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

Lecture - 15
Introduction to the campus network on Cisco Packet Tracer

Hello and welcome back. Now, you have seen an introduction to Cisco Packet Tracer. It is a good time to actually go ahead and look at how we can request a website from an server and how does this request go through the entire network and how is the response received back from the server.

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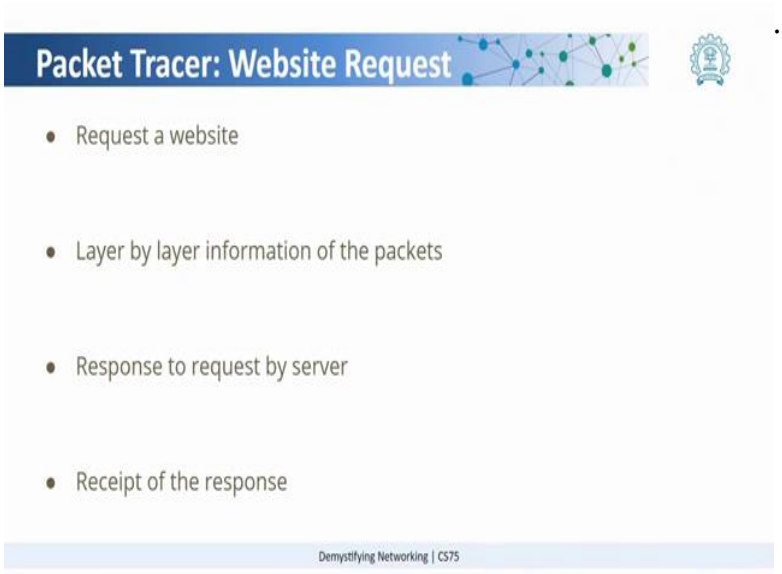

So, we were talking about the communication being sent in fragments as we also saw in the analogy, that the orders were being delivered in small packages and whenever there is a huge request, say a very huge file to be sent by the server back to the laptop which made the request, it is sent in small packets.

So, how do these packets actually reach the destination and how the laptops actually take all these packets and finally, come up with the website that was requested? So, let us go to packet tracer and see how this happens.

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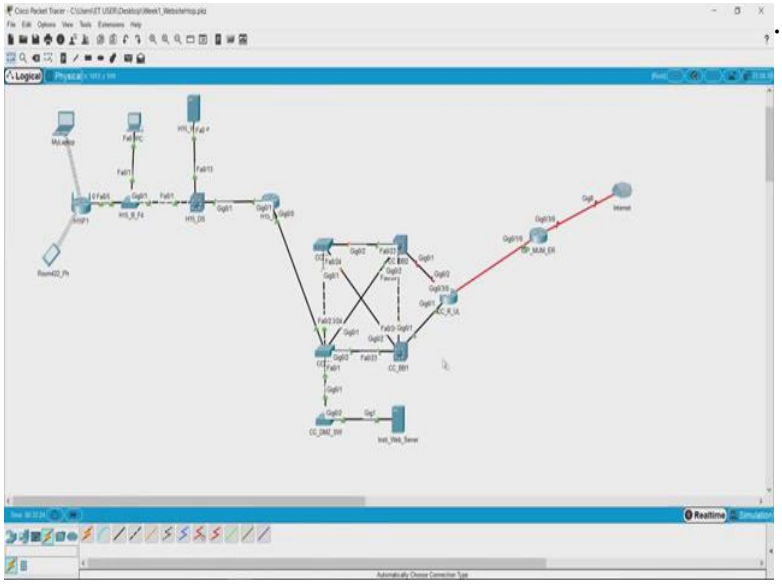

So, here we have a topology that has already been laid out, it is just a imaginary topology of say a campus network. This is the logical representation of the topology.

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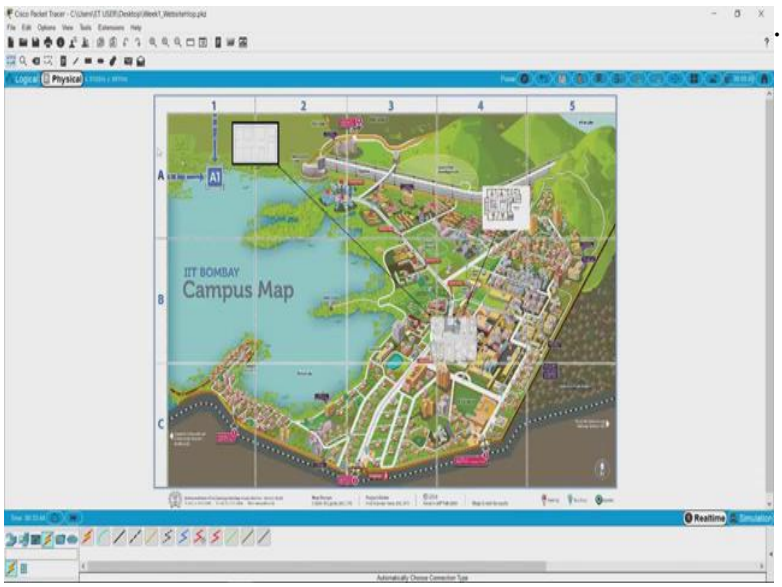

So, if you look at the physical one, here is a map. So, this is a campus map. Here what we see is the internet service provider and the internet service provider is linked to the computer centre which is again link to a hostel.

We could go inside the computer centre and look at certain devices that are available there.

