

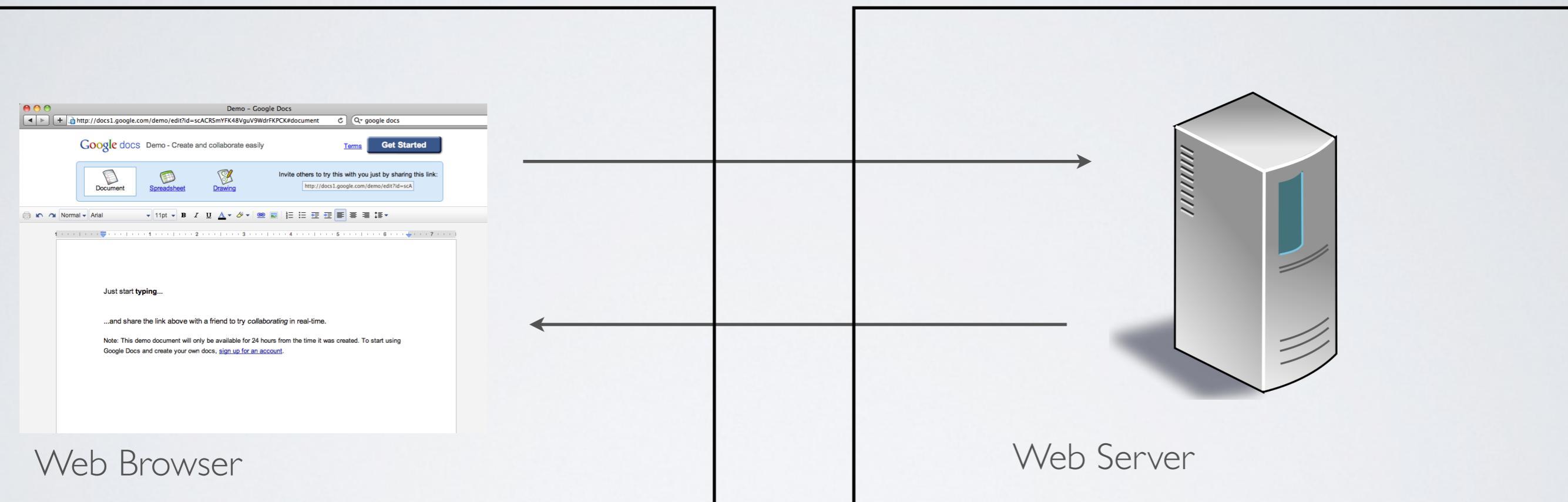
CSCC09
Programming on the Web

Thierry Sans

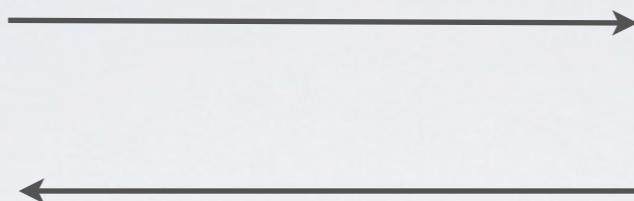
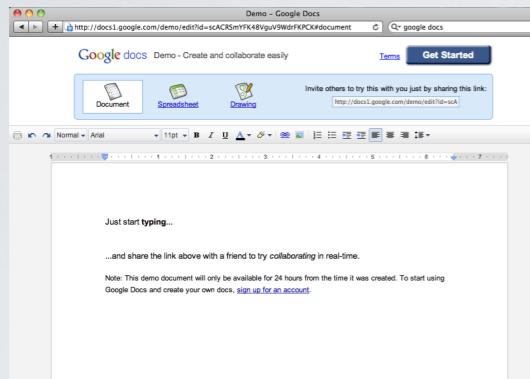
Architecture of a Web Application

