Input an undirected simple graph $G$.
Set thresholds $d_{in}$ and $c_{p_{in}}$
and initialize cluster ID $k = 1$.

Generate degrees of the nodes of $G$.
Determine the highest node degree ($D_h$).

Generate weight of each node of $G$.

Start at highest weight node
of $G$ as cluster $k$.

Start at highest degree node
of $G$ as cluster $k$.

Generate the neighbors of the cluster $k$ in $G$
and sort them according to priority (if applicable, use fine tuning).
Add the highest priority neighbor ($p$) to cluster $k$.

Add the next priority
neighbor ($p$) to cluster $k$.

Deduct the last added node from cluster $k$.

All neighbors of
cluster $k$ are checked

Print cluster $k$.
$G \leftarrow G - \text{cluster } k$
$k \leftarrow k + 1$.

End