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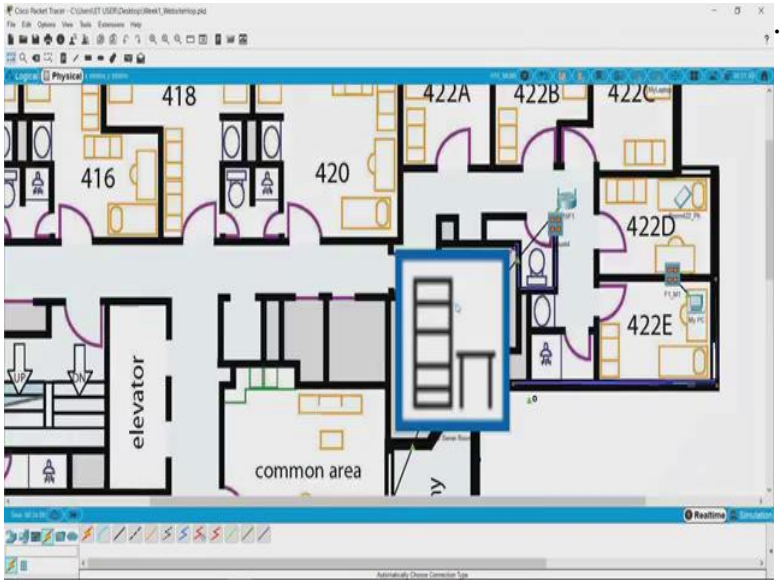

And similarly if we go back to the hostel, we can see there is a network room for the hostel where certain devices are placed, there is a Wi-Fi modem here and we have a laptop, a cell phone and a desktop which is connected directly to the wall socket. So, these are certain scenarios that usually happen in a hostel.

So, when we look at it logically so, these are the laptops and the cell phone and the PC that we were talking about, that this is the Wi-Fi router that we saw in the lobby of the hostel. And similarly this entire network belongs to what the hostel network is and the hostel network is then connected to the campus network and the campus network has its own devices like this server.

So, what we will try to do now is, we will try to request a website which is there on the institute website server from the hostel network. So, let us open the laptop and let us go to the browser.

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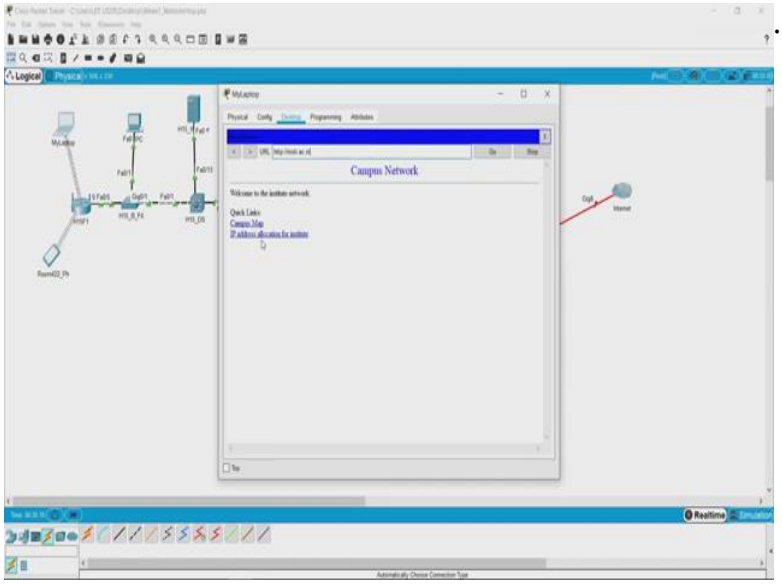

So, name of the website is ‘insti.ac.in’. Now, if we hit ‘Enter’, we see this dummy website coming up, which has a link to a campus map and IP address allocation of the institute and when you click, click on campus map we see this image opening.

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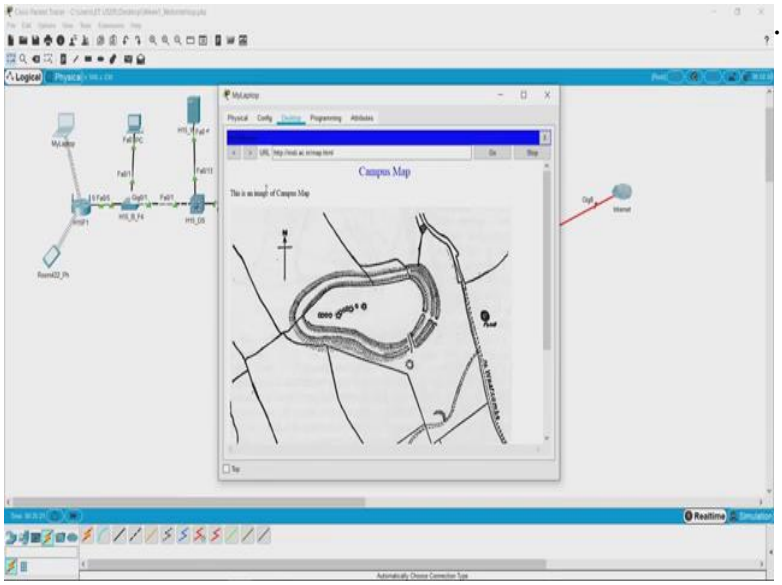

So, right now what we saw is the laptop has sent the request and the server has responded. But how do we see it step by step? So, what we can do is, go back into the simulation mode and then try.