communication between web server and client.

What aspects of each topic or concept in this course will be relevant 5 years from now?

What have you heard about this course?

Complaints:

- “I didn’t learn the technology I wanted to learn”
- “It was too basic”
- “It was too advanced”
- “I had to learn everything myself on stackoverflow”
- “Lectures were useless”

Survey results

[https://docs.google.com/forms/d/
1JhfsvMcIMvpIV2ccDJYORJpK7ZBO2AcgoMEmXfX21Ew/
edit#responses](https://docs.google.com/forms/d/1JhfsvMcIMvpIV2ccDJYORJpK7ZBO2AcgoMEmXfX21Ew/edit#responses)

Course Structure

8 weeks	Labs	Try out lecture concepts	pairs
Oct 14	Assignment 1	HTML, CSS, JQuery	solo
Nov 4	Assignment 2	TBA	solo
Nov 11	Project Proposal	Domain idea Overall structure	groups of 3 or 4
Nov 25	Project	Use Node, DB, React and other to build app	groups of 3 or 4
Last week of classes	Project Demo	Show off your work to TAs and classmates	groups of 3 or 4
TBA	Final Exam	Focus on lecture concepts	solo

Course Topics

- HTML, CSS, Layout, Responsive Design
- Canvas, jQuery, AJAX, JSON
- REST API, Sessions + Cookies, Forms
- Node.js, Express.js, Databases, React.js
- Web Architectures, Performance
- Web Security
- Advanced topics TBA (Guest speakers)

History

Hypertext



- Vannevar Bush
- 1945 Essay, “As We May Think”
- “The **memex** was also to be a **storage and retrieval device** using microfilm. It would consist of a desk with viewing screens, a keyboard, selection buttons and levers, and microfilm storage. Information stored on the microfilm could be retrieved rapidly and projected on a screen. The machine was to extend the powers of human memory and association. Just as the human mind forms memories through associations, the user of the memex would be able to make **links** between documents.” (<http://www.ibiblio.org/pioneers/bush.html>)
- Ted Nelson coined the word hypertext in the 1960's and credits Bush.



