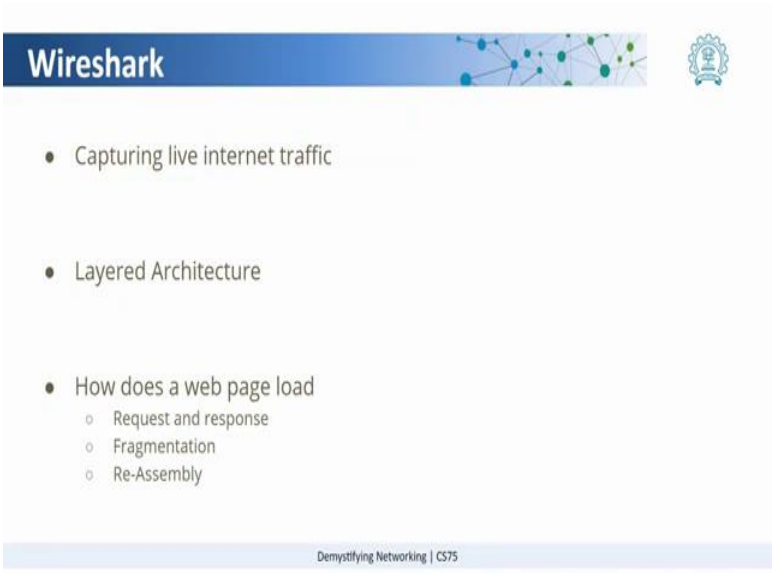
Demystifying Networking
Department of Computer Science and Engineering
Indian Institute of Technology, Bombay

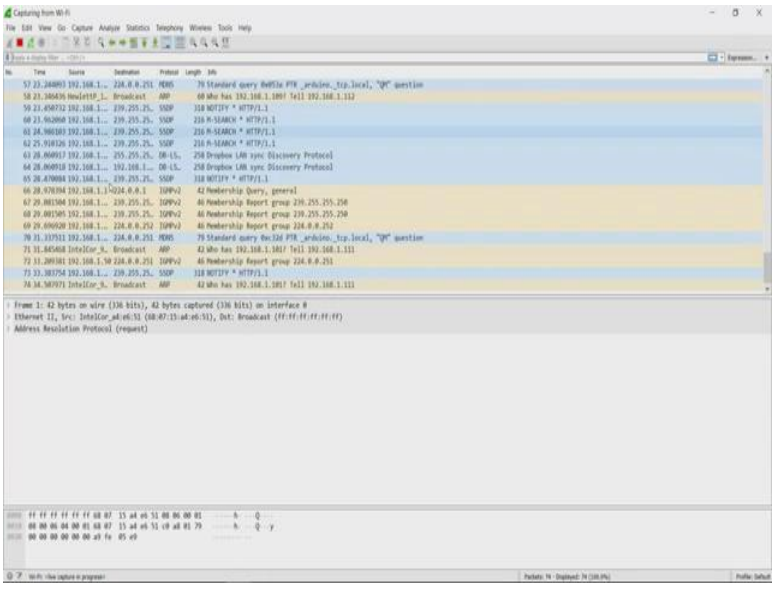
Lecture – 08

(Refer Slide Time: 00:01)



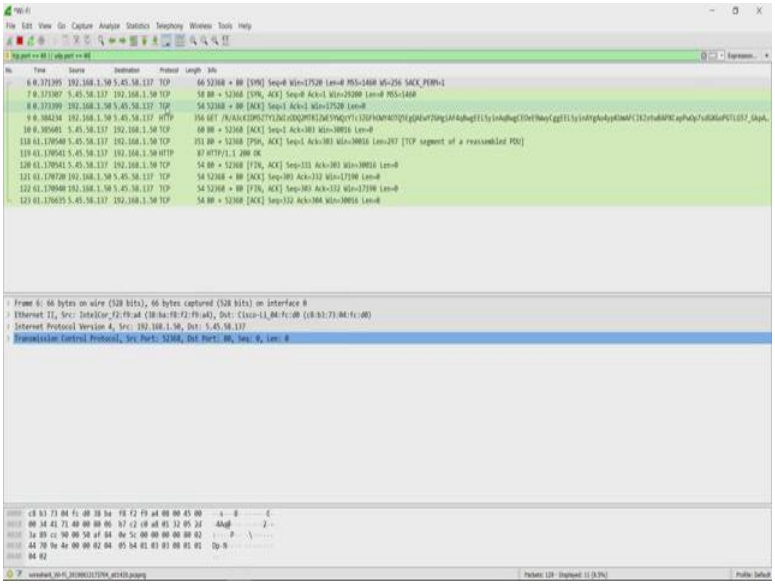
We can see how does these different applications communicate like for a web page, how is a request from browser sent to a website and the website server response to the request by fragmenting the packets and then reassembling it.