Client Side

Server Side



Web Technologies



Content



Resources
management



Client Side
Processing

The evolution of web applications

The Virtuous Circle

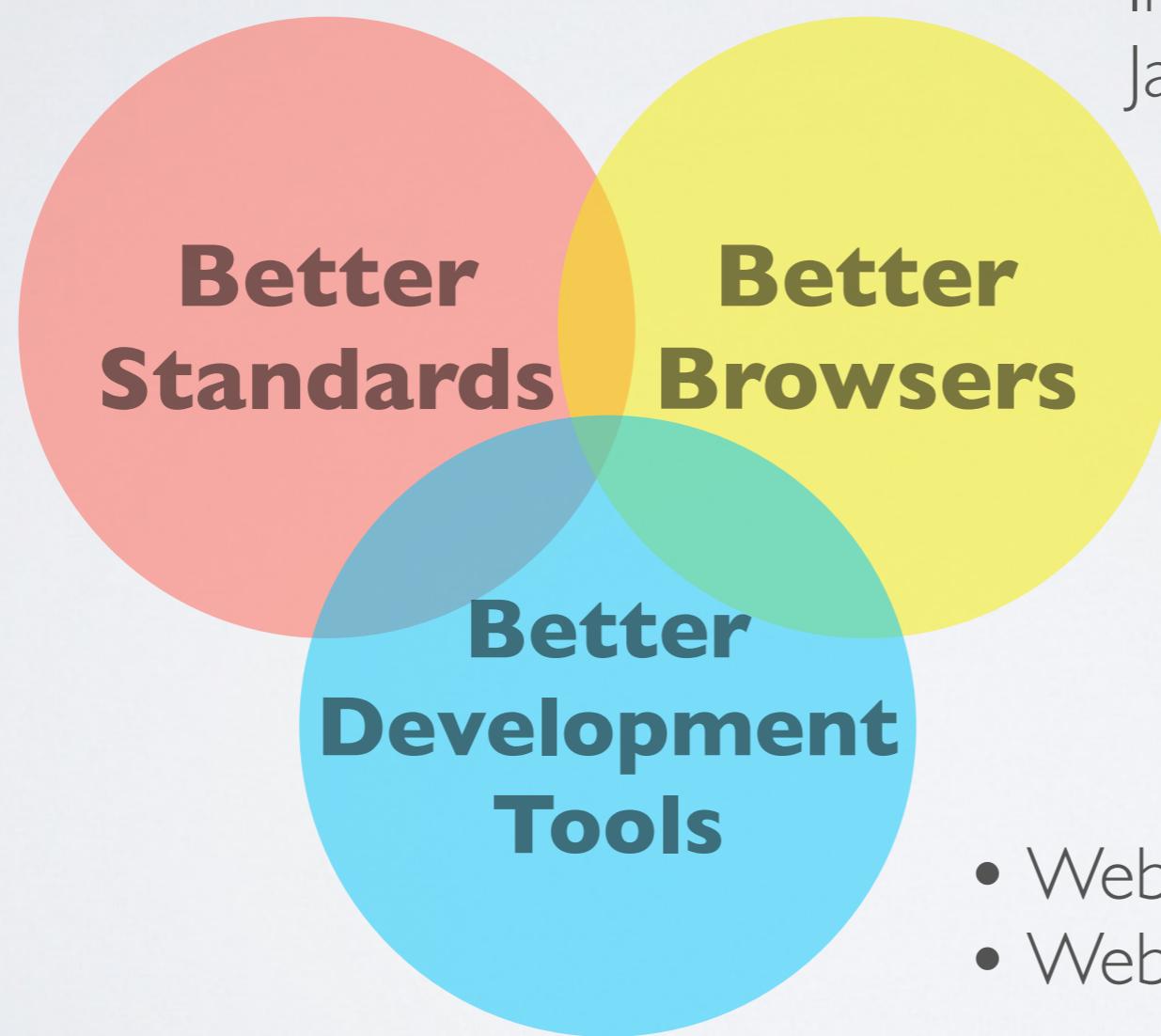
faster, better technology



new usage

How web technologies have changed?

