Chapter 23

WWW

- Hypertext and Hypermedia
- Browser Architecture
- Static Document and HTML
- Dynamic Document and CGI
- Active Document and Java

Figure 23-1

Distributed services

Site A  Site B  Site C

Site F  Site E  Site D
A computer is a digital electronic machine made of a CPU, a control unit, and memory. It is used to do mathematical and logical calculation. It is read-only memory. It is random access memory.

Computers

CPU

Control unit

Memory

It is part of a computer that controls the flow of data.

It can be RAM or ROM. It is used in a computer to store information.

It is random access memory.

RAM

It is read-only memory.

ROM

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**Figure 23-2**

Figure 23-3

**Hypertext**

**Browser architecture**

Browser

Controller

HTTP FTP TELNET SMTP

HTML

Java interpreters

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**Figure 23-3**
Figure 23-4
Categories of Web documents

<table>
<thead>
<tr>
<th>Web document</th>
<th>Static</th>
<th>Dynamic</th>
<th>Active</th>
</tr>
</thead>
</table>

Figure 23-5
Static document

a. Request

Client → Request → Server

b. Response

Client → Server → Web document
Boldface tags

Figure 23-6

Beginning of boldface

The text to be boldfaced

End of boldface

<B> This is the text that must be boldfaced. </B>

Effect of boldface tags

Figure 23-7

<B> This is the text to be boldfaced. </B>

Browser

This is the text to be boldfaced.
Figure 23-8  

**Beginning and ending tags**

- **Beginning tag**
  
  `< TagName Attribute = Value Attribute = Value ... >`

- **Ending tag**
  
  `< /TagName >`

---

**Figure 23-9  
Dynamic document**

- **a. Request for running a program**

  ![Client](image) ![Request](image) ![Server](image)  

- **b. Running the program and creating the document**

  ![Client](image) ![Program](image) ![Document](image)  

- **c. Response**

  ![Client](image) ![Document](image) ![Server](image)
Active document

Figure 23-10

a. Request for a copy of a program

b. Sending a copy of the program

c. Running the program and creating the document

Skeleton of an applet

Figure 23-11

public class name extends applet
{
    Private data

    Public methods

    Private methods
}

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Figure 23-12

Instantiation of the object defined by an applet

Browser

Private data

Public methods

Private methods

Object

Figure 23-13

Creation and compilation

a. Creating

Editor

Name.java

b. Compiling

Name.java

Compiler

Name.class

c. Making an HTML document

Name.class

HTML

Name.html

d. Running

Name.html

Browser

Result
Figure 23-14  HTML document carrying an applet

```html
<HTML>

<APPLET CODE="Name.class"
WIDTH=mmm
HEIGHT=nnn .... >
</APPLET>

</HTML>
```