# Random Variable –

* Variables whose values depend on the outcome of a random phenomenon.
* Random Phenomenon is something that occurs in real life.
  + Tips to a waiter
  + Total bill amount
  + Measurement of a species of flower
* Could be Numerical or Textual
* Could be discrete or continuous
* Discrete – Finite number of values or countable number of values. Categorical in nature
* Continuous – Infinite number of variables, uncountable .
* In Pandas the columns can be considered random variables.

# SAMPLE VS POPULATION

**Population** – Entire Data or the whole of the data for a particular random variable.

**Sample** – It is a subset selected from the entire population.

**Two branches of statistics evaluate the sample or the population.**

* Descriptive Statistics – It is a statistics of learning the characteristics of the sample drawn from the population.
* Inferential Statistics – Statistics of making inferences about the population based on the sample. Similar to Machine Learning.