



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

Discrete Mathematics Relations

Condition for relation to be symmetric

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




How do we check whether a given relation is symmetric or not? You must look at all possible entries in the matrix and see if the corresponding entries across the diagonal are the same or not. Basically, the red zone and the blue zone, the corresponding entries should all be the same. So what do I mean by this?

1	0	1	1
0	1	0	0
1	0	0	0
1	0	0	1

$M = M^{\text{Transpose}}$

IIT Ropar



Notation-wise all I am saying is the entries after considering the transpose of the matrix M should be equal to $M^{\text{Transpose}}$, isn't it?

Online Editing and Post Production
Karthik

Ravichandran
Mohanarangan
Sribalaji
Komathi
Vignesh
Mahesh Kumar

Web-Studio Team

Anitha
Bharathi
Catherine
Clifford
Deepthi
Dhivya
Divya
Gayathri
Gokulsekhar
Halid
Hemavathy
Jagadeeshwaran
Jayanthi
Kamala
Lakshmipriya
Libin
Madhu
Maria Neeta
Mohana
Mohana Sundari
Muralikrishnan
Nivetha
Parkavi
Poornika
Premkumar
Ragavi
Renuka
Saravanan
Sathya
Shirley
Sorna
Subhash
Suriyaprakash
Vinothini

Executive Producer

Kannan Krishnamurthy
NPTEL Coordinator
Prof. Andrew Thangaraj
Prof. Prathap Haridoss

IIT Madras Production

Funded by

Department of Higher Education

Ministry of Human Resource Development

Government of India

www.nptel.ac.in

Copyright Reserved