- Ajax (interactivity)
- HTML 5 (multimedia)



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

- Web-oriented languages
- Web frameworks

Consequence I (of 2)

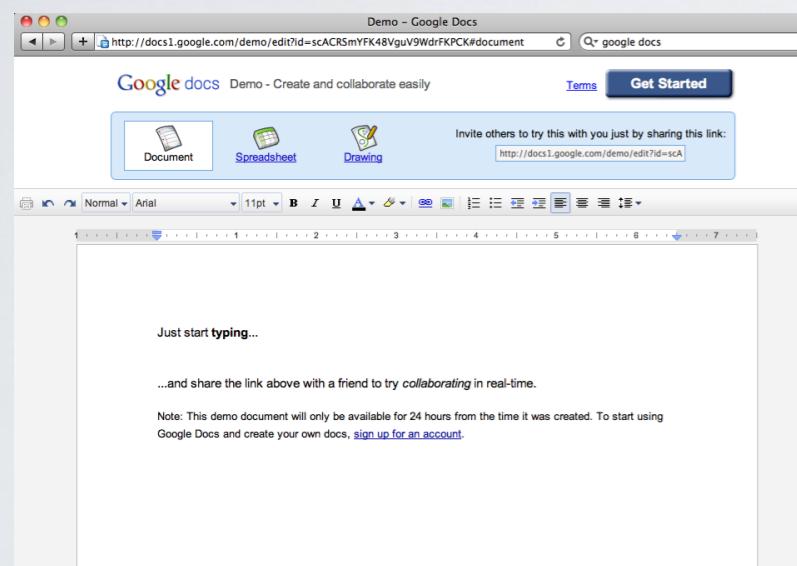
→ The application is moving from the server to the client