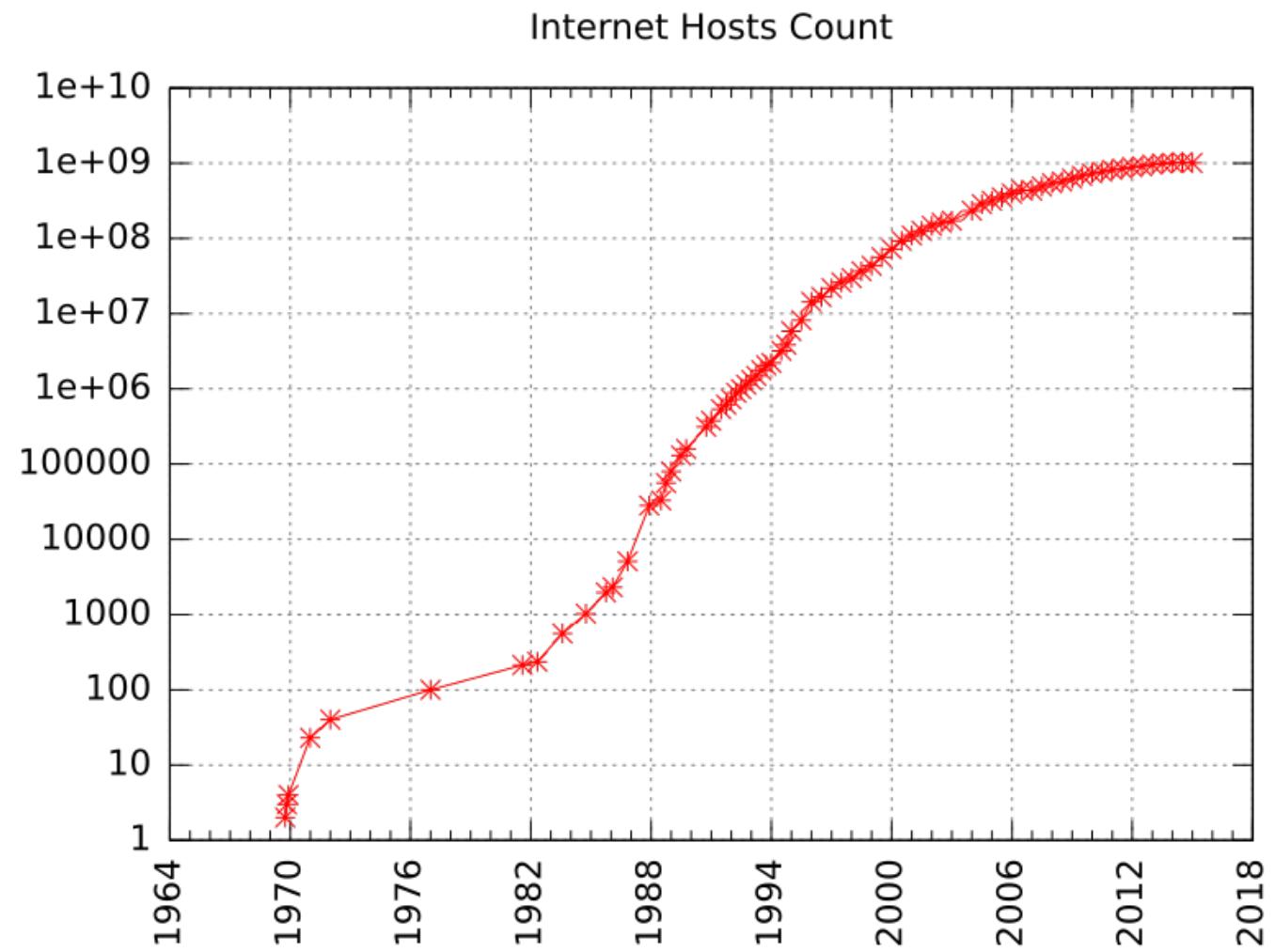
Xanadu



- Ted Nelson coined the word **hypertext** in 1965
- Envisioned Xanadu as a tool to preserve and increase humanity's literature and art.
- Information stored as connected literature.

