SUSS
SINGAPORE UNIVERSITY OF SOCIAL SCIENCES

ICT239 Web Programming

Front End Development – HTML & CSS - Seminar 2

RECAP: SEMINAR 1 OVERVIEW

INTRODUCTION TO WEB PROGRAMMING – LEARNING OBJECTIVES

1. Understand fundamental of Web Technologies - Internet, Browsers, Web Servers, Web Applications, Databases

2. Web Application Development Tools - Testing & Debugging

3. Basic Web Page Elements and Learn how Web Pages are deployed

SEMINAR OVERVIEW

INTRODUCTION TO WEB PROGRAMMING – LEARNING OBJECTIVES

1. Analyse the HTTP protocol in a sequence of requests for coherent communication

2. Understand how to respond to an information request through HTTP protocol

3. Learn how application state is managed across a sequence of information request through HTTP

4. Structure and present information with Client side programming

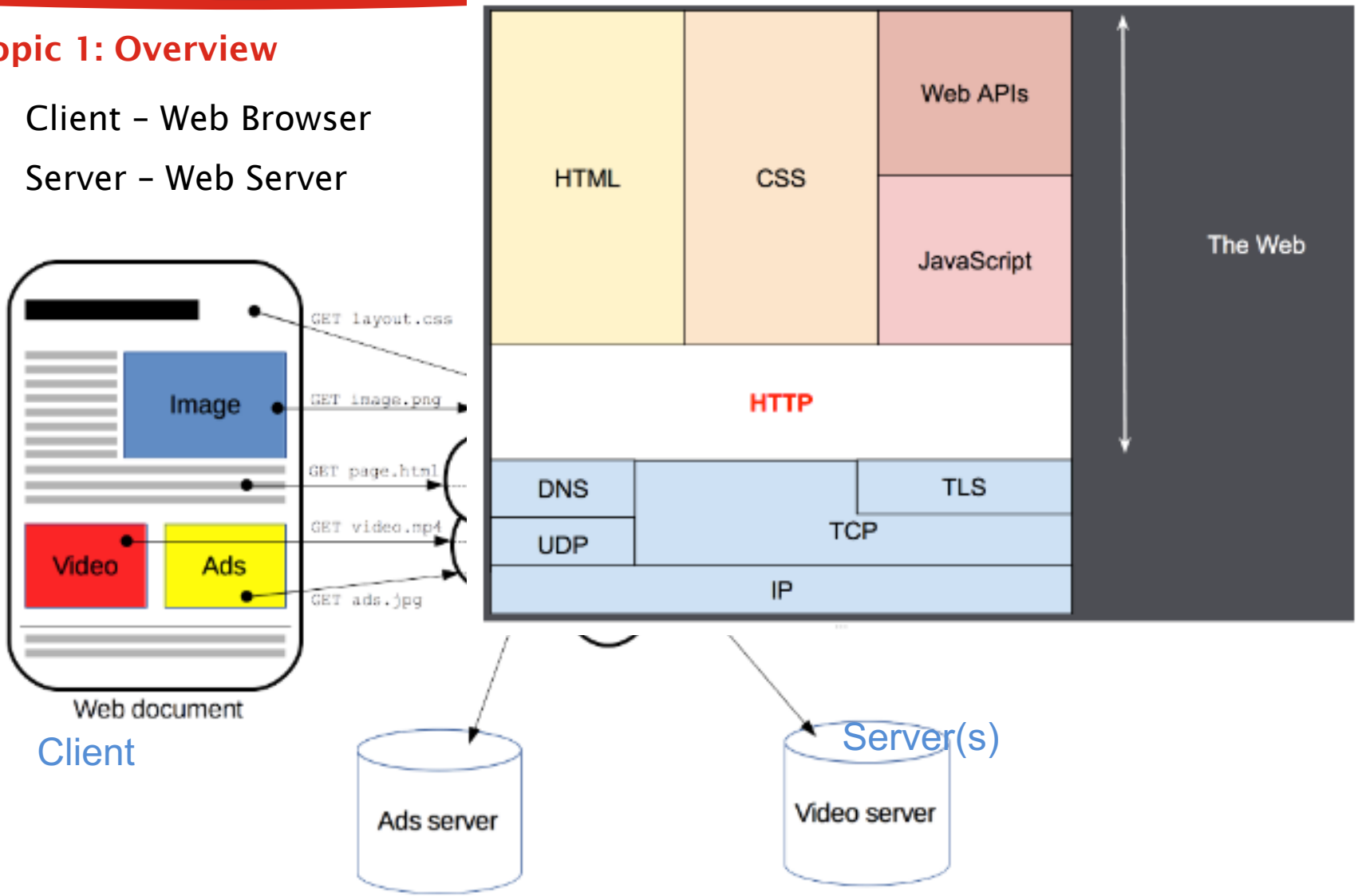
5. Use HyperText Markup Language (HTML)

