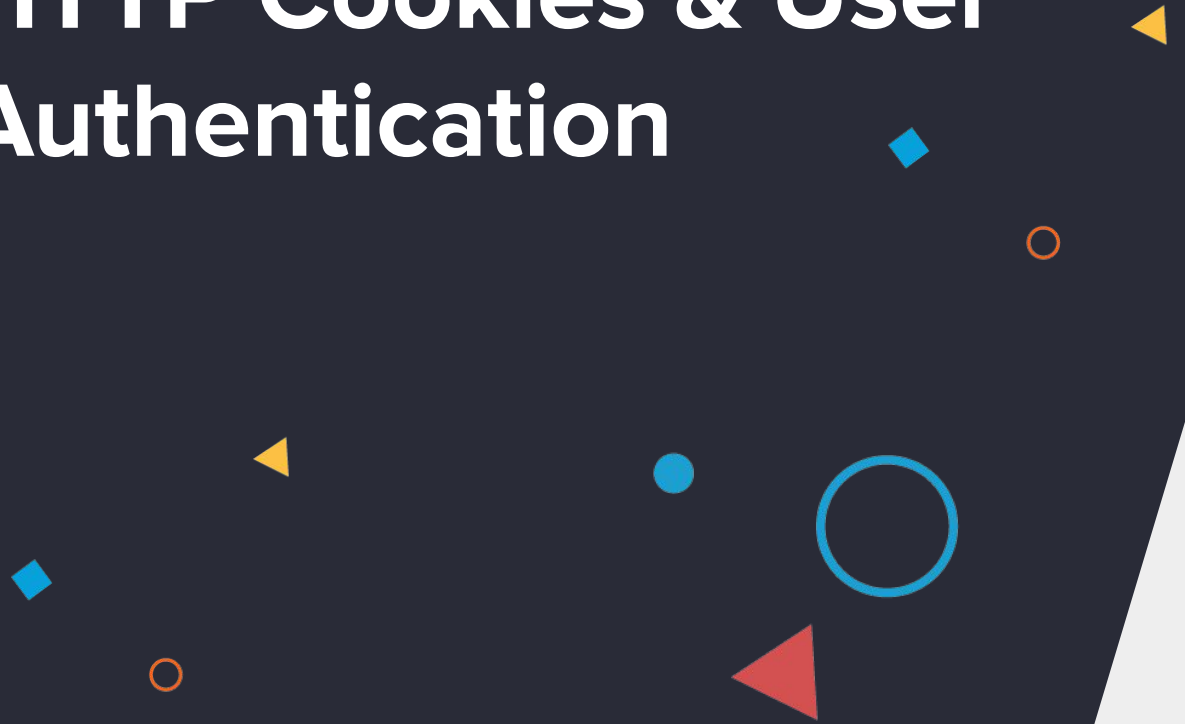
HTTP Cookies & User Authentication



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AGENDA

HTTP is Stateless

Cookies

Code Demo Language Settings

Code Demo Login Flow

HTTP is Stateless

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HTTP is Stateless

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

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HTTP is Stateless

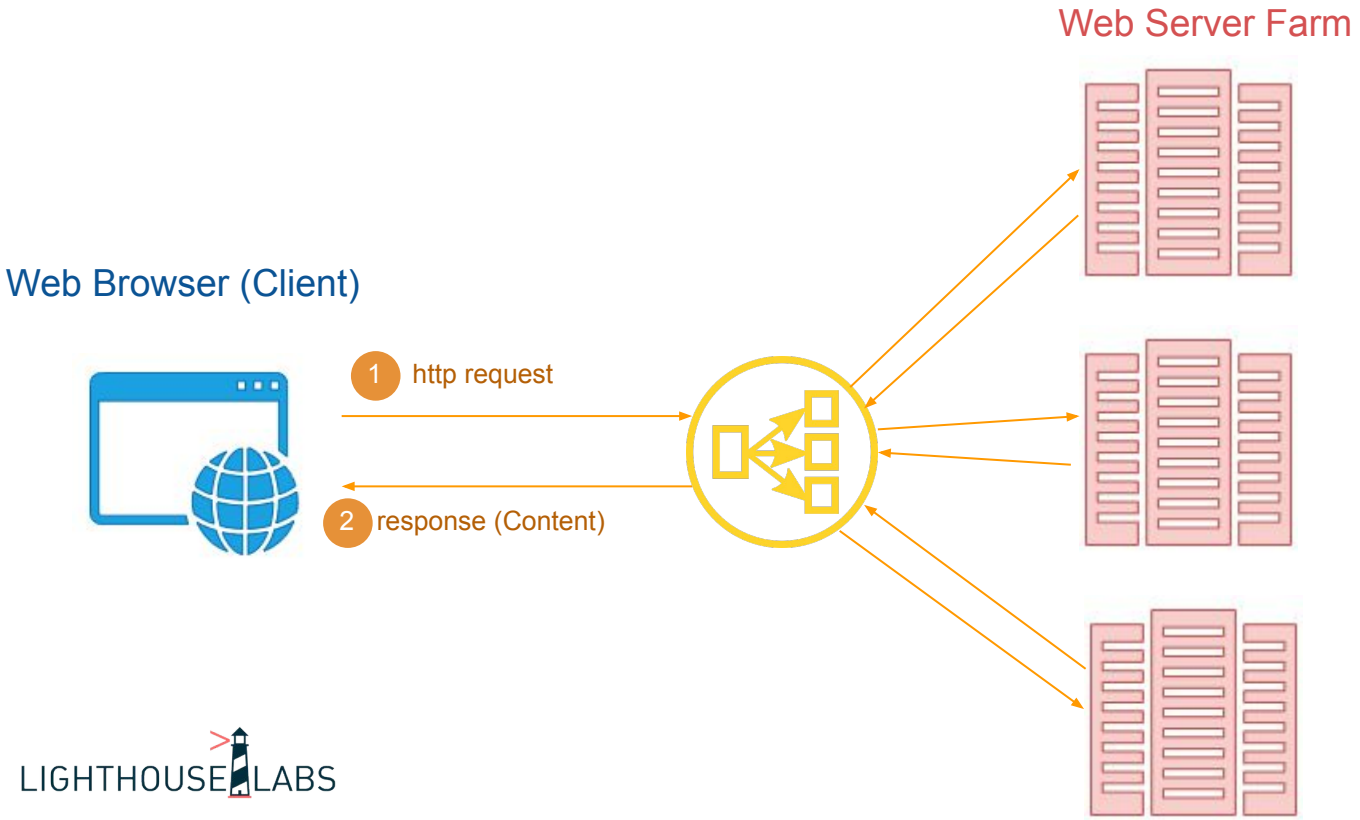
Pros

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

Cons

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

Scalability



