

## Algorithm PA3 report      B09901081 施伯儒

### Data structures:

Disjoint set, vector

### How to find answers:

1. Do Kruskal algorithm but edges are sorted from biggest to smallest

2. Record the edges to be deleted

3. If it is an undirected graph, it is done.

4. If the graph is directed, get a new graph  $G$  which is the original graph without all the deleted edges.

5. Add the deleted edges which have positive weight to  $G$  (one by one), and check whether there are cycles

⇒ if there is a cycle, then that edge must be deleted

⇒ if not, then that edge can be placed in the graph

### Reference:

TA recitation week13 & week14

(there is Kruskal algorithm example in it)