(Refer Slide Time: 00:19)



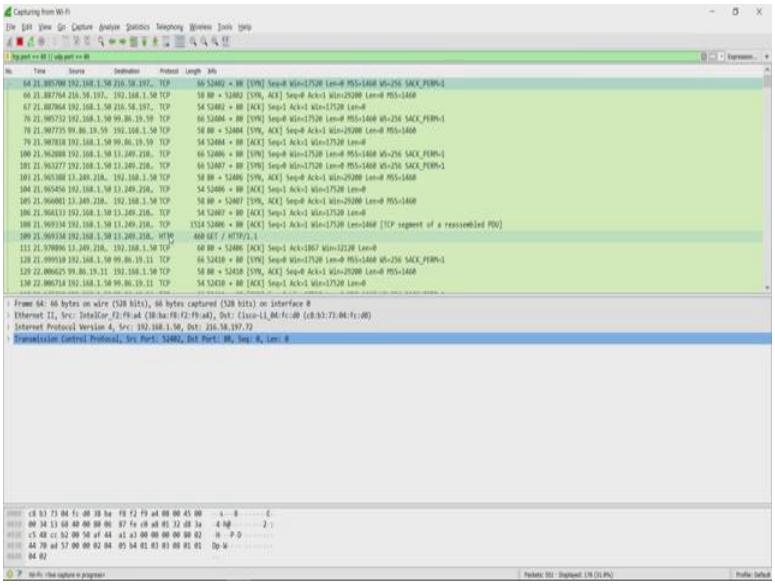
For the ease of looking at the packets or trying to look at the information that is available in the packets, what I will do here is, I will add a filter here which will allow us to only see packets of websites.

(Refer Slide Time: 00:33)



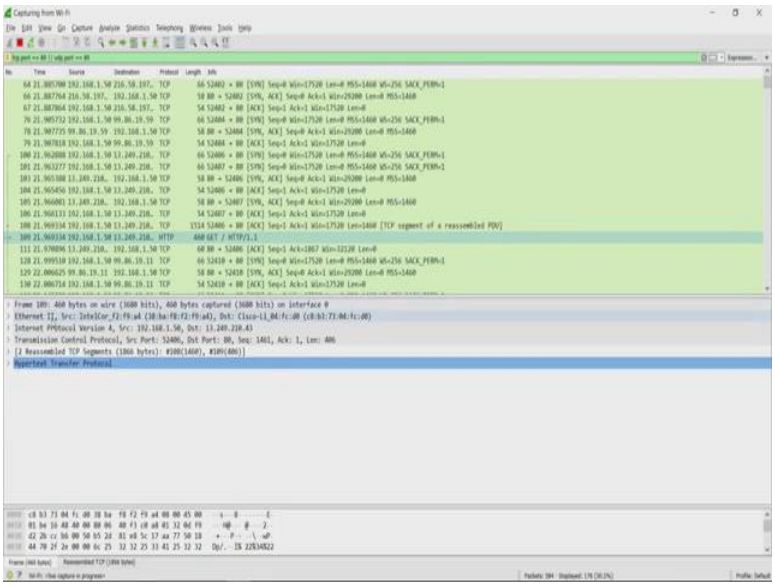
So now, what we see here is are different packets that are responsible for a website's communication to happen. So, further we will be learning about protocols like HTTP and TCP and how they enable these websites to exchange information. So, while I am doing this what I will do is I will open up Google chrome. So, this is the dummy website.

