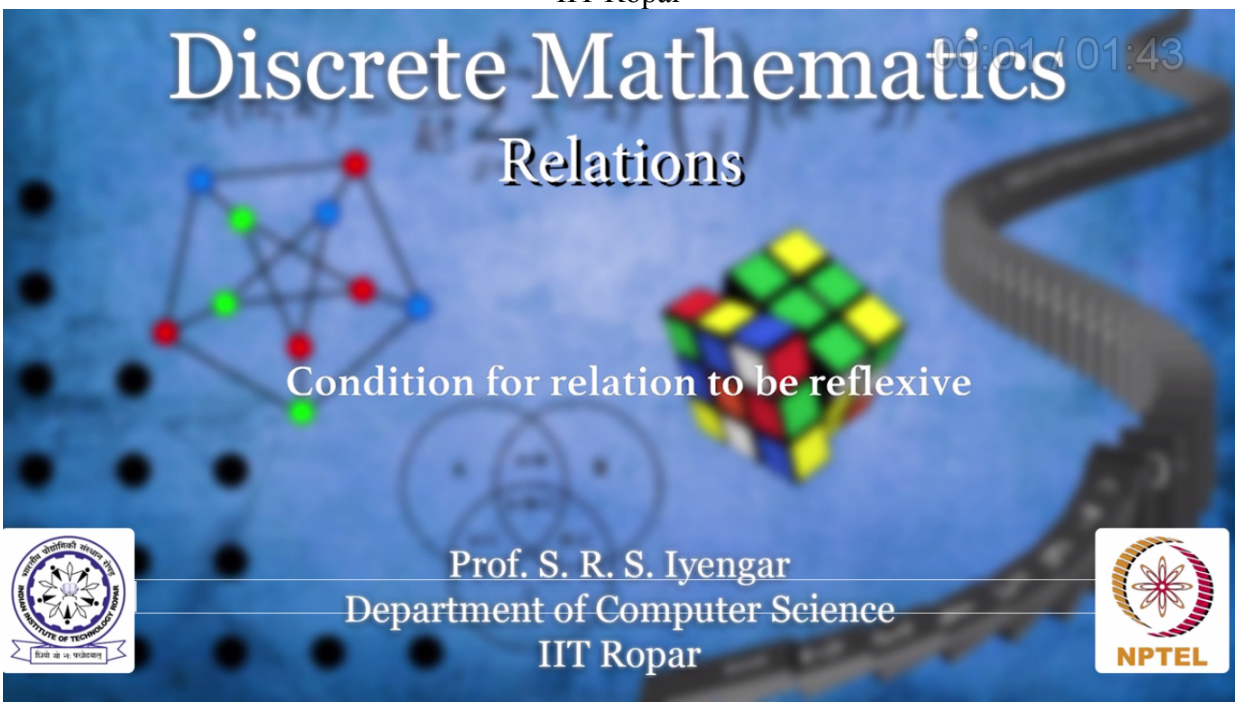
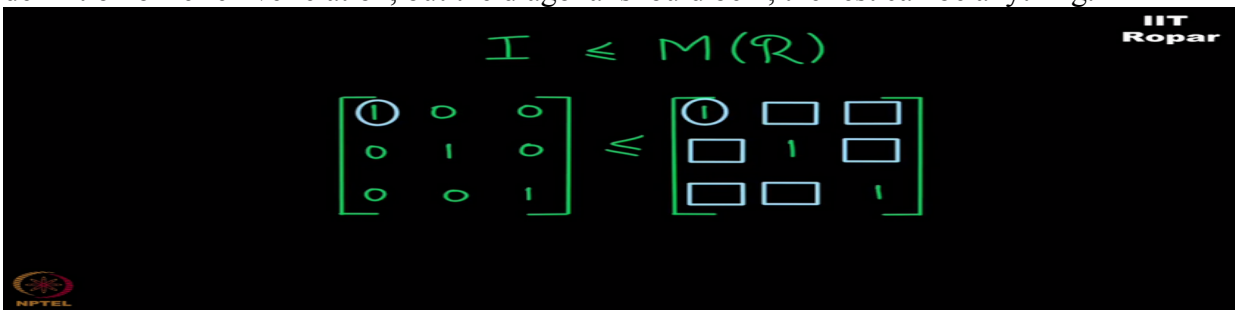
NPTEL
NPTEL ONLINE COURSE
Discrete Mathematics Relations
Condition for relation to be reflexive(2)
With
Prof. S.R.S. Iyengar
Department of Computer Science
IIT Ropar



What do we mean by I less than or equal to the matrix. By this we mean every entry of I here, we know what it is, diagonals will be 1s, rest will be 0s. If I say my matrix is less than or equal to this matrix, it means that corresponding diagonal elements, please note, you better be familiar what we mean by less than or equal to. Without that you cannot understand what I am saying here. So the diagonal here in M(R) should all be 1. Why? Less than or equal to means the corresponding element should respect that inequality.

Whenever you put 1 here the only thing you were allowed to put here so that this less than or equal to is followed is 1.

So whenever we say $I \leq M(R)$, diagonals of M(R), the matrix M, let's say, instead of M(R) I'll say M. The diagonals of M(R) should be 1. The rest can actually be anything. Now isn't that the definition of reflexive relation, but the diagonal should be 1, the rest can be anything.



You see, this is taking care of that whenever I say $I \leq M(R)$.
Think about it. If you are not following what I am saying, you probably should understand the less than or equal to symbol's usage when we talk about matrices.
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