

CSCC09
Programming on the Web

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1991

Sir Tim Berners-Lee



← → ↻ ↕ info.cern.ch/hypertext/WWW/TheProject.html ☆

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#) , [Policy](#) , November's [W3 news](#) , [Frequently Asked Questions](#) .

[What's out there?](#)

Pointers to the world's online information, [subjects](#) , [W3 servers](#), etc.

[Help](#)

on the browser you are using

[Software Products](#)

A list of W3 project components and their current state. (e.g. [Line Mode](#) ,[X11 Viola](#) , [NeXTStep](#) , [Servers](#) , [Tools](#) , [Mail robot](#) , [Library](#))

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

A summary of the history of the project.

[How can I help ?](#)

If you would like to support the web..

[Getting code](#)

Getting the code by [anonymous FTP](#) , etc.

Web Portals



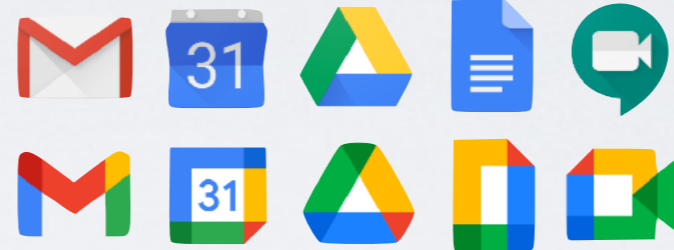
2024

Customer Resources Management



E-Health

Accounting and Billing



E-Learning

Collaboration



Content Management



Social Networks

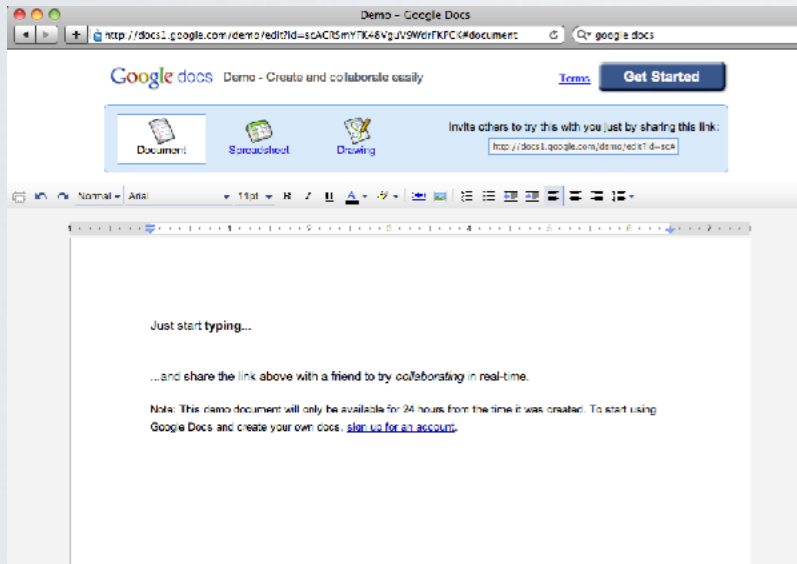
Publishing



Architecture of a Web Application

Client Side (a.k.a Frontend)

Server Side (a.k.a Backend)



