

CSE421_Lab 02

Name: Sanzana Mahrukh Hassan

ID: 21101237

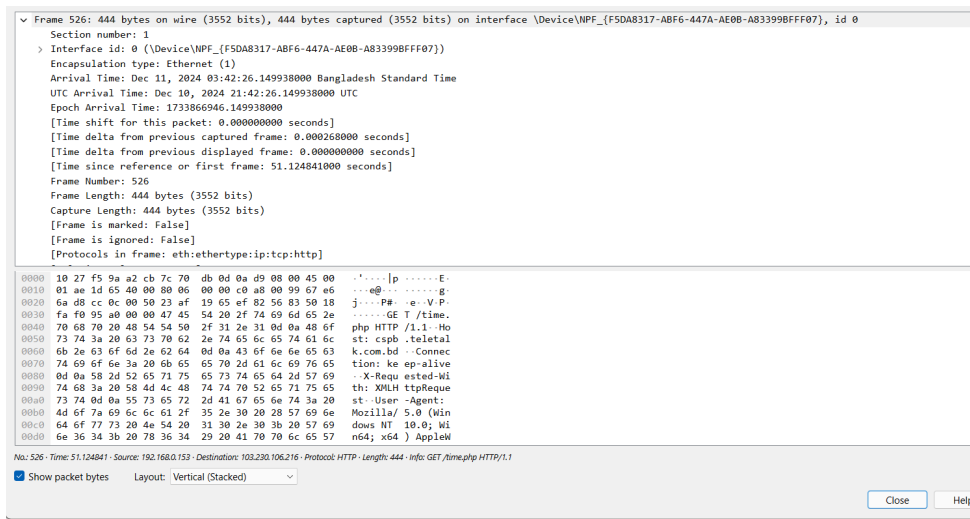
Section: 10

Two HTTP packets are selected, the first packet for HTTP request and the second packet for HTTP response

No.	Time	Source	Destination	Protocol	Length	Info
526	51.124841	192.168.0.153	103.230.106.216	HTTP	444	GET /time.php HTTP/1.1
530	51.131383	103.230.106.216	192.168.0.153	HTTP	439	HTTP/1.1 200 OK (text/html)

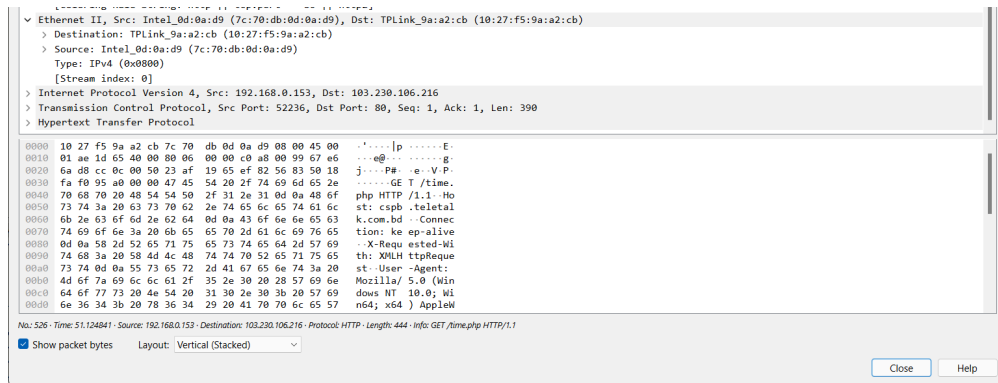
HTTP Request Packet:

