# Erdős-Rényi networks creator (Erdos-Renyi_network_creator.py)

This program creates with the parameters N (nodes number) and p (probability of links between nodes) and export it in a .net file. Erdős-Rényi model creates random networks.

Arguments:

- Mandatory:
    - -N, --nodes: Number of nodes in the network.
    - -p, --probability: Probability of the node to have an edge with any other node in the network.
- Optional:
    - -o, --output: Name for the output file. If this argument is not given the default file name depends on the N and p parameters in the following sense N_p_Erdös-Rényi_network.net

# Barabási-Albert networks creator (Barabási-Albert_network_creator.py)

Creates a Barabási-Albert network with the parameters N (nodes number) and E (new arrivals links to previous nodes) and export it in a .net file. Core nodes ammount (named Ncore) is set at 30% of N and the probability of these connecting with other core nodes (named p) is set at 7/Ncore to ensure that core will be connected. These parameters can be easily modified on the script. Barabási-Albert model, also called preferential attachment model, characterizes by creating networks with a core, randomly but fully connected in a single component, and then the other nodes are added one at a time connecting E times with other nodes with a probability that depends on the other node's degree.

Arguments:

- Mandatory:
    - -N, --nodes: Number of nodes in the network.
    - -E, --links: Number of links that, after the core creation, new arrival nodes will have.
- Optional:
    - -o, --output: Name for the output file. If this argument is not given the default file name depends on the N and E parameters in the following sense N_E_ Barabási-Albert _network.net