NPTEL

NPTEL ONLINE CERTIFICATION COURSE

Discrete Mathematics
Graph Theory - 2

Litmus test for an Eulerian graph

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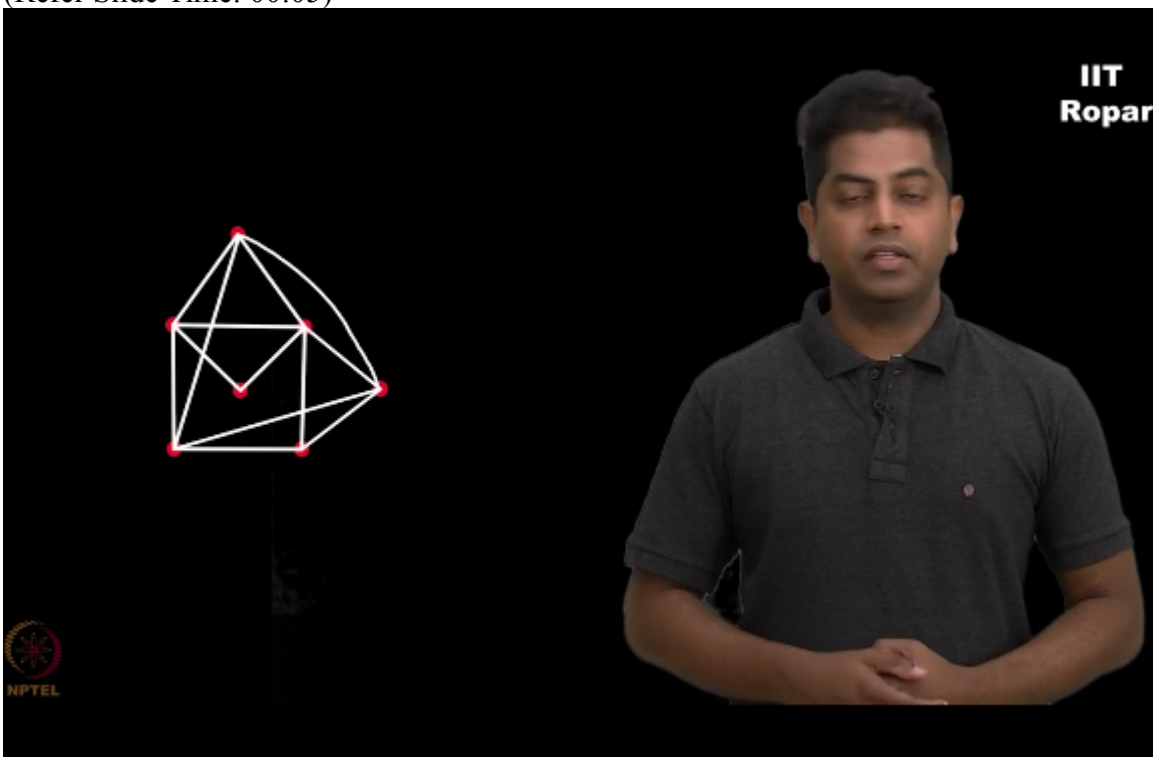
Look at this complicated graph,
(Refer Slide Time: 00:05)



can you tell me whether it is Eulerian or not?
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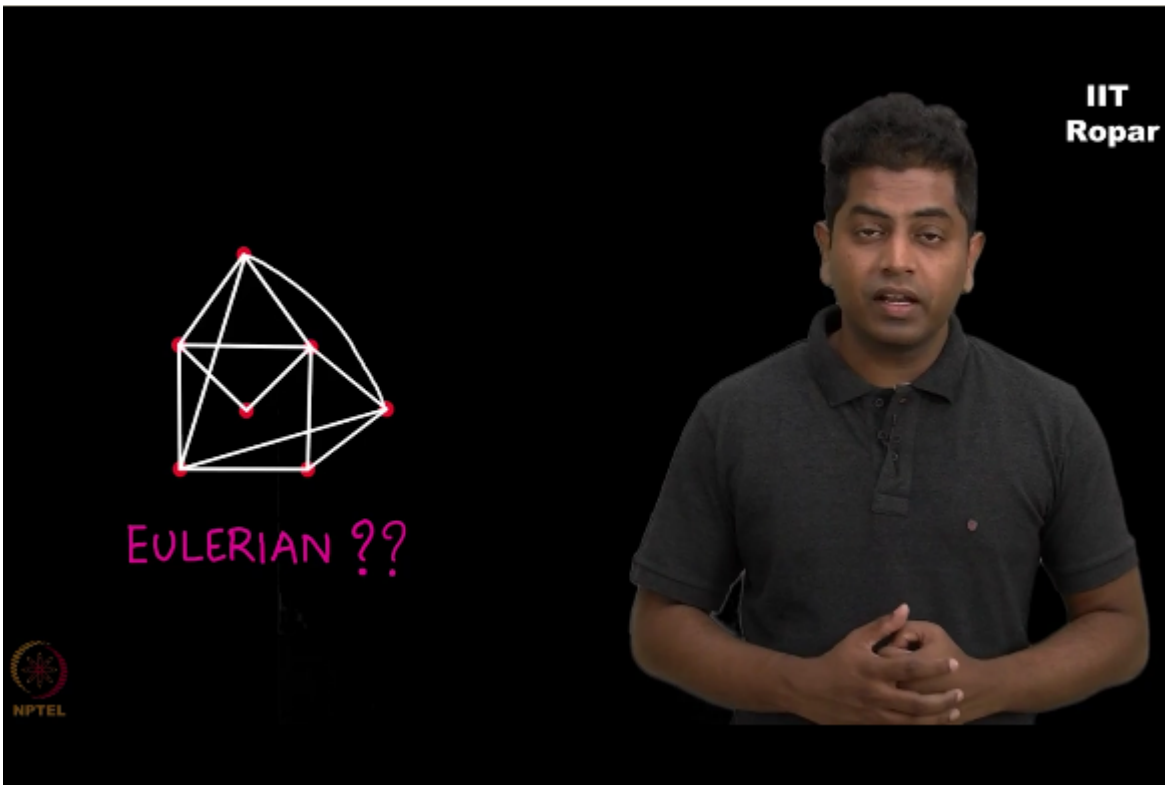

