Explanation\_PRJ4

1. Goal

- Write a function that provides an efficient look up of whether the user is in a group.

1. Code Design
   1. “is\_user\_in\_group” , recursive function

- To check if the user exists in a group or nested groups’s group, I designed the recursive function that takes user and group paramters.

1. Efficiency
   1. Time Efficiency
      1. # of users for each group in nested group = n, the number of group = m  
         🡪 O(n\*m)
   2. Space Efficiency
      1. 🡪 O(n\*m)