THE WEB PROGRAMMER’S TOOLBOX

- Document languages and programming languages that are the building blocks of the web and web programming
  - XHTML
  - Plug-ins
  - Filters
  - XML
  - Javascript
  - Java, Perl, Ruby, PHP

**XHTML**
- To describe the general form and layout of documents
- An XHTML document is a mix of content and controls
  - Controls are tags and their attributes
  - Tags often delimit content and specify something about how the content should be arranged in the document
  - Attributes provide additional information about the content of a tag

**Creating XHTML documents**
- XHTML editors - make document creation easier
  - Shortcuts to typing tag names, spell-checker,
- WYSIWYG XHTML editors
  - Need not know XHTML to create XHTML documents

**Plugins and Filters**
- Plug ins
  - Integrated into tools like word processors, effectively converting them to WYSIWYG XHTML editors
- Filters
  - Convert documents in other formats to XHTML

**Plugins and Filters: Advantages and Disadvantages**
- Advantages of both filters and plug-ins:
  - Existing documents produced with other tools can be converted to XHTML documents
  - Use a tool you already know to produce XHTML
Disadvantages of both filters and plug-ins:
- XHTML output of both is not perfect - must be fine tuned
- XHTML may be non-standard
- You have two versions of the document, which are difficult to synchronize

XML
- A meta-markup language
- Used to create a new markup language for a particular purpose or area
- Because the tags are designed for a specific area, they can be meaningful
- No presentation details
- A simple and universal way of representing data of any textual kind

JavaScript
- A client-side HTML-embedded scripting language
- Only related to Java through syntax
- Dynamically typed and not object-oriented
- Provides a way to access elements of HTML documents and dynamically change them

Java
- General purpose object-oriented programming language
- Based on C++, but simpler and safer
- Our focus is on applets, servlets, and JSP

Perl
- Provides server-side computation for HTML documents, through CGI
- Perl is good for CGI programming because:
  - Direct access to operating systems functions
  - Powerful character string pattern-matching operations
  - Access to database systems
- Perl is highly platform independent, and has been ported to all common platforms
- Perl is not just for CGI

PHP
- A server-side scripting language
- An alternative to CGI
- Similar to JavaScript
- Great for form processing and database access through the Web

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