Demystifying Networking
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Lecture – 27
Nomenclature of a sub-net mask

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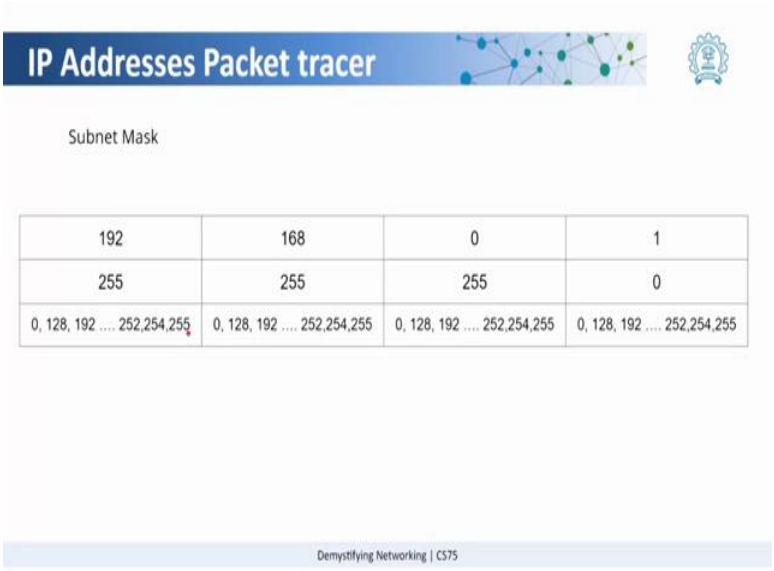

What are these special values? Let us look at them.

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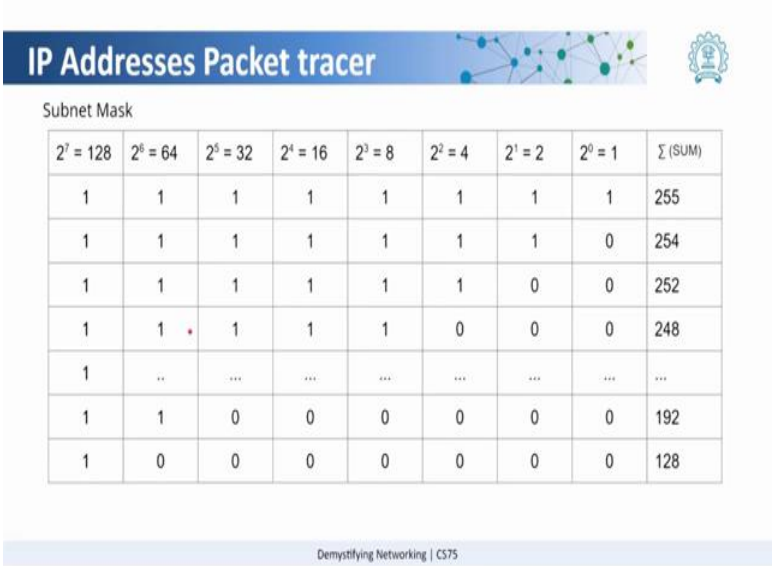

So, how subnet mask work is, they use the binary form of a subnet mask, do a logical operation with the IP address and then try to determine the network address. But to do that, what is very essential for a subnet mask is, to have the trailing set of 1s. So, a subnet mask can only take values which are trailing 1s and in continuation.

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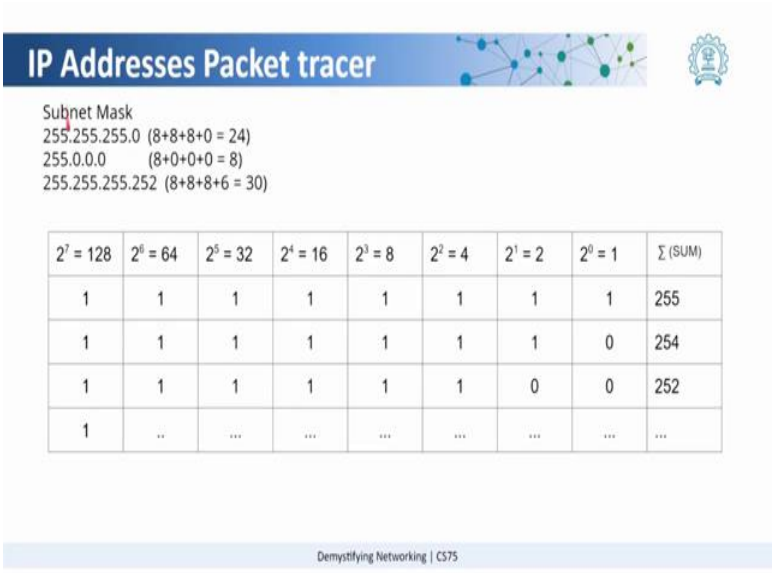

Let us look at some of the other type of subnet masks. So, another subnet mask here is 255 255 255 0 which we just saw. So, it has a 8+8+8 that is 24 trailing 1s. Similarly, a subnet mask for 255.0.0.0 has a 8 trailing 1s. Similarly, a subnet mask for 255 255 255 252 would a have a total of 30 trailing 1s.

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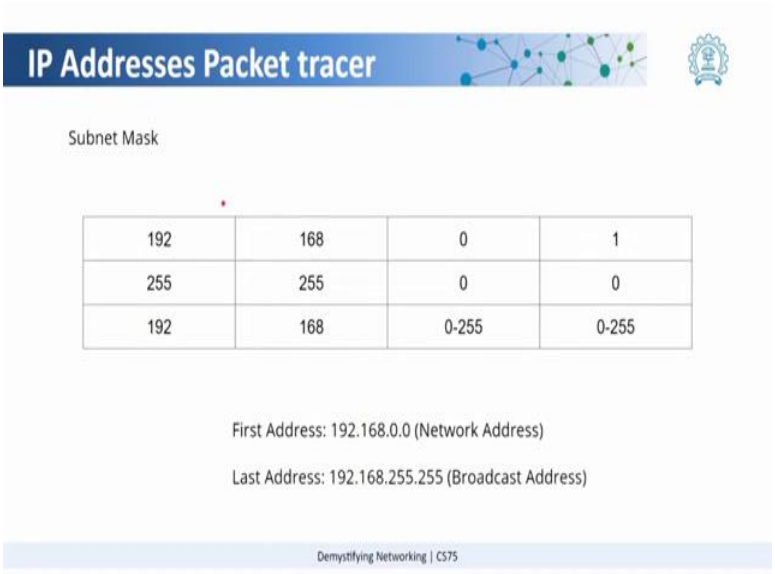

So, using these different type of subnet mask, how can you calculate the number of IP addresses that are available?