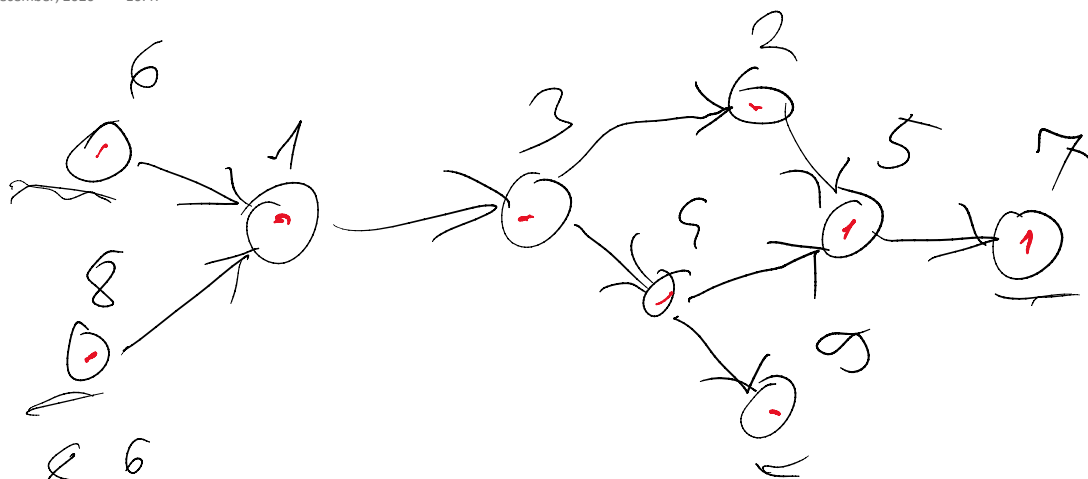


SCC & Toposort

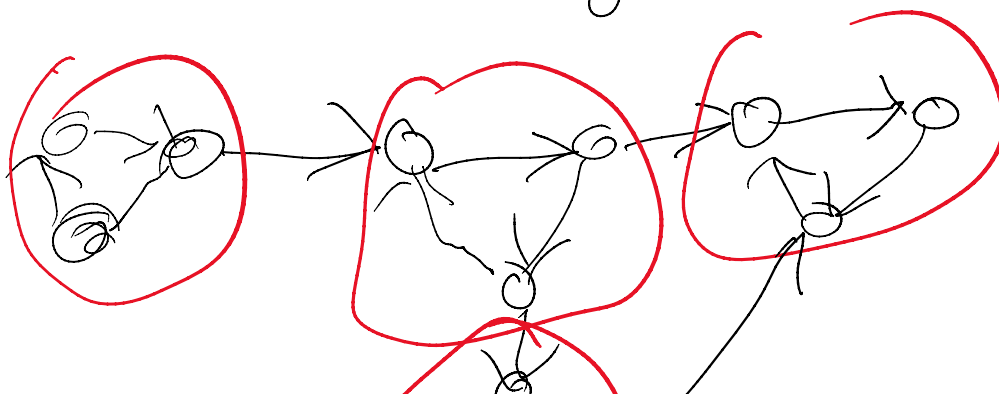
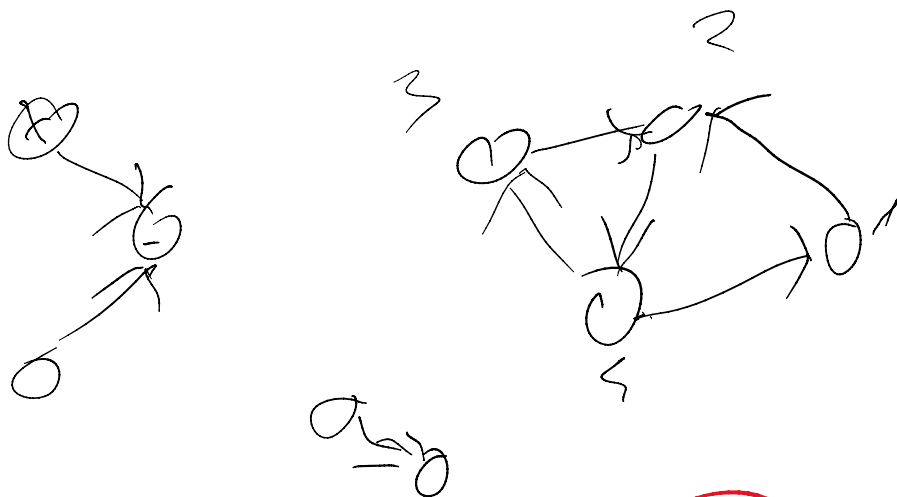
Friday, 4 December, 2020 16:47