6. Use Cascading Style Sheet (CSS)

RECAP: Client and Server

Topic 1: Overview

1) Client – Web Browser
2) Server – Web Server



RECAP: Client and Server

Overview

Static vs Dynamic

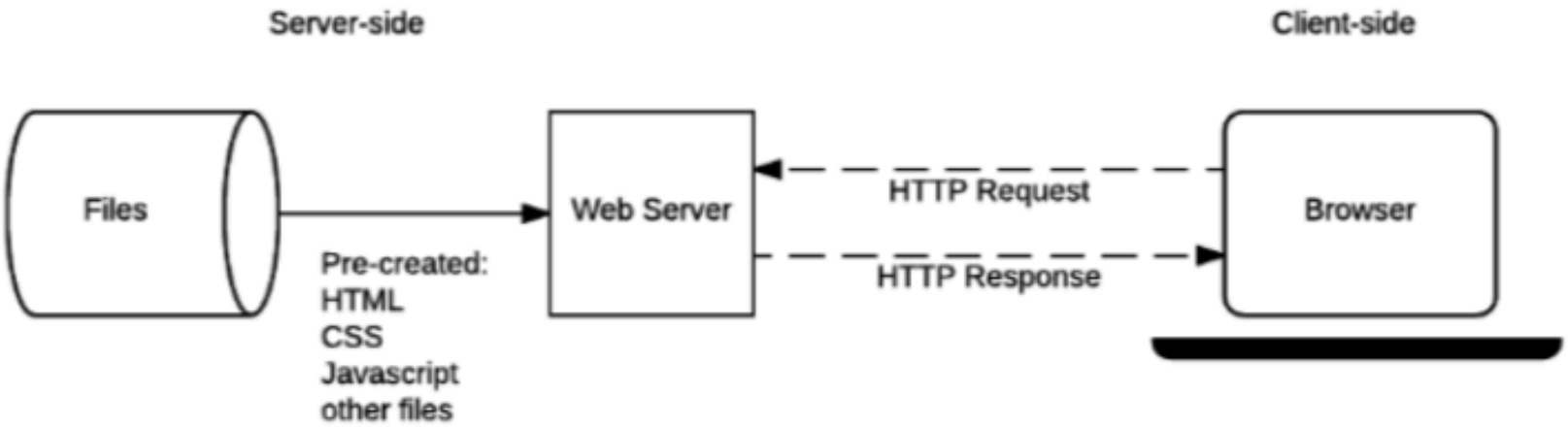


Figure 1: Static website architecture
Source: mozilla.org

Request - https://developer.mozilla.org/en-US/docs/Web/HTTP/Session#Sending_a_client_request

Response - https://developer.mozilla.org/en-US/docs/Web/HTTP/Session#Structure_of_a_server_response

