5.26)   input: Equality constraints, inequality constraints

output: Satisfiable or not

Initialize all variables to arbitrary different values

for each equality:

     Assign right side to left

for each inequality:

     If not satisfies:

         return "non satisfiable"

     return "satisfiable"

time complexity is $O(\text{inequality} + \text{equality}) \Rightarrow O(n+m)$

5.28)   for each person pair:

     Add to Adjacency list

   while change:

     for each person in Adj list:

         if party_list size < 5 or party_list size $> \text{num_people} - 5$:

           remove person from list

     return all key values in Adj list

$O(n^2)$