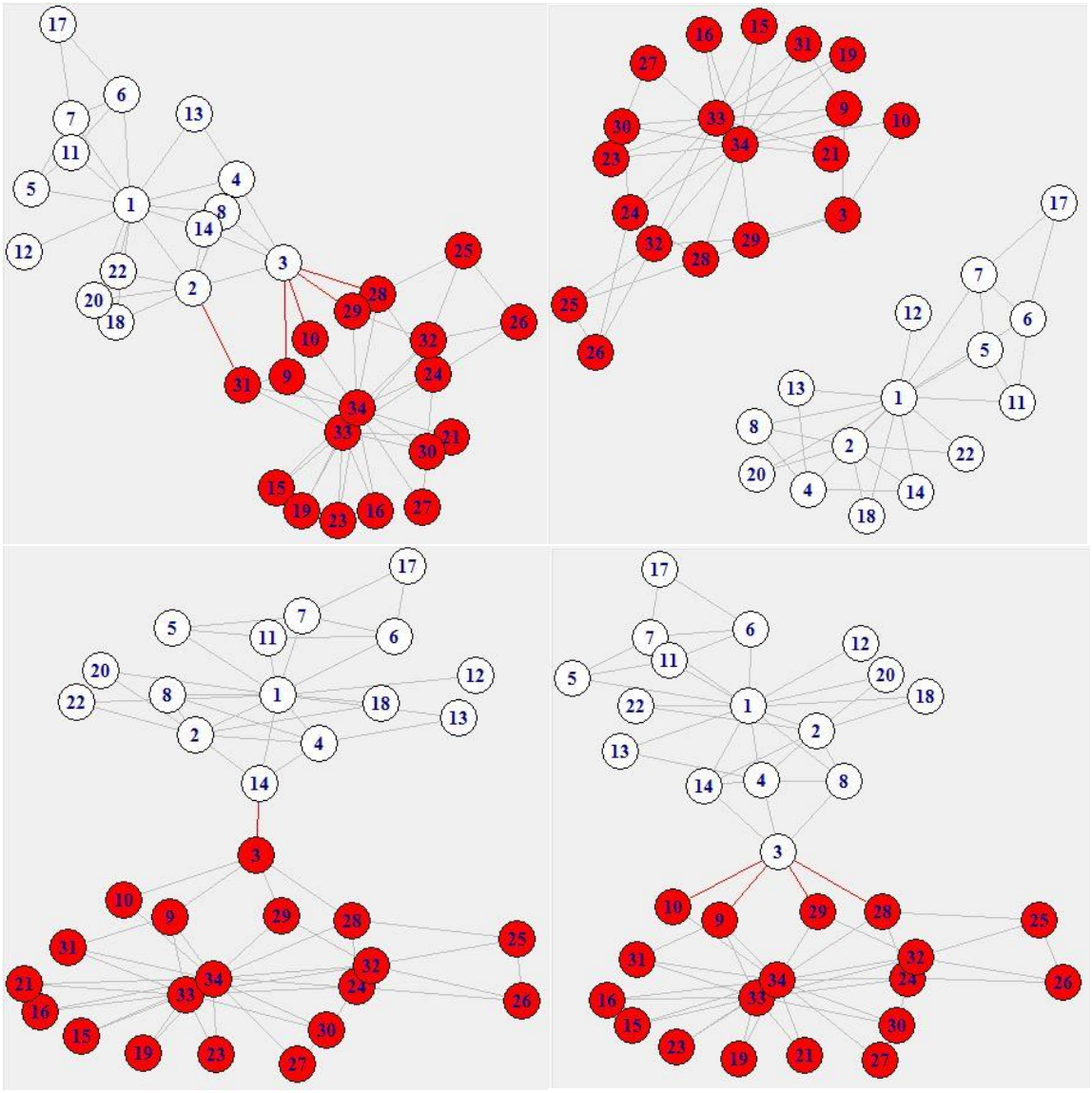
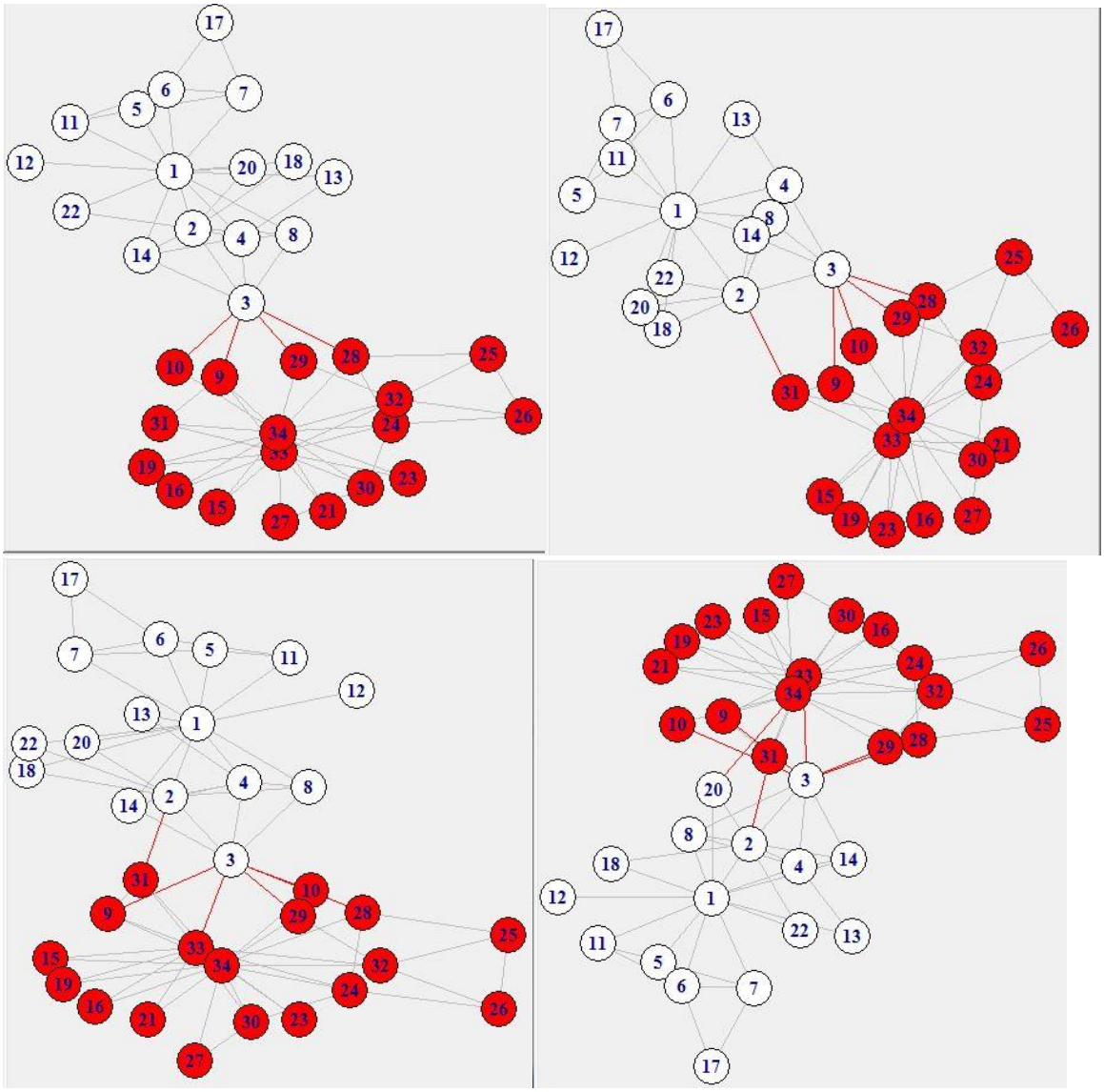
1. Graphs to prove the algorithm of the split

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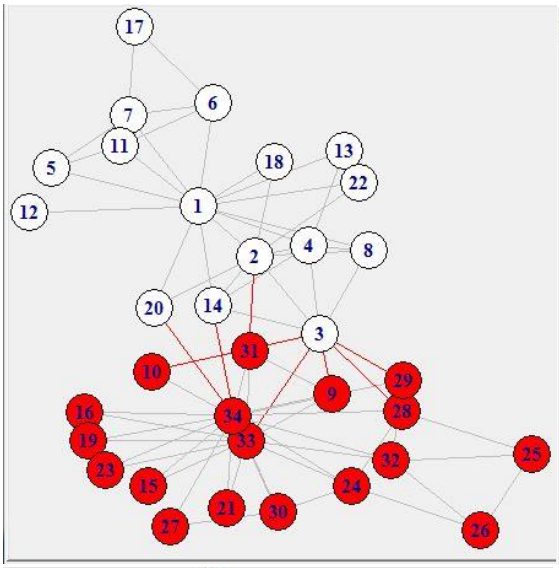
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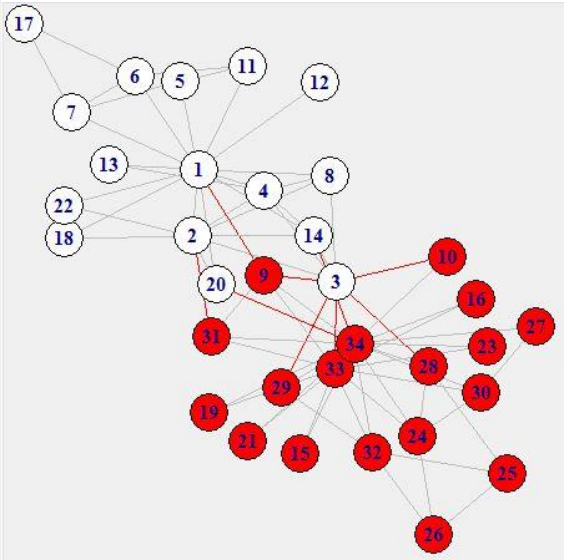
