

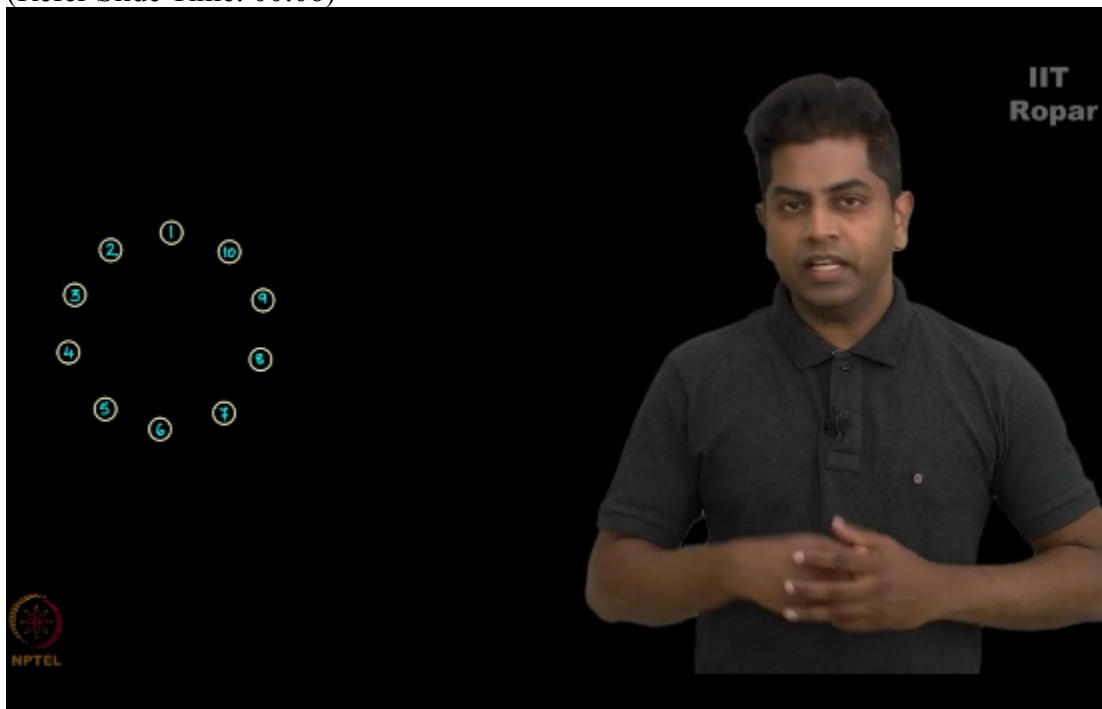
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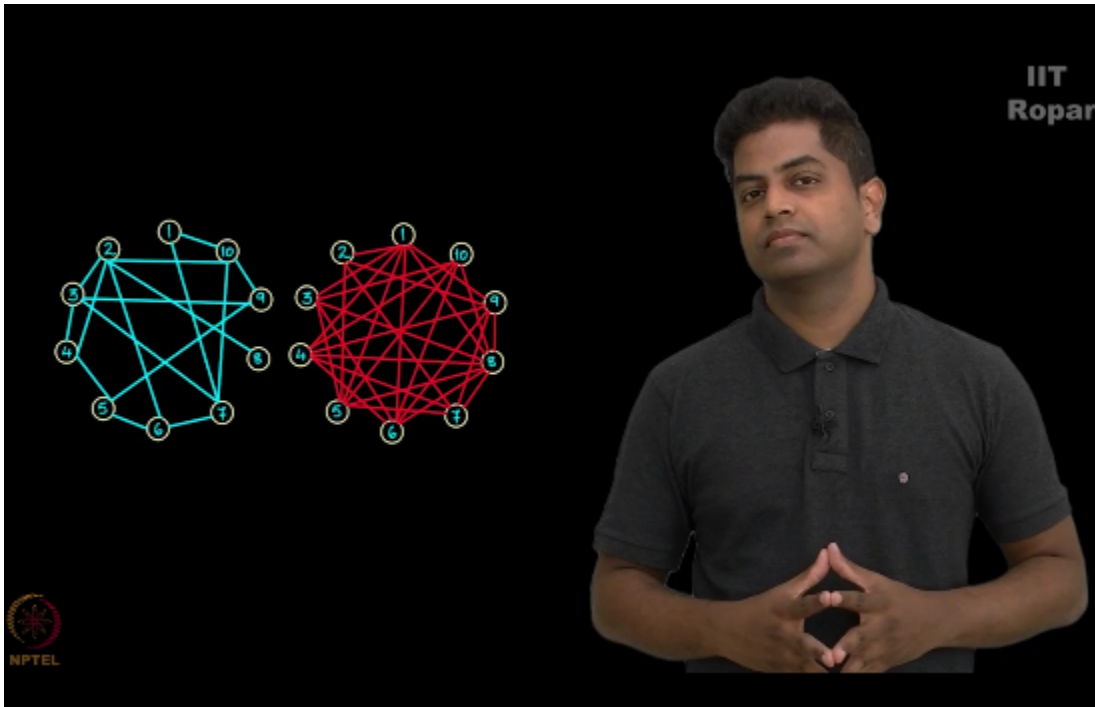
**Discrete Mathematics  
Graph Theory - 2**

