CSCC09
Programming on the Web

Thierry Sans

1991

Sir Tim Berners-Lee

← → C ↻ ⌂   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
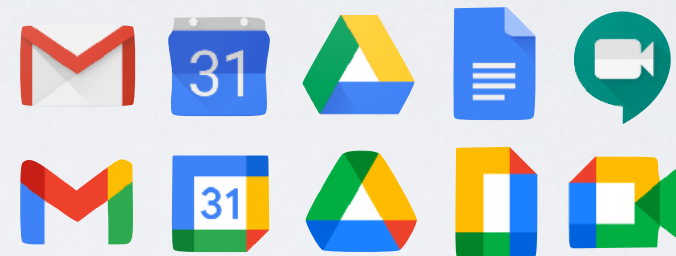   Getting the code by anonymous FTP , etc.

Web Portals

2023

Customer Resources Management

E-Health

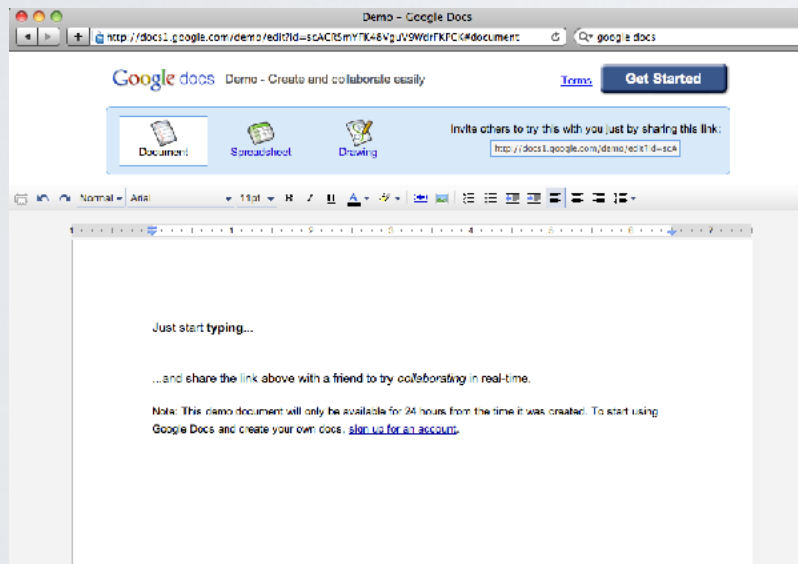Accounting and Billing

E-Learning

Collaboration

Content Management

Social Networks

Publishing

Architecture of a Web Application

Client Side (a.k.a Frontend)

Web Browser

Server Side (a.k.a Backend)

