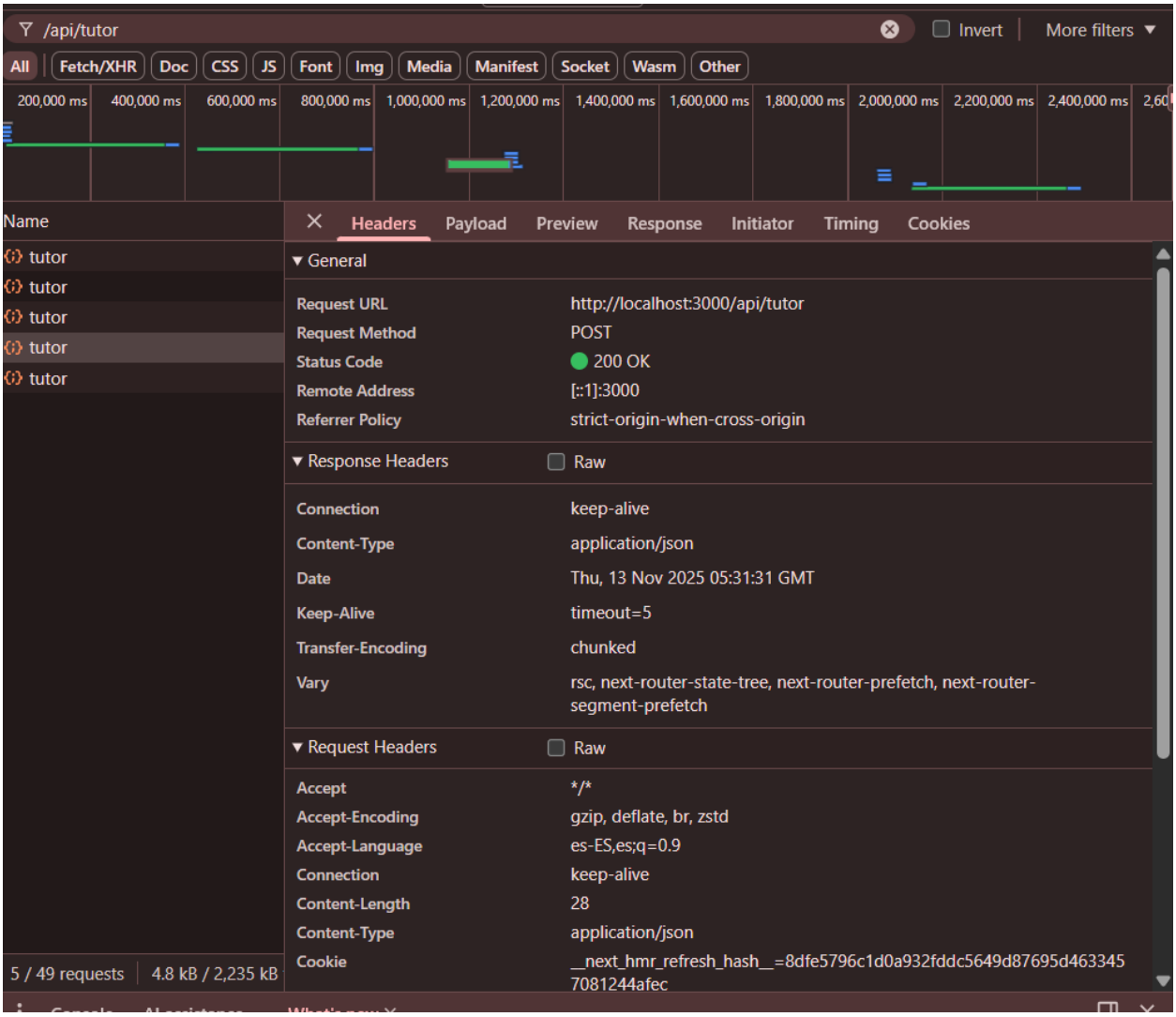
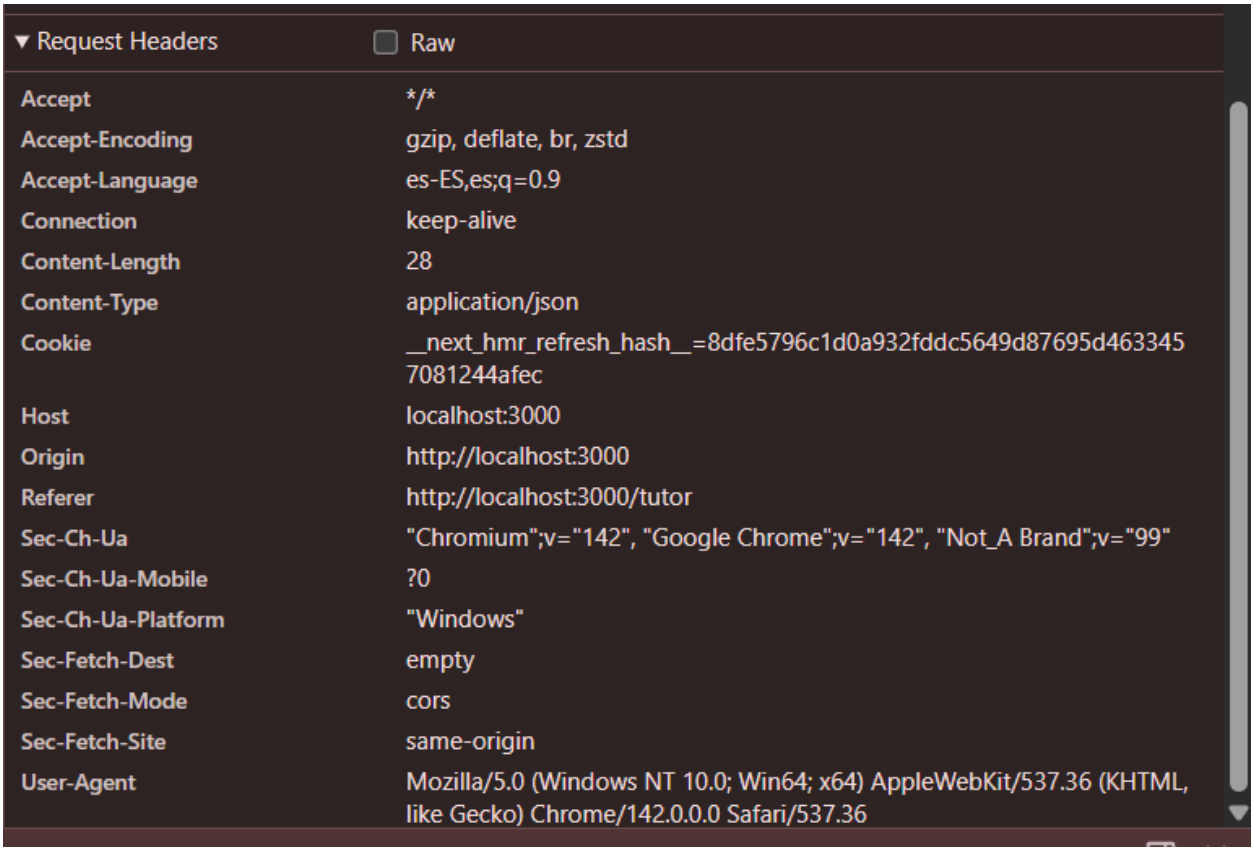
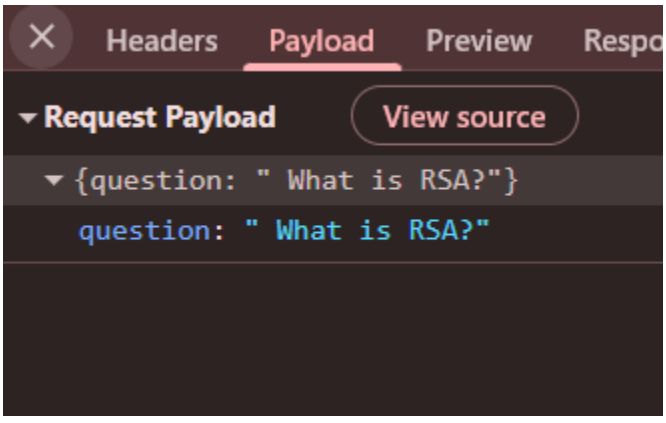
API Analysis (Bonus)