You probably are wondering how can one even guess, if one can take such a traversal through the graph and then starting and ending vertex is the same, and you go through all the edges, right, that's the definition of Eulerian graph, it is difficult to even try all possibilities, just because you are failing it doesn't mean it is not possible, but there is one Litmus test for a graph to be Eulerian, and that Litmus test is surprisingly easy to carry out, that is look at every single nodes, degree, all of them should be even, then the graph is Eulerian,

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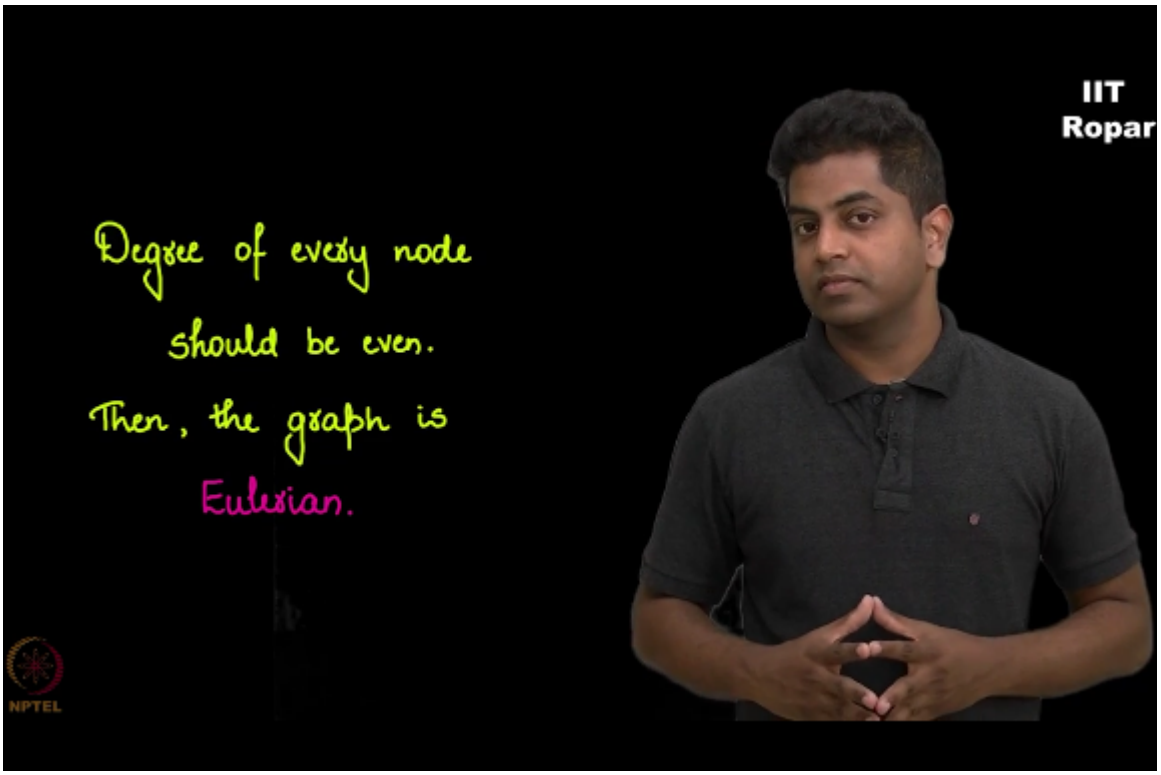

if not the graph is not Eulerian, let us see more details.

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