Demystifying networking
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Lecture - 78
Introduction to Network Security

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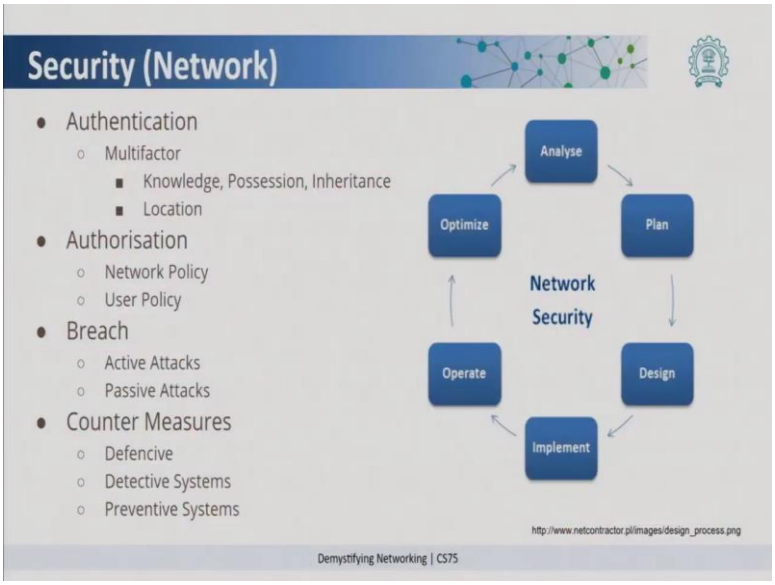

Now, let us look at Network Security. Now in network security we again have authentication, authorization. Here let us talk a bit more about authentication. In authentication we these days use a multifactor authentication.

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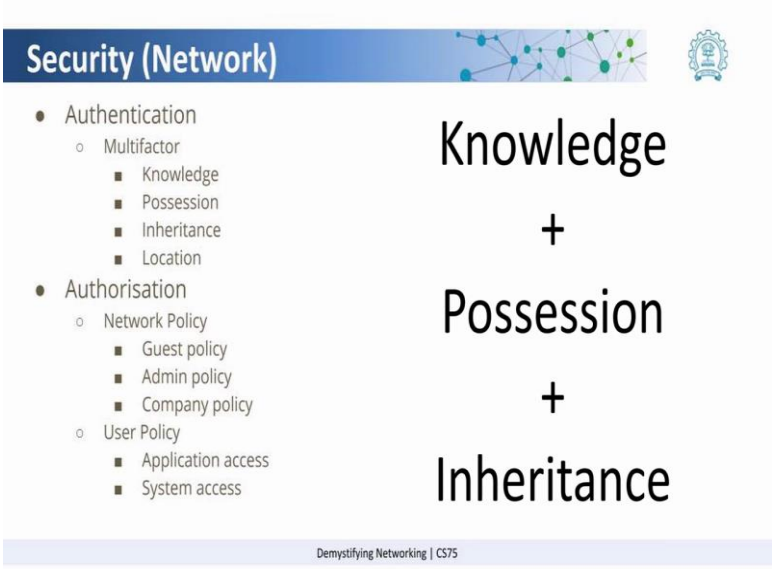

So, what do we mean by multifactor? Certain things say a knowledge about some information, a certain possession and a certain inheritance of you can prove that you are the right person. So, what do we mean by that? Knowledge is something like a password.

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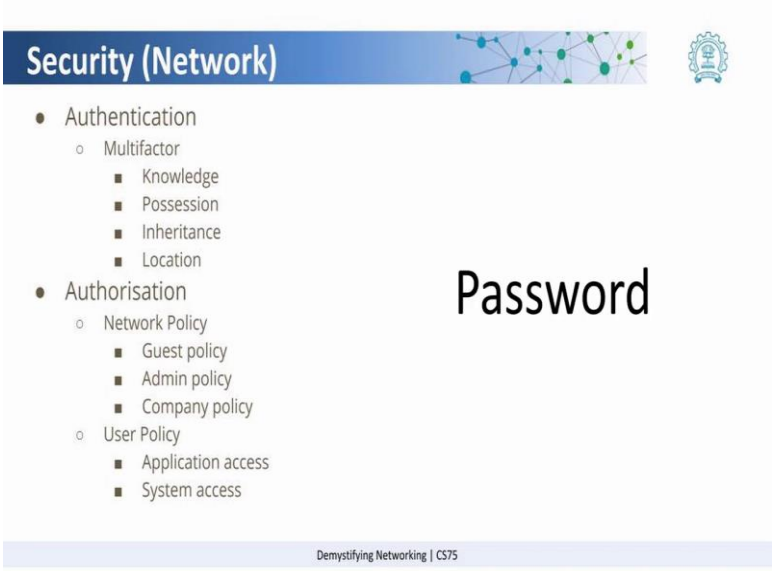

Something that you remember, possession is say your ID card.