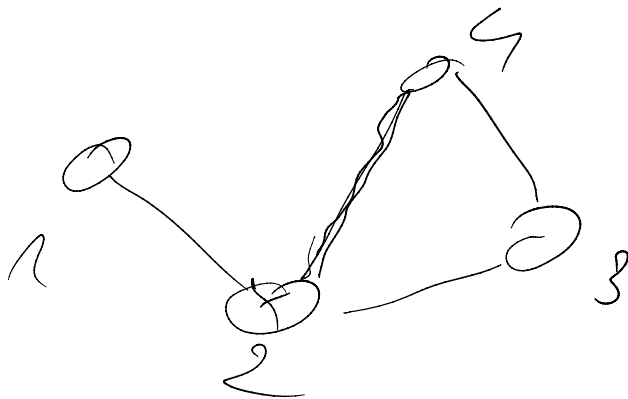
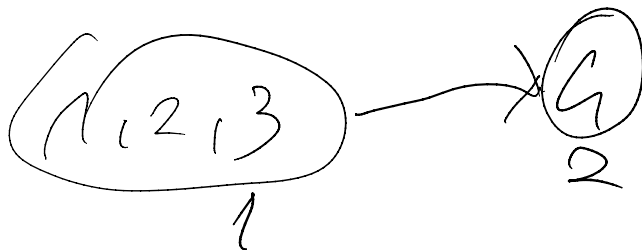
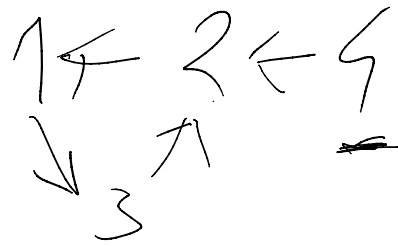
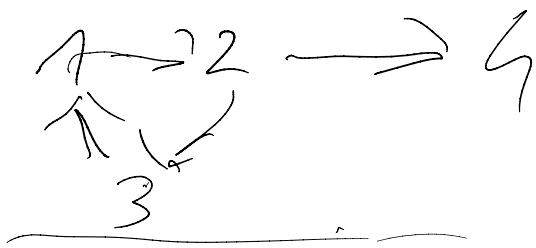
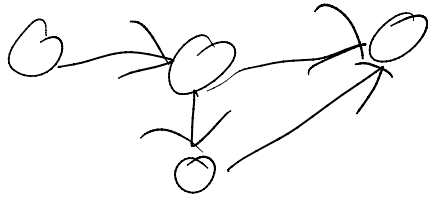
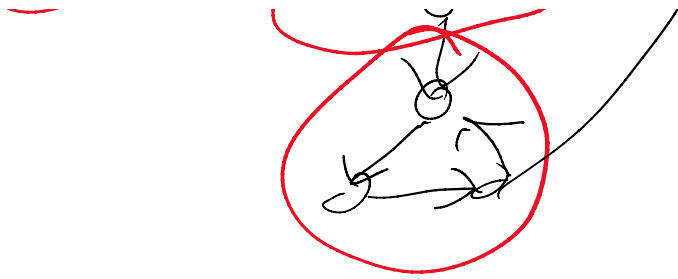