Layer 1



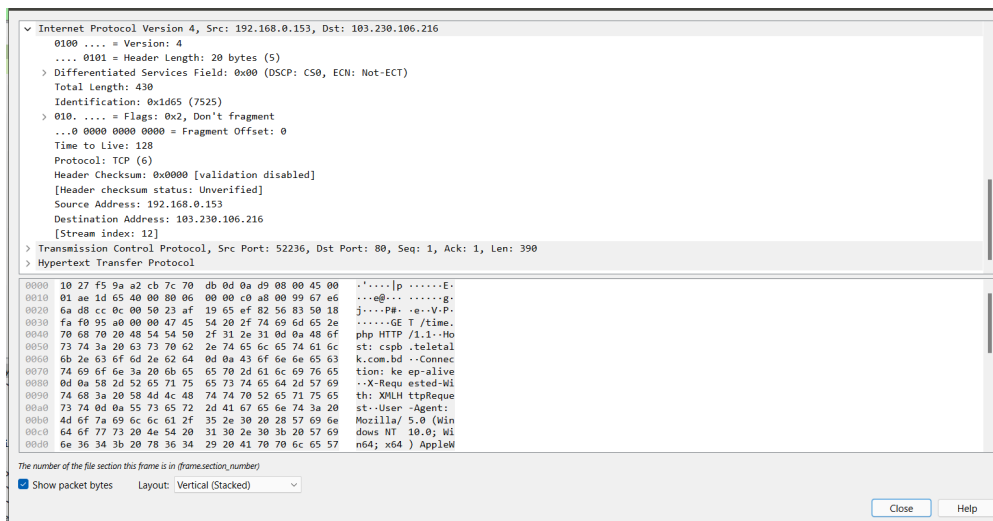
Frame is in the Data Link Layer and it is the physical layer header. From the screenshot, network frame information contains the frame number 526 and a frame length of 444 bytes. It also has arrival time information.

Layer 2



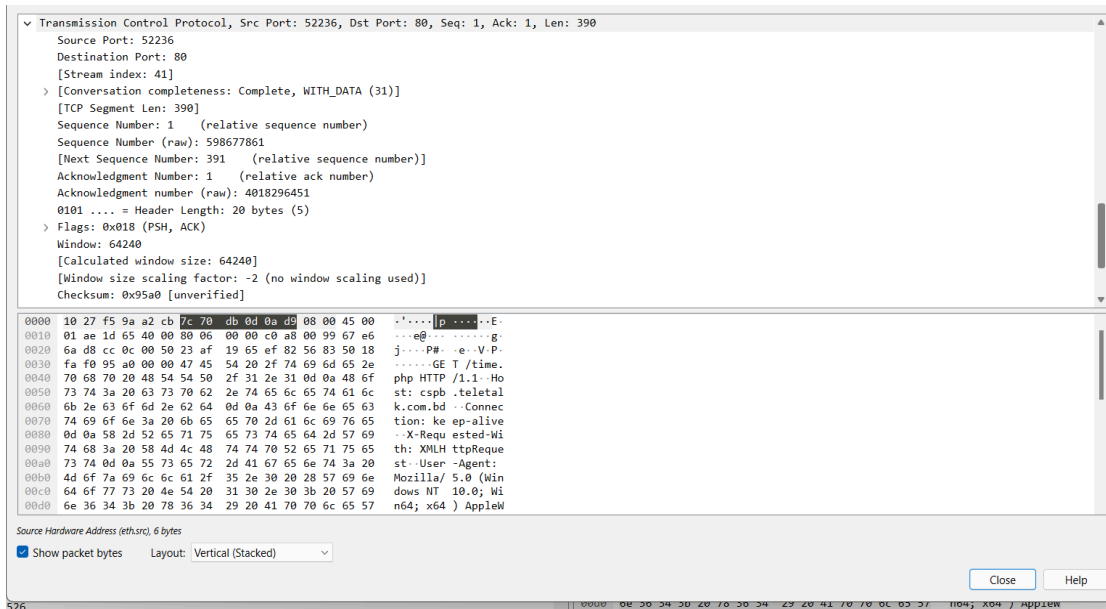
This layer is the Data Link Layer, which contains the type and the source and destination MAC addresses for node-to-node data transfer and error detection.

Layer 3



The Network Layer contains the source and destination IP addresses and header information (Header Length=20 bytes) for packet routing and addressing.