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Browsers Store Cookies

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Browsers Store Cookies

- When we say HTTP is stateless, we mean *the server doesn't store Cookie information*
- Browsers, however, are stateful - *the browser stores all of the Cookie information*
- The Server can tell the browser to remember a Cookie with the `Set-Cookie` header
- **The Browser** can set cookies at any time, because it **is the Cookie Master**

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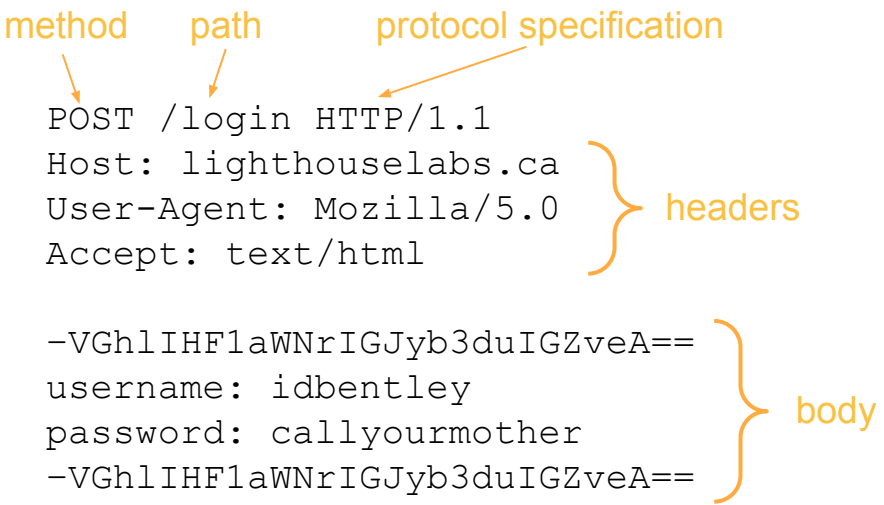
Anatomy of HTTP requests



