

Data Analysis with Excel

10 ways :-

(1) Descriptive Statistics [Quick Statistics]

- To turn raw data into table format

↓
select any cell

↓
(ctrl + T)

↓
Table Name :- Rename

• **Formula:** ✓ * **Sum:** = sum(tablename[Amount])

✓ * **Average:** = average[tablename[Amount]] + ↗

✓ * **Median:** = median(tablename[Amount])

Note:-
→ average = AVERAGE (either small or capital)

→ = AV.

↑
Average select + table

↓
= average similarly to select
list → press tab.

Median → mid pt. of ur data , when arranged in ascending or descending order.

Average → sum of all values divided by count of values .

* minimum value : $= \min(\text{select range})$

* maximum value : $= \max(\text{data [Amount]})$

* Range : $\text{max. value} - \text{min. value}$

Quartiles → Refer to $\frac{1}{4}^{\text{th}}$ or $\frac{3}{4}^{\text{th}}$ points in your data when it is arranged in sort order .

* First Quartile : $= \text{percentile.exc}(\text{data [Amount]}, 0.25)$
 $\frac{1}{4}^{\text{th}} \text{ value} \leq$

* Third Quartile: = percentile.exc(data[Amount], 0.75)

⇒ To copy any formula just - (ctrl+c) of any result. → to get same formula.

Top $\frac{1}{4}$ value >

⇒ To bring filter to your table & remove them



(ctrl + shift + L)

Amount ▾ or Amount

⇒ When we have a heap of diff. products and some products are repeated



(i) point all product + time only

(ii) count no. of products + time only

(i) Distinct products: = unique(data[product])

(ii) Count distinct product: = counta.unique(data[product])

(2) Exploratory Data Analysis - (EDA)

with Conditional Formatting

- copy the given data
↓
convert into table ($ctrl + T$)
↓

remove all filter ($ctrl + shift + L$)

1) How varied my Amount is ?

- (a) select Amount Table / column
↓

Home : → conditional formatting
↓
colour scales

⇒ it applies diff. colour depending upon
the volume of the number.

OR

(b)

- select Amount column
↓
Home : → conditional formatting

↓
Data Bar

→ Then we can select it also. (ascending or descending)

* To clear this applied formatting *

→ Select data column

↓
Home :- conditional formatting

↓

clear rules

(c) Select amount/data column

↓

Home :- conditional formatting

↓

Top / Bottom Rules

(various rules inside it)

* eq: Top 10 items if applied

[see name of person (repeat wala)
see items sold ⇒ max. wala.

(d) select unit column (which quantity is purchased how much)

Hence :- Con. format

↓
Duplicate value

⇒ certain no. of purchased box is purchased by 2.

(30) Sales Analysis with Formulas

|| ** sale by country (with Formula) ** ||

• Make a 3 table in separate sheet

country	Amount	Unit

→ select geography / country column full
↓
copy
↓
paste it in new worksheet

→ select all country name in
new table



data option from top



Remove duplicate

For Amount for each Country

SUMIFS - formula { sum all the data entry
 { if condition given is
 specified }

⇒ ~~sumifs (Table name~~

= sumifs (Table name [Amount], Table name

[Geography], ^{any¹} _{country name})

jiske liye total
amount nikal rhe

→ Us country ka net amount aa jayega.

for currency format :

select Amount



Home :- General → currency

OR

(ctrl + shift + 4) with 2 decimal places

→ To remove decimal point



Select → Home → decimal decrease

Handy tips to fill other amount wrt country

→ fill 1st one



place cursor at the corner  *



when cursor turns black  *



double click

For Units

=sumifs (table name [units], table name [country ~~name~~],
country name)

→ select that cell



(ctrl + 1) → to open formatting settings



Number



use separator

Now our data is ready



To make it presentable



Select whole data



Give borders & highlights to headings



(ctrl + shift + L) → to apply filter in
the heading



then sort it



Select all



Home: - Borders



apply only horizontal border

** To remove grid line of Excel.

View option from top



Disable gridlines

Note,

Table :-

Country	Amount	Units

→ move units a cell ahead of previous.