Web Server

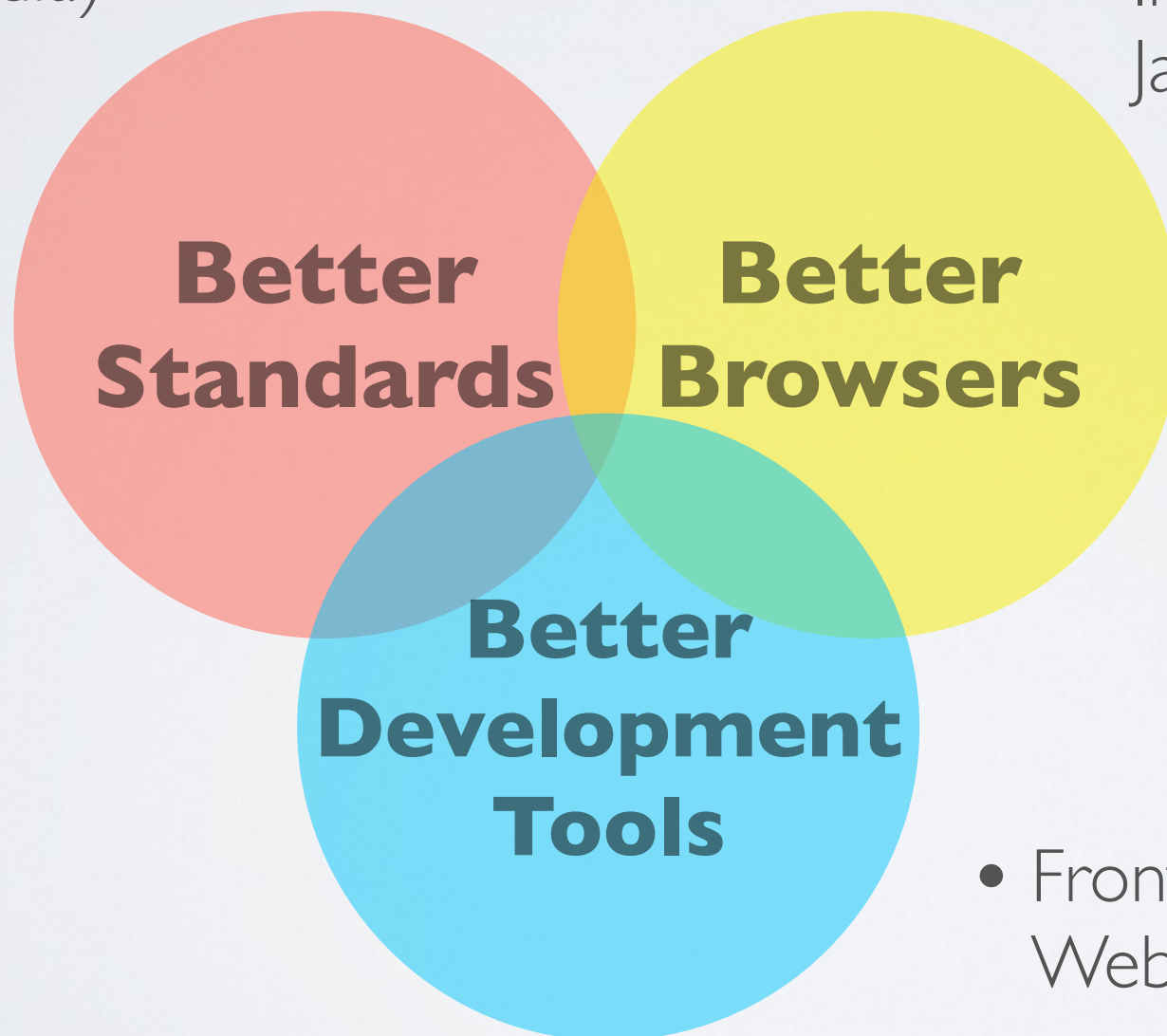# The Virtuous Circle

faster, better technology

↑   ↓

new usage

How web technologies have changed?

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

- Homogeneous implementation of the standards
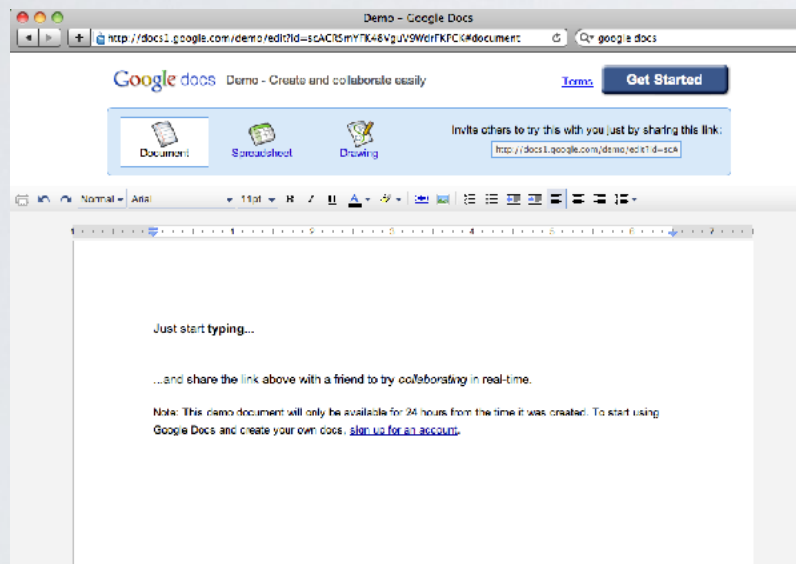- Increasing speed of rendering and Javascript engines

Better Standards

Better Browsers

Better Development Tools

- Frontend and Backend Web frameworks
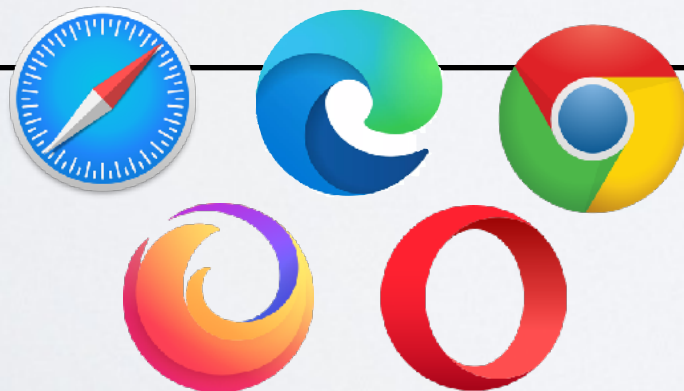
Traditional Web Platform

