

Collecting and Organising data

1) data → collection of information gathered by observation, measurement, research or analysis

2) Collecting → conclude, find some result based on observation, analysis

3) Organised data → meaningful data that are arranged in based on requirements columns format
(category)

It helps to understand data in very details way and helps to analyse, observe etc

Ex → any height of Heena's class room

<u>⊗</u> <u>F Name</u>	<u>⊗</u> <u>Add</u>	<u>⊗</u> <u>Roll</u> <u>Unique</u>	<u>⊗</u> <u>Name</u>	<u>⊗</u> <u>Age</u>
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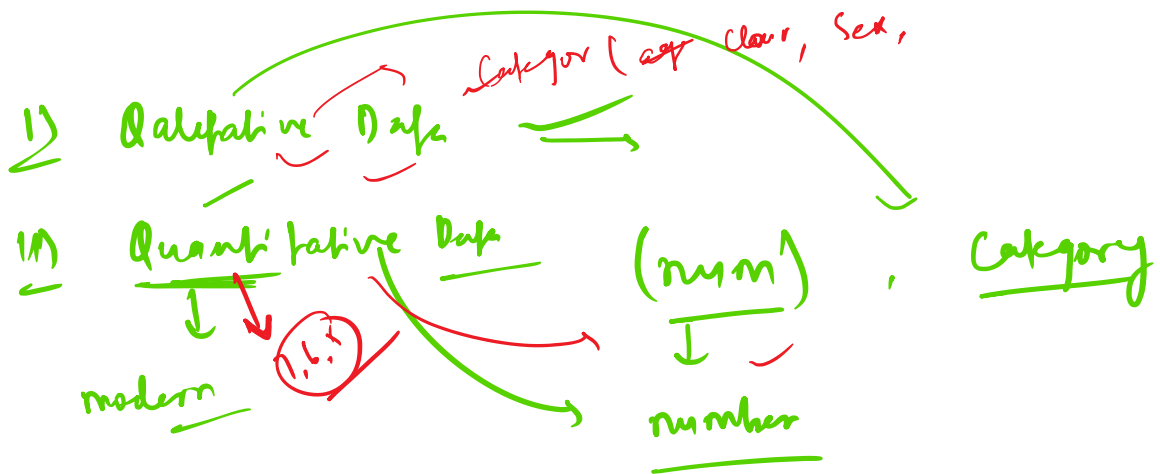
Q what is (Data Handling) unstructure

• Collecting the set of data and presenting in a different form

∴ process the process of securing the research data

category
now
get

is gathered, archived or disposed of in a protected and safe way during and after completion of analysis process.



Qualitative ^{category} data → does not have numerical value but it contains various characteristics about object or people ✓

Ex → color, shape etc.

Types of pet in neighborhood → Cat, dog, Rabbit, hamster, fish

→ color of fish in an aquarium → gray, red, blue, golden

↓
Categorical

Quantitative Data if includes numerical information
↓
Age, time, height, weight,

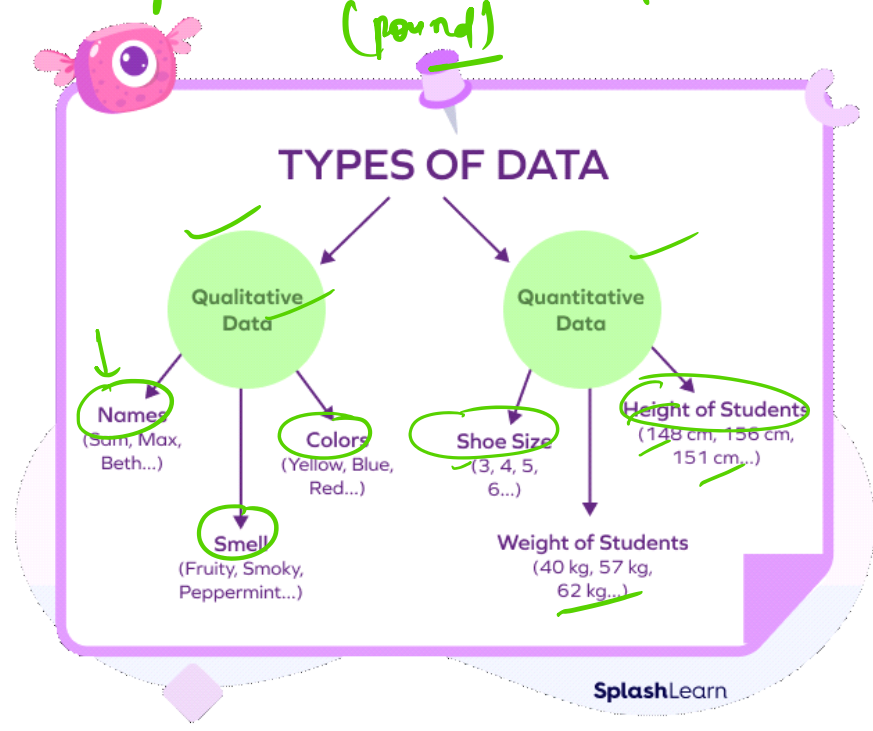
This data is collected by measuring if on
 required parameter

