LAB 4

Task 3

The time complexity for problem 1 and Problem 2 is $O((M+N) \log_2 M)$

If the number of titans in each road is exactly 1, then we can solve this problem using BFS method. If titan's is exactly 1 in each road, it would not work as weighted graph.

BFS pseudocode:

```
create queue Q
V → visited
Put v into Q

while Q is not empty:
    remove head u of Q
    mark and enqueue all (unvisited)
                    neighbours of u.
```