Client Side

Server Side

Web Browsers

Web Server

Modern Web Platform
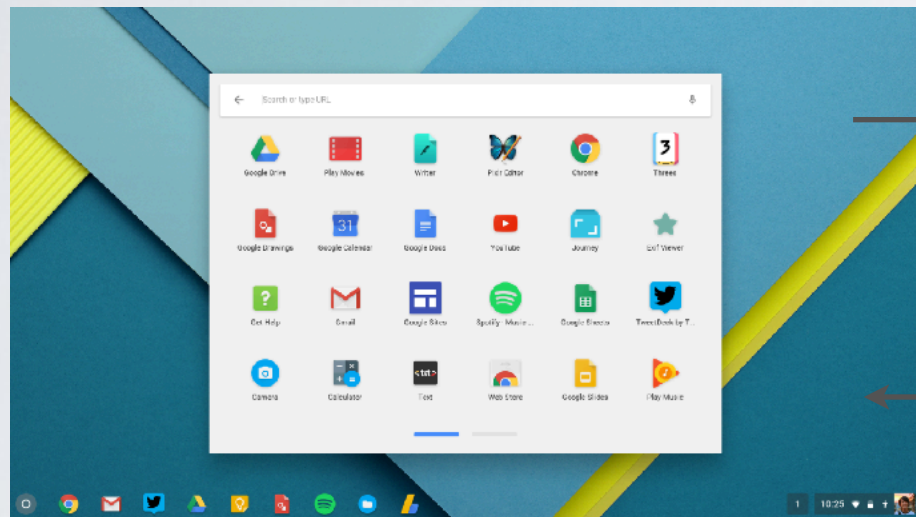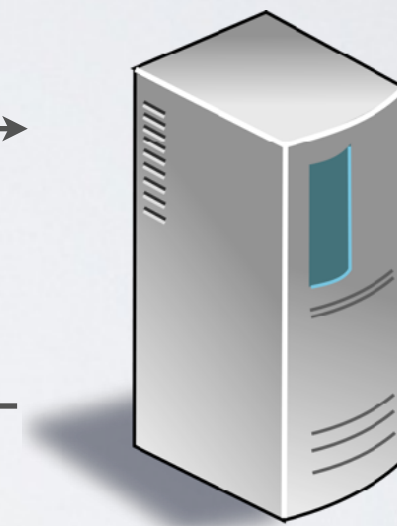
Client Side

Server Side

Smartphones and Tablets

Web Server

Emerging Web Platform

Client Side

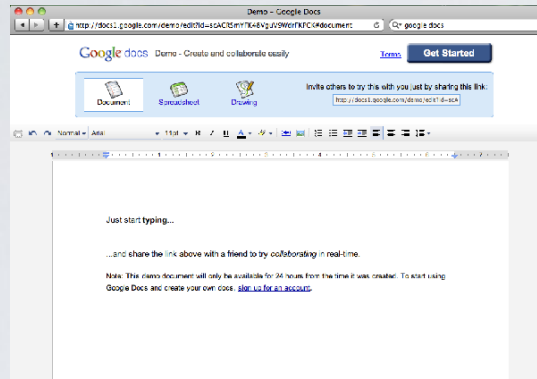Web-based Operating System

Server Side

Web Server

Web applications from the developer's perspective
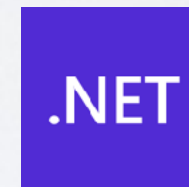
Web Technologies
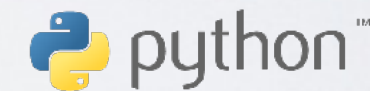

