Project: Youtube Summarizer Server

Session Management

Arnold Doray - 19 Dec 2023

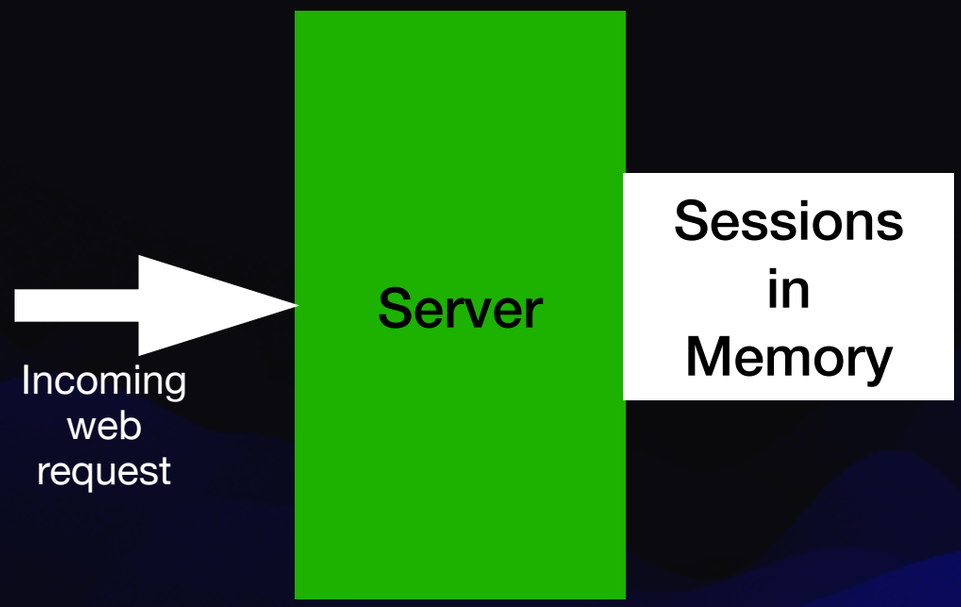
Discussion

- What is Session Management?
- How do we implement in SmojoVM?

Session Management Strategy

- Session management is how a user who logs in stays logged in.
- The server gives him a “session id” which is stored in his browser’s cookie jar.
- The cookie stored is the session id, which has information linked to it on the server (eg, username, expiry date)
- We use the PRE mechanism to check the session id at each interaction.
- If the session id is valid, then proceed. If not, user is redirected to the login page.
- We need to exempt certain pages from being checked - the login page itself (/) and form processing (dologin) and pages that don’t require logins (signup and dosignup).

Session Management



Simple Sessions

- Sessions are stored in an in-memory hash
- “sid” -> { “username”, expiry }
- Sessions are lost on server restart
- Homework — extend this into an in-process phash.

Step 1: Add Sessions Model

sessions.m

- We need to add a new model sessions.m
- new-session (“username” — “sid”)
- session-ok? (“sid” — f)
- Use a # to store info
- Expiry after 15 mins of inactivity.

DEMO

Step 2: Add access check in PRE

server.m

- Add in a check in server.m's pre word.
- Determine if user has logged in.
- If not, use html-redirect ("url" — "html") to redirect the user to the login page.
- html-redirect is in VM library arnold/server
- Check has to allow access to / , dologin, signup and dosignup
- The check needs cookies (#params — #) that extracts cookies from params. This is in VM library arnold/webapp
- We need to call session-ok? ("sid" — f) to determine if the SID is valid.

DEMO

Step 3: Inject the Cookie

app/login.m

- We need to inject the cookie containing the SID immediately after a successful login, in dologin-end
- We use webapp-cookie! (“s” —) to inject a cookie. The cookie needs to contain the SID (sid=xxx;) and set the SameSite attribute and also HttpOnly
- Eg, q{ sid=#{sid};SameSite=Strict;HttpOnly }q webapp-cookie!
- webapp-cookie! is from arnold/webapp
- We need to generate a new SID using new-session (“username” — “sid”)

DEMO

Homework

- Complete the sessions management portion.
- Extend the sessions model to use a p#.