

Web Technology - Lab

Submitted By:

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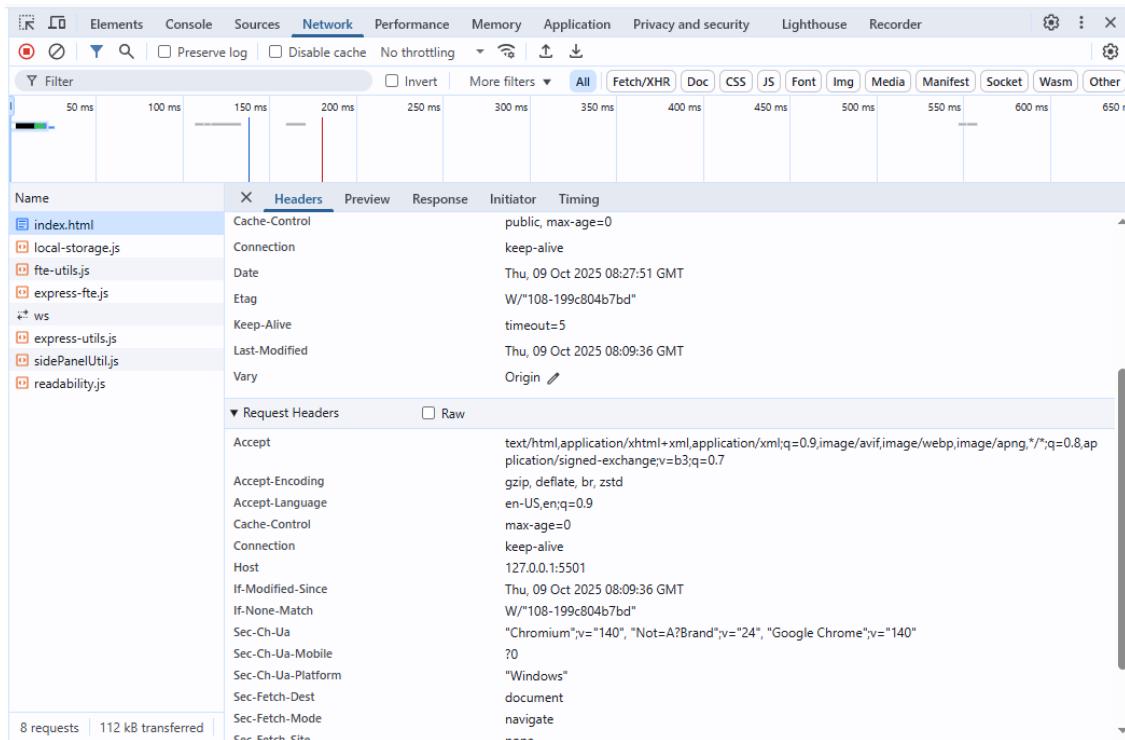
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Step 1: Inspect HTTP Requests with DevTools

1. Open any simple HTML page (e.g., index.html) using Live Server.
 2. Right-click → Inspect → go to Network tab.
 3. Reload the page (F5) to capture network activity.
 4. Click on the main request (e.g., index.html) and observe:
 - Request Method (GET)
 - Status Code (e.g., 200 OK)
 - Request Headers (Host, User-Agent)
 - Response Headers (Content-Type, Cache-Control) **Screenshot Tip:** Capture the headers and status code view.
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Step 2: Make GET/POST Requests with Postman or curl Using Postman

1. Open Postman and create a GET request to your local server (e.g., <http://localhost:5500/index.html>).

2. Observe the status code, response body, and headers.

3. Create a POST request to a test endpoint (e.g., <https://httpbin.org/post>).

- Add a JSON body: { o "name": "Student", o "lab": "HTTP Basics" o }
- Send the request and inspect the response. Using curl (optional) curl -X POST

The screenshot displays two windows side-by-side. The left window is a code editor showing the content of an `index.html` file. The right window is a Postman interface showing a GET request to `http://127.0.0.1:5501/WebDevLab1/Html/index.html`.

Code Editor (Left):

