Consider the data in databases "bsedata1" and "nsedata1" that you have already obtained. Now for each of the stocks and for each of the market indices do the following :

1. Plot the prices against time (daily, weekly and monthly).
2. Compute the returns R_i (daily, weekly and monthly) and plot histograms of normalized returns

$$\widehat{R}_i = \frac{R_i - \mu}{\sigma},$$

   where μ and σ are sample mean and sample standard deviation respectively. Superimpose on each of these histograms a graph of the density function $\mathcal{N}(0, 1)$.
   Now, zoom into the tails of all these plots. What are your observations ?
3. Will the observations be different if you instead use the log returns ?
4. Now, consider the daily data only for the period January 1, 2019 to December 31, 2022 and estimate the μ and σ using log returns. Using the μ and σ, generate a path of stock prices that resembles (as closely as possible) the actual path of the stock for the period of January 1, 2023 to December 31, 2023.
5. Repeat the above with weekly and monthly data.

Summarize your observations in your report. Remember that you need not put all the figures in the report. General representative figures are sufficient, along with figures which show different behaviours.