The Internet

- 1971 - ARPANET has 23 hosts



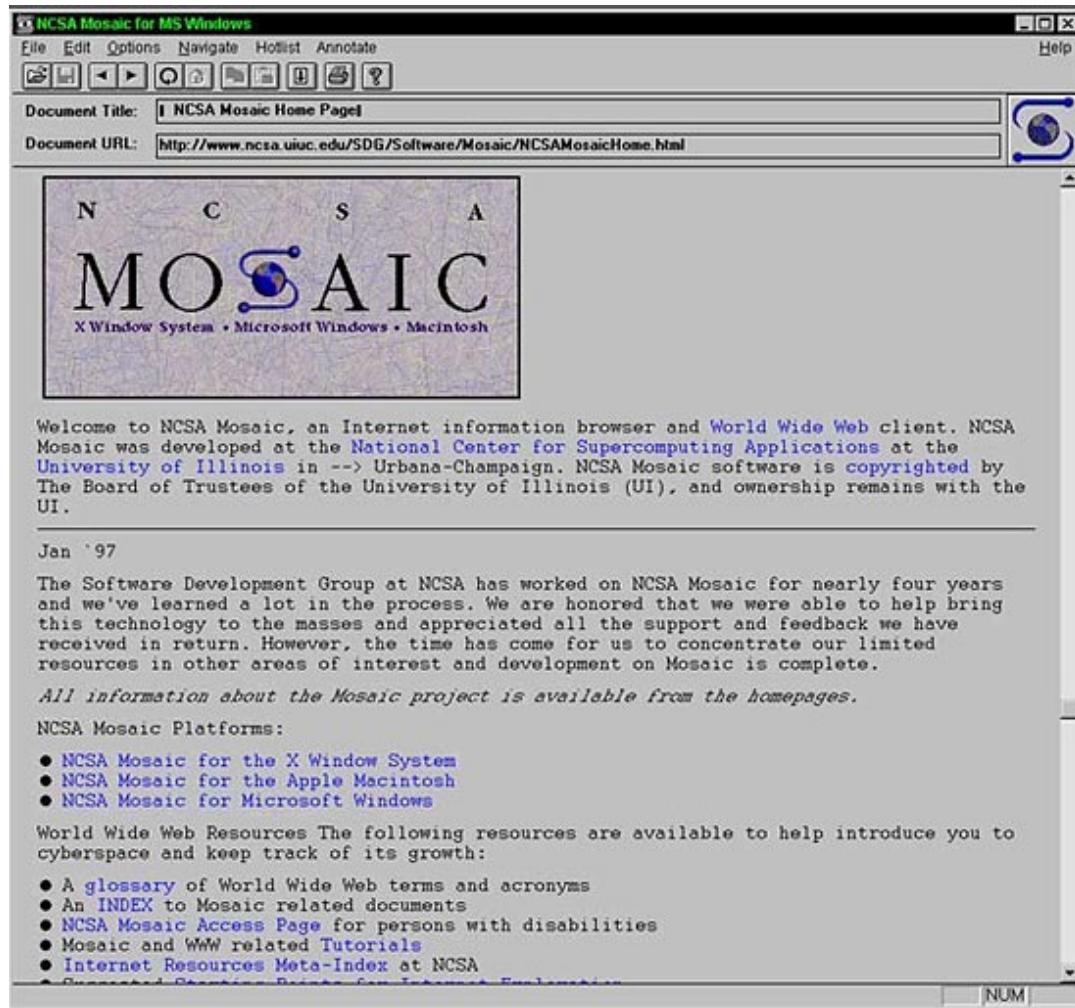
Tim Berners-Lee

- 1989 wrote a proposal to solve information sharing problem at CERN
- 1990 wrote HTML, HTTP, URI
- 1991 available outside CERN
- 1994 moved to MIT to found W3C



Early Browsers

- Marc Andreessen and other students at NCSA developed Mosaic
- 0.1a released in 1993
- supported by NSF funding



