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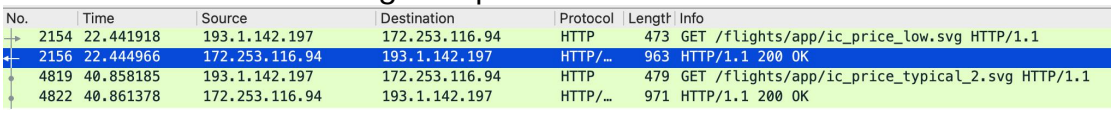
Wireshark Assignment

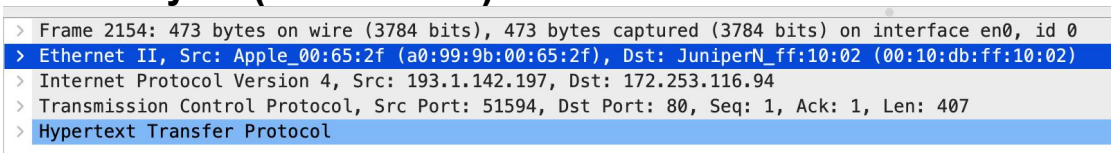
1. What is the IP address of the Google Map Server?

The IP address of the Google Map Server is 172.253.116.94



No.	Time	Source	Destination	Protocol	Length	Info
2154	22.441918	193.1.142.197	172.253.116.94	HTTP	473	GET /flights/app/ic_price_low.svg HTTP/1.1
2156	22.444966	172.253.116.94	193.1.142.197	HTTP/…	963	HTTP/1.1 200 OK
4819	40.858185	193.1.142.197	172.253.116.94	HTTP	479	GET /flights/app/ic_price_typical_2.svg HTTP/1.1
4822	40.861378	172.253.116.94	193.1.142.197	HTTP/…	971	HTTP/1.1 200 OK

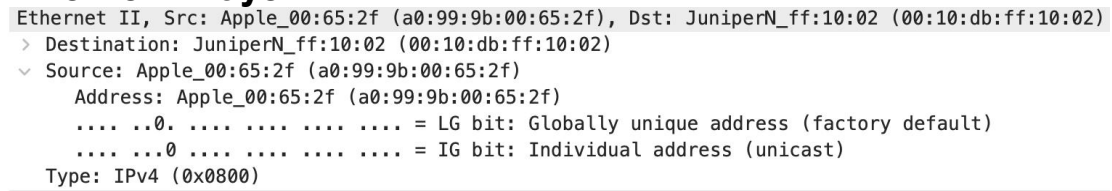
2. Match each layers shown in Wireshark to the relevant course layers (COMP30650).



```
> Frame 2154: 473 bytes on wire (3784 bits), 473 bytes captured (3784 bits) on interface en0, id 0
> Ethernet II, Src: Apple_00:65:2f (a0:99:9b:00:65:2f), Dst: JuniperN_ff:10:02 (00:10:db:ff:10:02)
> Internet Protocol Version 4, Src: 193.1.142.197, Dst: 172.253.116.94
> Transmission Control Protocol, Src Port: 51594, Dst Port: 80, Seq: 1, Ack: 1, Len: 407
> Hypertext Transfer Protocol
```

The Ethernet II in the screenshot is the Link layer.
The Internet Protocol Version 4 in the screenshot is the Internet Layer.
The Transmission Control Protocol in the screenshot is the Transpot Layer.
The Hypertext Transfer Protocol in the screenshot is the Application Layer.

3. What are the source and destination addresses used in the Ethernet II Layer?



```
Ethernet II, Src: Apple_00:65:2f (a0:99:9b:00:65:2f), Dst: JuniperN_ff:10:02 (00:10:db:ff:10:02)
  > Destination: JuniperN_ff:10:02 (00:10:db:ff:10:02)
  v Source: Apple_00:65:2f (a0:99:9b:00:65:2f)
      Address: Apple_00:65:2f (a0:99:9b:00:65:2f)
      .... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)
      .... ...0 .... .... .... .... = IG bit: Individual address (unicast)
    Type: IPv4 (0x0800)
```

The size of the address is 48 bits.
The Destination MAC Address correspond to the router.

4. What is the source and destination address used in the Internet Protocol Layer?

```
Internet Protocol Version 4, Src: 193.1.142.197, Dst: 172.253.116.94
   0100 .... = Version: 4
   .... 0101 = Header Length: 20 bytes (5)
 > Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
   Total Length: 459
   Identification: 0x0000 (0)
 > 010. .... = Flags: 0x2, Don't fragment
   ...0 0000 0000 0000 = Fragment Offset: 0
   Time to Live: 64
   Protocol: TCP (6)
   Header Checksum: 0xc80a [validation disabled]
   [Header checksum status: Unverified]
   Source Address: 193.1.142.197
   Destination Address: 172.253.116.94
```

The size of this address is 32 bits.
The Destination IP Address correspond to the Google Map Server.

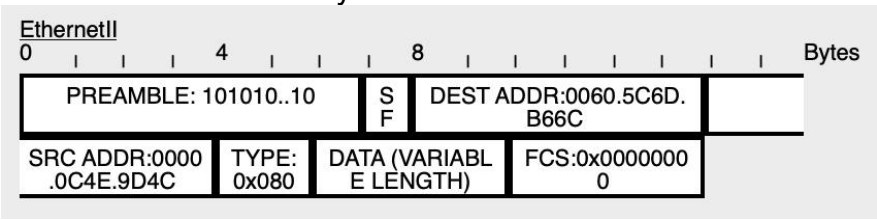
5. What is the size in bits of each of the headers of the following protocols as shown in Wireshark?

