



香港中文大學
The Chinese University of Hong Kong

CSCI2720 - Building Web Applications

Lecture 1: Introduction

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FAQ

- What's special about this course?
 - In the CSE Dept, we generally aim more for theories and sciences of computing. This course is more on *practical sides and lots of hands-on* experience.
- Crazy workload?
 - Yes. We aim to cover *every basic aspect* of web development. We want to ensure that you are well-prepared to pursue various directions (front-end / back-end / cloud / security) in the job market smoothly.
- Is it a pre-requisite for CSCI3100 Software Engineering?
 - No. You can study software engineering without studying this course.
- Should I bring my computer to lecture?
 - It is not necessary, but please feel free to try the code immediately.

How to do well in this course

- Explore and practise:
 - We prioritize hands-on material.
- Attend lectures and labs:
 - It is hard to catch up if you fall behind.
- Feedback and discuss:
 - Weekly labs & BlackBoard.



What browser should I use in this course?

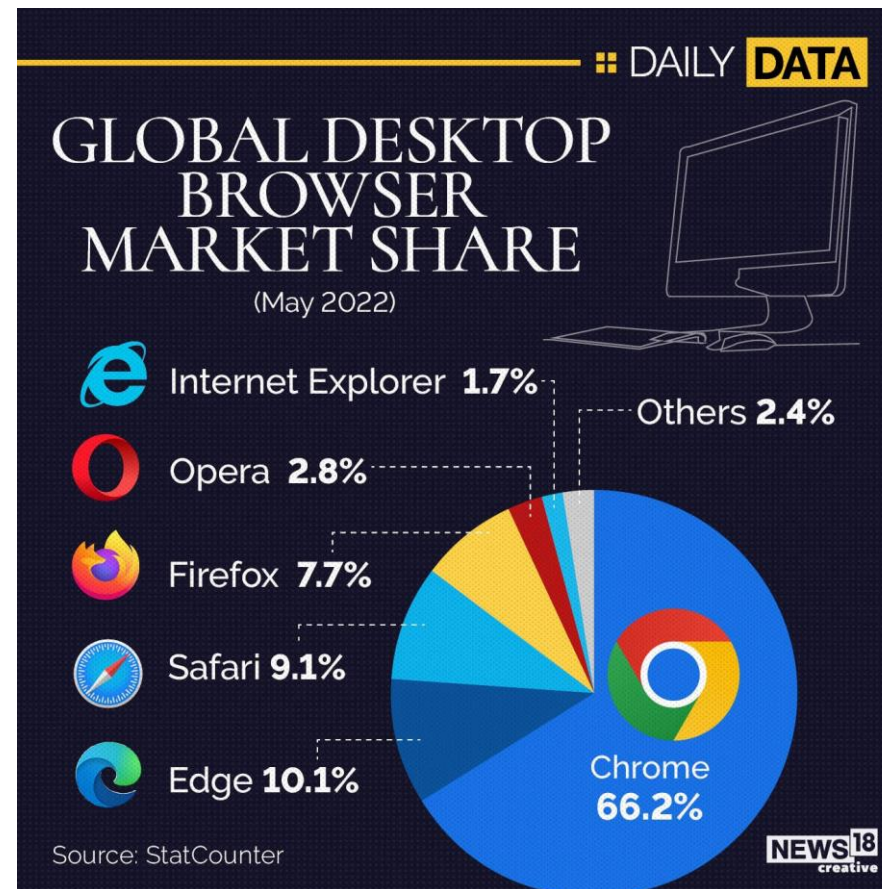


Image from Facebook: <https://www.facebook.com/moneycontrol/photos/a.213169508693779/5578124808864862/?type=3>

What browser should I use in this course?

- Any modern browser on your laptop or tablet is fine
 - The skills you will learn in this course are applicable in almost any web browser
- For consistency, all assignments and project will be graded on the latest (almost) version of Google Chrome.



What editor should I use?

