## NPTEL NPTEL ONLINE COURSE Discrete Mathematics Logic Motivation for OR operator Prof. S.R.S Iyengar Department of Computer Science IIT Ropar

Let us start with a very famous quote. The quote goes like this; he who knows not and knows not that he knows not he's a fool, shun him. He who knows not and knows that he knows not is simple, teach him. He who knows and knows not that he knows, he is asleep, wake him up. He who knows and knows that he knows is an intellectual, he's a leader, follow him. Do you see what just happened? So let me write this thing in in the form of 1s and 0s. So let me write if a person is knowledgeable or not as a first thing and then is he aware, if he's knowledgeable or not. So the first thing says he who knows not he is not knowledgeable and knows not that he knows not which means he's unaware that he is not knowledgeable. That's the first one. Second one is he who knows not, not knowledgeable, and knows that he knows not. He is aware of the fact of his knowledge status. This chap was not aware of his knowledge status. Whatever is his knowledge status he was unaware of what was his knowledge status, but the second one is ignorant, he's not knowledgeable but he's aware of the fact that he is ignorant, that is not knowledgeable. Third one he who knows, a fellow who is knowledgeable and knows not that he knows. He is unaware of the fact that he is knowledgeable, right. It says he's asleep wake him up. Correct? Makes sense. The last one is he who knows and knows that he knows he's an intellectual, follow him. Look at this table. The table has a 0, 0, 0, 1, 1, 0, 1, 1. These are the only possible enumerations you can think of right. Let's see what this has to say.

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