Lab - 8
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- **Part 1**

1. The IP address of the client is **192.168.10.11.** The source port number in the TCP segment is **53924.** The destination IP address is **138.76.29.8.** The destination port number is **80,** of HTTP GET message

```
Internet Protocol Version 4, Src: 192.168.10.11, Dst: 138.76.29.8
Transmission Control Protocol, Src Port: 53924, Dst Port: 80, Seq: 1, Ack: 1, Len: 330
  Source Port: 53924
  Destination Port: 80
```

2. The message was forwarded at **0.030672101.**

```
6 0.030672101 138.76.29.8                    192.168.10.11         HTTP
```

3. Source IP address: **136.76.29.8,** Destination IP address: **192.168.10.11,** Source Port: **80,** Destination Port: **53924,** of 200 OK message

```
    Source Address: 138.76.29.8
    Destination Address: 192.168.10.11
  ansmission Control Protocol, Src Port: 80, Dst Port: 53924,
```

4. The time at which this appears is **0.027356291.**

```
4 0.027356291 10.0.1.254                    138.76.29.8           HTTP
```

5. Source IP address: **10.0.1.254,** Destination IP address:**138.76.29.8,** Source Port: **53924,** Destination Port: **80,** of 200 OK message.

```
    Source Address: 10.0.1.254
    Destination Address: 138.76.29.8
  ansmission Control Protocol, Src Port: 53924, Dst Port: 80,
```

6. Among the four fields, **Source IP Address** is different.
7. No fields were changed in **HTTP** the GET message.
8. Only the **Checksum** and **TTL** field is changed in IP Datagram.

```
Header Checksum: 0x64dc [validation disabled]
[Header checksum status: Unverified]

Header Checksum: 0x2492 [validation disabled]
```

9. The 200 OK messages arrived at **0.030625966.**

```
6 0.030625966 138.76.29.8                    10.0.1.254
8 0 271400100 10 0 1 254                      128 76 20 8
```

10. Source IP address: **136.76.29.8,** Destination IP address: **10.0.1.254,** Source Port: **80,** Destination Port: **53924.**

```
Source Address: 138.76.29.8
Destination Address: 10.0.1.254
ransmission Control Protocol, Src Port: 80, Dst Port: 53924,
```
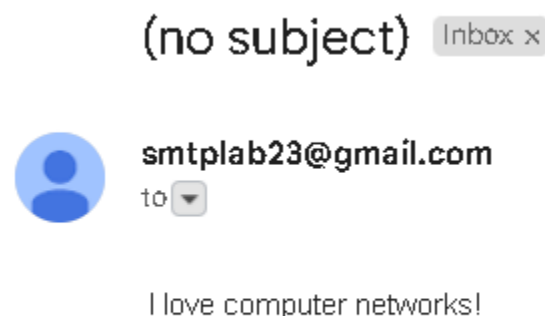
11. Source IP address: **136.76.29.8,** Destination IP address: **192.168.10.11,** Source Port: **80,** Destination Port: **53924.**

We saw the **inside** wireshark capture, and the answers matched.

● **SMTP**

The mail delivery was successful.

(no subject) Inbox x

smtplab23@gmail.com
to

I love computer networks!

The responses printed from the mail server are shown below.

```
Connection Established
220 smtp.gmail.com ESMTP e3-20020aa78243000000b005e5861932c9sm5236772pfn.129 - gsmtp

250 smtp.gmail.com at your service

HELO command sent
b'220 2.0.0 Ready to start TLS\r\n'
e:\Programming\Github_S\Computer-Networks-2023\Lab_7\200010048_client.py:49: DeprecationWarning: ssl.wrap_socket() is deprecated, use SSLContext.wr
ap_socket()
  clientSocket = ssl.wrap_socket(clientSocket)
Wrapped Socket in SSL
235 2.7.0 Accepted

AUTH command sent
250 2.1.0 OK e3-20020aa78243000000b005e5861932c9sm5236772pfn.129 - gsmtp

MAIL FROM command sent
250 2.1.5 OK e3-20020aa78243000000b005e5861932c9sm5236772pfn.129 - gsmtp

RCPT TO command sent
354  Go ahead e3-20020aa78243000000b005e5861932c9sm5236772pfn.129 - gsmtp

DATA command sent
250 2.0.0 OK  1677566666 e3-20020aa78243000000b005e5861932c9sm5236772pfn.129 - gsmtp

Message sent
221 2.0.0 closing connection e3-20020aa78243000000b005e5861932c9sm5236772pfn.129 - gsmtp

QUIT command sent
```