RECAP: Client and Server

Overview

Static vs Dynamic

HTTP Response Status Code

https://developer.mozilla.org/en-US/docs/Web/HTTP/Status

Common codes

200s – Successful

300s – Redirection

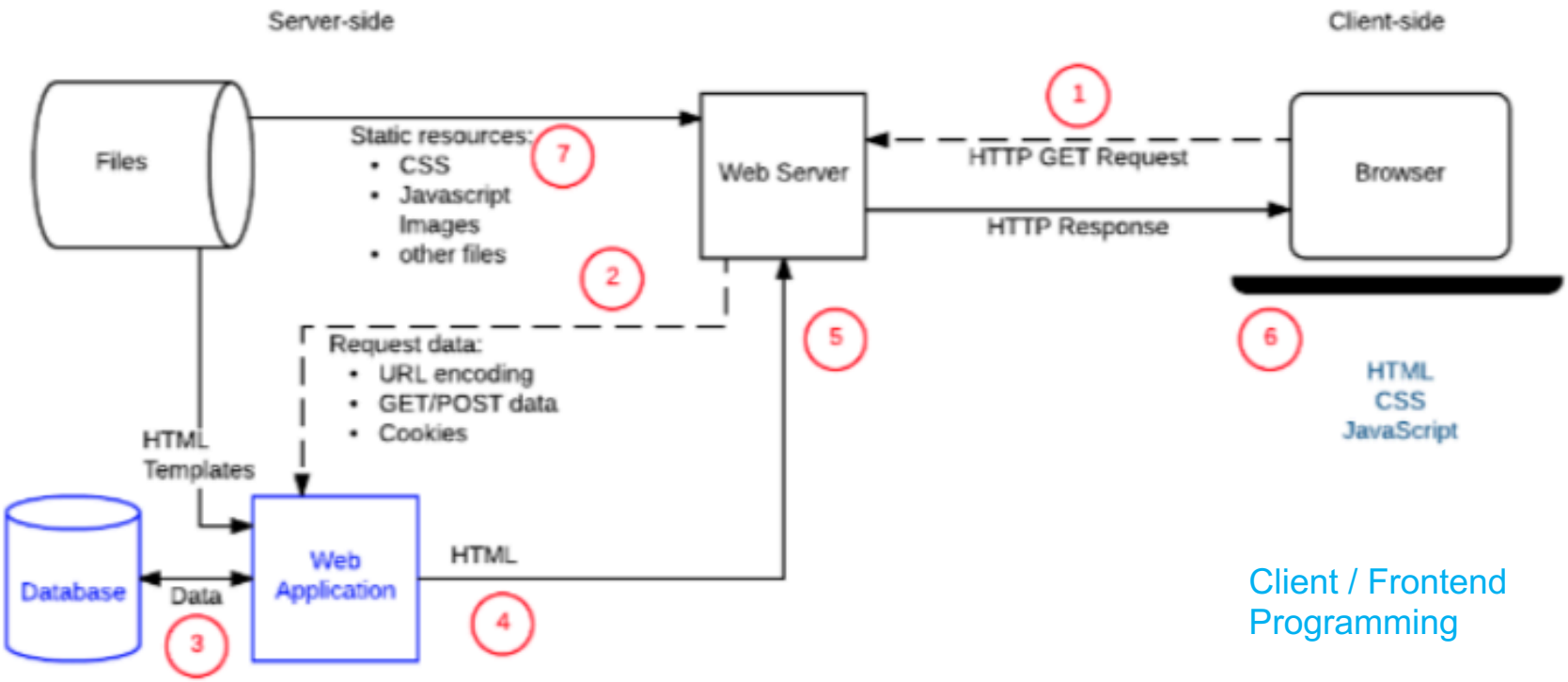
400s – Client errors

500s – Server errors

RECAP: Client and Server

Overview route parameters

http://www.server.com/best?team=my_team&show=11



Server / Backend Programming

Client / Frontend Programming

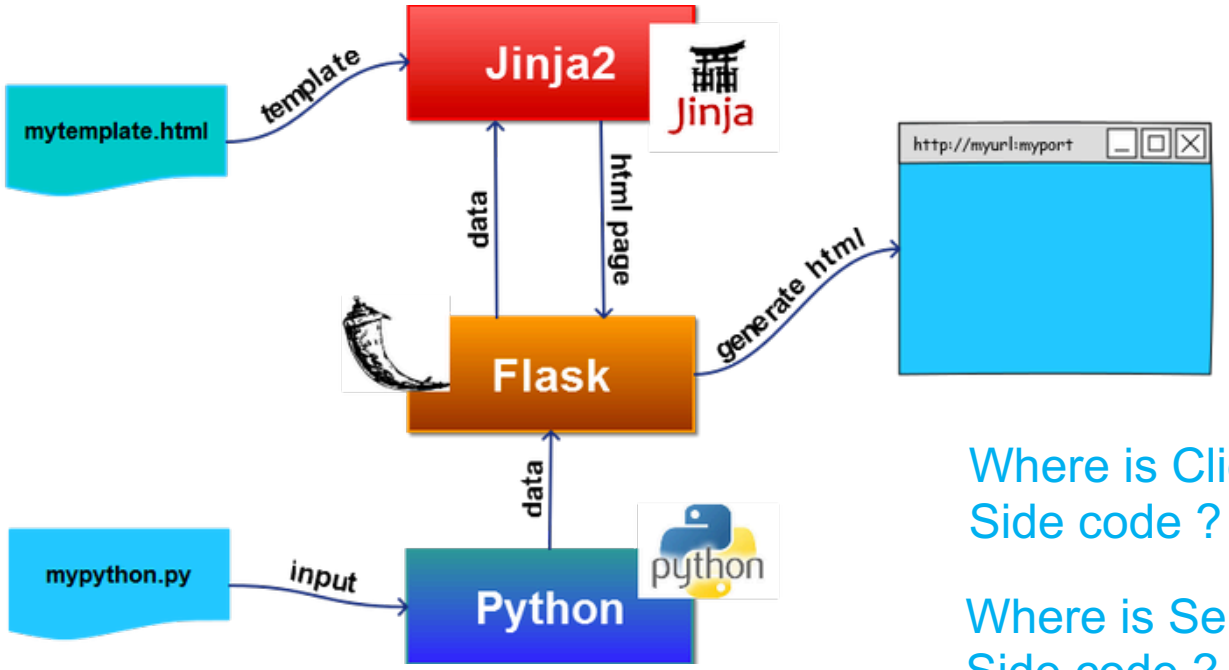
Figure 2: Dynamic website architecture
Source: mozilla.org