(Refer Slide Time: 01:03)



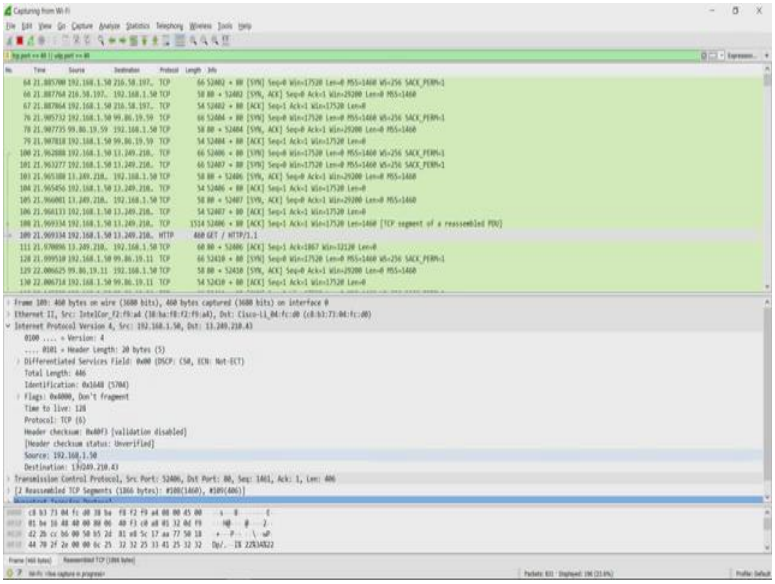
So, as I click here what we see on Wireshark is a lot of other packets are being captured here. Now, all these captures are relevant to the websites traffic that was just requested by us on the browser. So, the http is the hypertext transfer protocol which is responsible for the communication between a browser and a web server. So, let us click on this.

(Refer Slide Time: 01:25)



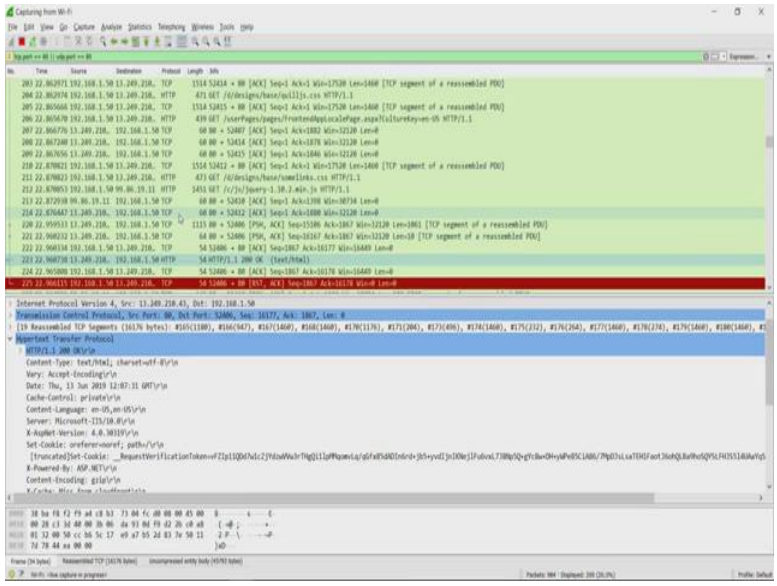
So, what you see here are different layers of this communication or this piece of communication which we call packet. So, you will come to know more about packets in the further course. Now, what we see here different layers of this communication, now each packet is actually divided into different layers. So, you have physical data link layer, then you have network layer and the transport layer.

(Refer Slide Time: 01:51)



So, here what we see is the different information that is relevant to each layer like you have IP addresses in this layer and so, we come to know about these in detail as we go ahead with the course. So, what here I want to show is this hypertext transfer protocol request.

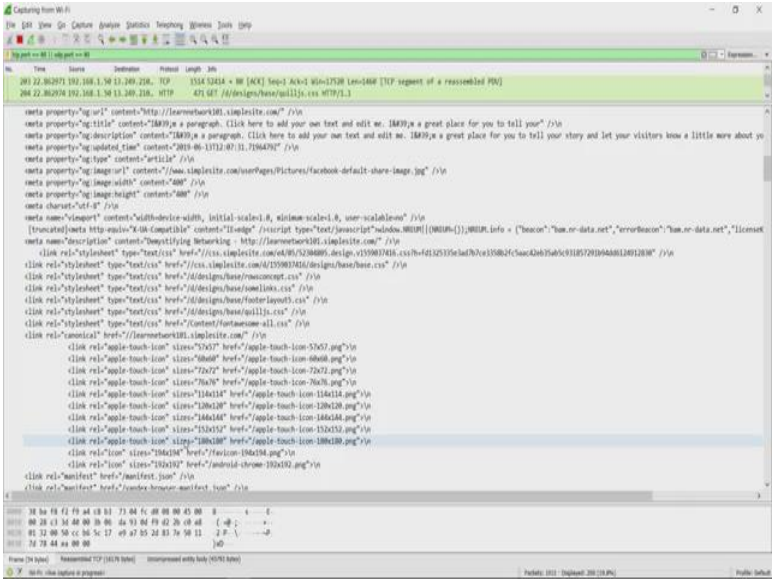
(Refer Slide Time: 02:05)



So, basically it says we had requested for this particular website. Wireshark tells you that the response of this request was seen in the frame 223. So, here are the frame numbers and let us scroll down to the frame 223. So, what we expect to see there is, there is another HTTP as we have seen earlier.

