1) Overview
- HTTP is a protocol for fetching resources such as HTML documents
- It is the foundation of any data exchange on the Web and it is a client-server protocol
- Clients and servers communicate by exchanging individual messages
- The messages sent by the client, usually a Web browser, are called requests
  and the messages sent by the server as an answer are called responses.
- Can be used for loading pages, submitting forms, AJAX calls

2) Components of HTTP

Client -> Server (request)
Server -> Client (response)
The client is always the entity initiating the request
On the opposite side of the communication channel is the server, which serves the document as requested by the client

3) Basic aspects of HTTP

- Simple
Designed to be simple and human readable
HTTP messages can be read and understood by humans

- Stateless but not sessionless
There is no link between two requests being successively carried out on the same connection
HTTP cookies allow the use of stateful sessions

4) HTTP flow

When a client wants to communicate with a server:

- Open a TCP connection: The TCP connection is used to send a request, or several, and receive an answer

- Send an HTTP message

GET / HTTP/1.1
Host: developer.mozilla.org

- Read the response sent by the server
HTTP/1.1 200 OK
Date: Sat, 09 Oct 2010 14:28:02 GMT
Server: Apache

Last-Modified: Tue, 01 Dec 2009 20:18:22 GMT
ETag: "51142bc1-7449-479b075b2891b"
Accept-Ranges: bytes
Content-Length: 29769
Content-Type: text/html

<!DOCTYPE html>… (here come the 29769 bytes of the requested web page)

- Close connection

5) HTTP methods

GET, POST, PUT, DELETE

6) HTTP Headers

Sections: General, Request, and Response

7) HTTP status codes

1xx: Informational responses
2xx: Success responses
   200 OK, The request succeeded. The result meaning of "success" depends on theHTTPmethod
   201 CREATED, The request succeeded, and a new resource was created as a result

3xx Redirection messages
   301 MOVED, The URL of the requested resource has been changed permanently
   304 NOT MODIFIED, This is used for caching purposes.
     It tells the client that the response has not been modified

4xx Client Error responses
   400 Bad Request, The server cannot or will not process the request
   due to something that is perceived to be a client error
   401 Unauthorized
   403 Forbidden
   404 Not Found
   405 Method Not Allowed
   418 I'm a teapot

5xx Server Error responses
   500 Internal Server Error
   503 Service Unavailable