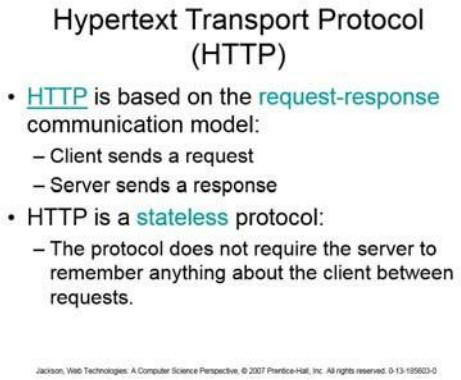
**Mid Term - We will cover these chapters**

1- Chapter 1: HTTP
2- Chapter 2: HTML
3- Chapter 3: CSS
4 Chapter 4: JavaScript
5- Chapter 5: DOM

**Questions Type:**
**These are just examples of the major questions types:**
**MCQs, True/False, Short Answer, What is the output of the program or the function, identify the error in the code, write a code.**

- Chapter 1:
  - HTTP request / response (URI, MIME)
  - Caching
  - Definition of Web Server


HTTP request: ← !important

- Start line
  - Example: GET / HTTP/1.1
  - Three space-separated parts:
    - HTTP request method
    - Request-URI
    - HTTP version
  - Uniform Resource Identifier (URI)
    - Syntax: *scheme* : *scheme-depend-part*
      - Ex: In http://www.example.com/
        the scheme is http
    - Request-URI is the portion of the requested URI that follows the host name (which is supplied by the required Host header field)
      - Ex: / is Request-URI portion of http://www.example.com/

- URI's are of two types:
  - Uniform Resource Name (URN)
    - Can be used to identify resources with unique names, such as books (which have unique ISBN's)
      - Scheme is urn
  - Uniform Resource Locator (URL)
    - Specifies location at which a resource can be found
    - In addition to http, some other URL schemes are https, ftp, mailto, and file.
- Common request methods:
  - GET
    - Used if link is clicked or address typed in browser
    - No body in request with GET method
  - POST
    - Used when submit button is clicked on a form
    - Form information contained in body of request
  - HEAD
    - Requests that only header fields (no body) be returned in the response

- Header field structure:
  - *field name* : *field value*
  - Syntax
    - Field name is not case sensitive
    - Field value may continue on multiple lines by starting continuation lines with white space
    - Field values may contain MIME types, quality values, and wildcard characters (*'s)
  - MIME type← !important
    - Convention for specifying content type of a message
    - In HTTP, typically used to specify content type of the body of the response
    - MIME content type syntax:
    - *top-level type* / *subtype*
    - Examples: text/html, image/jpeg.
    - Example header field with quality values:
      accept: text/xml,text/html;q=0.9,
      text/plain;q=0.8, image/jpeg,
      image/gif;q=0.2,*/*;q=0.1
    - *Quality value applies to all preceding items*
    - Higher the value, higher the preference
    - Note use of wildcards to specify quality 0.1 for any MIME type not specified earlier

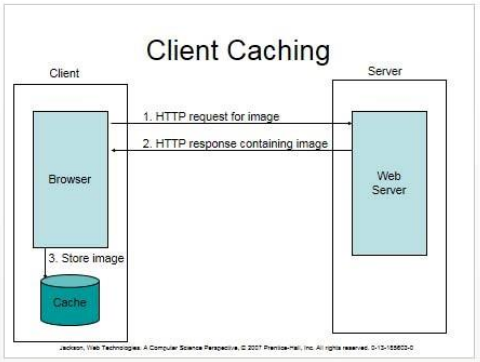
Response: ← !important

- Status line
  - Example: HTTP/1.1 200 OK

- Three space-separated parts:
    - HTTP version
    - status code
    - reason phrase (intended for human use)
- Status code ← !important
    - Three-digit number
    - First digit is class of the status code:
        - 1=InformaΘonal
        - 2=Success
        - 3=RedirecΘon (alternate URL is supplied)
        - 4=Client Error
        - 5=Server Error
    - Other two digits provide additional information

