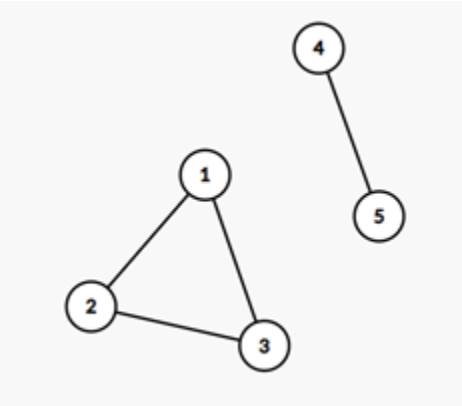
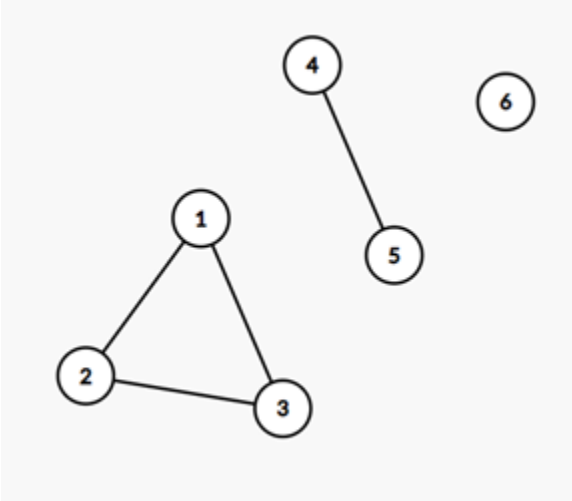
1) Connected component in an **undirected** graph means a set of vertices in a graph that are linked to each other by paths. For example,

- There are 2 connected components in the following graph

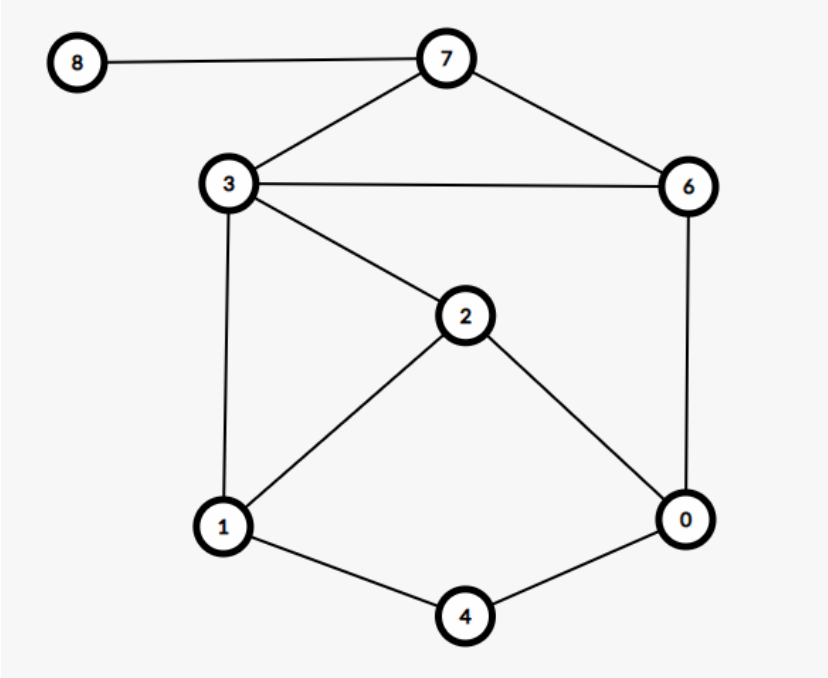


- There are 3 connected components in the following graph



Write a C++ program to take an **undirected** graph as input and count the number of connected components in it.

2) Write a C++ program to count the level of each node of the following graph.Choose node 3 as the source.



3)
https://cses.fi/problemset/task/1192

solve the above problem using dfs.

4) Write a C++ program that takes a directed graph as input and check whether it is bi-directionoal which means for every pair of nodes where there is an edge
u -> v, there should also be an edge v -> u.

Note - You can choose any graph as input and solve this problem by using both adjacency matrix and adjacency list