Assignment-2

Problem Statement :
Solve this in jupyter notebook:

There is an outbreak of a deadly virus. The growth of the virus, total no. of cases, is said to be of the form c1ec2(No: of days). After 99 days finally a cure will be available in 11 days, i.e. 110th day.

[Hint: Will taking log on either side help?]

1. Given the data for the 99 days, you have to estimate the total no. of cases on the 110th day. Assuming that there are 100,000 beds, do you think the hospitals can handle that many cases?

[Note: take learning rate (alpha) to be 0.0001; take 5000 iterations; do not use any other library apart from numpy and pandas]

2. If the learning rate (alpha) was 1 and 0.00001, what happens? Can you justify why this is happening?

3. Plot the given data points along with your fitted curve, using Matplotlib.

Useful material:

https://towardsdatascience.com/linear-regression-using-gradient-descent-97a6c8700931