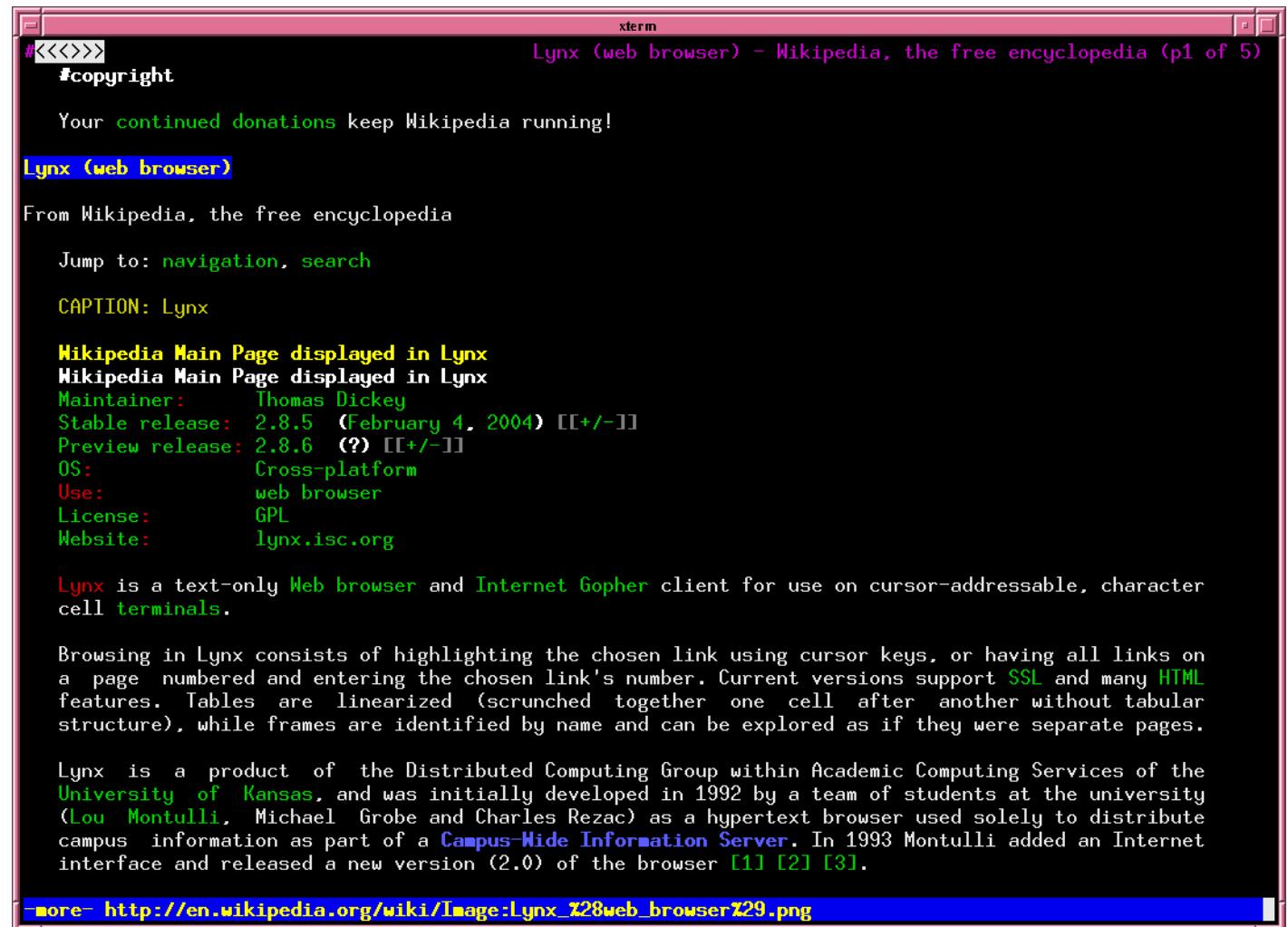
Netscape

- Andreessen founded Netscape Communications Corp.
- 1996: 75% of web users used Netscape
- Many browser features originated with Netscape
 - cookies, frames, Javascript
- Browser wars with Microsoft and increasingly buggy software led to Netscape's demise
- 1998 released code base to open source -> Mozilla was born



Lynx

- Terminal-based web browser



Search



- Excite 1993
- Yahoo! Directory 1994
- Lycos 1994
- AltaVista 1995
- Inktomi 1996
- Google 1997-98



Economic Shifts

- Internet economy GDP share:
 - Canada 3.6%
 - USA 5.4%
 - China 6.9%
 - UK 12% (?)
- Projections are that half of the world's population currently use the Internet

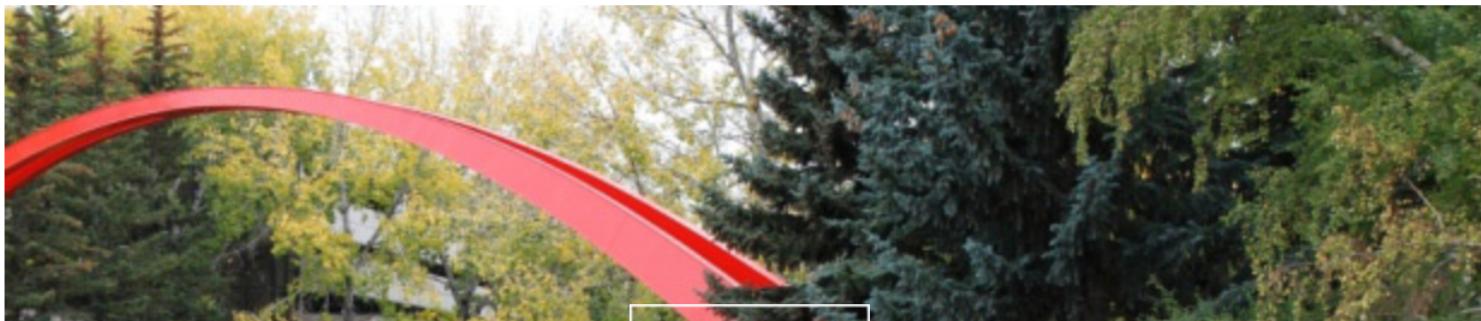
Implications?

Sony email hack: what we've learned

University of Calgary paid \$20K in ransomware attack

No evidence cyberattackers released personal or university data to public

CBC News Posted: Jun 07, 2016 2:27 PM MT | Last Updated: Jun 08, 2016 8:26 AM MT



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I am pleased to announce a new Citizen Lab [report](#): “The Million Dollar Dissident: NSO Group’s iPhone Zero-Days used against a UAE Human Rights Defender,” authored by senior researchers Bill Marczak and John Scott Railton.



