

HTTP Cookies & User Authentication

AGENDA

HTTP is Stateless

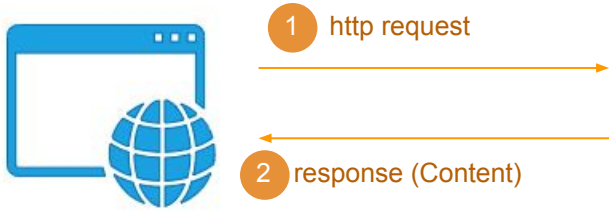
Cookies

Code Demo Language Settings

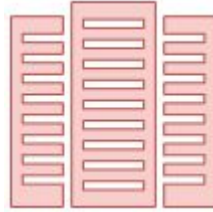
Code Demo Login Flow

http is stateless

Web Browser (Client)



Web Server



- The server doesn't remember any info about who's making the request
- The server process every request like a new request

http is stateless

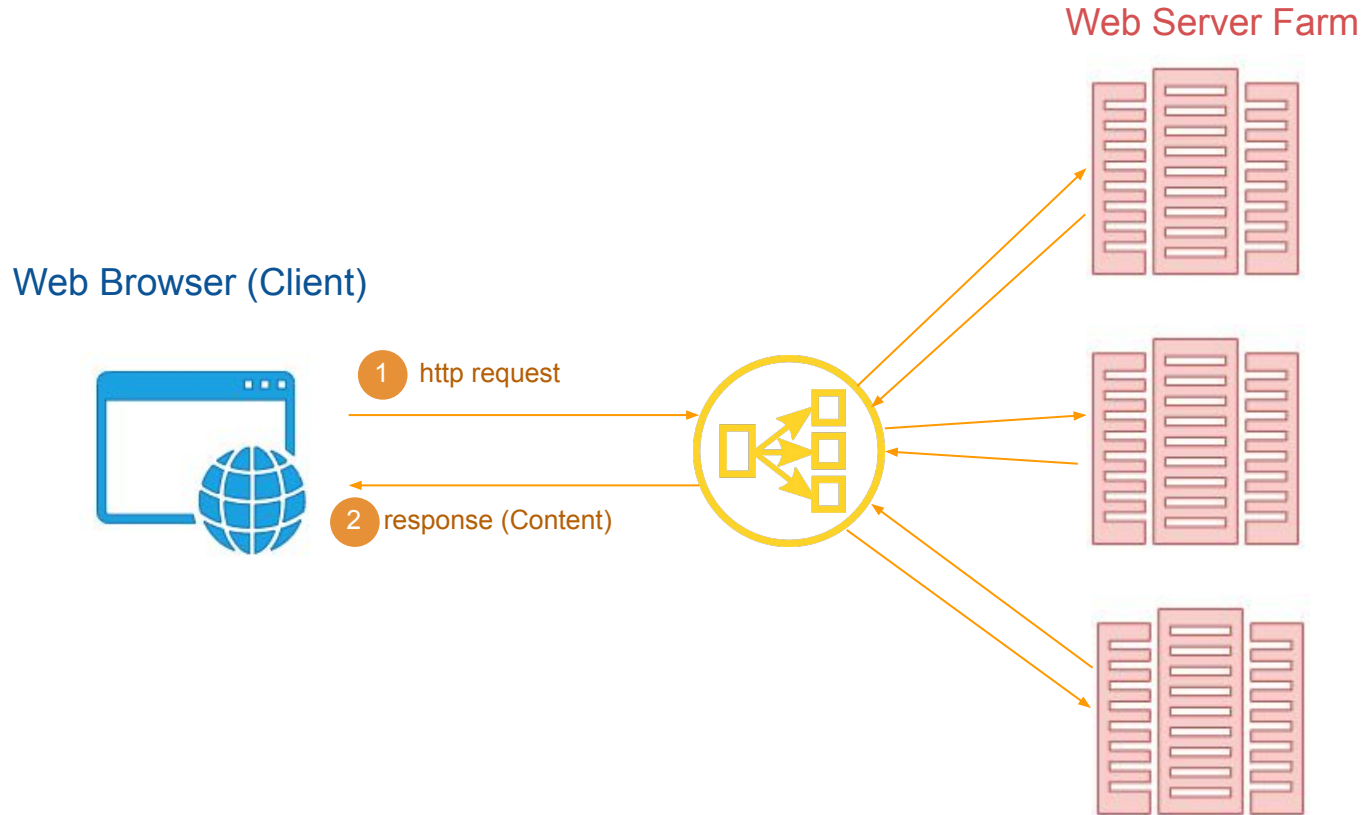
Pros

- Scalability - no session related dependency
- Less complex
- Easier to cache
- The server cannot lose track of information

