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