

## **Abstract**

In this final project will be discussed about analysis network topology LQ45 stock using minimum spanning tree (MST). LQ45 is one of the indexes in Indonesia Stock Exchange. MST is used to determine network topology from LQ45 stocks. The importance of a network topology to be able to map the correlation between stocks in LQ45. To build the MST, Kruskal's algorithm is used. To summarize the information contained in the MST, use the centrality measure of each stock such as degrees centrality, betweenness centrality, closeness centrality and eigenvector centrality. The result for highest degrees centrality of 0,113636, which is the stock of PT Jasa Marga Tbk (JSMR), for highest betweenness centrality of 0,157505 which is the stock of PT Summarecon Agung Tbk (SMRA), for highest closeness centrality of 0,295302 which is the stock of PT Summarecon Agung Tbk (SMRA), for highest eigenvector centrality of 0,472326 which is the stock of PT Wijaya Karya Tbk (WIKA) and for highest overall centrality of 0,433476.

**Keywords:** MST, Kruskal Algorithm, Centrality Measure, LQ45 Index