Hi. My name is Zhiquan Zhang. As is stated before, our target is to simulate the process of virus spread and Disease Control. To make both the model and process more reasonable, I add two

//Background: Disease and rescue team

What I have done (not technically): 1. Improve the model, there are two modes of rescue: a) the rescue team can transfer from one city and another according the distance. b) the rescue team can transfer from one city to another according to the number of infected people. 2. In the distance mode, a visited city will not be visited again unless all other cities have been visited in this round. 3. One city’s infection rate will be lowered when the rescue team is in. When it leaves, the rate will still be lower than before being visited. 4. Read the configuration files (Population and distance) separately. 5. Find the closest city.

What I have done (technically):

Use a rescue struct to simulate the rescue team. Its members can help decide which city it’s in at present.

2.Use HashMap to record the visited cities. Every city will have a visited cities HashMap attribute. And implement HashMap in C. I use an Array to reserve key and the data. The hash function is key module a parameter (Here it is size). And write clear(), size(), insert(), delete() API. 4.Use an adjacency matrix to reserve the distance between cities. Use dijkstra algorithm (in adjacency matrix) to calculate the closest path. 5. Transform the magnitude and longitude into distance and save as a file. 6 Read the files and generated an undirected graph, which is saved in the adjacency matrix. Read the cities basic information files and save the information in a struct array.

What I am doing now: Try to analyze the different effect of two rescue modes and compare the sum of final infected people in all cities and draw a conclusion in which mode is better. And also, if consider the cost of transportation, it remains to be seen which mode is better.

Expected results: Different cities will have different number of infected people after a period.

Actual results: It seems that if chosing