GRAPHICAL PRESENTATION OF DATA

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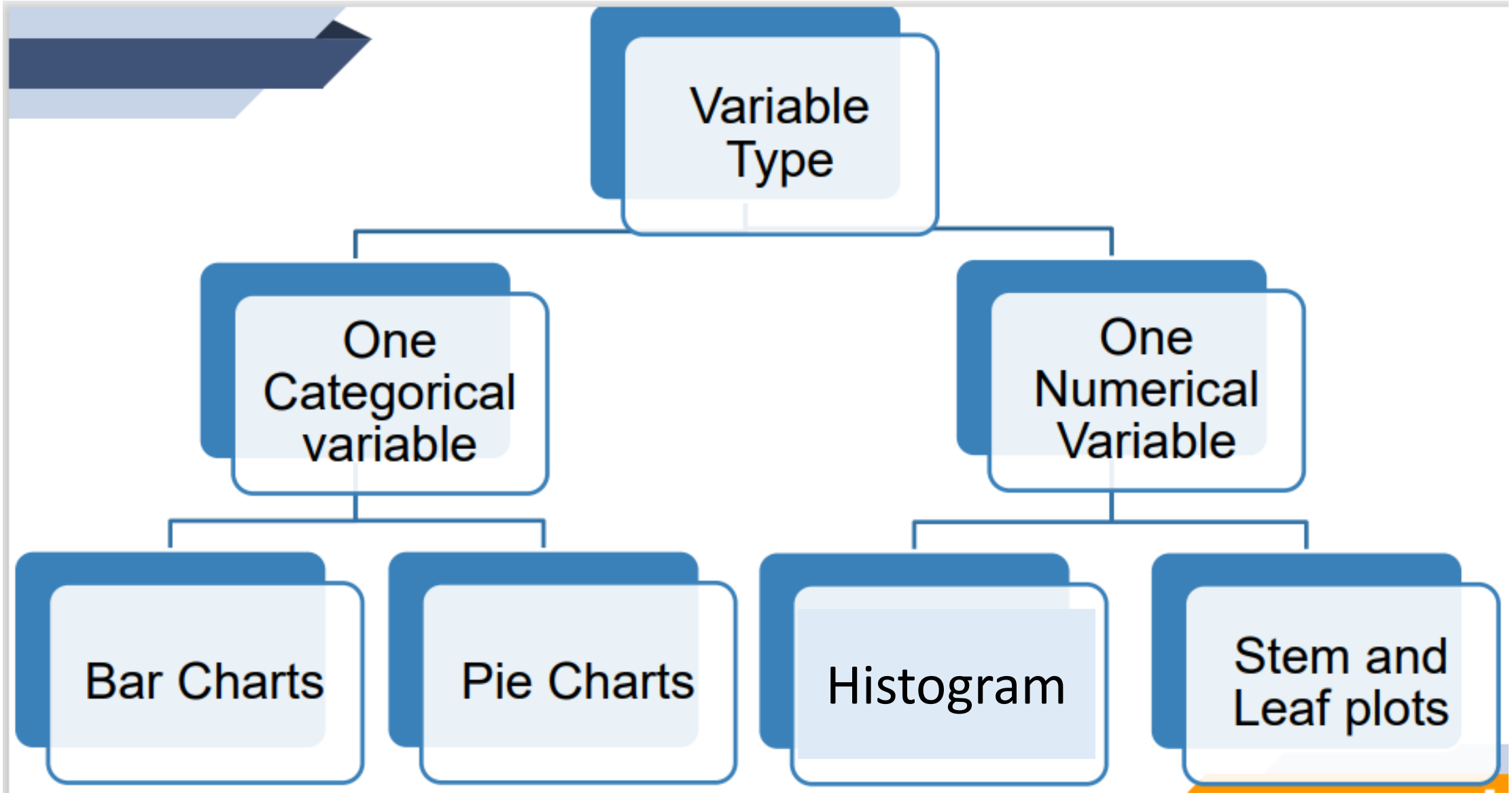
Descriptive Statistics

- This will give you a rough about the behavior of data. It describes how the each of the variables in your analysis behave. There are two methods that you can use under exploratory analysis. They are,
  - Graphical Methods &
  - Numerical Methods

- Each method depends on the type of the data available.