↓
copy the amount in the preceding column

↓
select new amount column

↓
Home : - conditional Formatting

↓
Data bar

↓
Manage Rules

↓

Select Data Bar

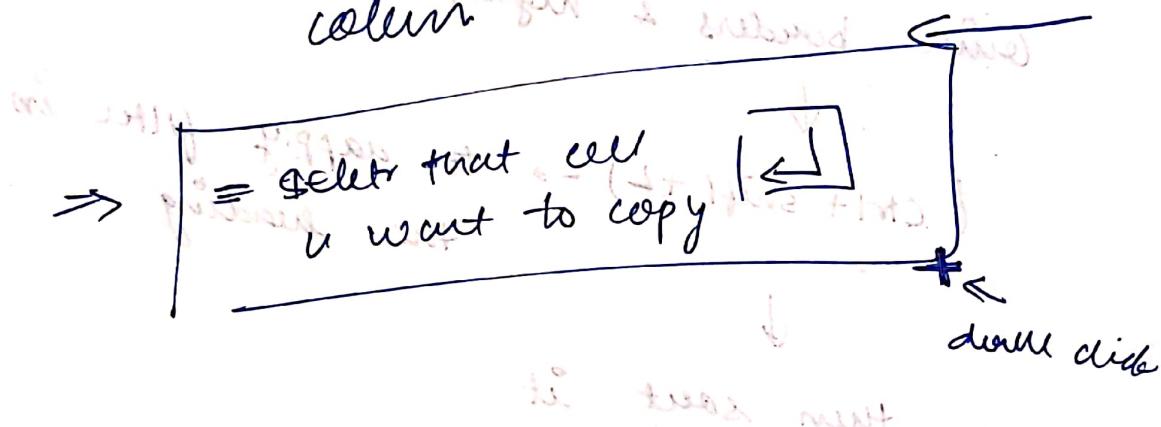
↓
Edit Rule

↓
Show bar only

↓
change colour as per choice

phase B. click on copy
↓
Clipboard to store or
↓

Have to copy the shorter text
same amount in another
column & instead of ~~ctrl + v~~



ctrl + c

double click

ctrl + v

ctrl + v

ctrl + v

already inserted plus press

ctrl + f until find summary of it

get many settings each

↓

initialized details

country	amount	Unit
—	—	—
—	—	 ↓ —

bar showing how high
the amount is.

→ select unit and give it very light
colours to make attractive.

(4) Sales Analysis with Pivot Tables

create insert option



pivot Table



select a Table

(give the Table Name)



we get canvas to build pivot
table

Here we want:

country

amount

unit

=

=

=

names you can see from

at best



Pivot Table Fields

↓
select country name in rows

↓
select amount & units → in values

Select

Amount & Units

→ in values

→ apply currency format

→ select it

→ file, send, forward, and

→ file, forward, and

help

press to ring keys from keyboard ←
introduction session of weeks

* TO make change in slice



select slice



option: ribbon



→ select any cell in pivot table
↓
change theme / colour / appearance
of table

→ To repeat the Amount column,
drag Amount from pivot table fields
& place it in values table
In b/w amount & units.

→ Apply bar as prev. format.

Name:

→ To look for individual person / sales

we can do in pivot tables.

→ from pivot table fields

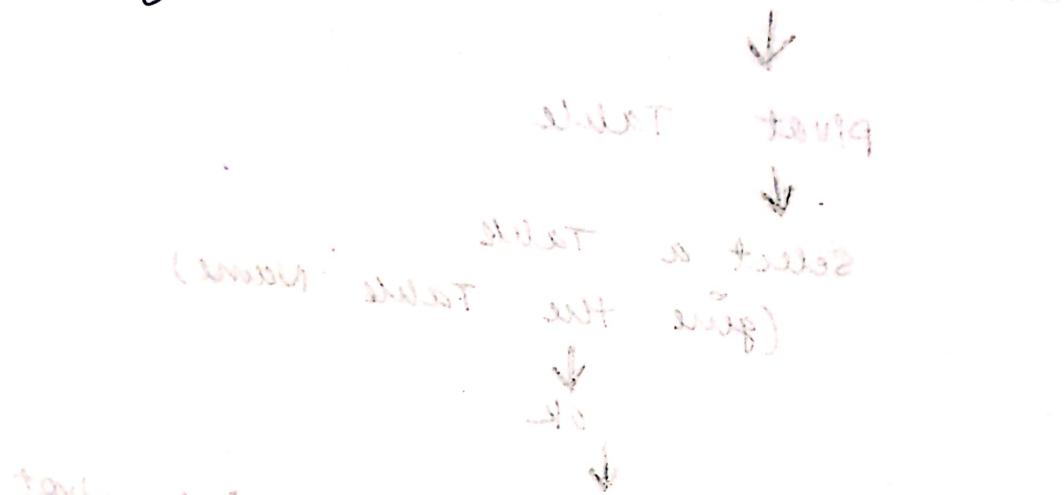
↓
right click on sales person

↓
add as a slice

↓
select it & goto slices
option on the top

↓
change it (formatting)

* You cannot remove any heading on table; just press space key once all will be removed.



