# Memo

**Tasks**:

- Study the scaling behavior the size of Distance based Dominating Set with respect to distance, network size, power law exponent and attributes of networks using real networks and artificially generated networks.

- Compare the running time of Python code and C code of the Sieve algorithm.

- Check the maximum capacity of algorithm with Python code to handle size of network within 30 minutes.

- Generation of artificial networks with various models and analyze the scaling behavior.

- Following the same approach as the paper on Scientific Report, analyze those networks to confirm the phenomenon reported.

- Same approach but with fixed distance k to study the scaling phenomenon with respect to k with value of k not more than 10 for large networks.

- Update the file for review of articles that cites the paper "Minimum Domintaing Sets in Scale-Free Network Ensembles".

**Future Plans**:

- Formulate the set cover problem using CPLEX.

- Include metrics to generalize algorithm.

- Compare the performance of exact solution using CPLEX.