HTTP protocol

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
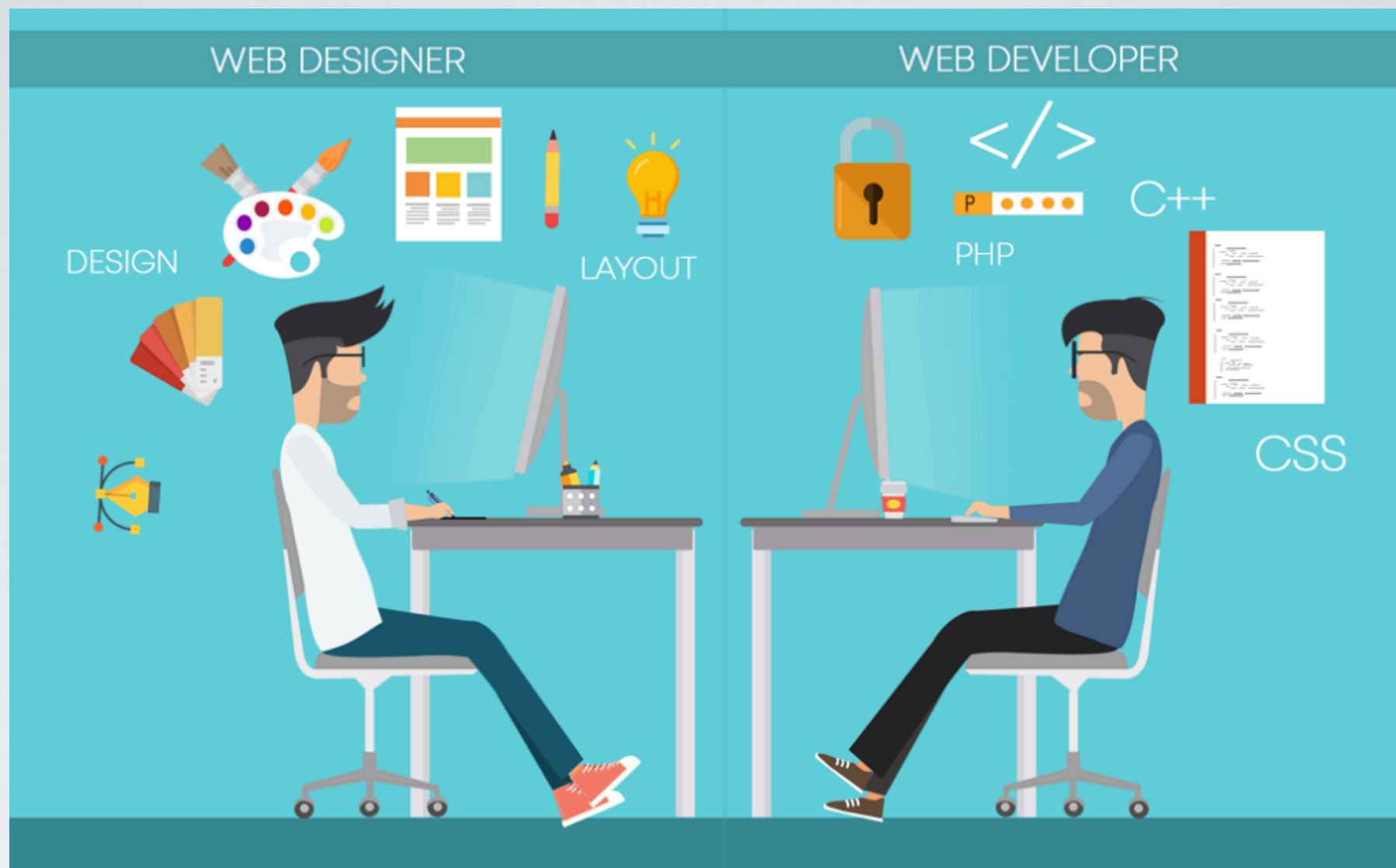
- Debugging

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
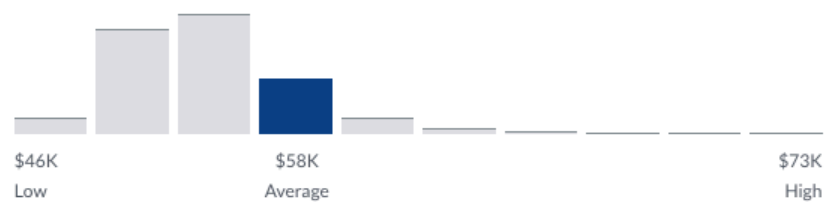
Web Designer Salaries in Canada
Updated Sep 3, 2023

Very High Confidence

$57,939/yr

Average Base Pay

423 salaries

$46K Low — $58K Average — $73K High

Additional Cash Compensation ⓘ

Average: **$1,865**   Range: $409 - $8,503

Web Developer Salaries in Canada
Updated Sep 3, 2023

Very High Confidence

$67,044/yr

Average Base Pay

3,074 salaries

$54K Low — $67K Average — $85K High

Additional Cash Compensation ⓘ

Average: **$3,321**   Range: $825 - $13,368

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**