Client Side Programming

Overview

Client side code are primarily concerned with

- Appearance and behaviour
- Styling UI components - ie layout, navigation, form validations
- Present information that is suitable for different devices – ie responsive



Where is Client Side code ?

Where is Server Side code ?

https://developer.mozilla.org/en-US/docs/Web/HTTP/Overview

Client Side Programming

Overview

What is a web framework ?

- Collections of functions, objects, rules and other code construct
  - HTML + CSS + JS (Frontend)
  - Objects Classes & Methods + Templates (Backend)
- Simplify & Speeds up development
- Eg Bootstrap (Frontend), Flask (Backend)

Client Side Programming

HTML

Refer to Study Guide HTML Chapter

https://developer.mozilla.org/en-US/docs/Learn/HTML

https://www.w3schools.com/html/ - Referenrce

Client Side Programming: HTML

Structuring the web with HTML

https://developer.mozilla.org/en-US/docs/Learn/HTML (dated 28 Mar 2020)

Section	Note
Introduction to HTML Overview	Getting started with HTML What's in the head? Metadata in HTML HTML text fundamentals Creating hyperlinks Advanced text formatting Document and website structure Debugging HTML Assessment: Marking up a letter Assessment: Structuring a page of content
Multimedia and Embedding	Multimedia and embedding overview Images in HTML Video and audio content Adding vector graphics to the Web Assessment: Mozilla splash page
HTML Tables	HTML tables overview HTML table basics Assessment: Structuring planet data

Client Side Programming

CSS

Refer to Study Guide CSS Chapter

https://developer.mozilla.org/en-US/docs/Learn/CSS

https://www.w3schools.com/css/

Client Side Programming: CSS

Learn to style HTML using CSS

https://developer.mozilla.org/en-US/docs/Learn/CSS (dated 28 Mar 2020)

Section	Note
CSS First Steps	CSS first steps overview What is CSS? Getting started with CSS How CSS is structured How CSS works Using your new knowledge
CSS Building Blocks	CSS building blocks overview Cascade and inheritance CSS selectors The box model Backgrounds and borders Values and units Sizing items in CSS Images, media, and form elements Styling tables Debugging CSS
Use CSS to solve common problems (Extra)	Common use cases Uncommon and advanced techniques

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TODO BEFORE NEXT SEMINAR

Reminder

- Read Study Unit 2,3 – they are related
- References
  - https://developer.mozilla.org/en-US/docs/Learn/JavaScript
  - https://developer.mozilla.org/en-US/docs/Learn/Tools_and_testing/Cross_browser_testing
  - Try out the exercises! (In the Study Unit, Mozilla site)
- Use your Canvas resources
  - Study Guide
  - Discussion Forums
  - Course Textbook / Google

Pre-Reading Reference

JavaScript — Dynamic client-side scripting

https://developer.mozilla.org/en-US/docs/Learn/JavaScript (dated 28 Mar 2020)

Section	Note
Javascript first steps	JavaScript first steps overview What is JavaScript? A first splash into JavaScript What went wrong? Troubleshooting JavaScript Storing the information you need — Variables Basic math in JavaScript — Numbers and operators Handling text — Strings in JavaScript Useful string methods Arrays Assessment: Silly story generator
Javascript Building Blocks	JavaScript building blocks overview Making decisions in your code — Conditionals Looping code Functions — Reusable blocks of code Build your own function Function return values Introduction to events Assessment: Image gallery

Pre-Reading Reference

JavaScript — Dynamic client-side scripting

https://developer.mozilla.org/en-US/docs/Learn/JavaScript (dated 28 Mar 2020)

Section	Note
Introducing Javascript objects	Introducing JavaScript objects overview Object basics Working with JSON data
Asynchronous Javascript	Asynchronous JavaScript overview General asynchronous programming concepts Introducing asynchronous JavaScript
Client-side web APIs	Client-side web APIs Introduction to web APIs Manipulating documents Fetching data from the server Third party APIs

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Thank You.