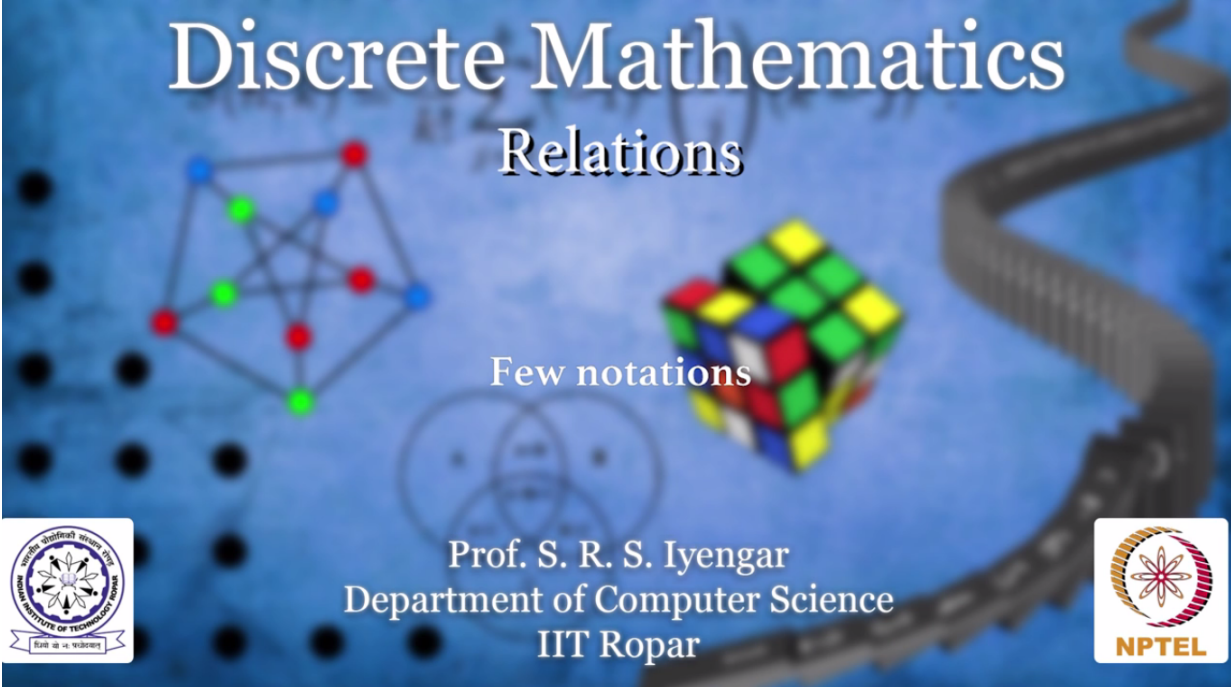




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Discrete Mathematics Relations
Few notations
With
Prof. S.R.S. Iyengar
Department of Computer Science
IIT Ropar



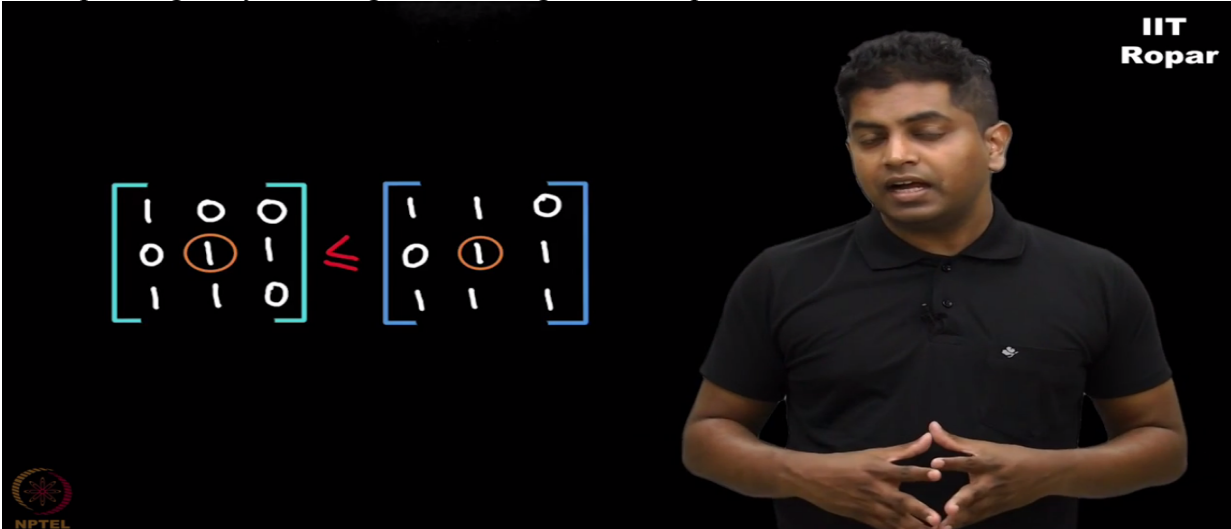
Discrete Mathematics Relations

Few notations

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Here is a very important notation to note. Whenever I say a relation matrix representation and another relation's matrix representation, let's say these two matrices here, I say one matrix is less than or equal to the other matrix if for every entry on the left matrix for every entry corresponding entry in the right matrix is greater or equal to.



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$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{bmatrix} \leq \begin{bmatrix} 1 & 1 & 0 \\ 0 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$$

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For example, on the left if you have a 0, on the right you must have 0 or 1. If you have 1 on the

left side, you must then should have 1 on the right side. All that we are saying is that the corresponding entries respect the inequality that is put between these two matrices.

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