Layer 4



The Transport Layer contains the TCP packets and source and destination port addresses, sequence number, acknowledgment number, and length. Here, the source port is 52236 which is a dynamically assigned port number by the client and the destination port is 80 which is the standard port for HTTP traffic on the server. Seq is the Sequence number that tracks the order of the data segments. ACK is the Acknowledgment Number that is used by the receiver to inform the sender which data has been successfully received. LEN is the length that specifies the size of the data segment.

Layer 5

The image shows a Wireshark packet capture of an HTTP GET request. The packet is selected, and the details pane shows the Hypertext Transfer Protocol section. The request is a GET for /time.php on the host cspb.teletalk.com.bd. The connection is keep-alive. The user agent is Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/130.0.0.0 Safari/537.36 Avast/130.0.0.0. The accept headers are */*, gzip, deflate, and en-GB, en-US; q=0.9, en; q=0.8. The DNT is 1. The referer is http://cspb.teletalk.com.bd/. The packet is 444 bytes long and is the 526th packet in the capture.

```

Hypertext Transfer Protocol
  > GET /time.php HTTP/1.1\r\n
    Host: cspb.teletalk.com.bd\r\n
    Connection: keep-alive\r\n
    X-Requested-With: XMLHttpRequest\r\n
    User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/130.0.0.0 Safari/537.36 Avast/130.0.0.0\r\n
    Accept: */*\r\n
    DNT: 1\r\n
    Referer: http://cspb.teletalk.com.bd/\r\n
    Accept-Encoding: gzip, deflate\r\n
    Accept-Language: en-GB,en-US;q=0.9,en;q=0.8\r\n
    \r\n
    [Response in frame: 530]
    [Full request URI: http://cspb.teletalk.com.bd/time.php]

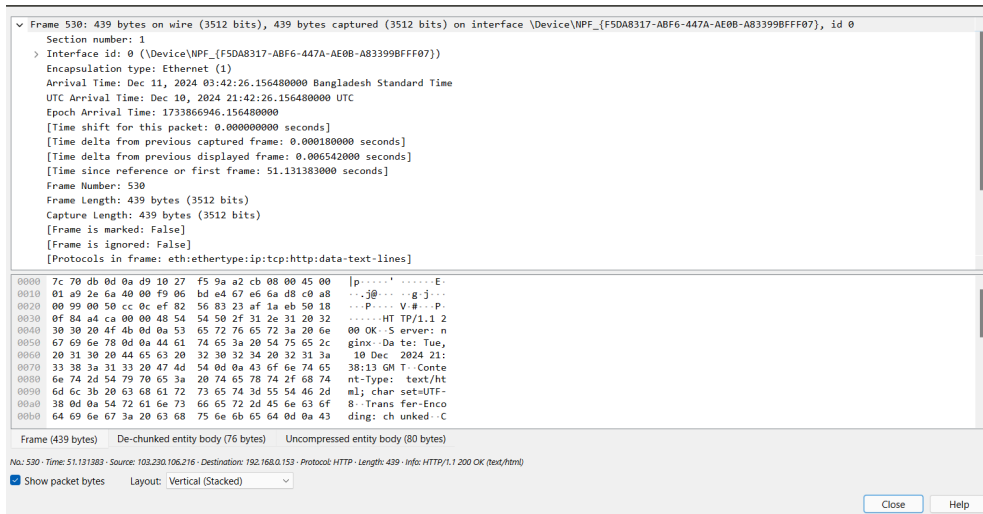
0000  10 27 f5 9a a2 cb 7c 70 db 0d 0a d9 08 00 45 00  .'. .p . . . .E.
0010  01 ae 1d 65 40 00 80 06 00 00 c0 a8 00 99 67 e6  .e@. . . . .g.
0020  6a d8 cc 0c 00 50 23 af 19 65 ef 82 56 83 50 18  j. . .P# . . .V.P.
0030  fa f0 95 a0 00 00 47 45 54 20 2f 74 69 6d 65 2e  . . . .GE T /time.
0040  70 68 70 20 48 54 54 50 2f 31 2e 31 0d 0a 48 6f  php HTTP /1.1 .Ho
0050  73 74 3a 20 63 73 70 62 2e 74 65 6c 65 74 61 6c  st: cspb .teletal
0060  6b 2e 63 6f 6d 2e 62 64 0d 0a 43 6f 6e 6e 65 63  k.com.bd .Conne
0070  74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 76 65  tion: ke ep-alive
0080  0d 0a 58 2d 52 65 71 75 65 73 74 65 64 2d 57 69  .X-Req ested-Wi
0090  74 68 3a 20 58 4d 4c 48 74 74 70 52 65 71 75 65  th: XMLH ttpReque
00a0  73 74 0d 0a 55 73 65 72 2d 41 67 65 6e 74 3a 20  st: User -Agent:
00b0  4d 6f 7a 69 6c 6c 61 2f 35 2e 30 20 28 57 69 6e  Mozilla/ 5.0 (Win
00c0  64 6f 77 73 20 4e 54 20 31 30 2e 30 3b 20 57 69  dows NT 10.0; Wi
00d0  6e 36 34 3b 20 78 36 34 29 20 41 70 70 6c 65 57  n64; x64 ) AppleW

No: 526 - Time: 51.124841 - Source: 192.168.0.153 - Destination: 103.230.106.216 - Protocol: HTTP - Length: 444 - Info: GET /time.php HTTP/1.1
Show packet bytes Layout: Vertical (Stacked)
Close H
526 0000 0e 36 34 30 20 78 36 34 29 20 41 70 70 6c 65 57 n64; x64 ) AppleW
```