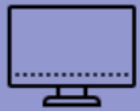
- You should use a text-based editor
 - You need to understand the programming code of multiple languages
 - Graphical editors may generate code that you cannot understand
 - Code linting and auto-completing is fine, yet just remind yourself not to get too dependent
 - We will learn
- Try online IDEs which will render right in the page
 - e.g., codepen.io, jsfiddle.net

What is web application?

- The web is service that allow computers to share and exchange data.
 - It could be image, music, numbers, etc.
- A software application often handled by the browser.
- Accessed via web over an intranet or the internet.
- Client-server based
- Some related terms you may head of: Dynamic websites, Web 1.0, Web 2.0, etc.

"Full-stack Development"

WEB TECHNOLOGIES



Web clients

Browser Engines

WebKit
Blink
Gecko
EdgeHTML

Client-side
Rendering

HTML
CSS
JavaScript
Ajax/Fetch
Frameworksss...



Internet

World Wide Web

HTTP
URL
Security layers

Server-side
Programs

Perl
PHP
ASP
JSP
Node.js



Web server



Files



Database

Server Data

Plain files
JSON/XML
DBMS

Basic elements of a web application

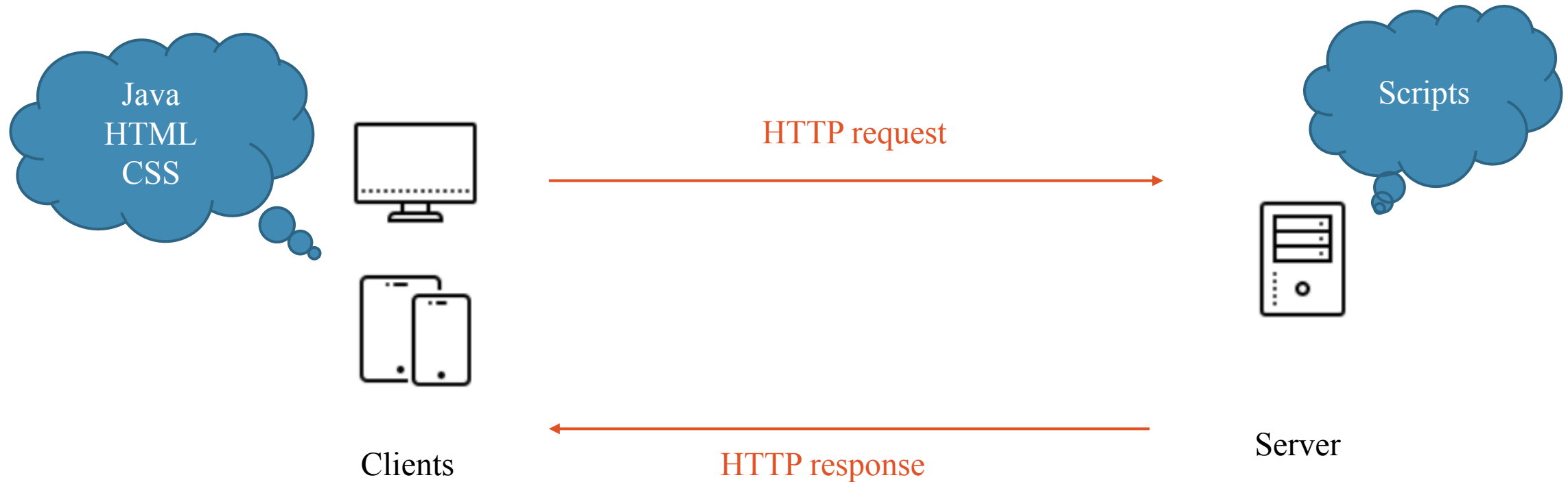
Client-side

- HTML
 - basic mark up of web contents
- CSS
 - Control the presentation of web content
- JavaScript
 - Generating dynamic contents

Server-side

- Web server
 - Delivering contents upon request
- Scripts (e.g., php, Node.js)
 - Programs for preparing contents
- HTTP
 - Communication between server and client

How does a web app work?



Further reading

- W3C standards in Web Design and Applications:
 - <https://www.w3.org/standards/>