We captured the full API trace for a tutor question using Chrome DevTools. When the user submits a question from the frontend, the browser sends an HTTP request to our backend endpoint: POST /api/tutor.





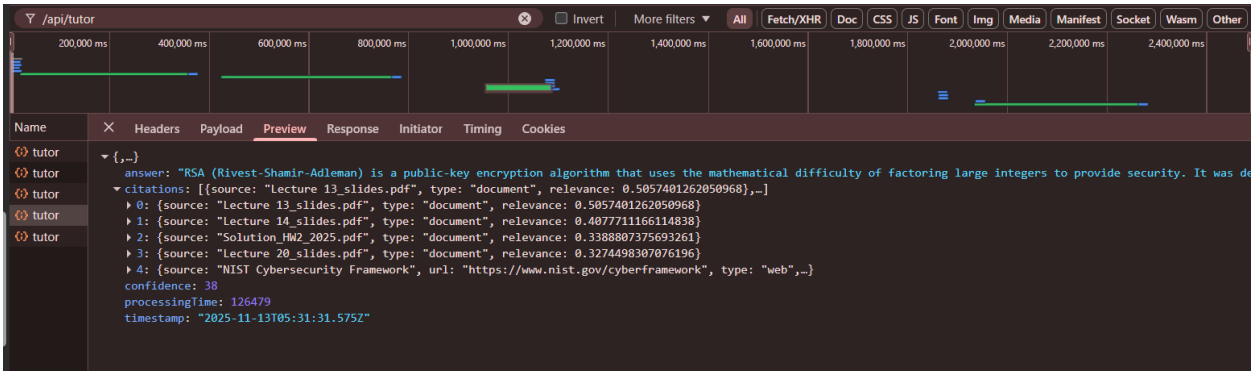
When the user submits the question “What is RSA?”, the browser sends an HTTP request to our backend endpoint POST /api/tutor. Using Chrome DevTools, we inspected the Request Payload, which shows the JSON body:



On the server side, our /api/tutor route logs both the raw and sanitized versions of this field:

```
=== Tutor API: Incoming question ===
RAW QUESTION: What is RSA?
SANITIZED QUESTION: What is RSA?
```