This layer is the Application Layer which contains information about HTTP requests, the GET method since it is a request packet, and also contains information on headers such as Host, Connection, User-Agent, Referrer, Accept-Encoding, and Accept-Language. Connection keep-alive means the connection is on so that it can send data and the accepted language is also mentioned which is English.

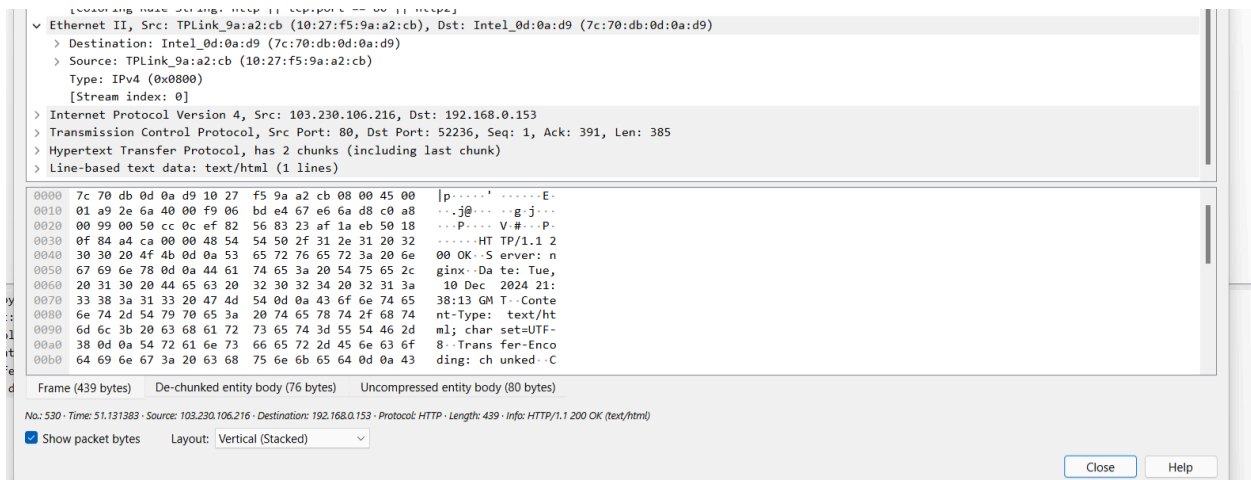
HTTP Response Packet:

Layer 1



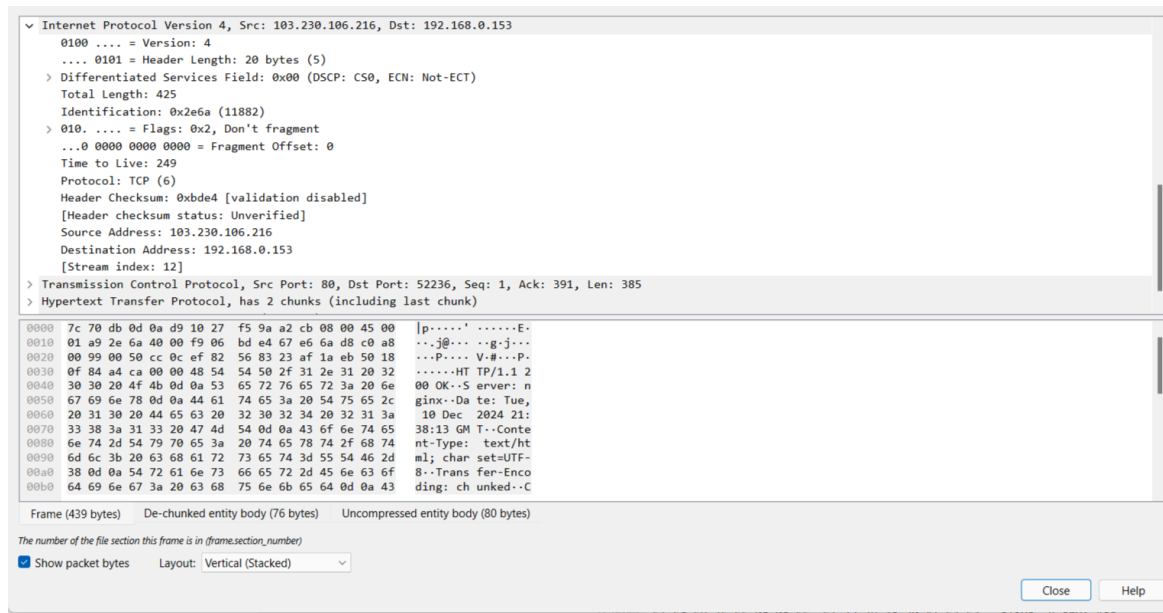
Frame is in the Data Link Layer and it is the physical layer header. Similarly, here for the response, it has the information of frame number: 530, frame length: 439 bytes, and arrival time.

Layer 2



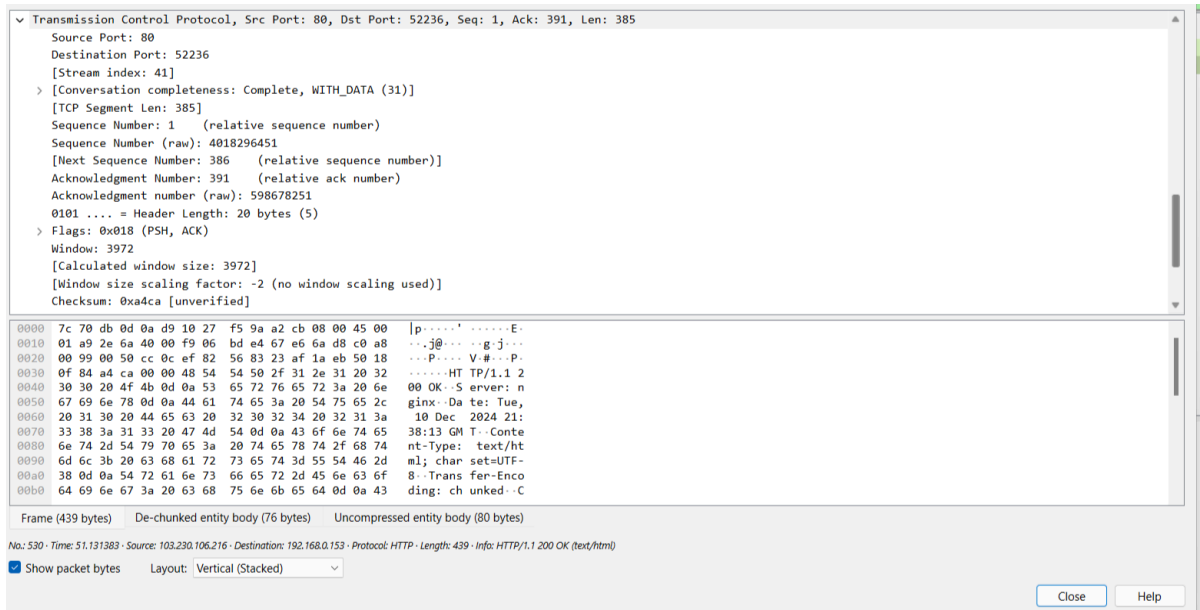
This layer is the Data Link Layer which contains the type source and destination MAC addresses for node-to-node data transfer and error detection.