Web Browser



Web Server

The Virtuous Circle

faster, better technology

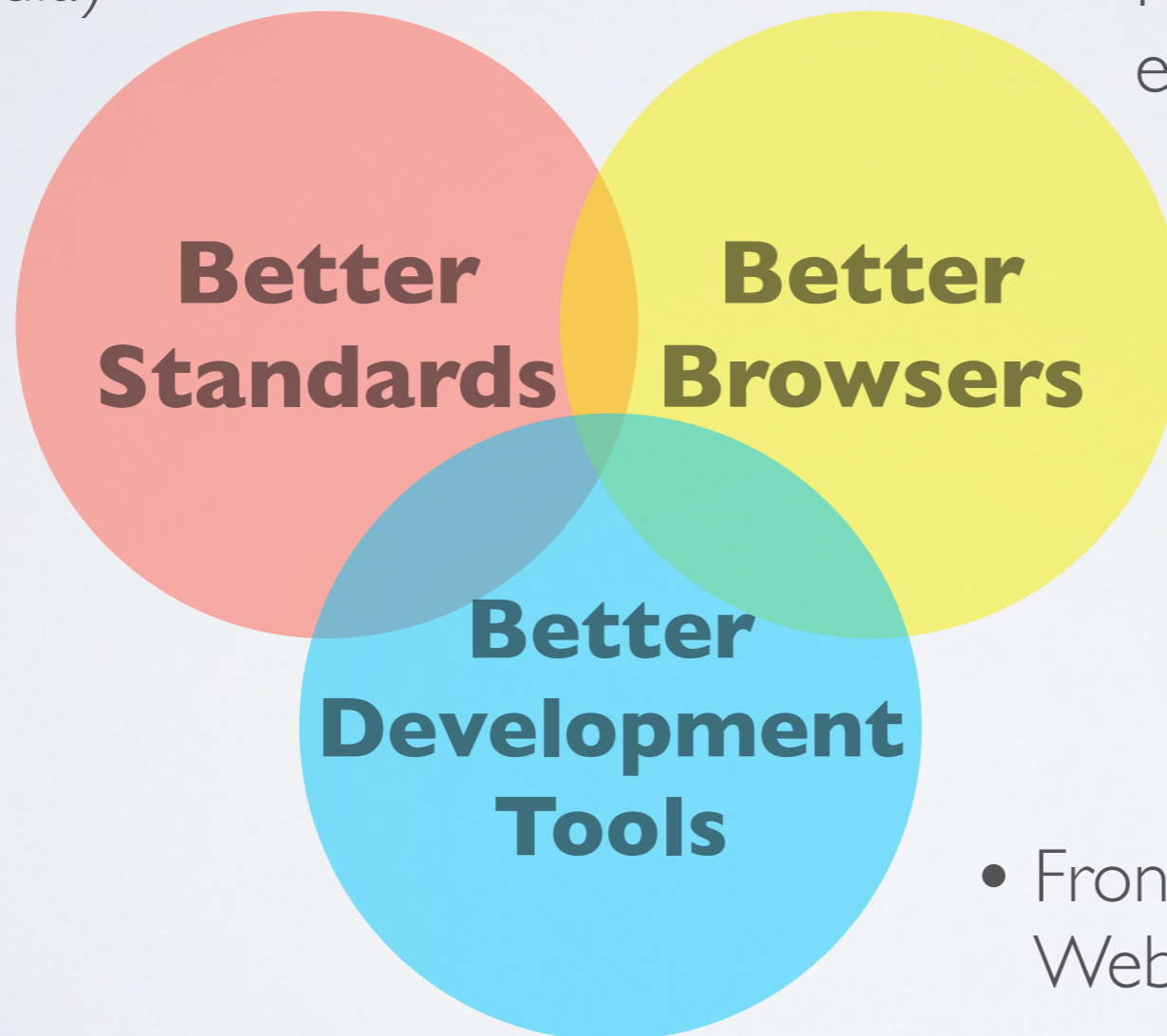


new usage

How web technologies have changed?

- Javascript (interactivity)
- HTML5 - CSS3 (multimedia)

- Homogeneous implementation of the standards
- Faster rendering and Javascript execution