The size of Ethernet II is 112 bits.
The size of Internet Protocol is 160 bits.
The size of Transport Control Protocol is 256 bits.

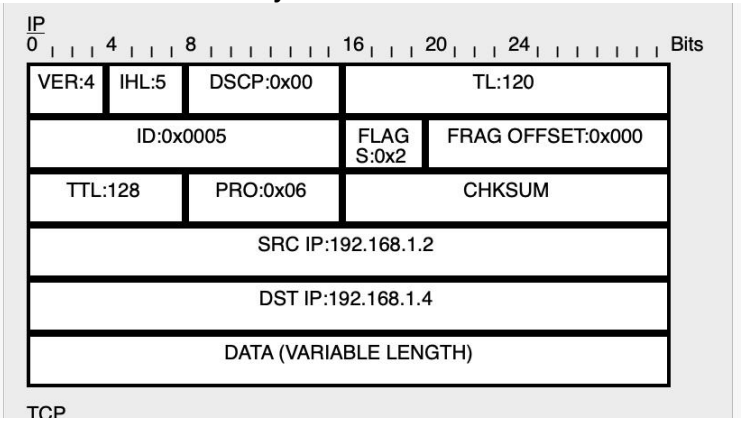
Packet Tracer Assignment

1. Match each layer shown in Packet Tracer PDU to the relevant course layers (COMP30650).

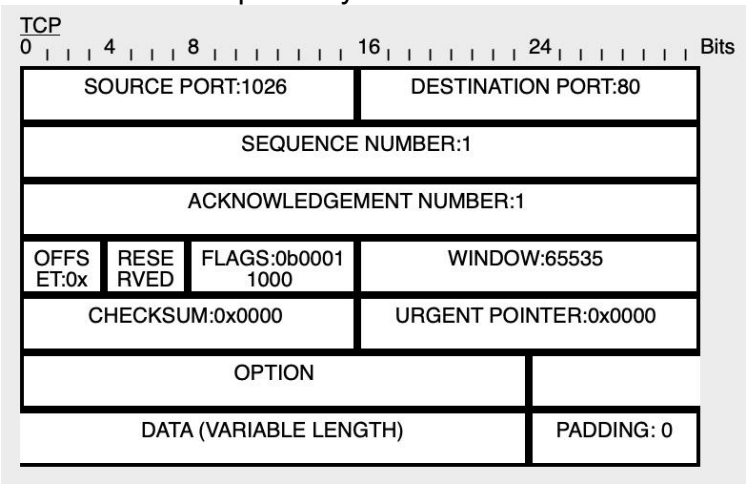
EthernetII is the Link Layer.



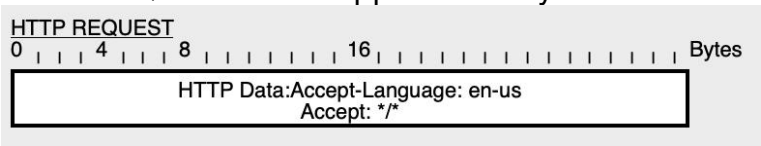
IP is the Internet Layer.



TCP is the Transport Layer.

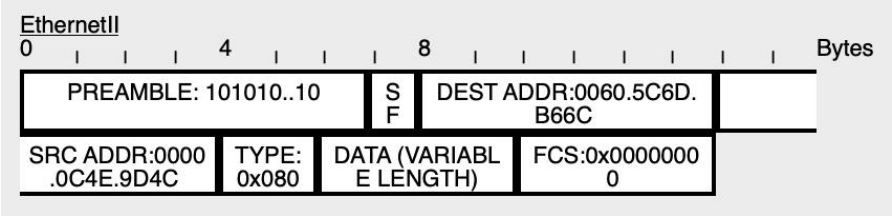


HTTP REQUEST is the Application Layer.

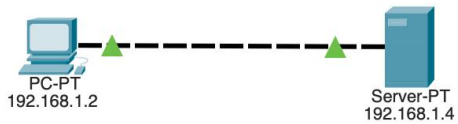


2. What are the source and destination addresses used in the Ethernet Layer?

The source Address used in the Ethernet Layer is 0000.0C4E.9D4C
The destination address used in the Ethernet Layer is 0060.5C6D.B66C

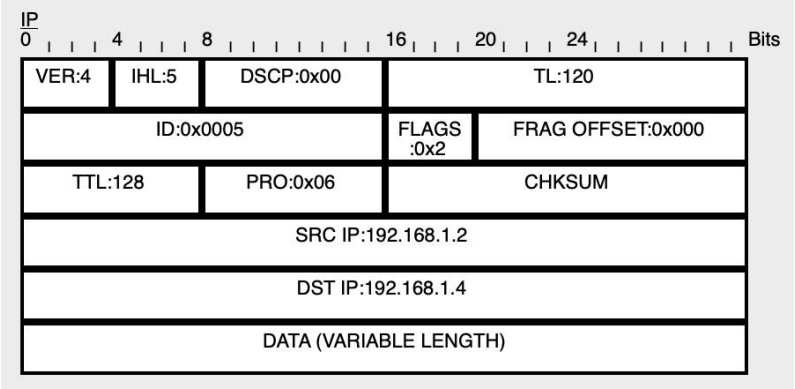


The Destination MAC Address correspond to Server-PT



3. What is the source and destination address used in the Internet Layer?

The source address used in the Internet Layer is 192.168.1.2
The destination address used in the Internet Layer is 192.168.1.4



The Destination MAC Address correspond to Server-PT.