12371 - LAB 12

Instructions

1. Access the auto-grader at https://c200.luddy.indiana.edu

2. Please write the code for the problems in python language

3. The code should be readable with variables named meaningfully

4. Plagiarism is unacceptable and we have ways to find it, so do not do it

5. Don't change the function signature (name of the function and number and types of arguments) provided in this file.

6. Once you pass all the tests on the auto grader, show your work to the teaching assistant

Problem

Question

Given a network of **g-nodes** data centers and **g-edges** bidirectional connections, the **ith** connection connects data centers **g-from[i]** and **g-to[i]** with a latency of **g-weight[i].** The max-latency of a network its the maximum latency of any connection.

Divide this network into **k or fewer networks** by removing some of the connections such that the maximum latencies of all the regions are minimized. Find the minimum possible value of the maximum max-latency of the networks formed.

Examples
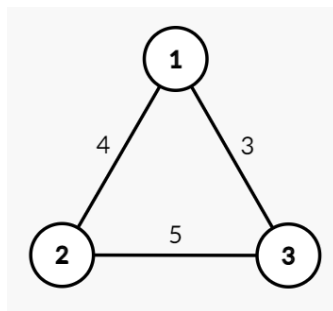
Example 1:
Input: g-nodes = 3, g-from = [1, 2, 3], g-to = [2, 3, 1], g-weight = [4, 5, 3], k = 2
Output: 3

Example 2:
Input: g-nodes = 2, g-from = [1], g-to = [2], g-weight = [3], k = 1
Output: 3

Function signature

```
def getMinMaxLatency(g_nodes, g_from, g_to, g_weight, k):
    # Your implementation here
```