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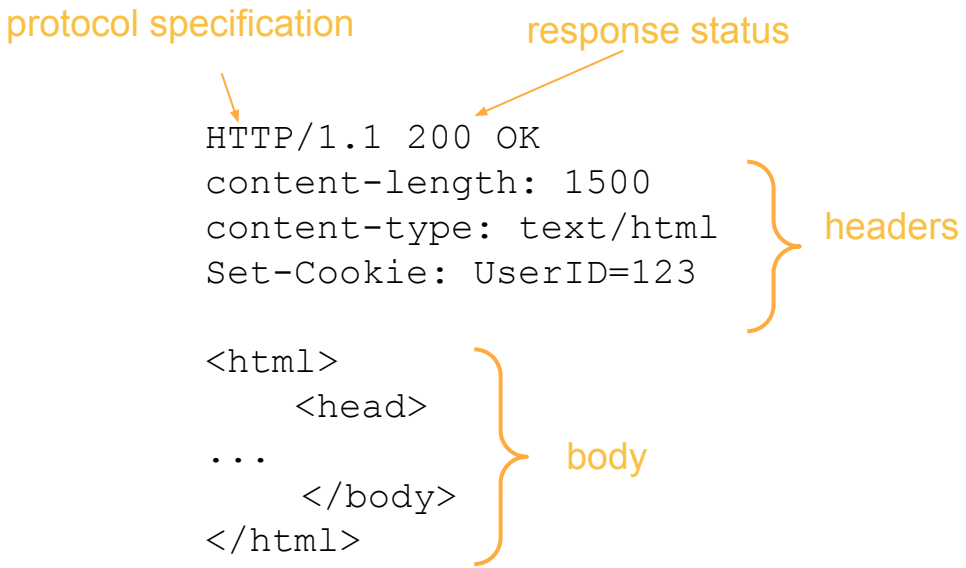
Anatomy of HTTP response



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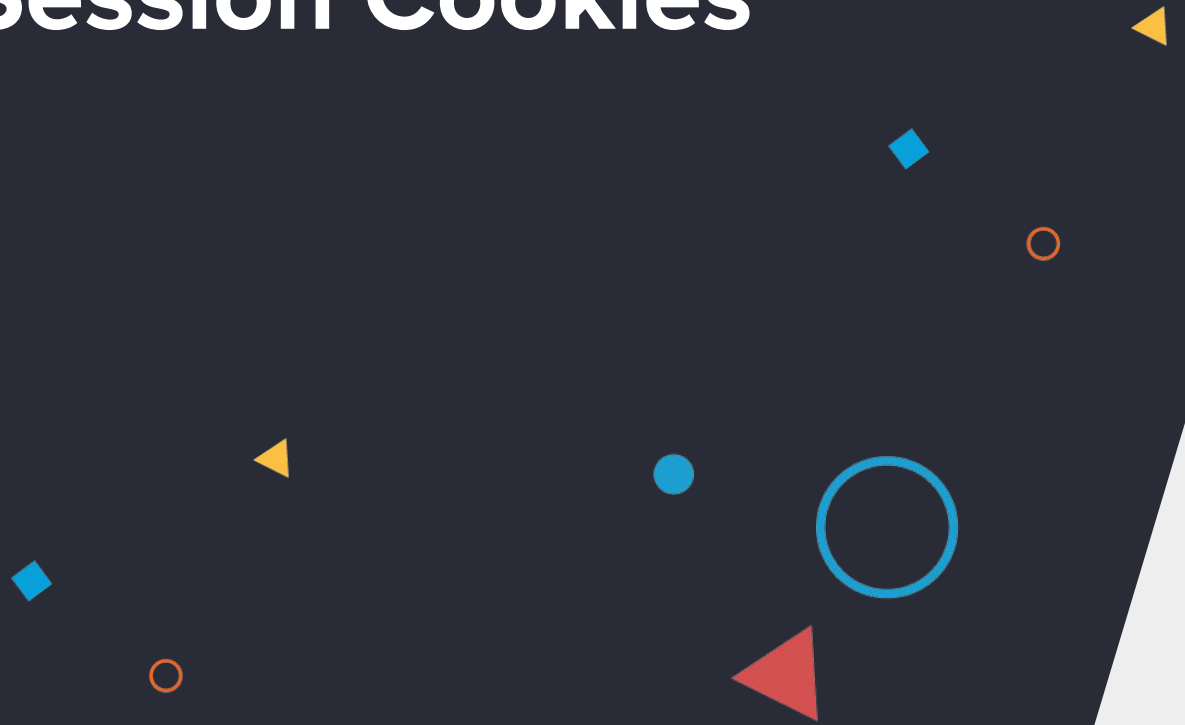
Cookie Header