6 8 1 3 2 4 5 9 7

$$x \rightarrow y \Rightarrow x < y$$

1 7 5 2 9 4 3 1 6 8
6
8



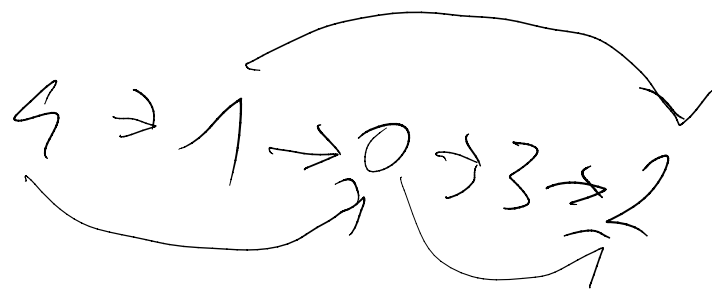
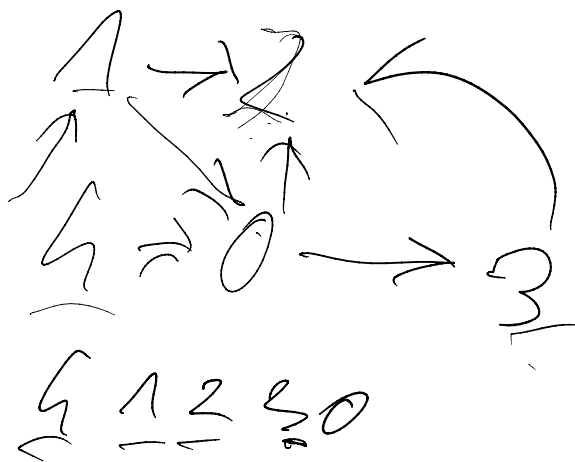
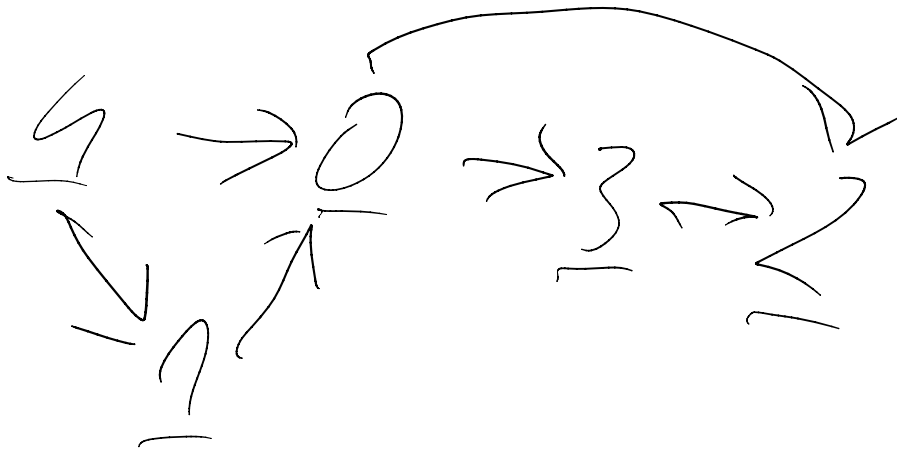


void dfs(int s, int p)
visited[s] = true;

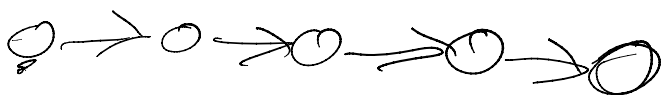
```

visited[s] = true;
for (int v : g[s])
    if (!visited[v] && v != p)
        isCycle = true;
    if (!visited[v])
        dfs(v, s);

```



4 1 0 3 2



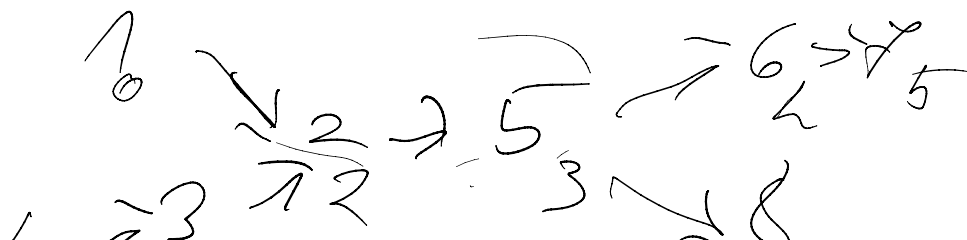
1 2 3 4 5

1 \Rightarrow 2

$pos[n][k]$

$c[i] > x_j$ for $i < n$
 $pos[i][x] = j$ for $j < k$

for $i < k$
 for $j < k$
 for $p < n$
 if ($pos[p][i] > pos[p][j]$)
 $c_2 gkra = false;$
 if ($c_2 gkra$)
 $g[i].pB(j);$



$4 \rightarrow 3 \rightarrow 2 \rightarrow 3 \rightarrow 8$
~~8~~ ~~6~~ ~~5~~ ~~2~~ ~~1~~ ~~3~~ ~~4~~

```

x = toposort.top();
for (int v : g[x])
    res[v] = max(res[v], res[x] + 1);
res1 = max(res1, res[x]);

```

