- Write down your **regression equation** in basic part (1%)

  cityA: 0.8688661009053639 y(t-1) +(-0.5253793001816984)x + 19.325968799348384

  cityB: 0.7399599558334383 y(t-1) + (-0.8177508727289325) x + 26.067715484685714

  cityC: 0.9249896679921573 y(t-1) + (0.07517808191761745) x + 0.00024262950962050667

- Briefly describe the **variables** you used in the advanced part (1%)
  - No point would be given for the advanced part if you do not clearly point out the difference between the basic part and the advanced part

  I use time as another input. We can see that cityA and cityB have more cases in the beginning, while cityC has less cases. So I think time is related to cases and help me have a better model.
- Briefly describe the difficulty you encountered (1%)

  Because I am not familiar with Python, I spent a lot of time searching for syntax in pandas and numpy. In the beginning, I try only linear regression. I ended up having bad results. Later, I used autoregression. And it did perform well.
- Summarize how you solve the difficulty and your reflections (2%)

  Of Course I went to google when I got confused by the error. As I said, I am not familiar with python, I would make some dumb mistakes like the forget that size is for numpy array and len() is for List. I hope the next homework I can finish with less time, since I don't have spend time on syntax questions.