```
comm_list = community.girvan_newman(G) # Outputs list of nodes in each community as tuple
                                                                                                                                                                                                                                                                            # Can uncomment the below tine and change and the function works # (and to nx.draw()) to G_test to see an example of how the function works # with a more straightforward network
                                                                                                                                Citation: "Community structure in social and biological networks"
M. Girvan, M., E. J. Newman, PNAS, 2002
                                                                                                                                                                                                                                                                          Can uncomment the below line and change the input to girvan newman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This function deconstructs a graph object into communities
based on the <u>girvan</u>newman algorithm (see 'references' folder)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   generator, holds lists of node labels in each community
# Step 3: Apply Girvan_Newman algorithm to build communities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 # G_test = nx.karate_club_graph()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       arg1 (G): Graph object input
                                                                                        # Apply girvan_newman algorithm
# Citation: "Community struct
# M. Girvan, M., E. J. Newman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Returns:
```