Layer 3



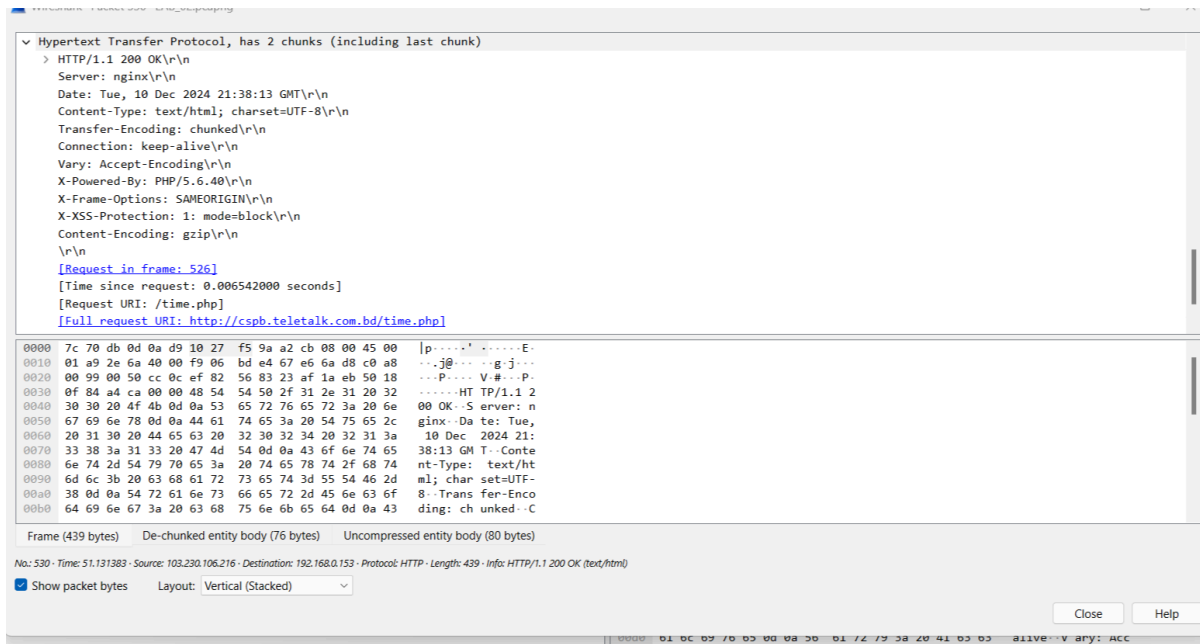
The Network Layer contains the source and destination IP addresses and header information (Header Length=20 bytes) for packet routing and addressing.

Layer 4



The Transport Layer contains the TCP packets and source and destination port addresses, sequence number, acknowledgment number, and length. Here, the source port is 80 which is used by the server to send HTTP responses. Port 80 is the standard port for HTTP traffic. Destination Port 52236 is a randomly selected port from the client's dynamic port range to receive the HTTP response. Seq is the Sequence number that tracks the order of the data segments. ACK is the Acknowledgment Number used to acknowledge receipt of data. LEN is the length that specifies the size of the data segment.

Layer 5



This layer is the Application Layer which contains the HTTP version (1.1) and Status code 200 (OK) and contains HTTP response headers along with the server name, content length, date, and last modification date.