

【CN】 Day12(2)

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☰ Materials	Overview of HTTP
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【Ch2】 Application Layer

2.2 The Web and HTTP

2.2.1 Overview of HTTP

The [HyperText Transfer Protocol\(HTTP\)](#) is at the heart of the Web. HTTP is implemented in two programs: a client program and a server program.

The client program and server program [talk to each other by exchanging HTTP messages](#).

A [Web page](#) consists of objects. An [object](#) is simply [a file](#)-such as an HTML file, a JPEG image, a Java applet, or a video clip-that is addressable by a single URL.

Most Web pages consist of a base HTML file and several referenced objects. The base HTML file references the other objects in the page with the objects' URLs.

Each URL has two components: [the hostname of the server](#) that houses the object and [the object's path name](#). For example, the URL

```
http://www.someSchool.edu/someDepartment/picture.gif
```

has [www.someSchool.edu](#) for a hostname and [/someDepartment/picture.gif](#) for a path name.

HTTP defines how Web clients request Web pages from Web servers and how servers transfer Web pages to clients.

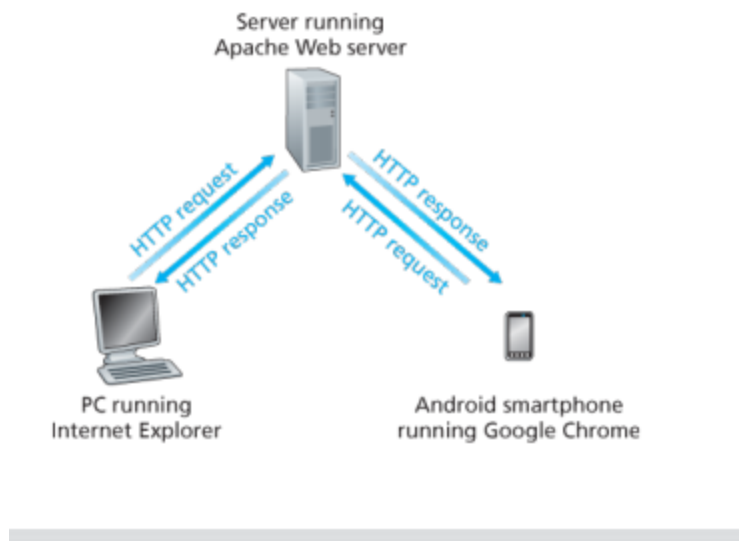


Figure 2.6 HTTP request-response behavior

When a user requests a Web page, the browser sends HTTP request messages for the objects in the page to the server. The server receives the requests and responds with HTTP response messages that contain the objects.

HTTP uses TCP as its underlying transport protocol. The HTTP client first initiates a TCP connection with the server. Once the connection is established, the browser and the server processes access TCP through their socket interfaces.