## NPTEL NPTEL ONLINE COURSE

Discrete Mathematics
Logic
XOR operator - Part 1
Prof. S.R.S Iyengar
Department of Computer Science
IIT Ropar

Let us take an interesting example. Assume our friend John has two girlfriends and they don't know each other. It is wrong to have two girlfriends. I am in no way advocating this. I am only giving this as a nice example because it's very easy on your minds to understand what I'm going to say next. John has two girlfriends and they do not know each other. Now John is a very happy person if he is with his first girlfriend. He is also a happy person if he is with his second girlfriend. But he is obviously unhappy if he is with neither of them. If he is lonely. At the same time you can imagine what will be his plight in case both the girlfriends meet each other and he is there in the picture simultaneously with them. Right. It's going to be a disaster. So do you see the truthtable here? This truthtable is a very well known Boolean operator called the exclusive OR.

## **IIT MADRAS PRODUCTION**

Founded by
Department of Higher Education
Ministry of Human Resource Development
Government of India
<a href="https://www.nptel.iitm.ac.in">www.nptel.iitm.ac.in</a>
Copyrights Reserved