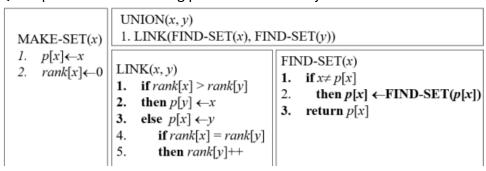
Online 4 Set A

Instructions:

- Write the code by yourself. Do not adopt any unfair means (No internet, no previous resource, no class code, nothing except what you yourself wrote at the moment of exam.). -100% Penalty for adopting any unfair means.
- You must submit the code/codes in ELMS.
- Q1. Implement the following pseudo code for disjoint set



Q2. Implement the **following** algorithm for finding the Minimum Spanning Tree in an undirected weighted graph and **print the MST** using the above implementation of disjoint set.

```
Kruskal()
{
    T = Ø;
    for each v ∈ V
        MakeSet(v);
    sort E into nondecreasing order by weight w
    for each (u,v) ∈ E (in sorted order)
        if FindSet(u) ≠ FindSet(v)
            T = T U {{u,v}};
            Union(FindSet(u), FindSet(v));
}
```

Sample Input #vertices #edges the edges of the graph	Sample Output
4 5 0 1 10 0 2 6 0 3 5 1 3 15 2 3 4	MST 2 - 3 0 - 3 0 - 1 Weight: 4+5+10 = 19