- Header fields
    - Common header fields:
        - Connection, Content-Type, Content-Length
        - Date: date and time at which response was generated (required)
        - Location: alternate URI if status is redirection
        - Last-Modified: date and time the requested resource was last modified on the server
        - Expires: date and time after which the client's copy of the resource will be out-of-date
        - ETag: a unique identifier for this version of the requested resource (changes if resource changes)

- Caching : A cache is a local copy of information obtained from some other source


Client Caching
Client
Server
1. HTTP request for image
2. HTTP response containing image
Browser
Web Server
3. Store image
Cache

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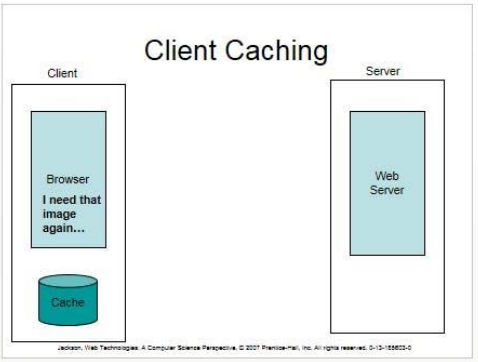
Client Caching
Client
Server
Browser
I need that image again…
Web Server
Cache

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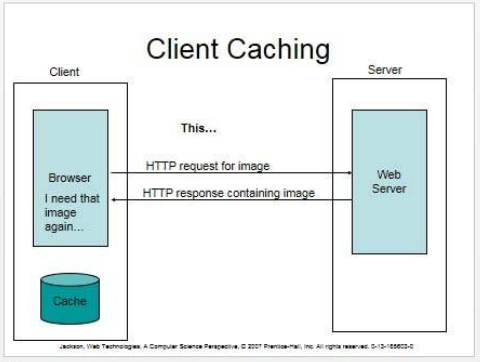
Client Caching
Client
Server
This…
Browser
I need that image again…
HTTP request for image
HTTP response containing image
Web Server
Cache

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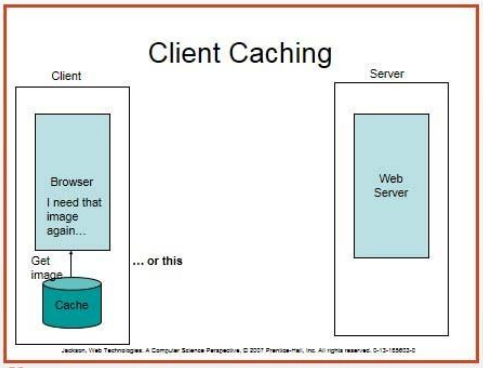
Client Caching
Client
Server
Browser
I need that image again…
Web Server
Get image
… or this
Cache

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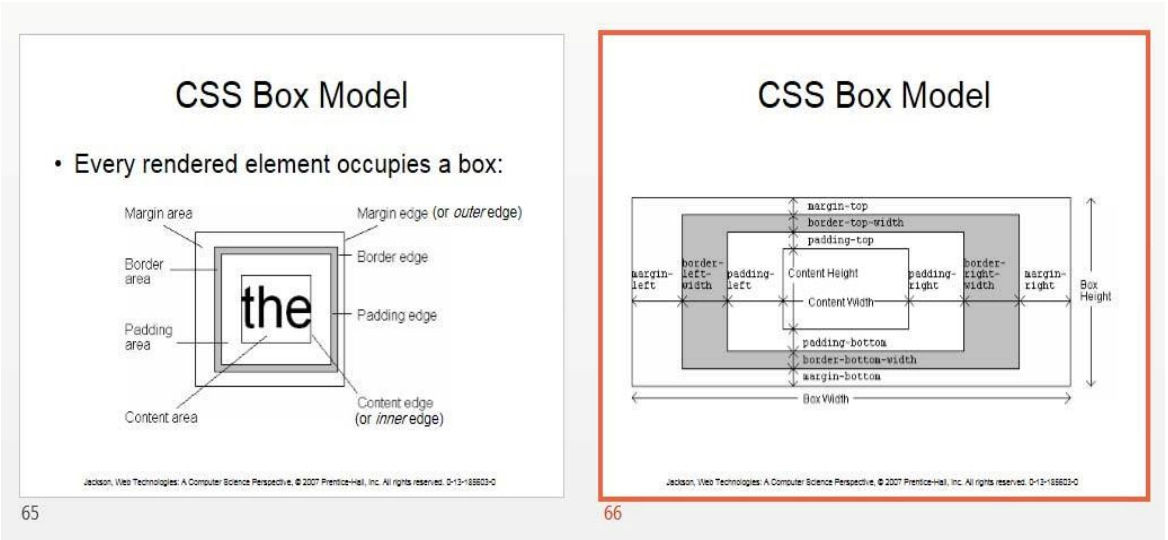
Solve caching problem ?
Slide 47 to 57.