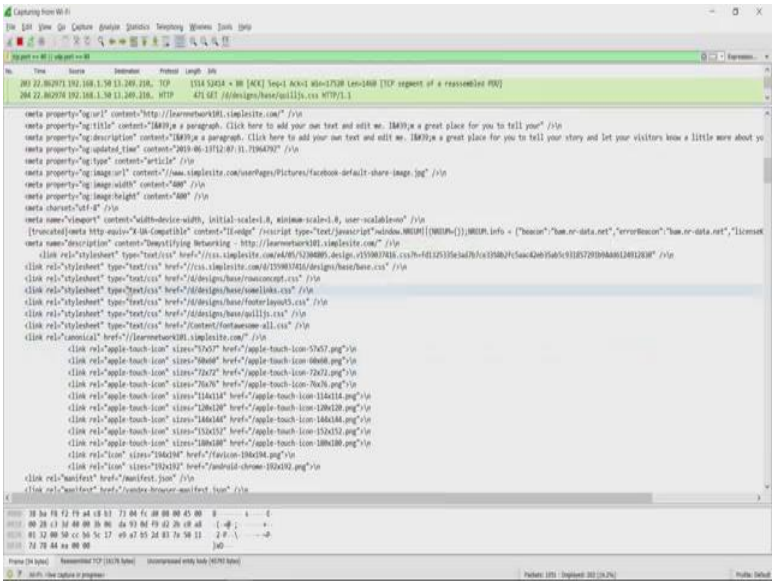
Now, this is the response to that request and there are lot of frames that we see in between. So, basically all these frames have been received to complete this entire communication and so, what does come in this communication? Here, let us open this packet and see what data was there.

(Refer Slide Time: 02:47)



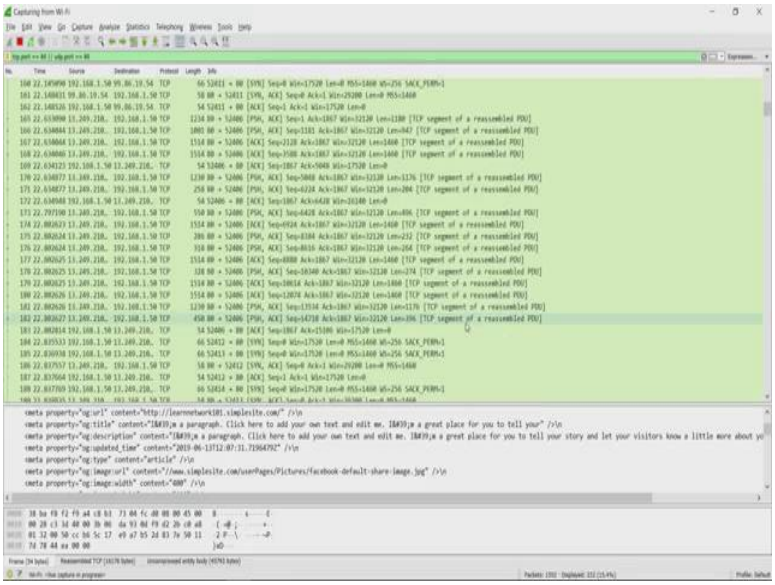
So, what you see here inside is actually the entire web page. So, it is the code of the webpage, the entire code of the webpage that we had requested. So, we could look at it by right clicking on the webpage and viewing the webpage source.

(Refer Slide Time: 03:05)



So, this is exactly what we had received from the server. So, this is how the entire web page has been sent to a laptop.

(Refer Slide Time: 03:23)



Now, how did this happen? Now before this entire response was received, we see there are a lot of packets that were received. So, all these were small-small packets which were sent to the laptop and here they were reassemble using their TCP information some something like a sequence number. We will learn more about it in the further course. So, this is how we can capture and look at live information on any of the laptop using Wireshark.

Thank you.