Name

(age) (old)

Ex → height of student → 5, 4.7, 5.3, 4.9, 4.5

weight of students → 75, 89, 133, 90, 87
 (pound)



2. Based on method collecting method

1) Primary Data → 1st original information

↳ accurate

CR/cm
 data

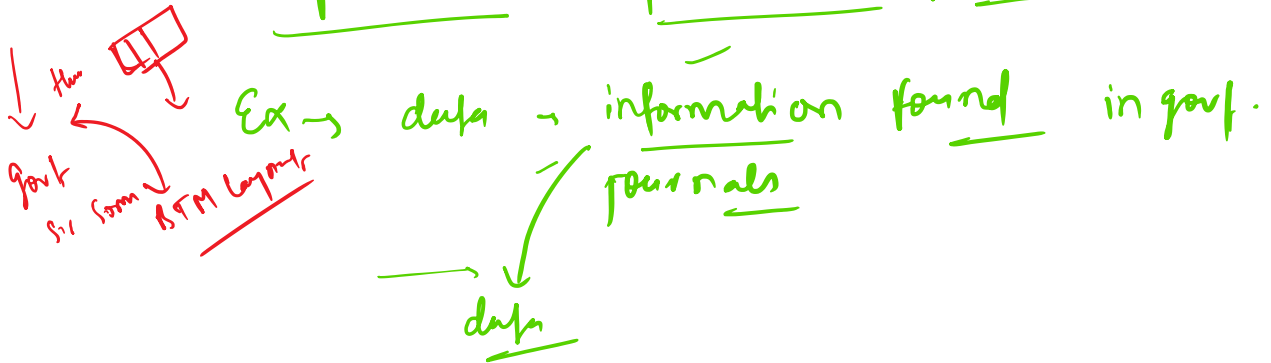
→ is original information that has been

Collected for a specific purpose.

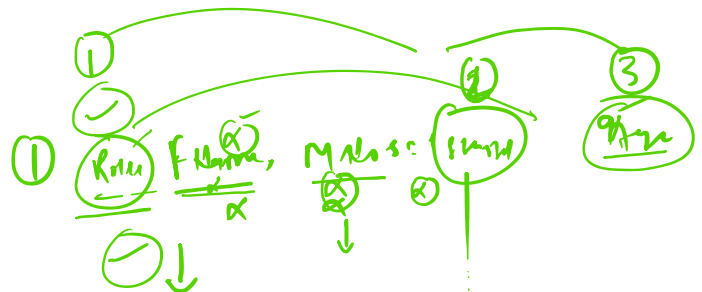
→ raw data that has never been processed

→ structured for future use

2) Secondary → if is sourced from an existing data source, either in an unpublished or published form.



Data Organization



↳ is a simple practice of classifying and categorizing data to make it easy to understand.

to understand ✓

8th grade ✓

②

Roll No	St. Name	Age	Ad
01		12-13	ABC
14		13	XYZ

we can use ① Table form ✓

② Graph form ✓

③ picture form ✓

Representation

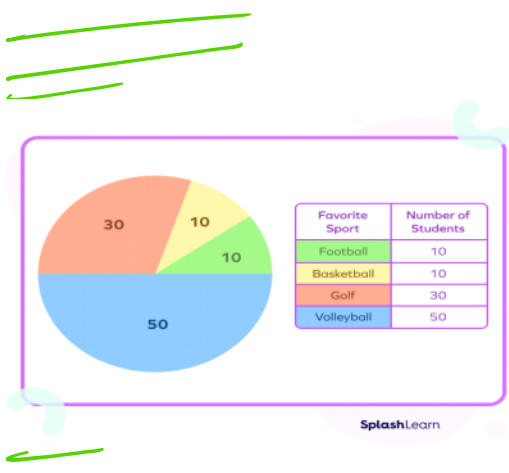


Table ✓
Pi

Example 1: The daily wages of 10 construction workers are given below:

\$60, \$78, \$56, \$90, \$72, \$68, \$83, \$89, \$57, and \$93

ascending order

✓ → Data Types
 ① Qualitative (category, non-number)
 ② Quantitative (Number)

method of collecting data

- 1) Primary → pure / original
- 2) Secondary → used data

Q1) What is continuous and discrete quantity

Q2) What is biased or unbiased data collection method

Q3) How many ways of presenting data.
 give example for each.

Q → frequency → number of repetition of ^{same} quantity

Ex → 10, 9, 8, 7, 6, 5, 4, 11, 13, 15

The following marks (out of 50) obtained in Mathematics by 50 students of Class VIII.

