

# Lahore Garrison University

DHA Phase 6 Lahore

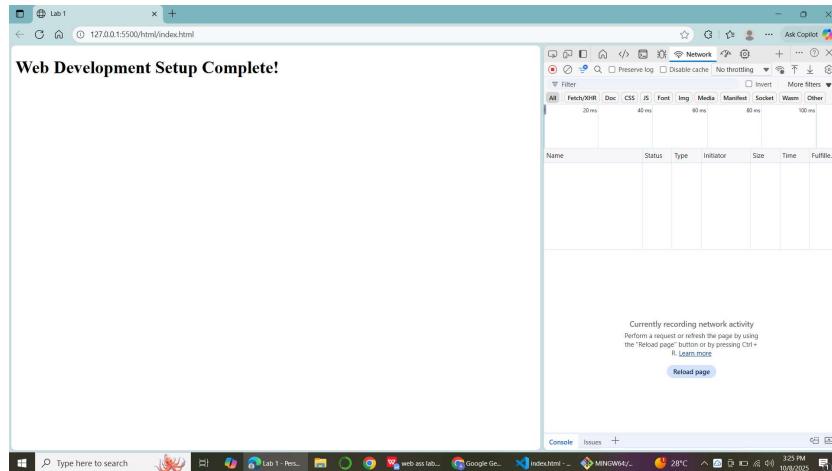


|                 |                     |
|-----------------|---------------------|
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| Section         | D                   |
| Subject         | Web Technologies    |
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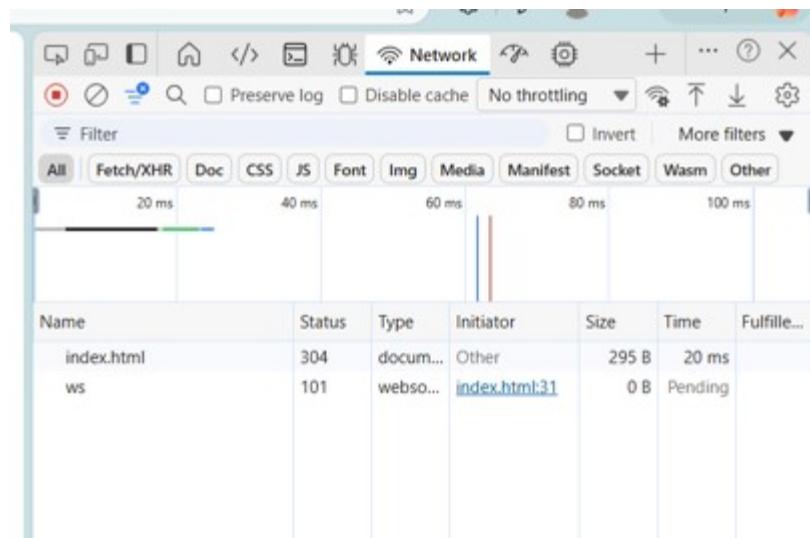
## Lab 2

### Step 1: Inspect HTTP Requests with DevTools

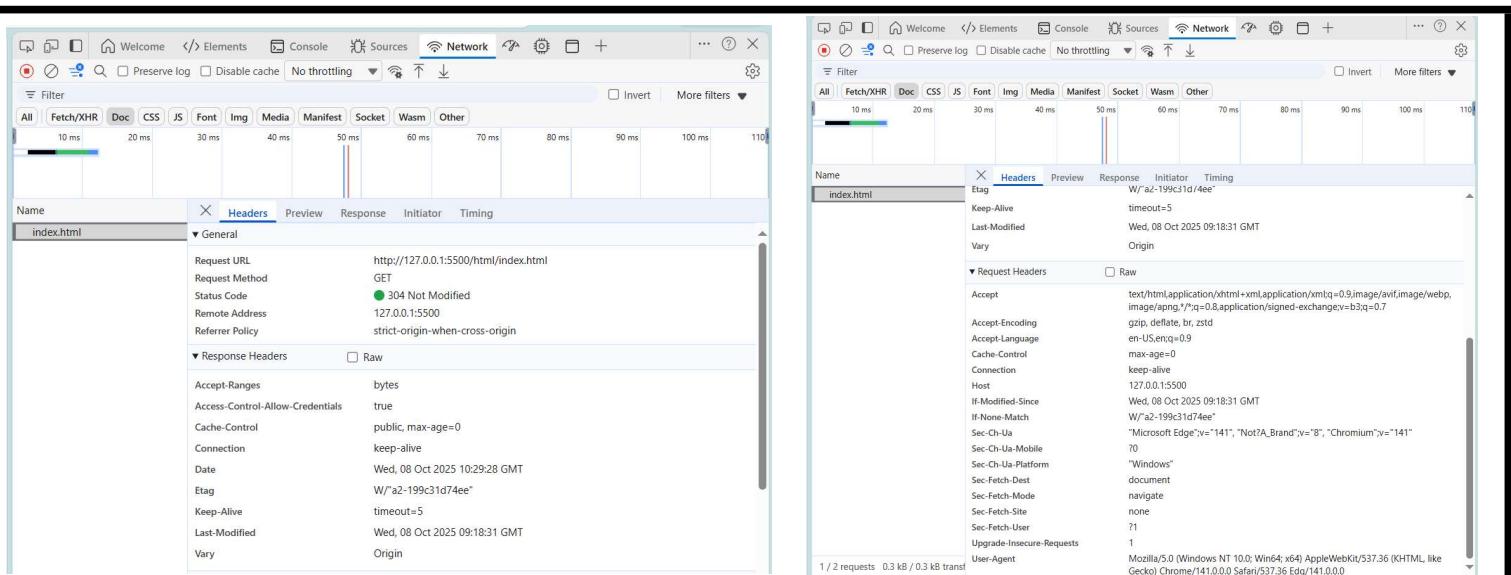
1. Open any simple HTML page (e.g., index.html) using **Live Server**.