Graphical Methods

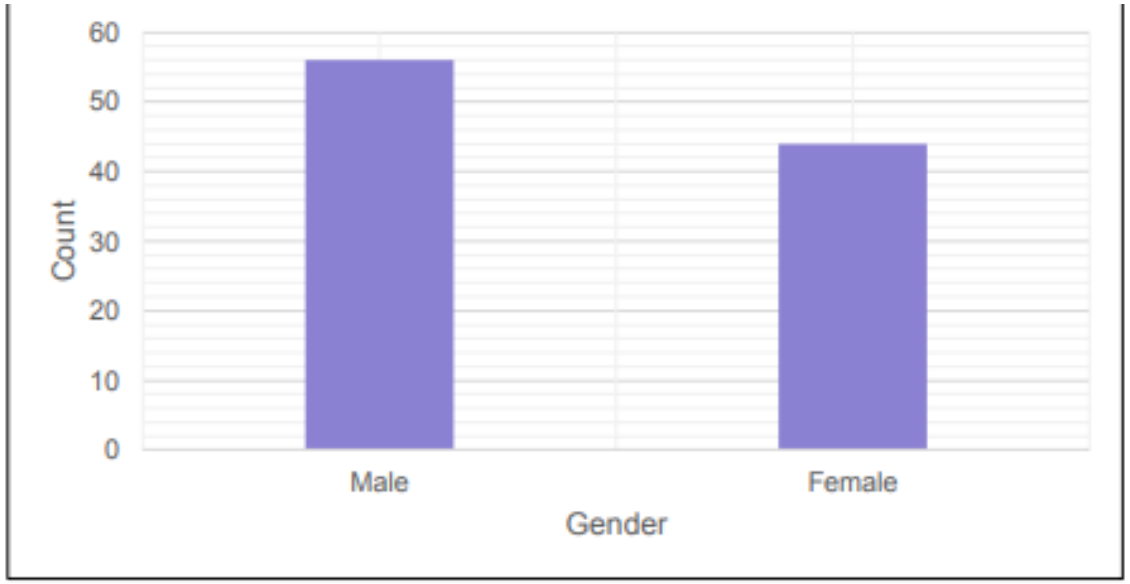
- You can use graphical methods to analyze both categorical and numerical variables.
- Type of graph you use depends on the type of the data available.


Variable Type
One Categorical variable
One Numerical Variable
Bar Charts
Pie Charts
Histogram
Stem and Leaf plots

BAR CHARTS

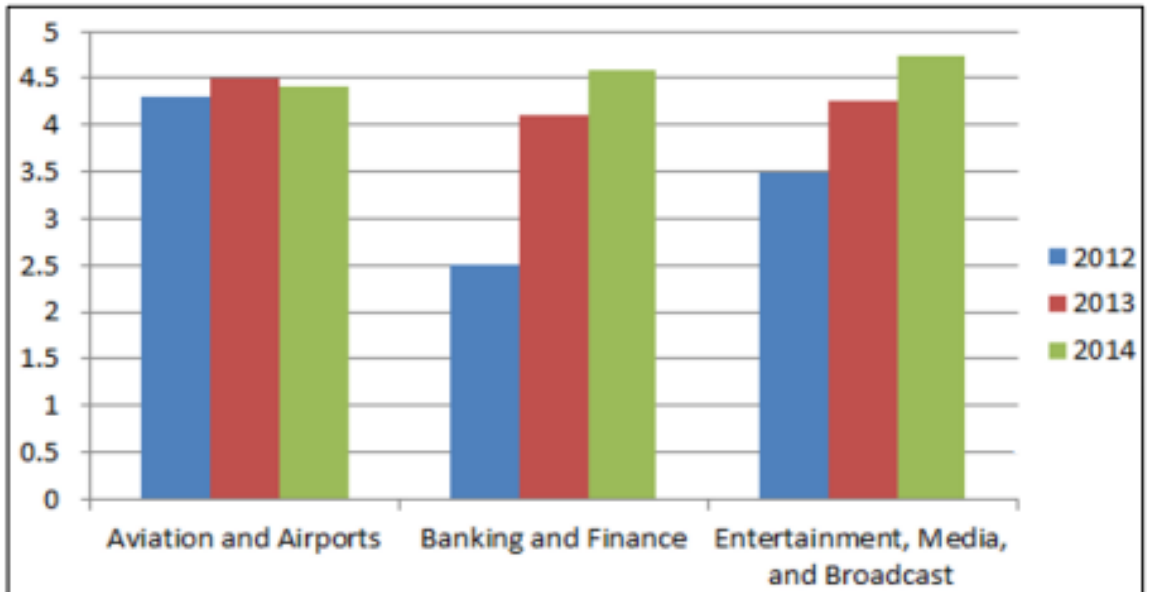
Bar Charts

- In bar charts, each bar will represent each category level. These bars can be drawn in vertically or horizontally.
- Frequency, cumulative frequency or percentages can be used for the y axis while x axis will represent the categorical variable.
- Length of the bar will proportional to the value it represent.