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta http-equiv="Cache-Control" content="no-cache, no-store, must-revalidate">
<meta http-equiv="Pragma" content="no-cache">
<meta http-equiv="Expires" content="0">
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<p>Hello World</p>
<h1>Verifying.....</h1>
</body>
</html>
```

Postman (Right):

Request URL: `http://127.0.0.1:5501/WebDevLab1/Html/index.html`

Method: GET

Headers (11):

Header	Value
Access-Control-Allow-Credentials	true
Accept-Ranges	bytes
Cache-Control	public, max-age=0
Last-Modified	Thu, 09 Oct 2025 08:09:36 GMT
ETag	W/"108-199c804b7bd"
Content-Type	text/html; charset=UTF-8
Content-Length	1757
Date	Thu, 09 Oct 2025 08:46:55 GMT
Connection	keep-alive
Keep-Alive	timeout=5

Test Results:

Header	Value
Access-Control-Allow-Credentials	true
Accept-Ranges	bytes
Cache-Control	public, max-age=0
Last-Modified	Thu, 09 Oct 2025 08:09:36 GMT
ETag	W/"108-199c804b7bd"
Content-Type	text/html; charset=UTF-8
Content-Length	1757
Date	Thu, 09 Oct 2025 08:46:55 GMT
Connection	keep-alive
Keep-Alive	timeout=5

The screenshot shows the Postman application interface. On the left, there's a sidebar with 'Collections' (selected), 'Environments', 'Flows', and 'History'. The main area shows a collection named 'Hafiz Muhammad Hamza Khalid...' with a single item: 'GET http://127.0.0.1:5501/WebDevLab1/...'. Below it, a new collection is being created with the URL 'POST http://127.0.0.1:5501/WebDevLab1/Html/index.html'. The 'Headers' tab is selected, showing the following headers:

Key	Value	Description
Vary	Origin	
Access-Control-Allow-Credentials	true	
Allow	GET, HEAD, OPTIONS	
Content-Length	0	
Date	Thu, 09 Oct 2025 09:21:19 GMT	
Connection	keep-alive	
Keep-Alive	A general header specifying whether the current network connection stays open once the current transaction finishes.	

At the bottom, there are buttons for 'Body', 'Cookies', 'Headers (7)', and 'Test Results'. The 'Test Results' tab is active, showing the response: '405 Method Not Allowed' with a timestamp of '13 ms' and a size of '219 B'. Other tabs include 'Body', 'Cookies', and 'Headers (7)'. The bottom navigation bar includes links for 'Online', 'Find and replace', 'Console', 'Runner', 'Start Proxy', 'Cookies', 'Vault', 'Trash', and a help icon.

Step 3: Simulate Caching and Status Codes Modify HTML to simulate caching

1. Add meta tags to your HTML :2. 3. 4. 5. Reload the page and observe changes in response headers. Simulate Status Codes Use these test URLs:

- 200 OK: <https://httpbin.org/status/200>
- 301 Redirect: <https://httpbin.org/status/301>
- 404 Not Found: <https://httpbin.org/status/404>
- Tip: Capture each status code response in DevTools or P

The screenshot shows the Postman application interface. On the left, there's a sidebar with 'Collections' (selected), 'Environments', 'Flows', and 'History'. Below it is a section titled 'Create a collection for your requests' with a 'Create Collection' button. The main workspace shows a collection named 'My first collection' containing two folders: 'First folder inside collection' and 'Second folder inside collection', each with a single 'GET' request. A specific request for 'https://httpbin.org/status/301' is selected. The 'Headers' tab shows several headers including 'Accept', 'Accept-Encoding', 'Host', 'Postman-Token', 'Referer', 'User-Agent', and 'X-Amzn-Trace-Id'. The 'Body' tab shows a JSON response with a complex object structure. The status bar at the bottom indicates a 200 OK response with 1.31 s duration and 652 B size.

This screenshot shows the same Postman interface as the previous one, but the request URL has been changed to 'https://httpbin.org/status/404'. The response status is now '404 NOT FOUND'. The Headers tab shows the following details:

Key	Value
Date	Thu, 09 Oct 2025 08:58:15 GMT
Content-Type	text/html; charset=utf-8
Content-Length	0
Connection	keep-alive
Server	gunicorn/19.9.0
Access-Control-Allow-Origin	*
Access-Control-Allow-Credentials	true

The screenshot shows the Postman application interface. On the left, there's a sidebar with 'Collections', 'Environments', 'Flows', and 'History'. The main area displays a collection named 'My first collection' containing two folders: 'First folder inside collection' and 'Second folder inside collection', each with several requests. A specific request for 'https://httpbin.org/status/301' is selected, showing its details. The request method is 'GET' with the URL 'https://httpbin.org/status/301'. The 'Params' tab is active, showing no parameters. The 'Headers' tab shows the following JSON payload:

```
1 {  
2   "args": {},  
3   "headers": {  
4     "Accept": "*/*",  
5     "Accept-Encoding": "gzip, deflate, br",  
6     "Host": "httpbin.org",  
7     "Postman-Token": "1414c3f0-538a-446e-86ce-aa30c99e3865",  
8     "Referer": "https://httpbin.org/redirect/1",  
9     "User-Agent": "PostmanRuntime/7.48.0",  
10    "X-Amzn-Trace-Id": "Root=1-66e77916-3e40098f556d1e4c02f6db45"  
11  },  
12  "origin": "149.40.228.66",  
13  "url": "https://httpbin.org/get"  
14 }
```

CONCLUSION:

-----The End-----