2. Right-click → **Inspect** → go to **Network** tab.



3. Click on the main request (e.g., index.html) and observe:



## 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`).

The figure shows the Postman application interface. A GET request is made to `http://127.0.0.1:5500/html/index.html`. The response status is 200 OK, with a duration of 19 ms and a size of 1.96 KB. The response body is displayed in an HTML viewer, showing the injected code:

```

1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <meta charset="utf-8" />
6   <title>Lab 1</title>
7 </head>
8
9 <body>
10  <h1>Web Development Setup Complete!</h1>
11  <!-- Code injected by live-server -->
12  <script>

```

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

| Body                             | Cookies | Headers (11)                  | Test Results | ⌚ | 200 OK | • 11 ms | • 2.18 KB | 🌐 |  | Save Response | ☰ |
|----------------------------------|---------|-------------------------------|--------------|---|--------|---------|-----------|---|--|---------------|---|
| Key                              |         | Value                         |              |   |        |         |           |   |  |               |   |
| Vary                             |         | Origin                        |              |   |        |         |           |   |  |               |   |
| Access-Control-Allow-Credentials |         | true                          |              |   |        |         |           |   |  |               |   |
| Accept-Ranges                    |         | bytes                         |              |   |        |         |           |   |  |               |   |
| Cache-Control                    |         | public, max-age=0             |              |   |        |         |           |   |  |               |   |
| Last-Modified                    |         | Wed, 08 Oct 2025 18:51:13 GMT |              |   |        |         |           |   |  |               |   |
| ETag                             |         | W/"188-199c529c81a"           |              |   |        |         |           |   |  |               |   |
| Content-Type                     |         | text/html; charset=UTF-8      |              |   |        |         |           |   |  |               |   |
| Content-Length                   |         | 1885                          |              |   |        |         |           |   |  |               |   |

Runner Start Proxy Cookies Vault Trash

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

The screenshot shows the Postman interface with a POST request to <https://httpbin.org/post>. The request body is set to raw JSON with the following content:

```

1  {
2   "name": "Student",
3   "lab": "HTTP Basics"
4 }

```

The response details show a 200 OK status with a response time of 5.59 s and a response size of 853 B.

## Step 3: Simulate Caching and Status Codes

### Modify HTML to simulate caching

```
index.html M READMe.md

html > index.html > html > head > head
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="utf-8" />
5  <title>Lab 1</title>
6  <head>
7  <title>Lab 1</title>
8  <meta http-equiv="Cache-Control" content="no-cache, no-store, must-revalidate">
9  <meta http-equiv="Pragma" content="no-cache">
10 <meta http-equiv="Expires" content="0">
11 </head>
12 </head>
13 <body>
14 <h1>Web Development Setup Complete!</h1>
15 </body>
16 </html>
```

