QUESTION 2

In GDSC-IEM club of your college, the Professor asks the students of the 1st year and the 2nd year to form collaborative groups, each consisting of 2 members – one from the 1st year and the other from the 2nd year. Professor has also told the students that there will be an interview after 3 months to track the progress of each student. The interview panels will be formed in such a way that all the 1st year students will sit in Seminar Hall 1 and all the 2nd year students will sit in Seminar Hall 2. In the meantime one day Professor calls the Coding Lead of IEM Coding club and gives him arbitrary seating arrangements of the students in Seminar Hall 1 and Seminar hall 2, provided the students may or may not have sat in their proper Halls. Professor asks him to visualize the given seating arrangements of the students, using a graph and to figure out whether each student has sat in the proper Hall, using any graph traversal algorithm. How they have sat in the Halls is not the matter of concern here. The Coding lead then represents each student as a node and draws an edge between two nodes if the corresponding two students have formed a group between them. Now it is your task to help the Coding lead to design the algorithm to find out the answer of what Professor has asked him.