- The **Set-Cookie** header is read by the browser
  - The browser will store this cookie information until expiration or deletion
  - All subsequent 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
```

Session Cookies



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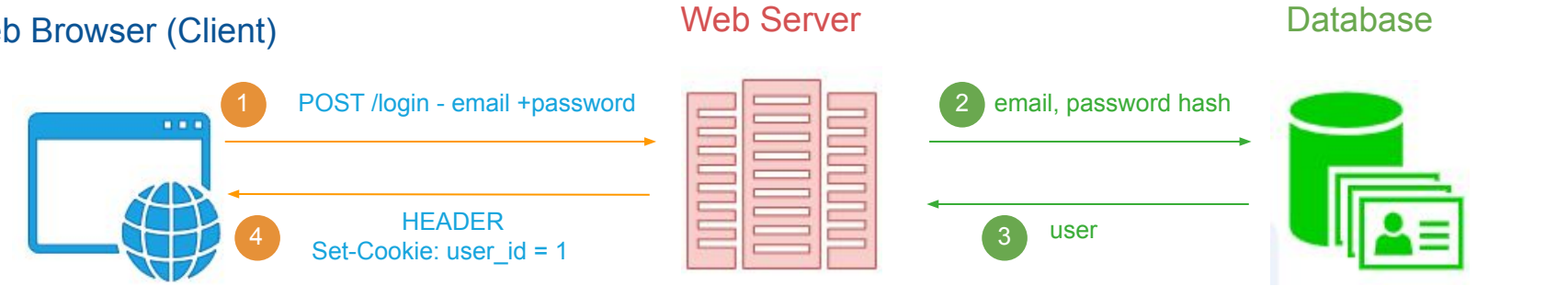
Session Cookies

- Session Cookies are cookies that allow the server to identify the user
- Session Cookies contain an identifier that the server can validate
- The identifier can be used to look up the current user

User Login



- 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

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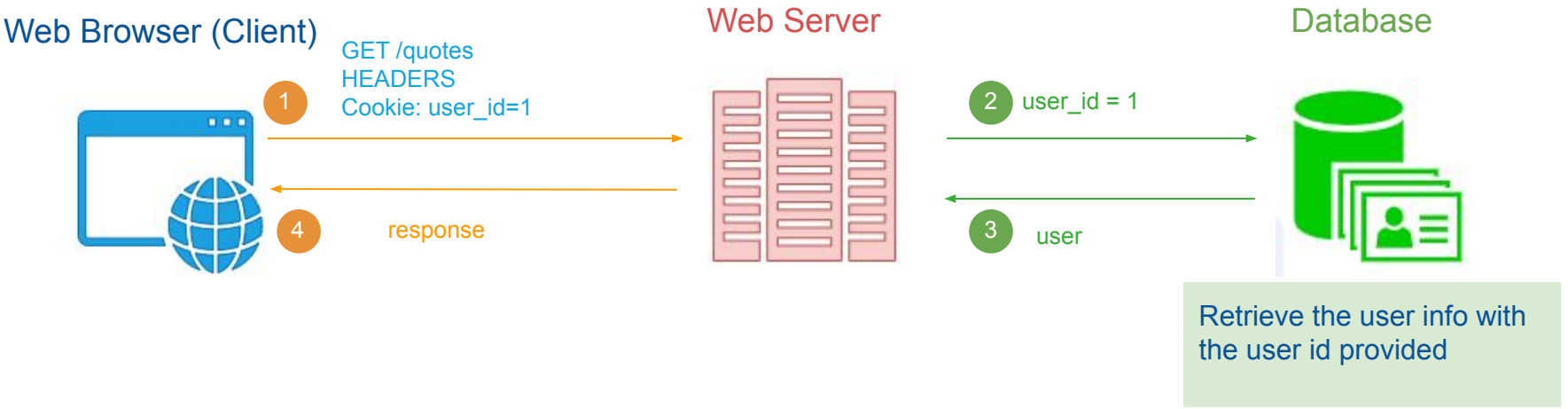
Logged In State



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

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CODE DEMOS

- Language Setting
- Login Flow

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Questions?

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