**Project Written Submission**

The project leverages a data set containing global education statistics from the United Nations (UN) for the year 2020. The main goal is to analyze the data using graph clustering and partitioning methods to gain insights into relationships between different countries or regions based on their education statistics. The project involves creating a network where each node represents a country or region, and the connections (edges) between the nodes are weighted based on similarity in education metrics. The aim is to identify clusters within the network and evaluate how well the chosen clusters represent different aspects of the global education landscape.

**How it runs:**

### The program reads data from a CSV file and processes each record into an EducationData struct.

### The EducationData struct includes fields for the country or area, year, indicator, series, and value of the data.

### After processing the data, the program constructs a graph using the construct\_graph function.

### The graph is represented by a list of node names (nodes) and an adjacency matrix (adjacency\_matrix) that represents the connections between the nodes.

### The program clusters the graph using the cluster\_graph function, which is a placeholder in the current implementation.

### In the placeholder function, you can replace the existing code with a real clustering algorithm.

### The program prints the resulting clusters and adjacency matrix.

### The print\_clusters function formats and prints the clusters and the adjacency matrix.

### The project includes a test function, test\_print\_clusters, to verify the output of the print\_clusters function.

**Expected Output:**

In this sample output:

The clusters are printed first. Each cluster is represented by an index and a list of nodes in that cluster.

The adjacency matrix is printed after the clusters. Each row of the matrix represents the connections between nodes.

Cluster 0:

- USA

Cluster 1:

- Canada

Adjacency Matrix:

[1.0, 0.5]

[0.5, 2.0]