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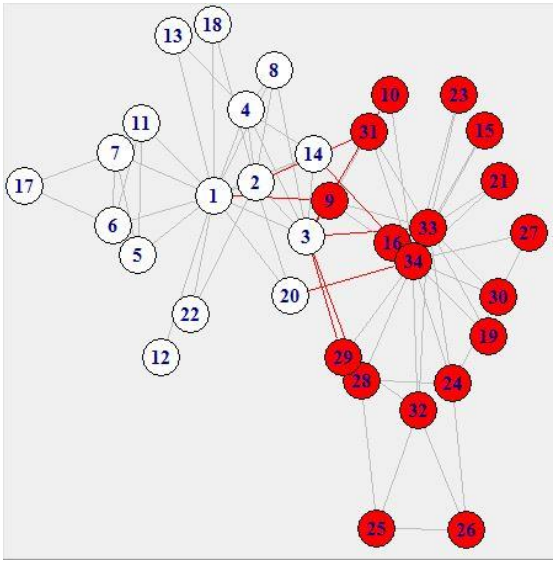
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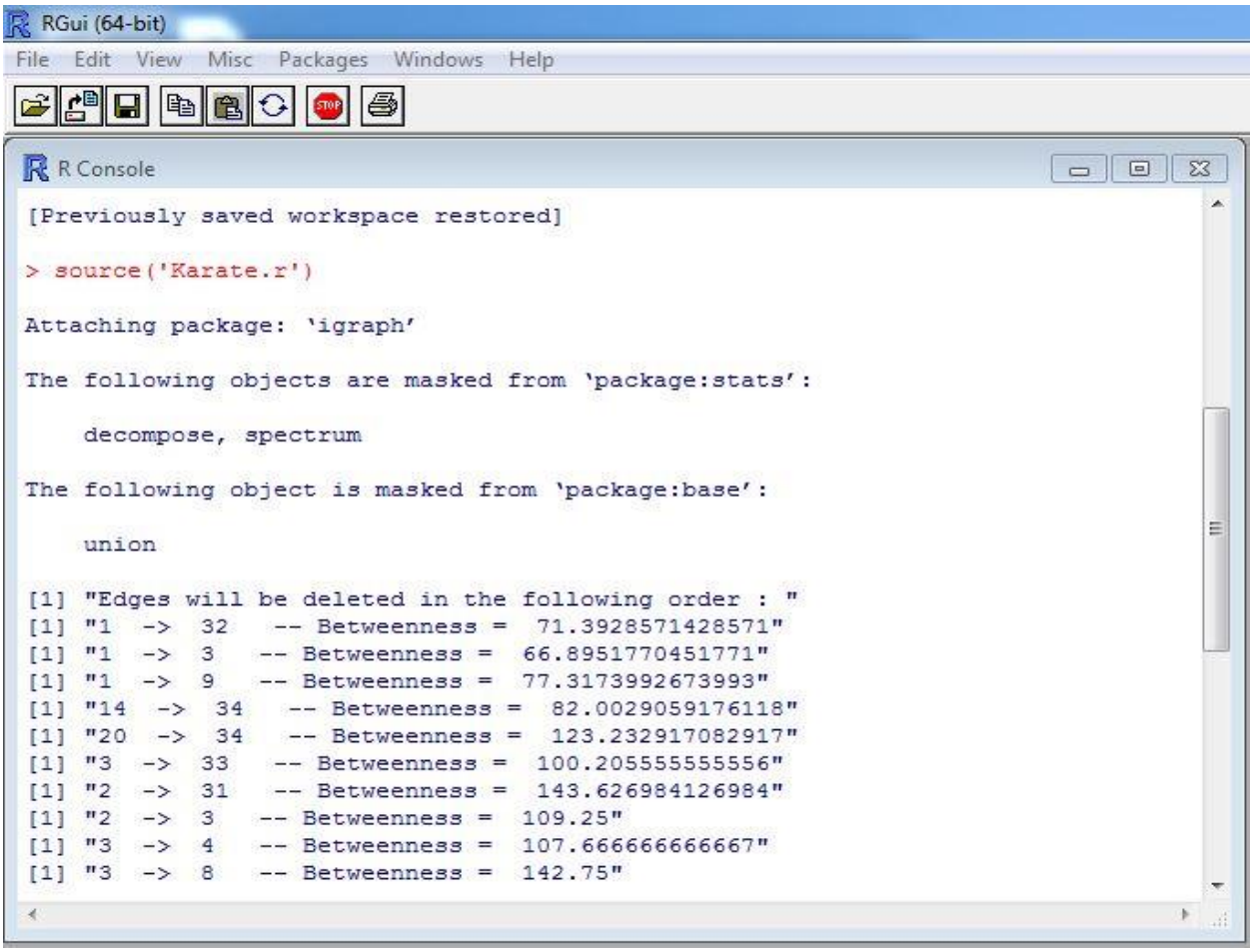
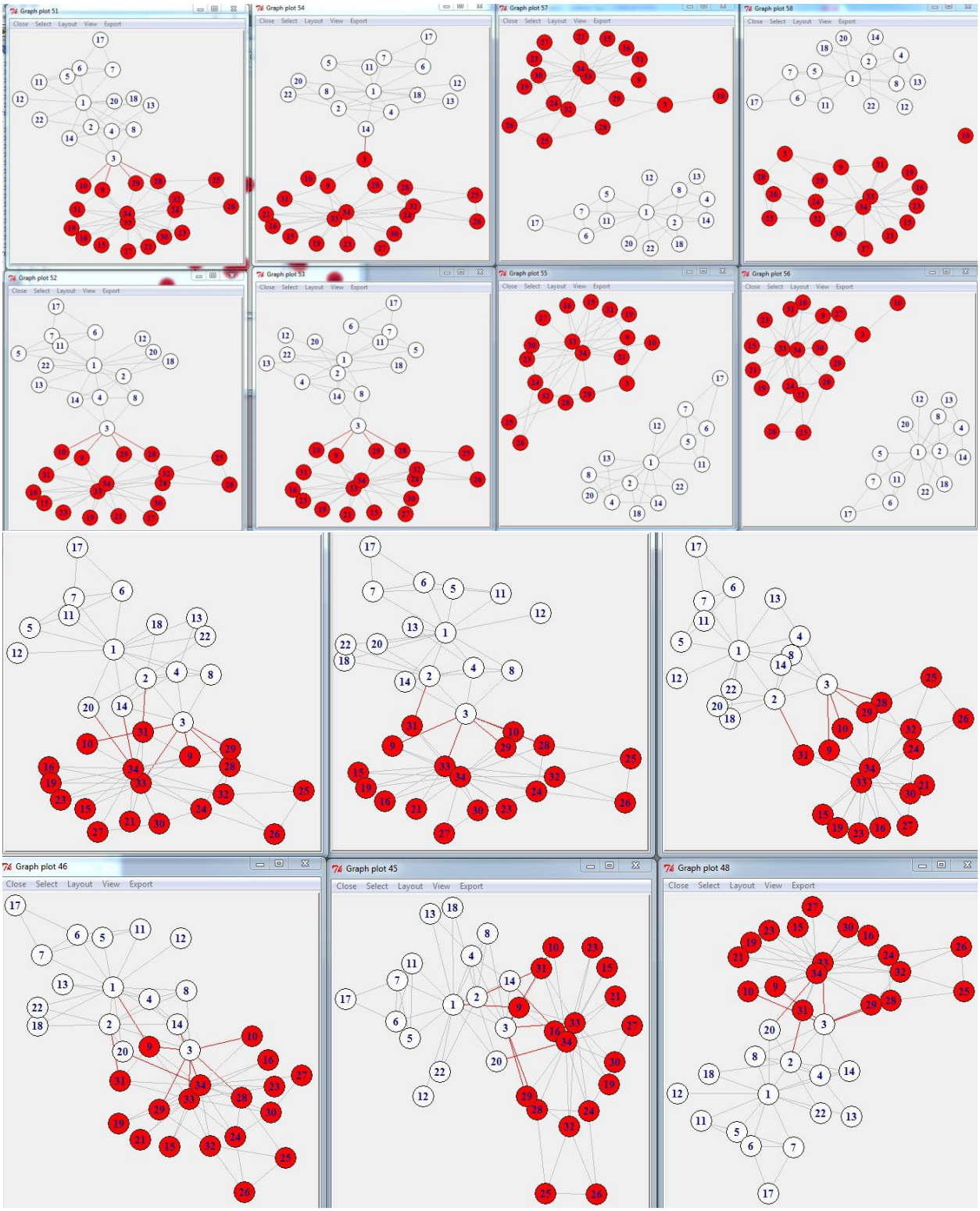


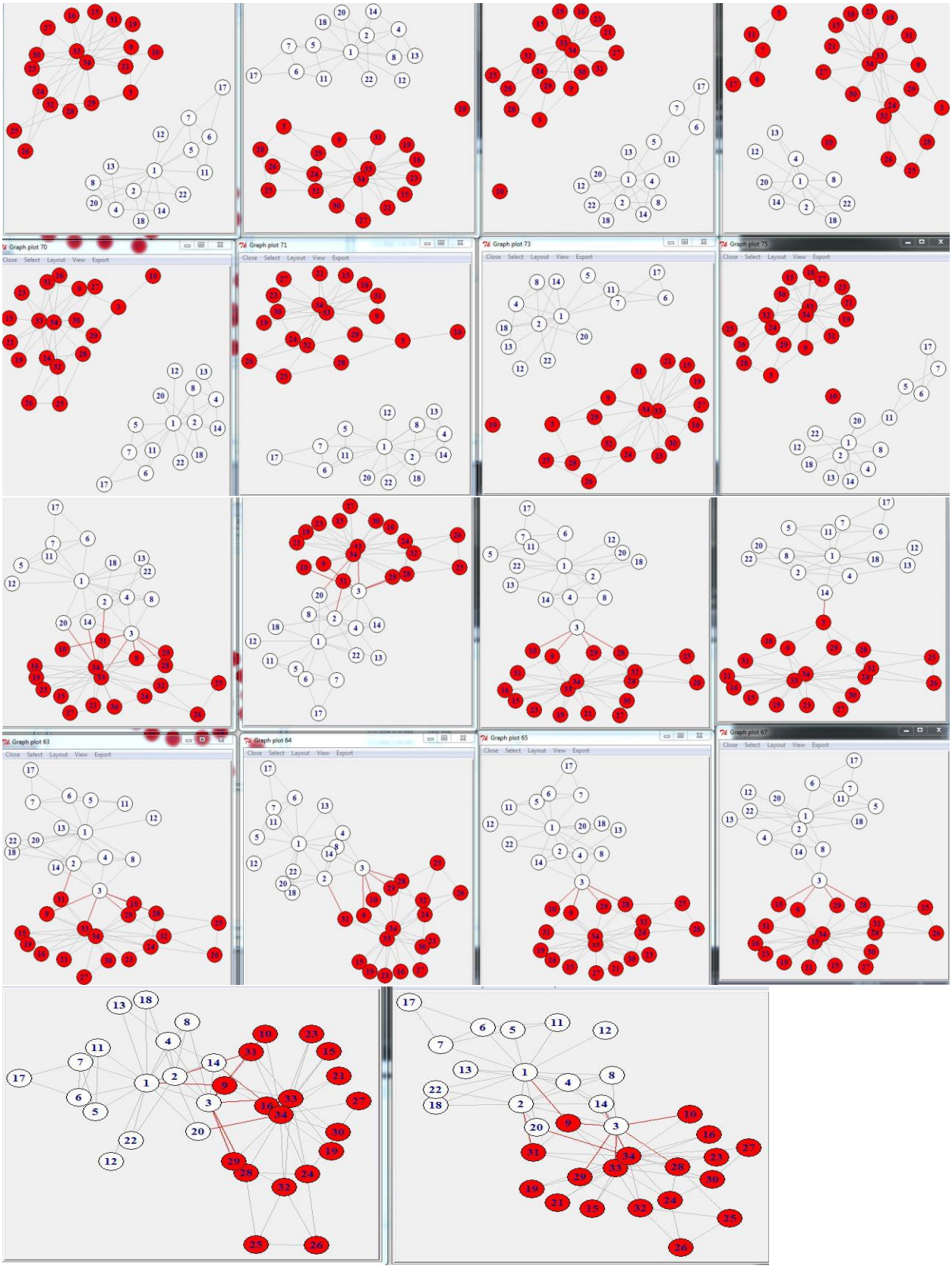
