Algorithms and Problem-Solving Lab (15B17CI471)

EVEN 2024

Labtest-2

Max Time: 50 Mins **Max Marks: 20**

ODD Numbered Seat

You're organizing a networking event and need to select attendees strategically. You have a list of n individuals and know which pairs of them have previously interacted. Your goal is to maximize connections while ensuring that each person meets at least five new contacts and interacts with at least five familiar faces. Develop an efficient algorithm to determine the optimal guest list given the list of individuals and their known connections. Also, provide the algorithm's runtime complexity in terms of n.

Even Numbered Seat

You're on a mission to strategically position cameras along a long road lined with houses. Each camera has a coverage range of 2 kilometers. The goal is to minimize the number of cameras needed to ensure all houses are monitored. Create and implement an efficient algorithm that accepts an array A[1..n] as input, where n signifies the number of houses, and A[i] represents the distance of house i from the starting point of the road.