1. Given a dataset of integers or floating-point numbers, calculate the following descriptive statistics:

- Mean
- Median
- Mode
- Variance
- Standard Deviation

Sample Dataset**:** [20, 40, 40, 40, 30, 50, 60]

2. Generate a dataset of 1,000 random values generated from a lognormal distribution with a mean of 0 and a standard deviation of 1 in the log-space, perform the following tasks:

- Plot the histogram of the dataset.
- Calculate the mean and median of the dataset.
- Fit a lognormal distribution to the data and overlay the probability density function (PDF) on the histogram.

3. Generate 1,000 random values following a logarithmic distribution with a probability parameter p = 0.3. Perform the following tasks:

- Plot the histogram of the dataset.
- Calculate the mean of the dataset.
- Overlay the probability mass function (PMF) of the logarithmic distribution on the histogram.

4. Given a dataset containing various types of data, categorize each variable into the appropriate statistical data type: Nominal, Ordinal, Interval, or Ratio. Then, write code to demonstrate how you would work with each type of data.

Example Dataset:

ID	Name	Age	Education Level	Salary	Joining Year
1	Sophie	22	Bachelor's	60000	2022
2	Aryan	25	Master's	75000	2020
3	Amit	28	PhD	78000	2018
4	Charu	26	Bachelor's	45000	2015
5	Piyush	37	Master's	92000	2010

5. Given a data of house prices [200000, 250000, 150000, 350000, 300000, 400000, 450000, 600000, 650000, 500000, 550000]. Calculate the following:

- The median of the dataset.
- The 25th percentile (1st quantile), 50th percentile (2nd quantile, also the median), and 75th percentile (3rd quantile).
- Visualize the data using a box plot.