21, 10, 30, 22, 33, 5, 37, 12, 25, 42, 15, 39, 26, 32, 18, 27, 28, 19, 29, 35, 31, 24, 36, 18, 20, 38, 22, 44, 16, 24, 10, 27, 39, 28, 49, 29, 32, 23, 31, 21, 34, 22, 23, 36, 24, 36, 33, 47, 48, 50, 39, 20, 7, 16, 36, 45, 47, 30, 22, 17.

Cl.	frequency →
0-10	1
10-20	3
20-30	0
30-40	0
40-50	0

30 - 40 0
 40 - 50 0
 50 - 60 0

marks

vein diagram

Worked example 2

Martha wants to collect data on the wingspans of greenfinches (a type of bird). She expects the birds to have a wingspan of between 24 cm and 28 cm. Design a data collection sheet with four class intervals that would be suitable for collecting Martha's data. All class intervals should have equal width.

The data collection sheet needs four rows, so split the interval between 24 cm and 28 cm into four classes:

Wingspan, x (cm)	Tally	Total
$24 \leq x < 25$		4
$25 \leq x < 26$		3
$26 \leq x < 27$		5
$27 \leq x < 28$		7

The data being collected are continuous so each class interval should be written with inequality symbols.

Step 1 range ||||| 24 $\xleftarrow{28}$ |||| 28
 wingspan x (cm) 3 \rightarrow

Ex \rightarrow any height of student Total / No of quantity

Age	Name/roll	Tally marks	No of student
(10-14) year			4
(14-18) year			5
18-20 year			3
20-24 year			7

vein diagram

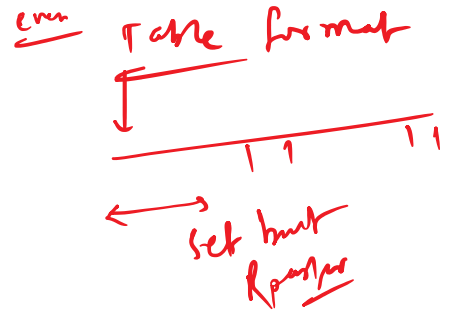
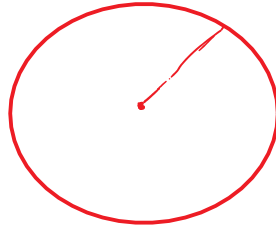
Q

Q

vein diagram

in dm

Circle and we can find



relation b/w mean - Set or Relation

↓ org

prob

Example 3. The following table shows the number of oranges sold by Mike at different times of the day. How many oranges did Mike sell in a day?

Time of Sale	Number of Oranges Sold
Morning	13
Afternoon	21
Evening	15

13 p

Ans

9 precise value of quantity mean

• precise value of given

7 student

12
17
15
13
14

avg

nc

nc

$$\text{avg} = \frac{\text{sum of quantity}}{\text{no of quantity}}$$

$$(12) + (17) + 15 + (13) + 14$$

$$5 \quad 2 \quad 14$$

$$\underline{75}$$

$$\underline{\underline{15.2}}$$

$$\frac{57}{17}$$

$$7.6$$

Any age of Modern in the car has 18.2 years

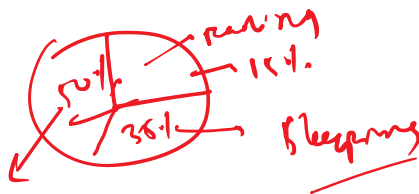


15 year $\frac{21}{10} \text{ (2)}$
 $\leq \text{air}$
 $\text{so } \checkmark$

18 years 2 month form

e

Venn diagram



rest

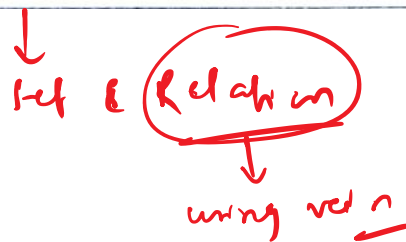
Worked example 3

The table shows information about the number of cars for sale in a garage. [4/5]

	Cars less than 3 years old		Cars 3 or more years old	
	with air conditioning	without air conditioning	with air conditioning	without air conditioning
Petrol engine	11	5	4	6
Diesel engine	7	2	3	9

Show this information as a Venn diagram.

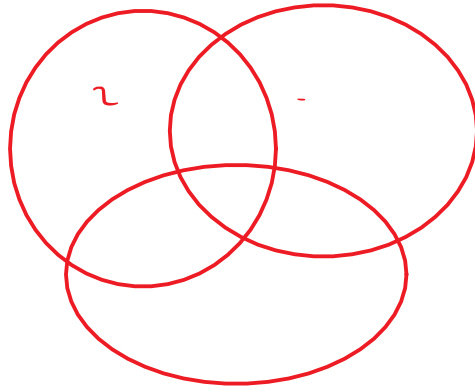
③ Circle



3 categories

① Car's < 3 years

② Car's > 3 years



hw

↓
each & every involve
in pair hu

③
engine type

Step → Circle 9

Step → digit →

Relation →

what the Relation hw the m