Simple Bar Chart

Multiple / Clustered Bar Chart

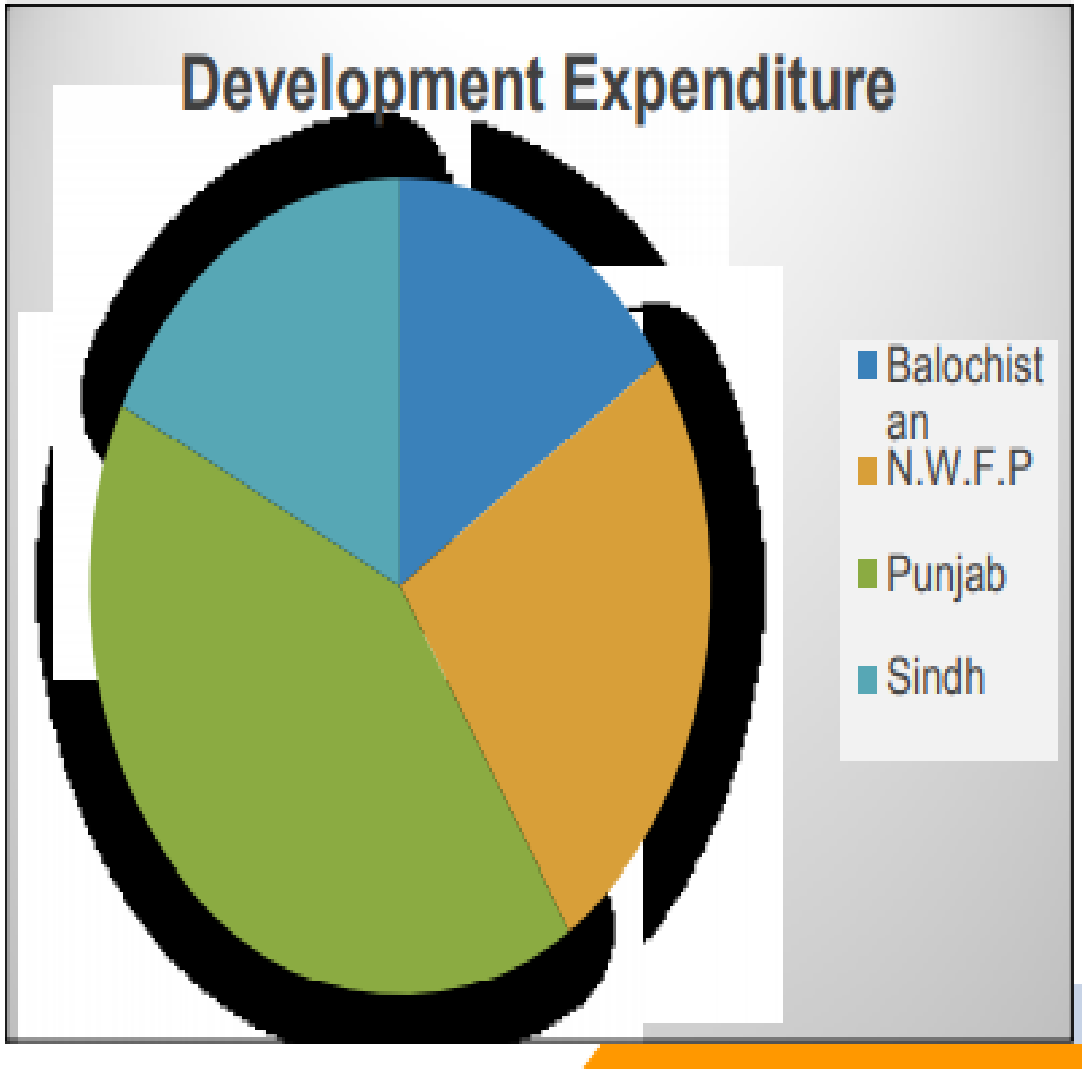


PIE CHARTS

Pie Charts

- Pie charts are used to analyze one categorical variable.
- In pie charts, area of each sector will proportional to the value of category it represent.
- This is appropriate, when there are few number of categories for the variable or when value of each category is varying widely.

Provinces	Development Expenditure	Angles for sectors
Balochistan	4874	56
N.W.F.P	7861	91
Punjab	12954	150
Sindh	5500	63
Total	31189	



STEM & LEAF PLOTS

Stem & Leaf Plots

- These plots are useful when the data set is very small.
- Before drawing this plot, it is need to arrange the data in ascending order.
- Then, each data value will split into two parts known as stem and leaf.
- The “leaf” is usually the last digit of the number.
- The other digits to the left of the “leaf” form the “stem”.
- These plots are not much use in preliminary analysis.