- Chapter 2:
  - HTML vs. XHTML← !important
    - HTML allows some tag omissions (e.g., end tags)
    - XHTML element and attribute names are lower case (HTML names are case-insensitive)
    - XHTML requires that attribute values be quoted
  - HTML tags: div, p, span, table, ol, ul, img, a, form, input,

See the text file in mid folder. ← !important

- Chapter 3:
  - Different methods of embedding CSS
    - Inline, in the style attribute. Ex.  Red color .
    - Embed in the style attribute:
      <style>
      P { color: red}
      </style>
    - Linked or externalin another file: Ex.
      <head>
      <link rel="stylesheet" type="text/css" href="theme.css">
      </head>
  - Selector Strings (id, class, …). ← !important
    - To represent a class selector string we can use a dot in the beginning of the class name. Ex .aParagraph
    - To represent an ID selector string we can use a hash (#) in the beginning of the class name. Ex #aParagraph
    - We can apply multiple classes in a class attribute but we cant do the same for ID's
  - Color, font-style, font-size.
    - Style attriputes to set color
      - Font color = color:red or color:#00ff00.
      - Background color = background-color: red.
      - Font-style : underline , oblique, italic, initial , inherit , hΣp://www.w3schools.com/cssref/pr_font_font-style.asp
      - Font size: read about em in the slides – very important! In short it is a percentage of parent size, if parent is 1 cm size then 2 em mean child is 2 cm.
        hΣp://www.w3schools.com/cssref/pr_font_font-size.asp

- CSS Box Model (with all properties in it).




Also slides from 67 – 74

- Flow Layout (Normal, Relative, Absolute, Float).
  - In normal flow processing, each displayed element has **a corresponding box**
  - html element box is called initial containing block and corresponds to entire document
  - Boxes of child elements are contained in boxes of parent
  - Sibling block elements are laid out one on top of the other
  - Sibling inline elements are one after the other
  - **What is a "block element"?**
    - Element with value block specified for its display property
    - User agent style sheet (not CSS) specifies **default values;** typical block elements include html, body, p, pre, div, form, ol, ul, dl, hr, h1 through h6
    - Most other elements **except li and table-related** have inline specified for display
  - position: static (initial value), relative, or absolute
    - Element is positioned if this property not static
    - Properties **left, right, top, bottom** apply only to positioned elements
    - Primary values are auto (initial value) or CSS length
  - float: none, left, or right
    - Applies to elements with static and relative positioning only

Slide 14 to 25

Who to write a class or id?

What is the difference between class and id?

Slide 65 & 66

Flow layout ( normal ) very important.

No code for flow layout, just the Differences and definitions

- Chapter 4:
  - Window.alert, .prompt
    - 
  - Functions, var, if, loop, operators.
  - Regular Expression.
  - Object methods, constructors not important

how to use 1.alert 2. Prompt.
How to make regular and expression?
/^ format $/

- Chapter 5:

- Events: onclick, onmouseover, onmouseout, onfoucs, onblur
- Document tree: switching example, collapse/expand
- Event PropagaΘon: event listener, bubble (slide 96 example)
- Settimeout, setinterval

write the code?

Explain what the code do?

*document = no write.

Finlay

*Assignments 1 & 2 are important.

*What is the output?

What are the functions?

Write all errors.