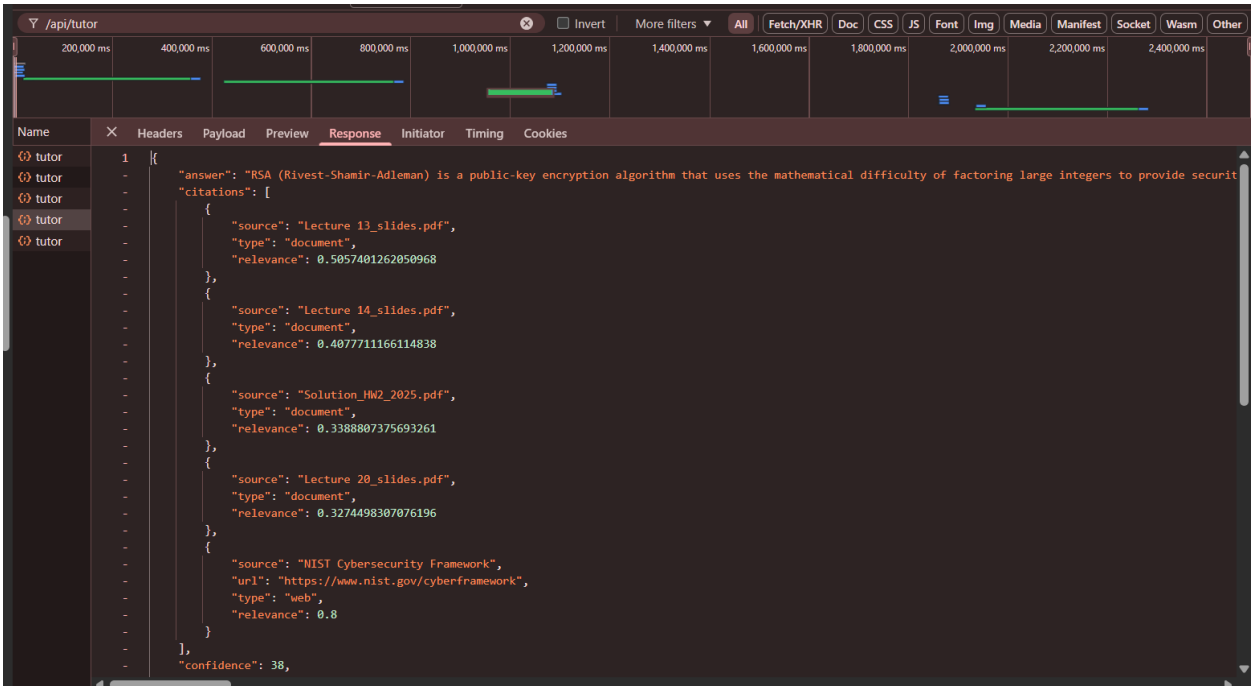
We visualize a preview of the answer

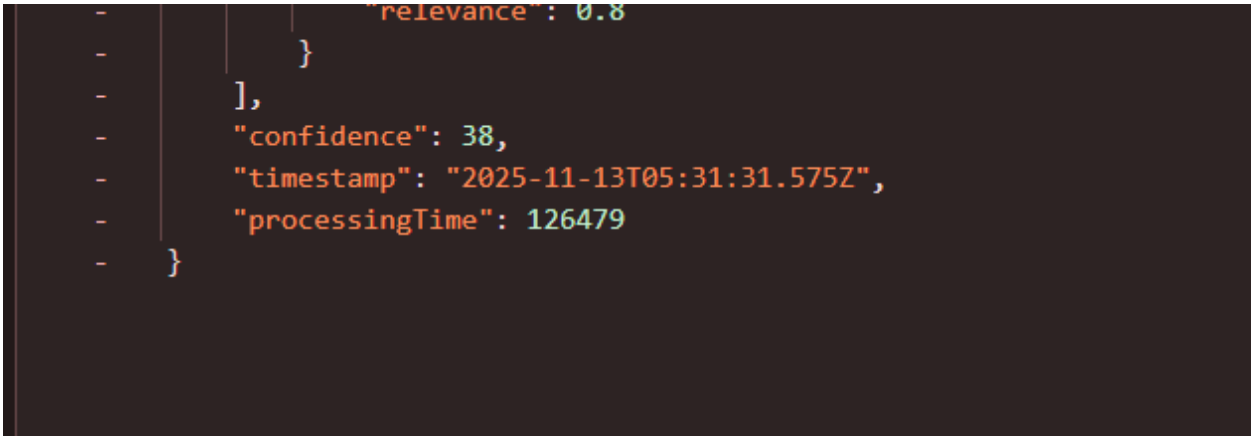


When the backend finishes processing the sanitized question, it sends back a detailed JSON response. We can observe the final stage of the data flow pipeline.