Stem	Leaves
1	6
2	
3	
4	
5	1 5
6	4 6
7	1 1 4 4 5 8 8 9
8	0 2 2 3 4 8
9	1

Key: 1|6 → 16

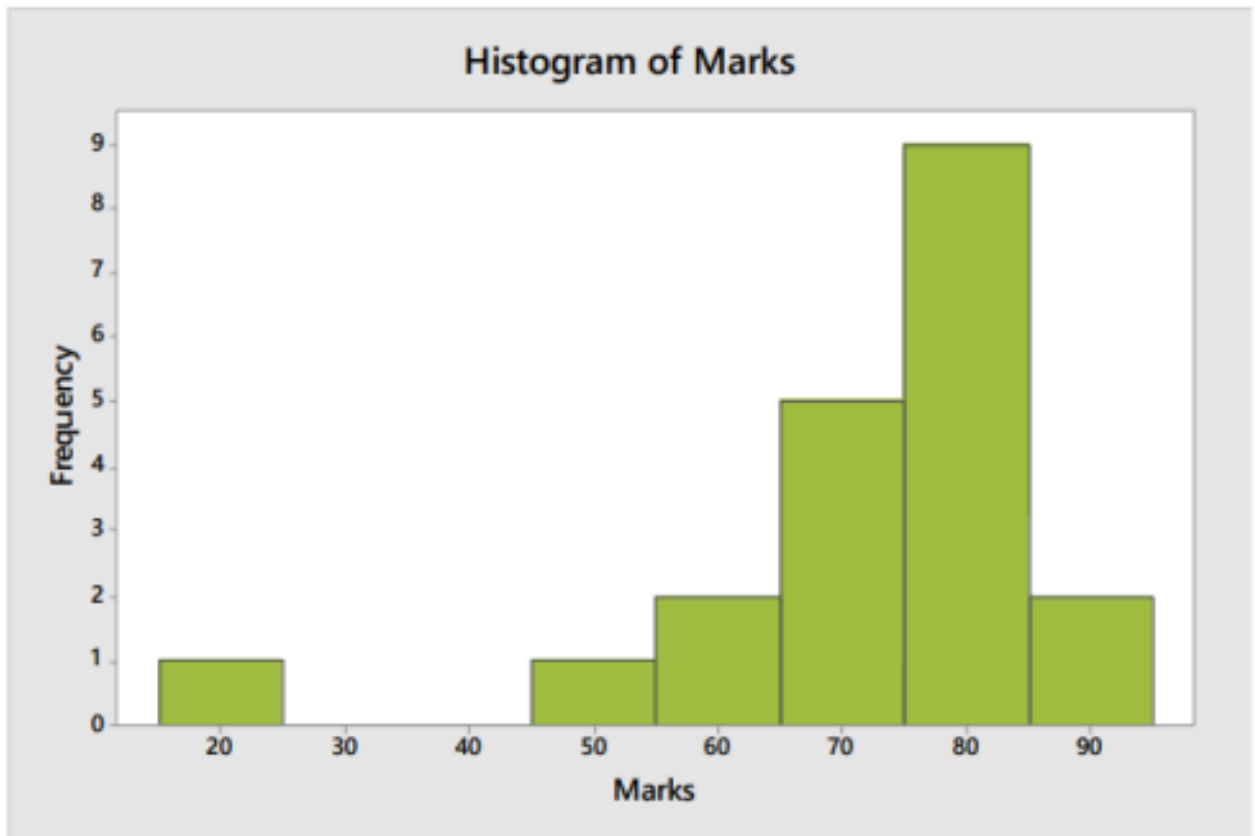
78	74	82	66	91	71	64	88	55	80
51	74	82	75	16	78	84	79	71	83

HISTOGRAMS

Histograms

- First, divide the given data set into suitable number of classes (intervals/categories) which have the same width.
- Classes with their frequencies (counts) is called a frequency distribution.
- Frequency, relative frequency or percentages can be used for the y axis while x axis will represent the classes of the variable.
- In histograms, each bar will represent each class and length of the bar will proportional to the frequency of respective class.
- In histograms, bars are drawn adjacent with each other (No gaps between two bars).

78	74	82	66	91	71	64	88	55	80
51	74	82	75	16	78	84	79	71	83



Class	Frequency
14.5 – 24.5	1
24.5 – 34.5	0
34.5 – 44.5	0
44.5 – 54.5	1
54.5 – 64.5	2
64.5 – 74.5	5
74.5 - 84.5	9
84.5 – 94.5	2

THANK YOU!