**Complement of a Graph Introduction  
By  
Prof. S.R.S Iyengar  
Department of Computer Science  
IT Ropar**

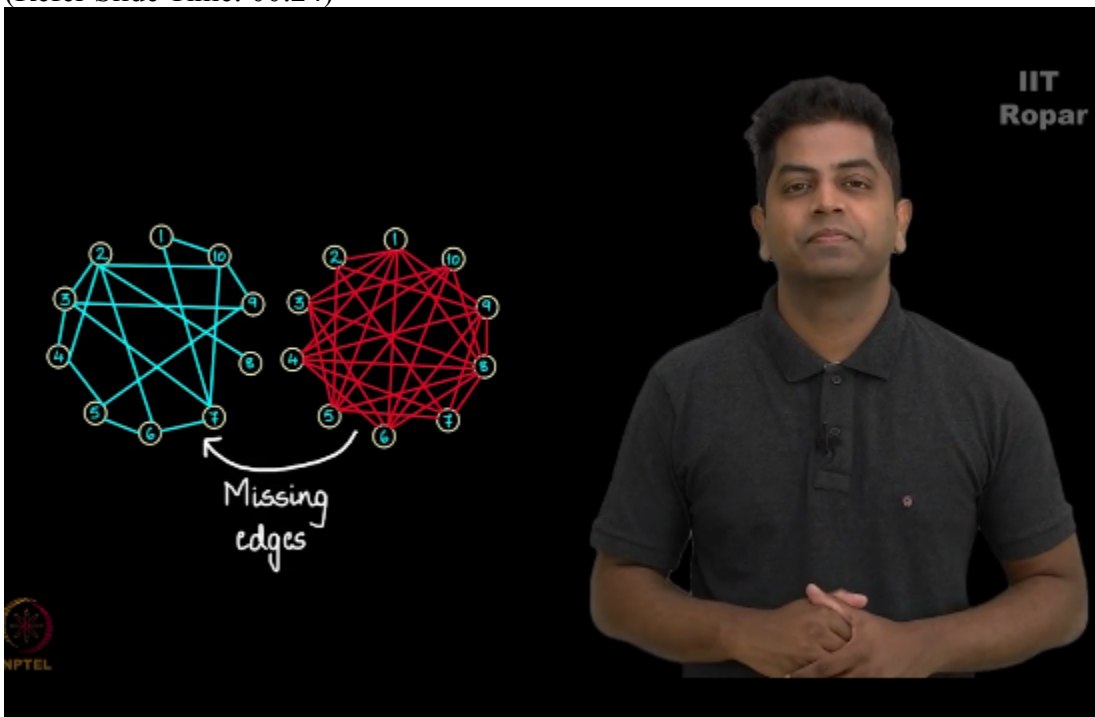
Look at these 10 friends,  
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there is some sort of friendships between them, but then can you guess what is the graph next to this in red  
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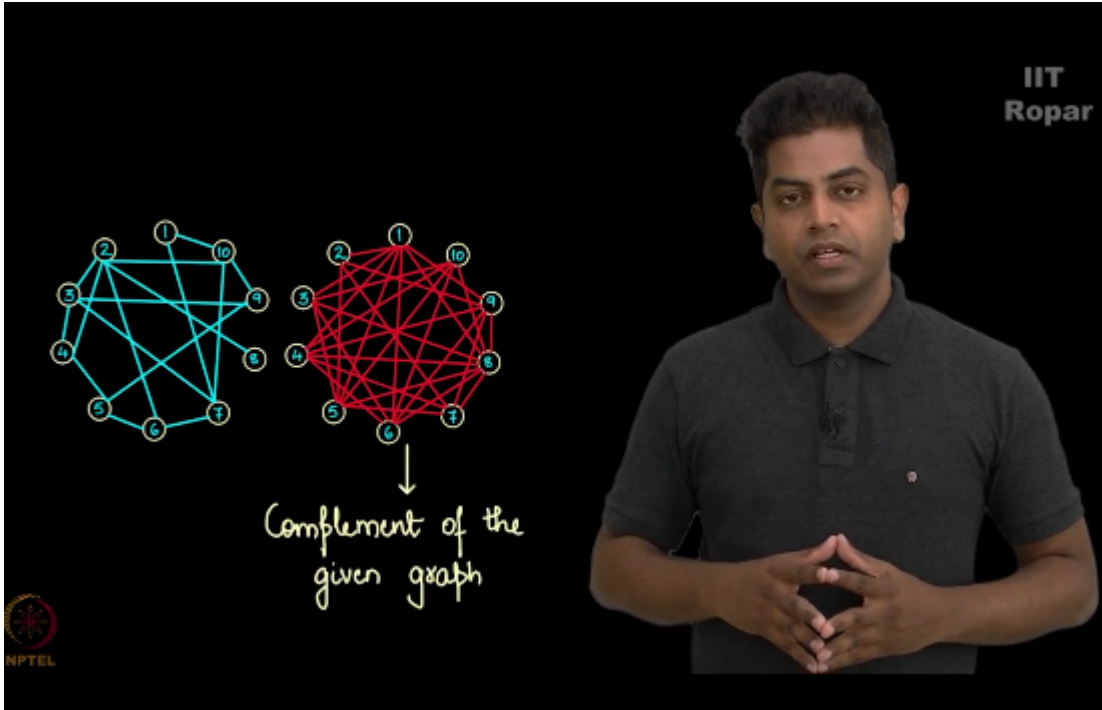


