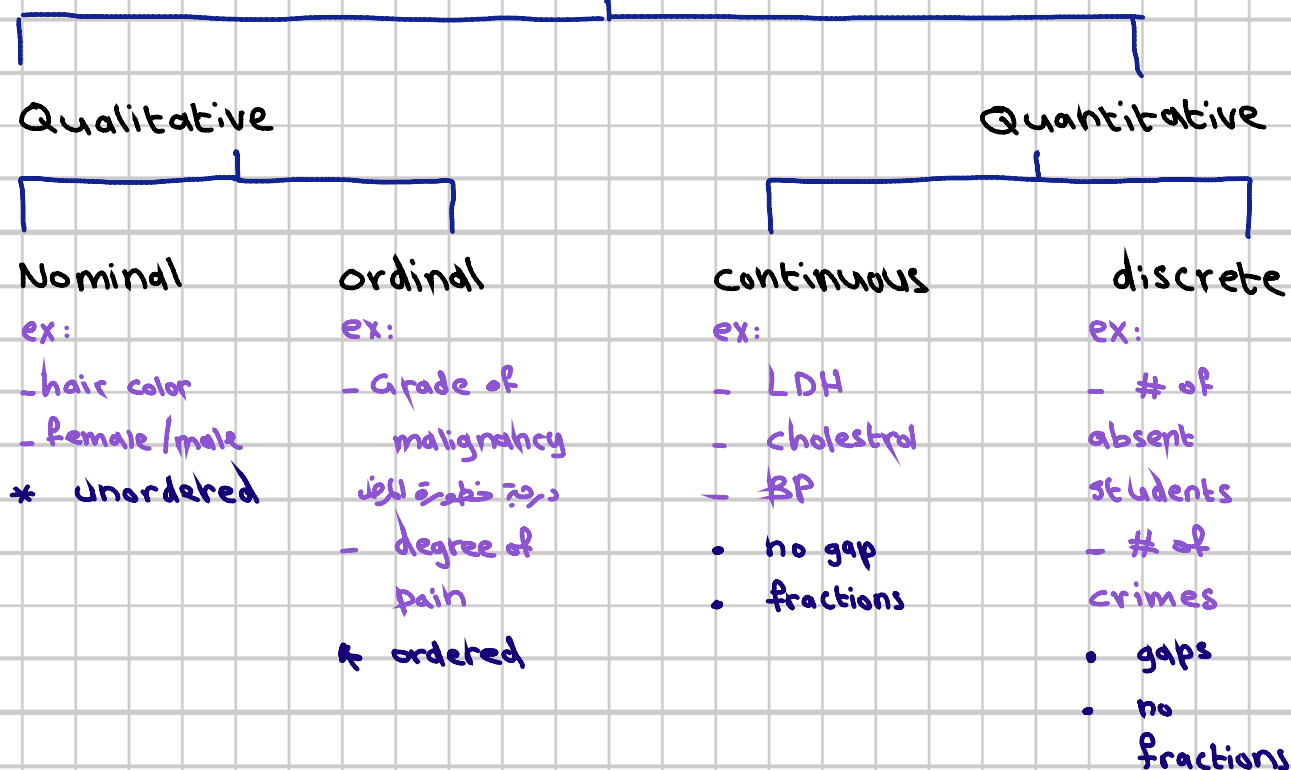


Types of data



Nominal data presentation

- counts in each category (حسول)
- Histogram (رسم بياني)
- Relative frequency = N / total
- Relative frequency diagram
- pie chart (رسم بياني دائري)

Ordinal data presentation

- tools of nominal data
- cumulative frequency
- cumulative frequency polygon
- percentiles

median divides a population in 2 equal size parts

- location of median = $\frac{N+1}{2}$

Discrete data presentation

- tools of ordinal data
- mean = sum of observations / total N

continuous data presentation

- central tendency
- dispersion (تشتت)
 - Range
 - Interquartile range
 - standard deviation

interval
ratio

$$\text{Variance} = (\text{standard deviation})^2$$

- standard deviation and mean have units

Importance of ordered array

- determine quickly the value of smallest measurement
- the value of the largest measurement

$$\text{Interval width} = \text{Range} / K$$

$$\text{mid interval} = \frac{\text{largest} + \text{smallest}}{2} \quad (\text{الفترة الواحدة})$$

Data Presentation Methods

Type of Data	Mode	Median	Mean	Range	SD
Nominal	X				
Ordinal	X	X		X	
Interval and Ratio	X	X	X	X	X