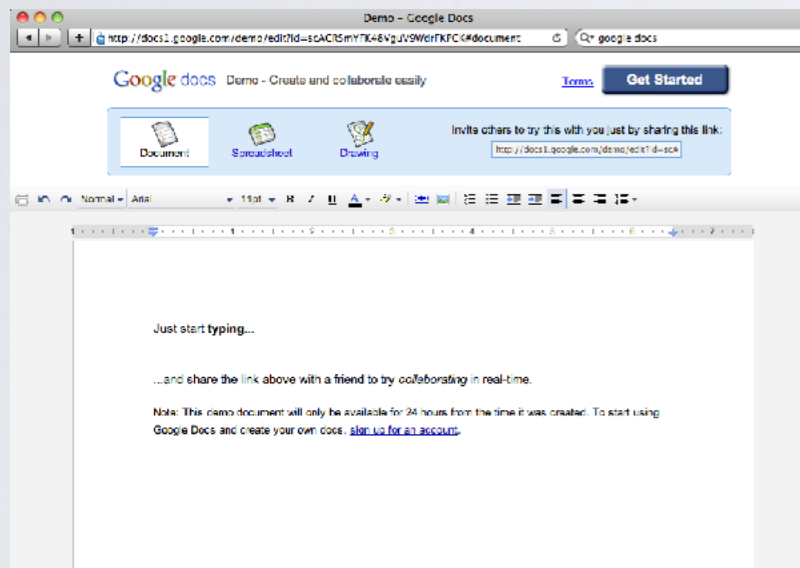


- Frontend and Backend Web frameworks

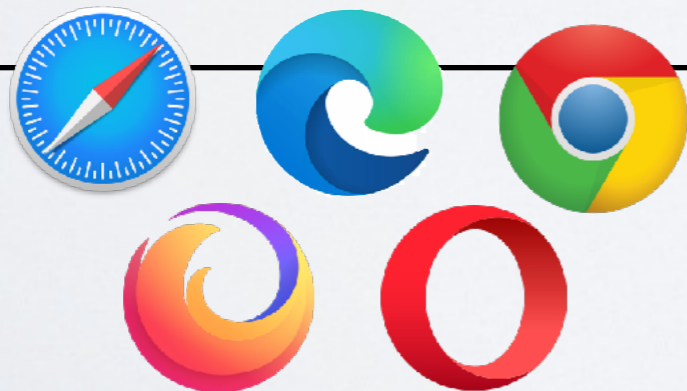
Traditional Web Platform

Client Side

Server Side



Web Browsers



Web Server



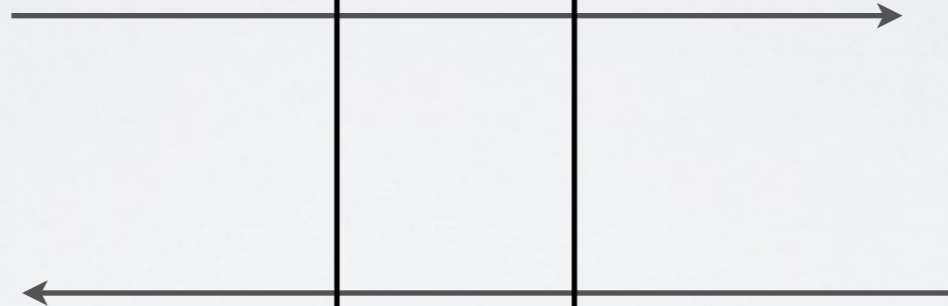
Modern Web Platform

Client Side

Server Side



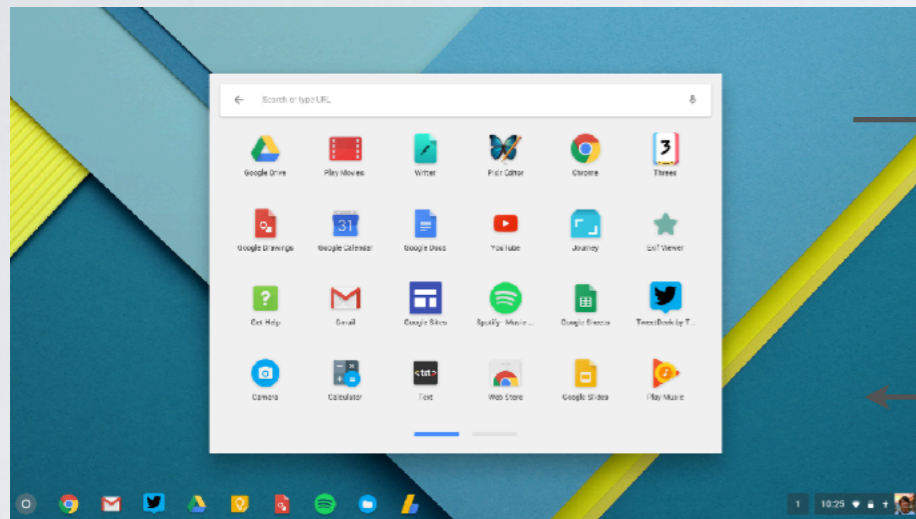
Smartphones and Tablets



Web Server

Emerging Web Platform

Client Side

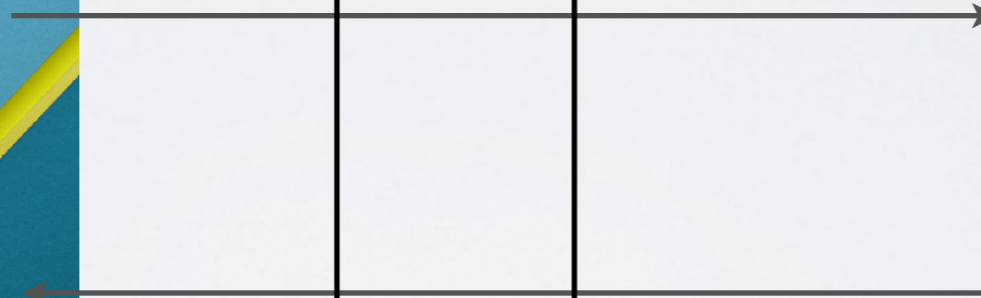


Web-based Operating System

Server Side

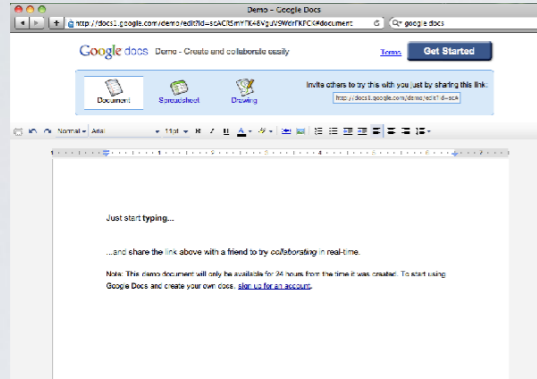


Web Server



Web applications from the developer's perspective

Web Technologies



HTTP protocol



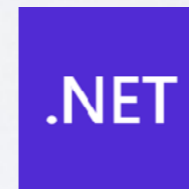
Content



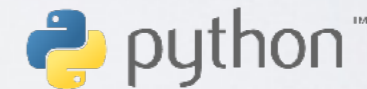
Presentation



Client Side Processing



Resources management



Why are web applications so popular?

- Easy to deploy
- Easy to maintain
- Fast and reliable technology (especially browsers)

What is challenging about web development

- A large collection of languages, framework and dev tools
- Technology evolves fast
- Event-based programming (concurrency)
- Asynchronous communication
- Debugging