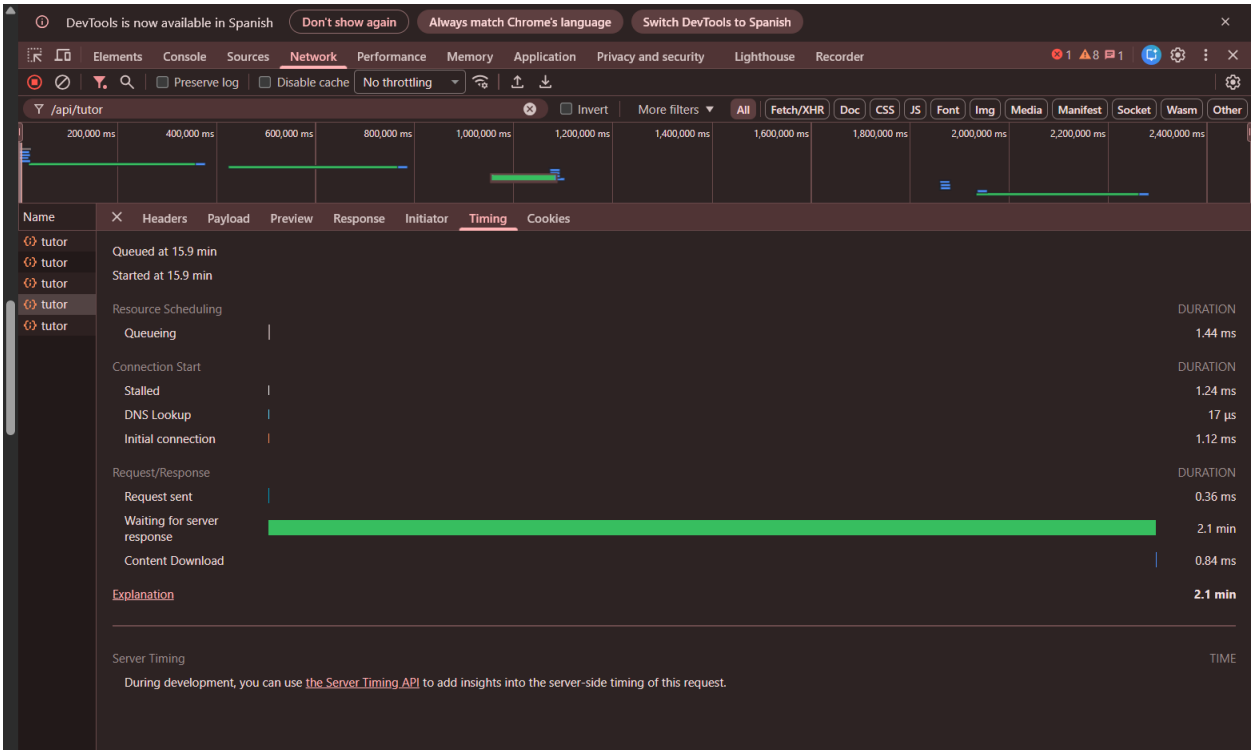
The response includes:

- Answer
- Citations
- Confidence
- Timestamp
- Processing time





In the timing feature of DevTools, we can visualize the time it took to get an Answer which is within the time stipulated (2 minutes)


DevTools is now available in Spanish
Don't show again
Always match Chrome's language
Switch DevTools to Spanish
Elements
Console
Sources
Network
Performance
Memory
Application
Privacy and security
Lighthouse
Recorder
Preserve log
Disable cache
No throttling
/api/tutor
Invert
More filters
All
Fetch/XHR
Doc
CSS
JS
Font
Img
Media
Manifest
Socket
Wasm
Other
200,000 ms
400,000 ms
600,000 ms
800,000 ms
1,000,000 ms
1,200,000 ms
1,400,000 ms
1,600,000 ms
1,800,000 ms
2,000,000 ms
2,200,000 ms
2,400,000 ms
Name
tutor
tutor
tutor
tutor
tutor
Headers
Payload
Preview
Response
Initiator
Timing
Cookies
Queued at 15.9 min
Started at 15.9 min
Resource Scheduling
DURATION
Queueing
1.44 ms
Connection Start
DURATION
Stalled
1.24 ms
DNS Lookup
17 µs
Initial connection
1.12 ms
Request/Response
DURATION
Request sent
0.36 ms
Waiting for server response
2.1 min
Content Download
0.84 ms
Explanation
2.1 min
Server Timing
TIME
During development, you can use the Server Timing API to add insights into the server-side timing of this request.