✓ Rich Content

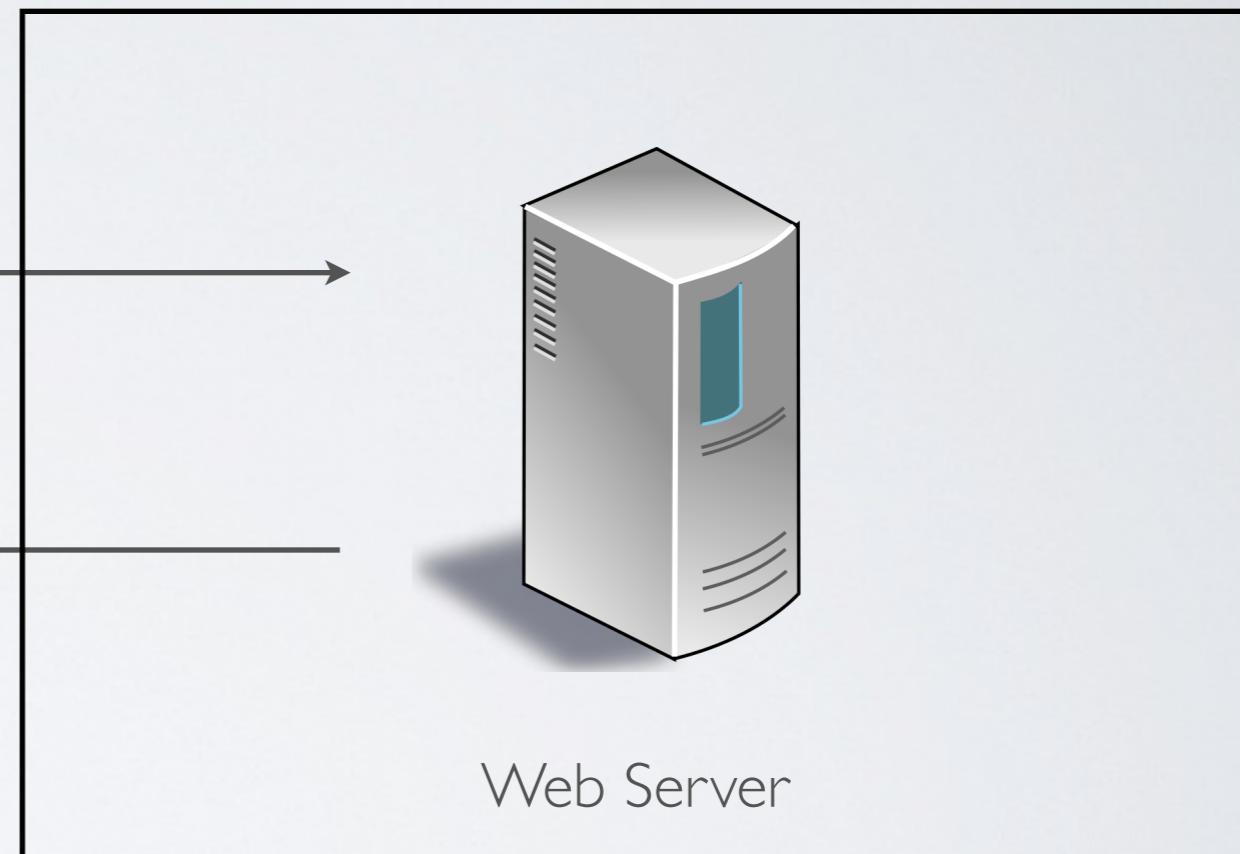
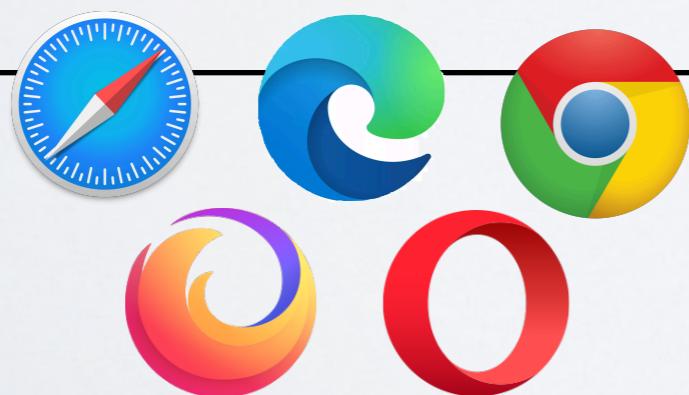
Traditional Web Platform