Based on the graphs above, the result of the split could have been predicted by the weighted graph of social interactions. With an algorithm of 34 different students and the students have their own unique connections to each other. In every situation it seems that there are always people that are strong, weak, and neutral. The strong students in this scenario mainly have other strong friends with the exception of a few weaker students. Those connections then lead to the rare connections that occur between the two groups, highlighted in red lines. I find it amazing how one issue can turn kind of good friends into really good friends or into enemies. The fact that it can be mathematically proven is impressive as well. Based on a person's previous relationship with another person can still lead to them having a good relationship despite the split. I came to my conclusion by looking through all the sources provided and using a .gml file that I uploaded to my code in order to run the algorithm and have it print out the corresponding graphs.

2: Extra Credit

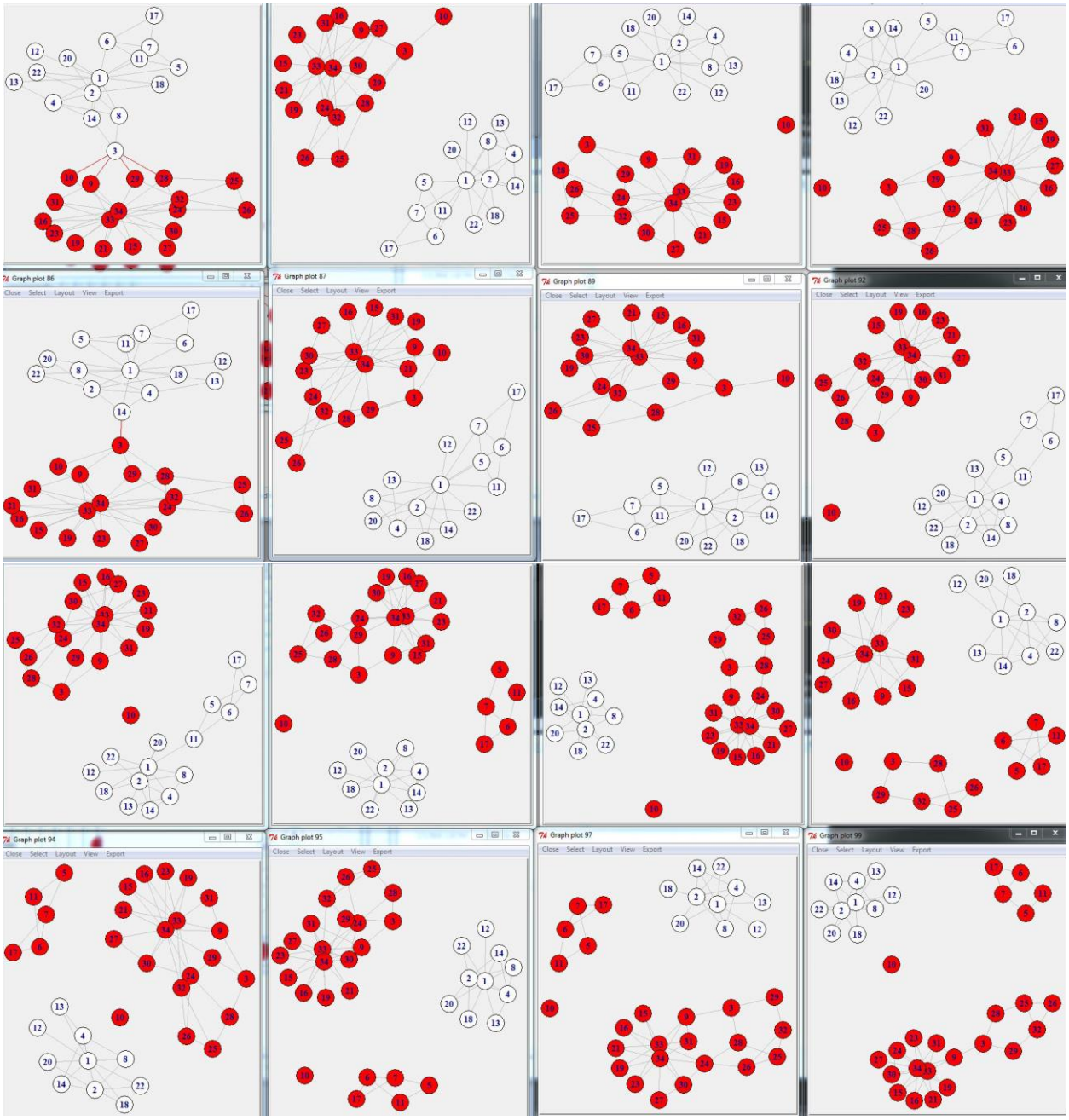
If the group split into three different groups then mathematically it would look like the following:

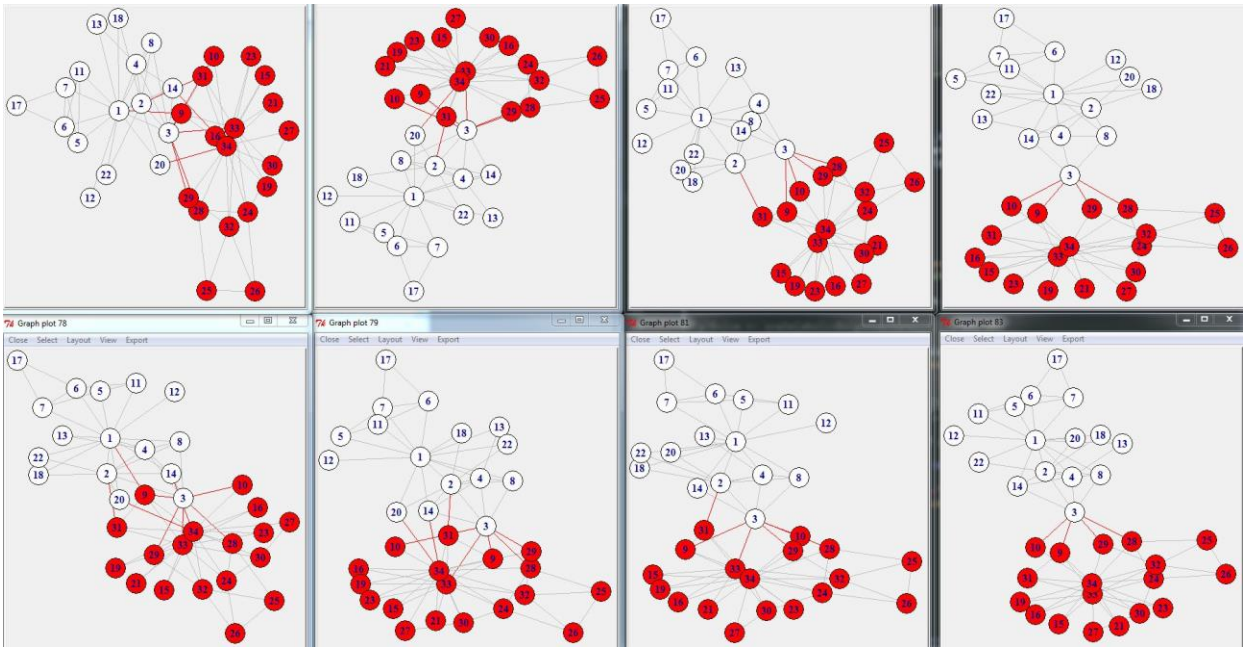


If the group split into four different groups then mathematically it would look like the following:



If the group split into five different groups then mathematically it would look like the following:

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Graph plot 81
Graph plot 83
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