About this course

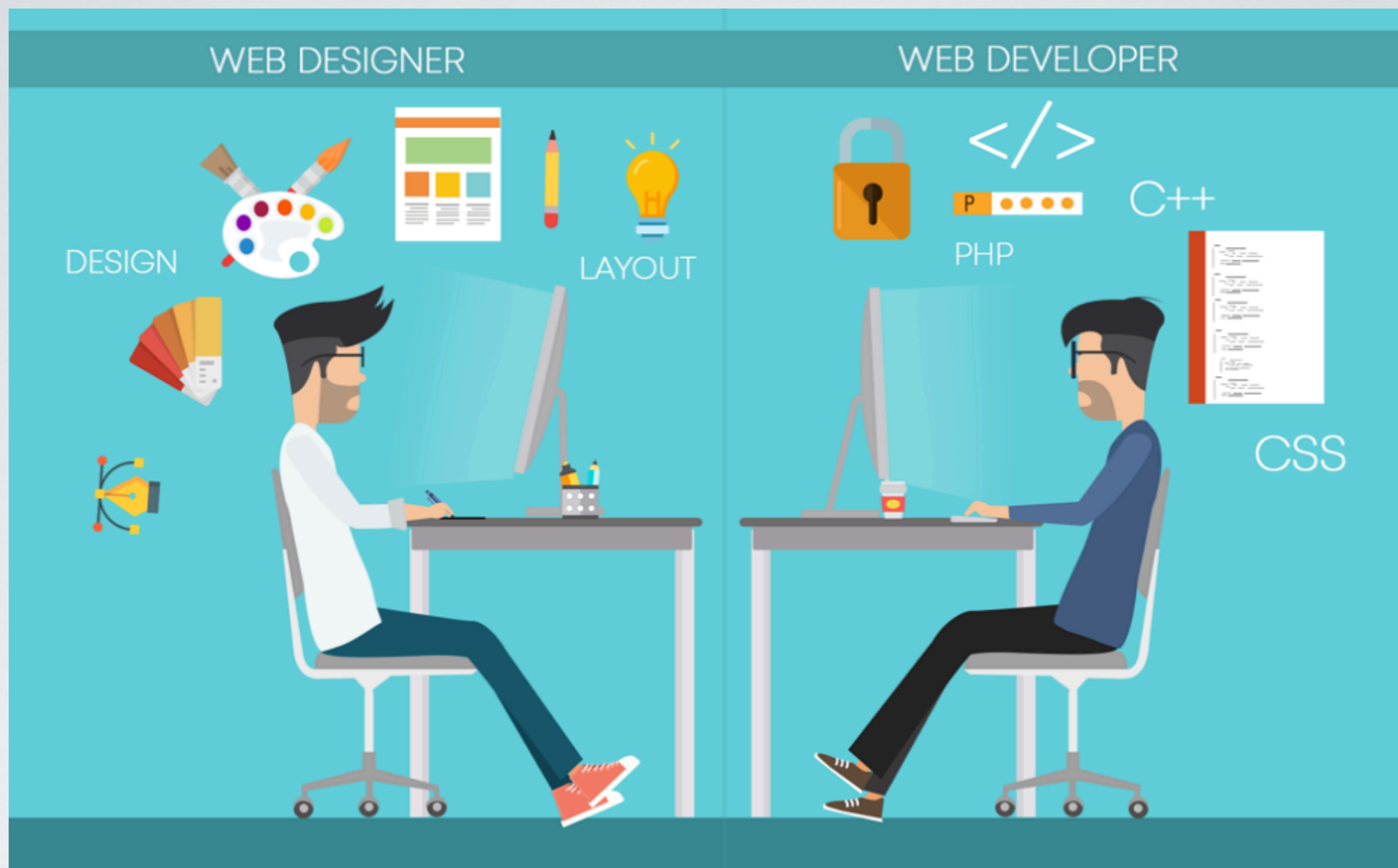
What you will learn in this course?

✓ Web development

- **The foundations of web programming**
- The new trends in web application development

○ ~~Web design~~

CSCC10 Human-Computer Interaction



Web Designer Salaries in Canada

Updated Sep 1, 2024

 Very High Confidence

Base Pay Range

\$42K - \$64K/yr

Average base pay

479 salaries

Web Developer Salaries in Canada

Updated Sep 1, 2024

 Very High Confidence

Base Pay Range

\$49K - \$74K/yr

Average base pay

3,562 salaries

Learning Outcome

- This course will make you ready for the **rapid changes of web technologies**
- This course will provide you with an experience that is **beyond junior web developer**

Course Syllabus

Let's look at the course webpage:

<https://thierrysans.me/CSCC09/>

How to succeed in this class?

- Learn and gain experience by doing labs, homework and project
- Start to work early,
web applications are hard to develop and hard to debug
- Come to the lectures, do not rely solely on the slides or code snippets
- Be smart about using resources from the web
- Go beyond, be curious, experiment, get your hands dirty
- Start thinking about your project now

Web Development tools

- **Chrome** (recommended) or Firefox
- **Code editor** with syntax highlighting for HTML, CSS, Javascript
- Web Accounts
 - **Github**
 - **Piazza**
- Command Line Tools
 - **Git**
 - **NodeJS and NPM**