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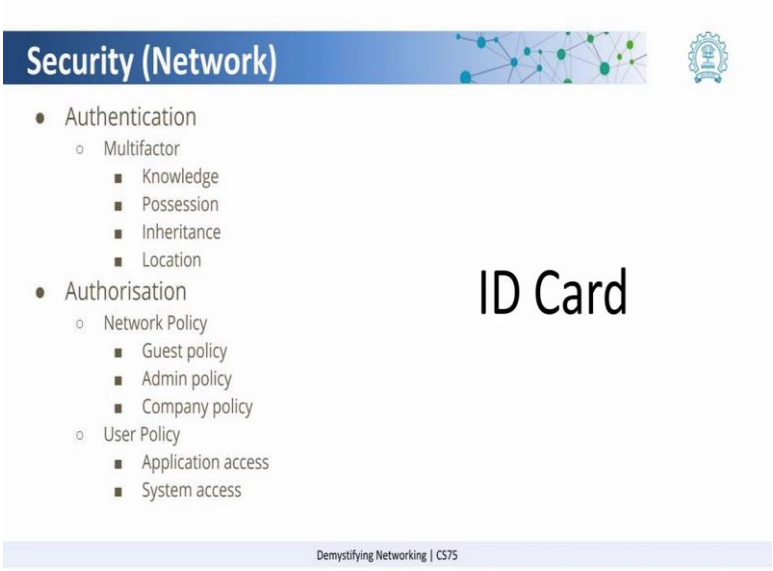

Something that you possess because you because you belong to the company and inheritance is something that has been with you since you were born for example your fingerprints or your iris.

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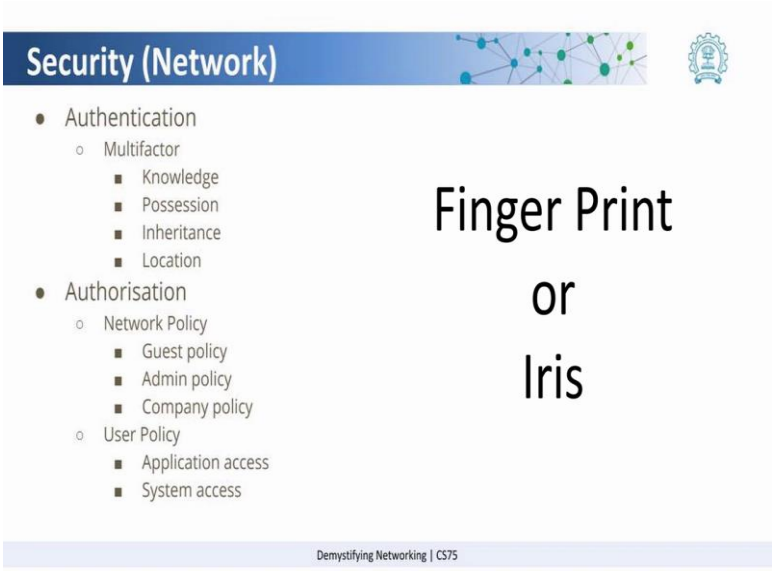

So, by using these three different factors you could authenticate yourself. Now depending on how confidential it is we could use either or a multiple of them. Now these days we also have something called location. For example, if there are certain systems which can only be accessed from say a given location, then you can have authentication factors which check where you are right now and only then allow you to enter. For example, if there is a very machine critical server somewhere and it can only be accessed from the server room, then the access can only happen while you are on the server or on the machine. So, remote access is not allowed.

So, now let us look at authorization. So, on a network, authorization is divided into two parts which is the network policy of authorization and the user policy. So, the network policy means that, who is authorized to enter which part of the network. So, like there is a guest who has come to the company, he is maybe just authorized to access the internet, whereas, a person who is working as a network engineer or say a security engineer, is able to access confidential network called the out of band management network in companies, which basically is used to manage network devices.

The standard employees of the company who are not involved in the networking roles, do not even have access to that network. So, the network policy determines which part of the network do you have access to. Similarly there is a user policy. So, in user policy what you have is, which applications do you have access to or which systems do you

have access to. So, this policy basically determines the applications or say which systems user can access.