

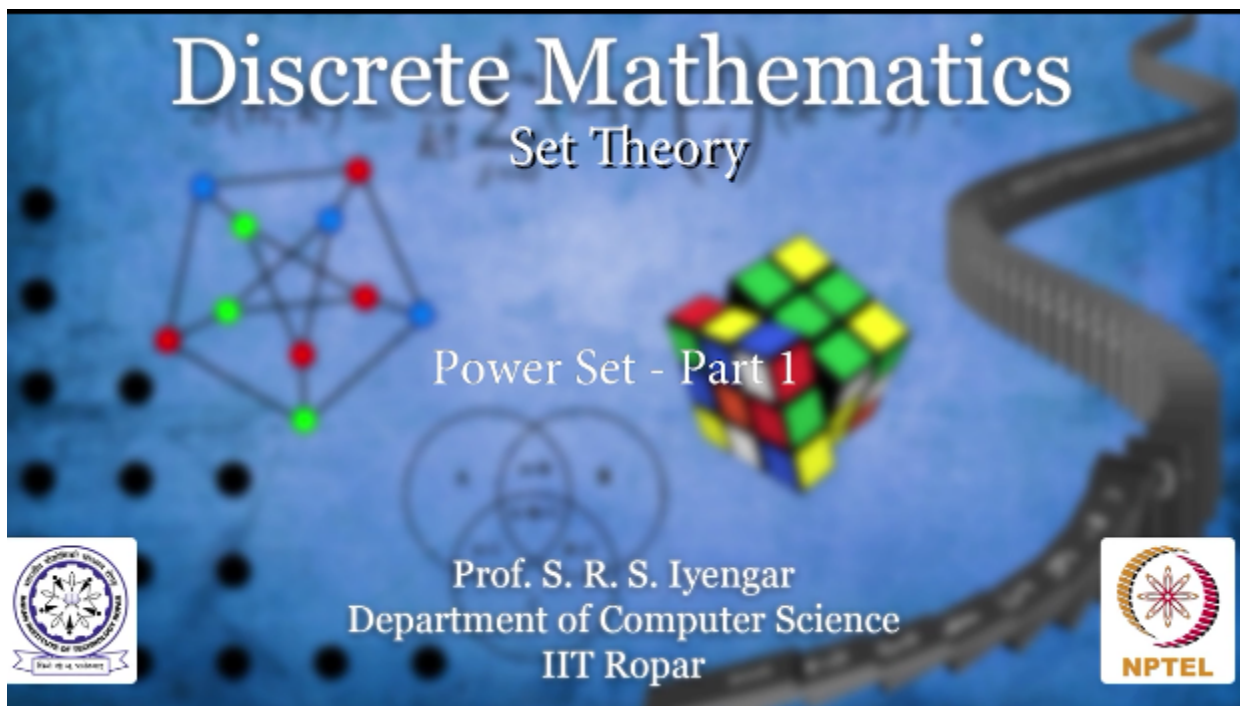
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Discrete Mathematics  
Set Theory

Power Set – Part 1

With  
Prof. S.R.S. Iyengar  
Department of Computer Science  
IIT Ropar



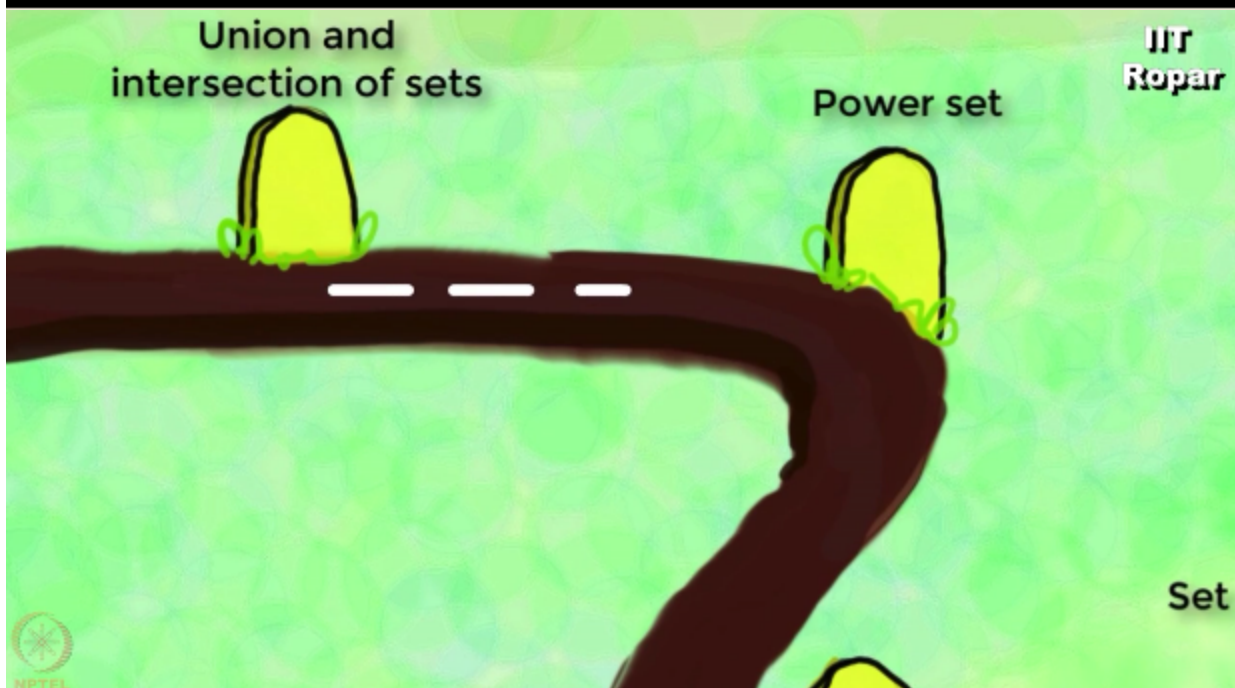
Let us now see how one can construct a new set from a given set by taking all possible subsets of the given set, this goes by the name the power set.

# POWER SET

What is more beautiful about power set, is its relationship with a binomial theorem, let us

# Binomial Theorem

## POWER SET



proceed to see more of power sets, I planned to go for a hike this weekend, and 5 of my



students are generally interested to join me for this hiking activities, this time I'm going to ask them they may or may not be willing to come, in fact it doesn't so happen that all of them come or all of them don't come, a part of them might come, you see these are my 5 students.

There is a possibility that some of them come in that case I'll put a 1 on top of their head if they come, 0 on top of their head if they don't come, right, in how many ways can I go for a hike with all these 5 people, by that I mean in how many ways can this 5 people come? One way is none of them come, that's one way, please note, another way is all of them come that's another way please note, another way is the first person comes or just the second person comes, or the first person and fourth person comes so on and so forth, do you observe something here?



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