1. Time series data:
    a. Samples that consists of lot of observations of the same phenomenon over time.
    b. Series of data points indexed in time order. Time series is a sequence taken at successive equally spaced points in time.
2. Why time series?
    a. Orders of the samples matter
    b. Uneven lengths
    c. Irregular sampling times
3. Why use time series forecasting over multi-variate regression models?
    a. Y = a + bx
        i. Regression equation
        ii. Dependent variable and independent variables
        iii. Yt = Yt-1 + Y — only one variable
    b. Based on patterns or trends in the past you extrapolate over time axis
4. When not to use time series?
    a. When values are constant, i.e. f(x) = c;
    b. When values can be represented using known functions (such as sinx() or cosx())
    c. When your data is not stationary
5. Components of time series: general trend, seasonal and irregular functions
    a. Trend: values are increasing or decreasing
    b. Seasonality: a spike or peak or dip in time interval
    c. Irregular: random or uncontrolled situations