Client Side

Server Side



Web Browsers

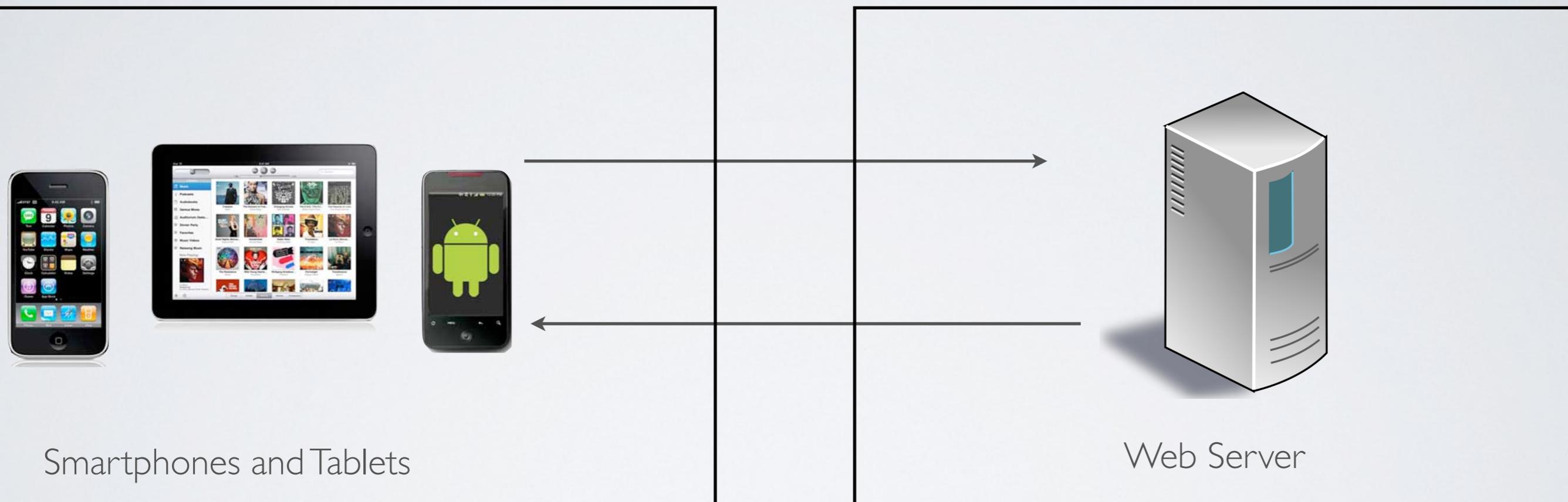


Web Server

Modern Web Platform

Client Side

Server Side



Consequence 2

- Data storage and data processing are moving from the desktop to the cloud
 - Cloud Computing

Customer Resources Management

Accounting and Billing

Collaboration

E-Learning

Web Portals

Content Management

Planning

E-Health

Where Web Applications are going

Rich Content

+

Cloud Computing

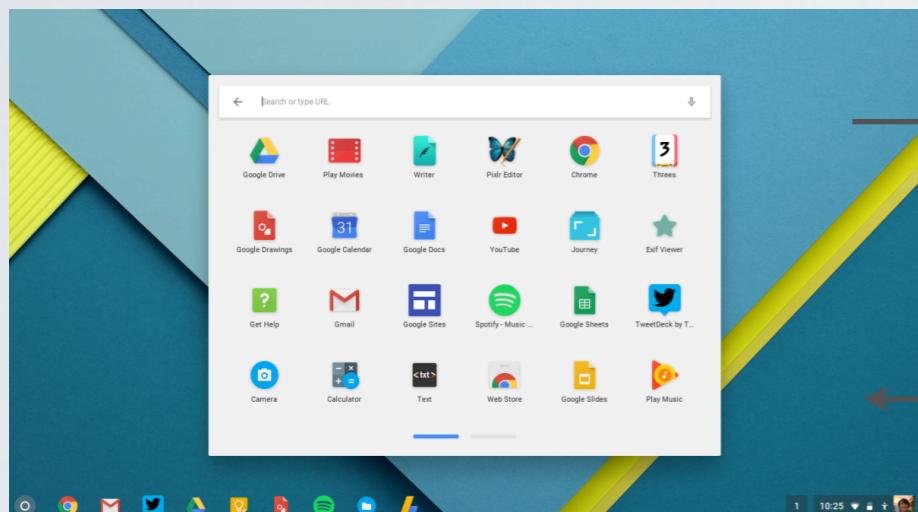
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A new way to think about software

