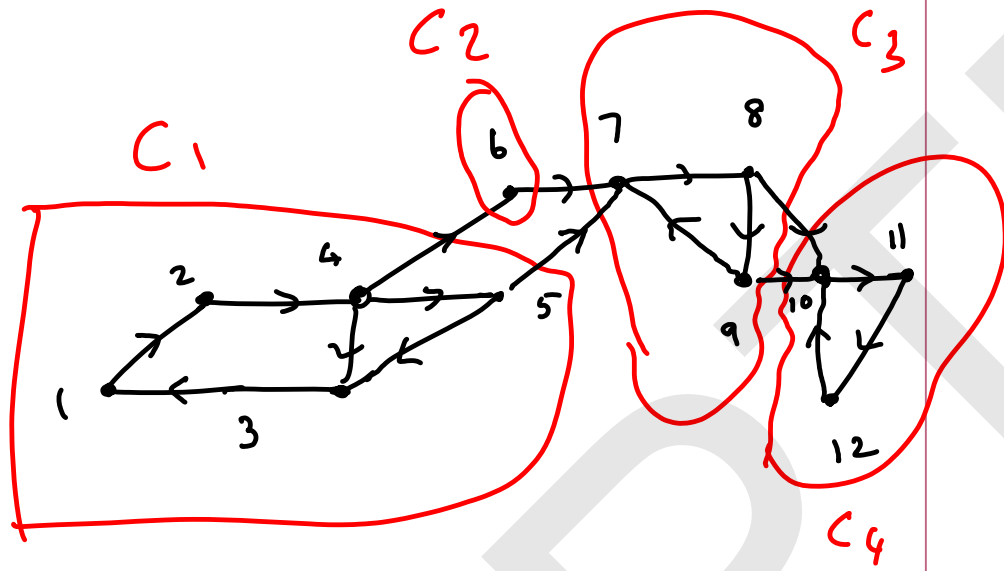


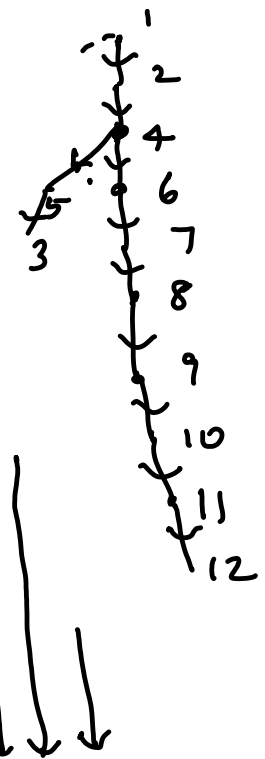
G



① Run DFS & find $u.d$ & $u.f$ for every vertex u .

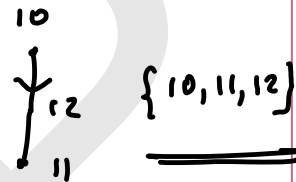
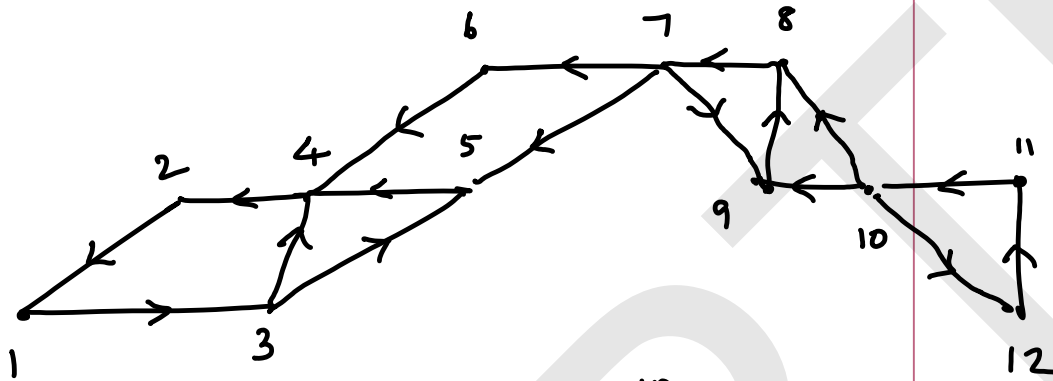
~~Adj[4] \rightarrow 1, 5, 6~~
~~[8] \rightarrow 9, 10~~

u	$u.d$	$u.f$
1	1	24
2	2	23
3	19	20
4	3	22
5	18	21
6	4	17
7	5	16
8	6	15
9	7	14
10	8	13
11	9	12
12	10	11



Construct G^R .

(Construct New Adj List for G^R .)

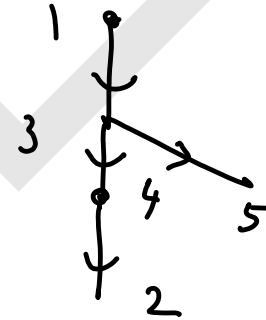


Perform DFS on G^R .

(Start always with an unvisited vertex with Max v.f.)

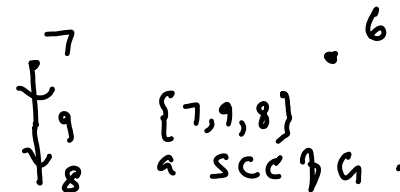
Max finish time is 24 for vertex 1.

So, Start DFS from 1 on G^R .



{1, 3, 4, 5, 2}
is a
SCC of G

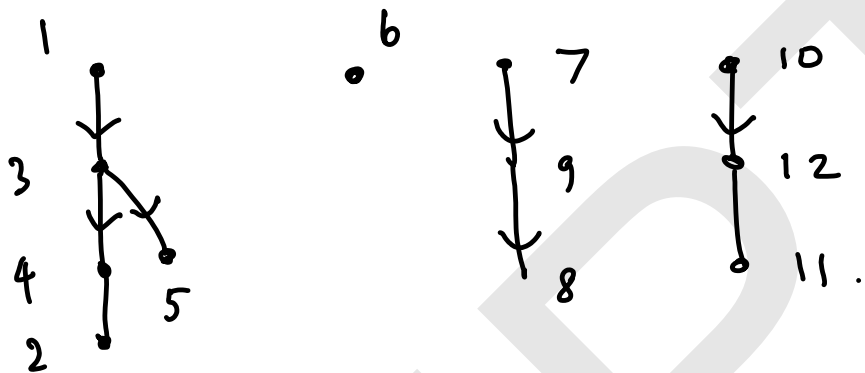
Among the remaining vertices 6 has Max finish time (17). Hence Continue the DFS on G^R from 6.



{6} is a
SCC of G .

The DFS on G^R is now complete.

The DFS has generated a forest with 4 trees.



$\{1, 3, 4, 2, 5\}, \{6\}, \{7, 9, 8\}, \{10, 12, 11\}$

A SCC of G .

① DFS on G & determine U.f for all $v \in V$.

② Construct G^R .

③ DFS on G^R and generate the DFS forest. Each tree has vertices defining the vertices of SCC of G .

(In ③ we always start DFS from a ^{unvisited} vertex with highest U.f).

