

Q1:

'c', 'c-c', 'c-c-c', 'c-c-c-c' are frequent

Q2:

(1):

Step1:

Rank(u0)=1/3

Rank(u1)=2/4

Rank(u2)=1/4

Rank(u3)=2/2

Rank(u4)=2/2

Rank(u5)=1/2

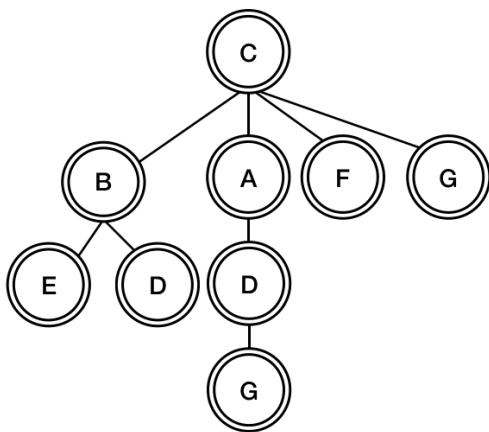
Rank(u6)=2/1

Rank(u7)=3/1

Rank(u8)=3/1

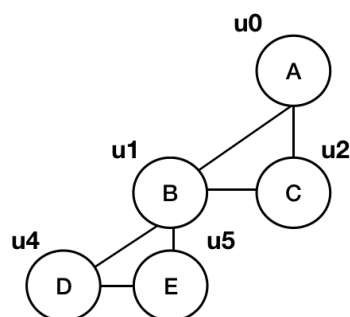
Hence, u2 is selected as the root node.

Step2:

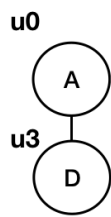


(2):

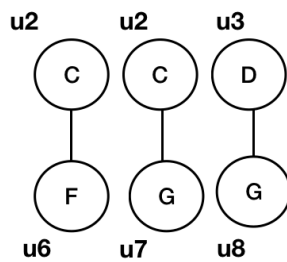
core-set:



forest-set:



leaf-set:



Q3:

Choose  $v_3$  as activated seed can generate largest influence spreads.

$w(v_3)=1$ ,  $w(v_2)=0.4$ ,  $w(v_7)=0.3$ ,  $w(v_9)=0.5$ ,  $w(v_0)=0.12$ ,  $w(v_6)=0.08$

$w(v_1)=0.06$ ,  $w(v_4)=0.3$ ,  $w(v_8)=0.05$ ,  $w(v_5)=0.024$

so the maximum sum is 2.824