Web Technologies are **at the heart** of this change

Emerging Web Platform

Client Side



Web-based Operating System

Server Side



Web Server

Web applications from the
developer's perspective

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

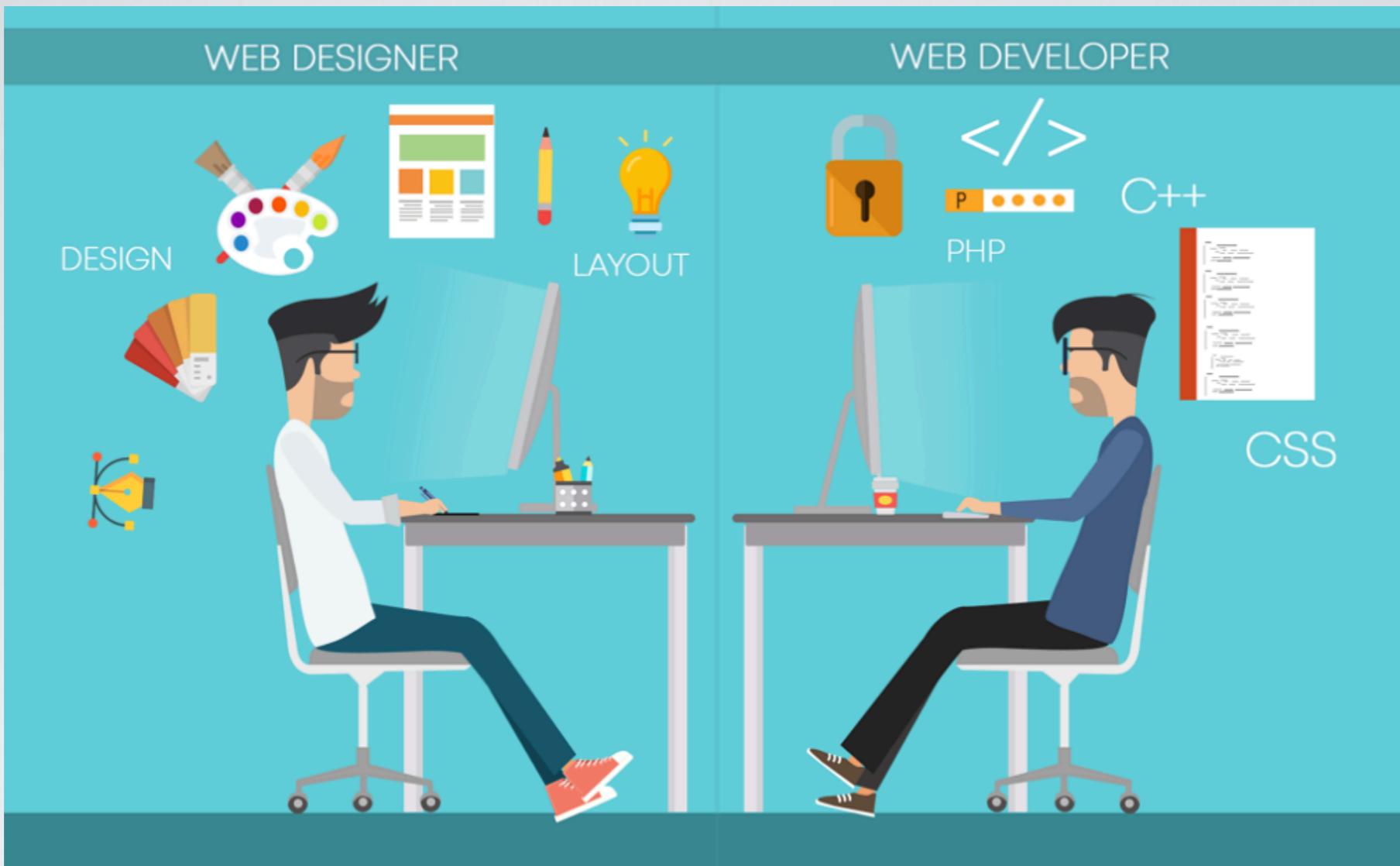
About this course

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 by Naureen Nizam

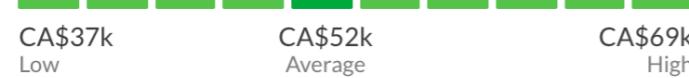


Web Designer Salaries

126 Salaries Updated Dec 27, 2019

Average Base Pay

CA\$52k /yr



How much does a Web Designer make?

The national average salary for a Web Designer is \$52,265 in Canada. Filter by location to see Web Designer... [More](#)

Web Developer Salaries

831 Salaries Updated Jan 6, 2020

Average Base Pay

CA\$60k /yr



How much does a Web Developer make?

The national average salary for a Web Developer is \$60,000 in Canada. Filter by location to see Web... [More](#)

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
- Use resources on the web extensively
- 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**