Cons

- Cannot easily keep track context
- Context has to be provided each time

Scalability



Browser Cookies

- Cookies are stored in the request HEADERS, so we share information between the server and the browser with each request
- Session Cookie: Provides a way for servers to recognize the user between requests.
 - A session cookie stores the user's identity: i.e. User ID

Anatomy of HTTP requests

method path protocol specification

POST /login HTTP/1.1
Host: lighthouselabs.ca
User-Agent: Mozilla/5.0
Accept: text/html

} headers

-VGhlIHF1aWNrIGJyb3duIGZveA==
username: idbentley
password: callyourmother
-VGhlIHF1aWNrIGJyb3duIGZveA==

} body

Anatomy of HTTP response

protocol specification

response status

HTTP/1.1 200 OK
content-length: 1500
content-type: text/html
Set-Cookie: UserID=123

headers

<html>
 <head>
 ...
 </body>
</html>

body

Cookie Header

- The **Set-Cookie** header is read by the browser
- Until expiration or deletion all requests will contain a matching **Cookie** header

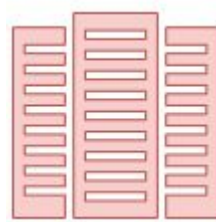
```
GET /profile HTTP/1.1
Host: lighthouselabs.ca
User-Agent: Mozilla/5.0
Accept: text/html
Cookie: UserId=123
```

User Login

Web Browser (Client)



Web Server



Database



- Cookies are stored on the users' browsers
- Cookies are sent to the server with each request

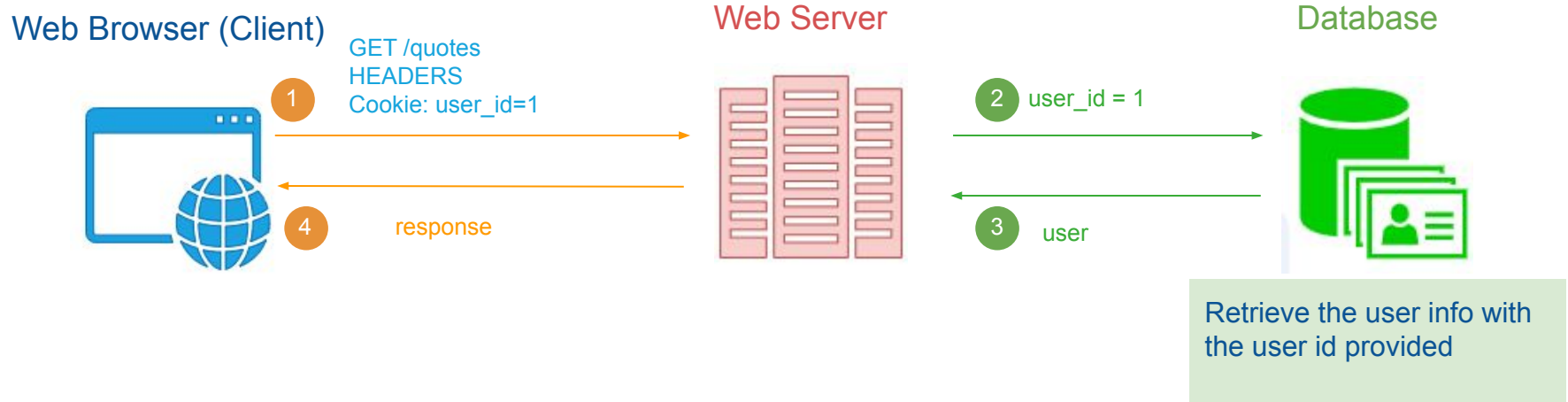
User Authentication



`setCookie(user_id, 1)`

Retrieve the user info for an account with a matching email and password

Logged In State



Cookies are sent with **every request** as request headers

CODE DEMOS

- Language Setting
- Login Flow

Questions?