little bit of observation tells you that it is those edges that are missing in the blue graph here, (Refer Slide Time: 00:24)



what do this red edges represent? They represent lack of friendship between people, you see it may even represents something to you people, maybe they don't like each other or they never got a chance to talk to each other, if you want a team to prosper you probably may want to look at these red edges and try to make them blue, you see the point right, so such a graph is called a complement of a graph,

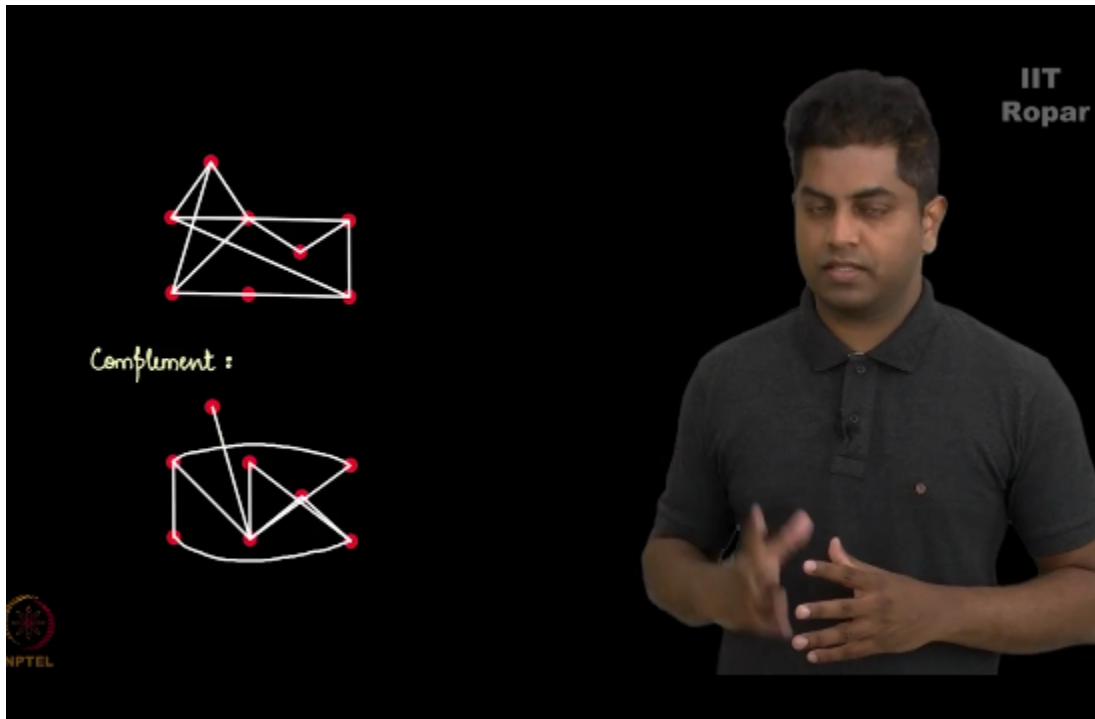
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for example take a graph, this graph on 4 nodes, it's complement happens to be this, (Refer Slide Time: 01:04)

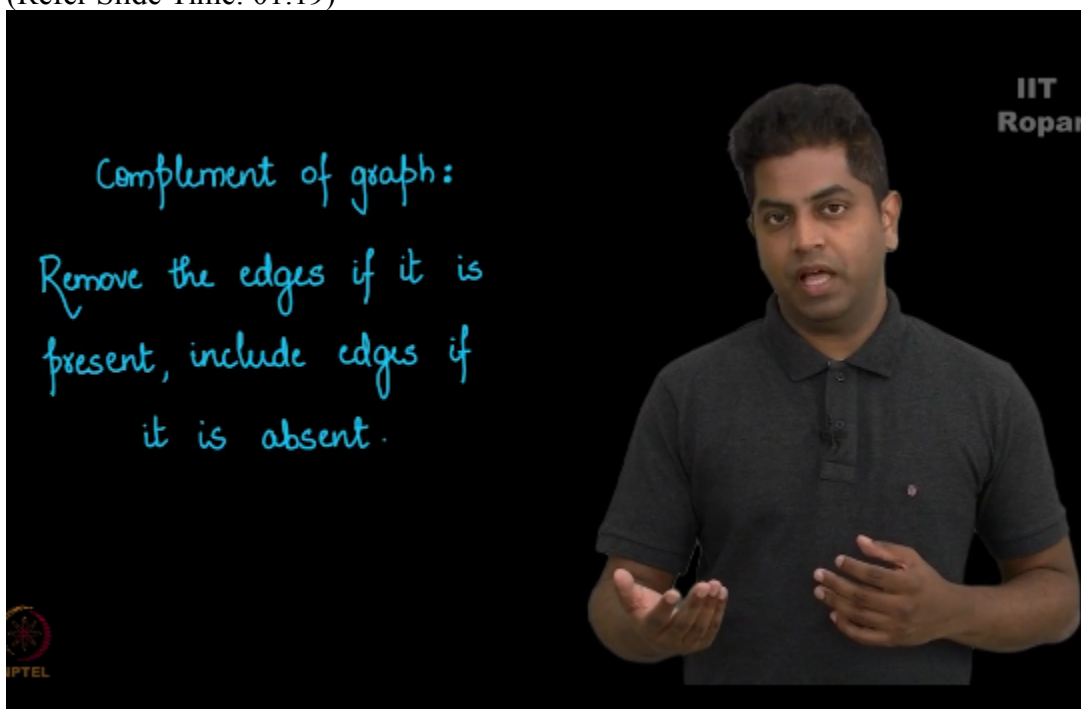


look at this complicated graph, it's complement happens to be this, (Refer Slide Time: 01:09)



basically a complement of a graph is remove the edges if it is present include edges if it is absent.

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