# Reflection

Q1: How could you apply this program to prevent the large-scale pandemic like Covid-19 in  
practice?

A more advanced version of the model we created could help prevent outbreaks COVID-19 by allowing us to simulate how disease spreads geographically, and learn how quick action at the site of an outbreak can prevent further spread. While disease models are never perfect (no model is, after all) they can give us insight into the higher level mechanics of how diseases spread, especially between different vectors, such as airborne or contact transmission.

Q2: What other features and factors can be integrated into this model to make the simulation  
and analysis more accurate?

In its current state, our project is mostly just a toy model. A lot of things could be added to better reflect the mechanics of disease transmission in the real world. Adding features such as different transmission vectors, unique individual susceptibility, more individual traits (such as age, sex, overall health) as well as making individuals behave more like agents in a geographic space would do a lot to make a more comprehensive model that gives us better takeaways, such as the effects of quarantining and how different places in a city serve as hotspots for the transmission of disease through the congregation of a lot of people. Making the model less abstracted and more “on-the-ground” would allow us to derive some insights about how we can stop the spread of diseases by changing our own behavior.