**200 OK:** <https://httpbin.org/status/200>

The screenshot shows the Postman application interface. At the top, there's a header bar with the URL <https://httpbin.org/status/200>, a 'Save' button, a 'Share' button, and a 'Copy' icon. Below the header is a search bar containing the same URL. To the right of the search bar is a large blue 'Send' button with a dropdown arrow. Underneath the search bar, there are tabs for 'GET', 'POST', 'PUT', 'DELETE', and 'PATCH'. The 'GET' tab is selected. Below the tabs, there are several navigation buttons: 'Params', 'Authorization', 'Headers (6)', 'Body', 'Scripts', 'Tests', and 'Settings'. A 'Cookies' tab is also visible on the far right. The main content area is titled 'Query Params' and contains a table with two rows. The first row has columns for 'Key' (with value 'Key') and 'Value' (with value 'Value'). The second row has columns for 'Description' (with value 'Description') and 'Bulk Edit' (with three dots). At the bottom of the interface, there are tabs for 'Body', 'Cookies', 'Headers (7)', and 'Test Results'. The 'Body' tab is selected. Below these tabs are buttons for 'HTML' (with a dropdown arrow), 'Preview', and 'Visualize'. On the far right, there are status indicators: '200 OK', '38.94 s', '236 B', and icons for copy, search, and refresh. The bottom-most part of the interface shows a single digit '1'.

**301 Redirect:** <https://httpbin.org/status/301>

The screenshot shows the Postman application interface. At the top, there's a search bar with 'Search Postman' and a 'Ctrl + F' keybinding. To the right are icons for invite, upgrade, and environment settings. Below the header, the URL bar shows three requests: 'get http://127.0.0.1:5500/htm', 'POST https://httpbin.org/post', and 'get https://httpbin.org/status'. A '+' button is next to the third URL. On the far right of the URL bar are 'Save' and 'Share' buttons, and a 'No environment' dropdown.

The main workspace shows a 'GET' request to 'https://httpbin.org/status/301'. The 'Body' tab is selected. The response body is displayed as:

```
1 <html>
2   <head>
3     <title>503 Service Temporarily Unavailable</title>
4   </head>
5 
6 <body>
7   <center>
8     <h1>503 Service Temporarily Unavailable</h1>
9   </center>
10 
11 </body>
12 
13 </html>
```

At the bottom right, the status bar indicates '503 Service Temporarily Unavailable' with a duration of '767 ms', a size of '337 B', and a link icon. There are also icons for copy, search, and file operations.

## 404 Not Found: <https://httpbin.org/status/404>

The screenshot shows the Postman application interface. At the top, there are tabs for Overview, http://127.0.0.1:5500/htm, https://httpbin.org/pos, and https://httpbin.org/status/404 (which is the active tab). Below the tabs, there's a search bar and an upgrade button. The main area shows a GET request to https://httpbin.org/status/404. The 'Body' tab is selected, displaying the following HTML code:

```
<html>
<head>
<title>503 Service Temporarily Unavailable</title>
</head>
<body>
<center>
<h1>503 Service Temporarily Unavailable</h1>
</center>
</body>
</html>
```

At the bottom of the interface, there are buttons for Runner, Start Proxy, Cookies, Vault, Trash, and a help icon.

## Deliverables

### 1. Explanations

#### a. Parts of a Request:

Method: Action the client wants (e.g., GET to retrieve, POST to submit).

URL: Address of the resource being targeted.

Headers: Metadata about the client or the request (e.g., User-Agent, Content-Type).

Body: Data sent with the request (only in methods like POST or PUT).

#### b. Parts of a Response:

Status Code: Shows the result of the request (e.g., 200 = success, 404 = error).

Headers: Info about the server, content type, and caching rules.

Body: The actual content returned (e.g., HTML code, JSON data).

#### c. Caching Headers:

Cache-Control: no-cache, no-store

Pragma: no-cache

Expires: 0

#### d. Status Code Meanings:

200 OK: Request was successfully processed and the result is returned.

301 Redirect: Resource has been permanently moved to a new URL.

404 Not Found: Requested resource could not be found on the server.

## CONCLUSION:

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## RUBRICS:

| Performance                               |             |                | Lab Report                  |             |                |
|---|-------------|----------------|-----------------------------|-------------|----------------|
| Description                               | Total Marks | Marks Obtained | Description                 | Total Marks | Marks Obtained |
| <b>Ability to Conduct practical</b>       | 5           |                | <b>Structure</b>            | 5           |                |
| <b>Data Analysis &amp; Interpretation</b> | 5           |                | <b>Efficiency</b>           | 5           |                |
| <b>Total Marks obtained</b>               |             |                | <b>Total Marks Obtained</b> |             |                |

Instructor Signature \_\_\_\_\_