In case of Pivot Table :

Any alphabets appearing are already arranged in $(A \rightarrow Z)$ format.

→ To apply sort to no. column

in pivot; select any cell

What is this?

right click

sort

(all will be sorted automatically then)

to sort

(5.) Top 5 Products with \$ per unit

- Use of Pivot Table make it simple
- goto Insert
- ↓
- Pivot Table
- ↓
- Table name : - select table
- ↓
- at bottom of it : - add this
- data to Data Model (enable it)

Pivot Table Fields :

- select country put it in rows
- select Amount & Unit → values

$\boxed{\$ \text{ per unit}}$

$$= \frac{\text{sum of Amount}}{\text{sum of Units}}$$

or from Pivot table

open pivot table field by selecting any
cell from pivot table



*

Once you close pivot Table field window

(cancel) ↓

Select any cell

right click

↓

Show field list

↓

Again pivot Table field window

filter appears

*

For Amt & Sum of Amt

↓

make filter to any cell

right click on small pop-up

last option



Right click on Data bar



Add Measure



Measure Name :— sales per unit

Formula : $\rightarrow = [\text{sum of Amot}] / [\text{sum of Unit}]$

↓
currency, decimal place

(0.2)

in
add
measure
only

we get sales per unit

↓
drop it in values box.



select it

(6.) Anomaly Detection

Method - 1

→ Copy the table in new sheet

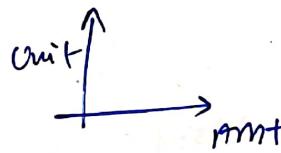
→ Select amount & unit table



Insert



x-y scattered plot (graph)



Method - 2

→ Select amount table



Insert:- Histogram



Box & whisker

→ Select geography & amount table



Select:- Histogram



Box & whisker

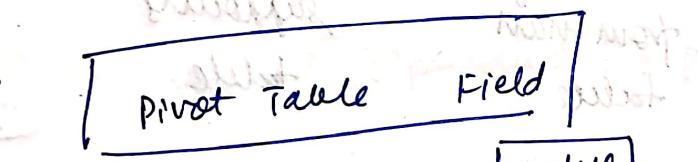
(7.) Best Sales Person by Country

Pivot Table Method

→ Insert a pivot table

↓
select table name
↓
OK

Name,



Geography
Sales Person

↓

select any 1 name

↓
click on filter row

Value
filter

Top 10

↓
edit Top ± (max)
or least
↓
OK

⇒ Best salesperson by country
or worst

(8.) Profit Analysis

- * How to combine & different tables in Excel *

lookup formula

Excel 365

=xlookup([@product], products[cost])

or

vlookup (for older version of Excel)

calculating total profit :-

insert pivot table



Table name



(enabll) Add this data to data model

Note :- If since we have made a pivot table from data and now insert a new column to our data then it will not show new one in pivot table, to make it show

with ~~task~~ in front of
 when sheet table
 $\Rightarrow = \text{xlookup}([\text{@products}], \underbrace{\text{products}}_{\substack{\downarrow \\ \text{from main table}}}, \underbrace{\text{products}}_{\substack{\downarrow \\ \text{suppliers}}} [\text{product}, \text{cost per unit}])$

	main	sheet	task
	main	sheet	task

↓
 answer to few tables
 if we find
 if we find
 if we find
 if we find

source in pivot table field

↓
just click Refresh from

Pivot Table Analyze
tab from tabs

[Rows]

Product

[Value]

Amount
cost

→ Add measure to pivot table

measure name : - Total Profit

formula : - $= [\text{sum of amt.}] - [\text{sum of cost}]$

↓
currency
↓
OK.

↓

sort it

→ Add slicer for geography.

↓
to see for each country separately.

(30) Dynamic Country-level Sales Report

→ Data Validation

In order to select any 1 country among all like a box.

e.g. Pick a country 
= = =

and with the change in this country each & every data will change respectively in that sheet.

⇒ How to apply it

→ Place name of all country (once)



Select the cell



Data



Data validation



Specify in the tab ; ⇒

allow: list

Drop - Down Box

source: point / select range for results
u want

small drop down in the selected
cell where u

make a summary Report for
that particular country

(1) NO. of transactions for any 1 country

= countifs (tablename [Geography], [])

select that
all in which
u are choosing
a country.

(2) sum

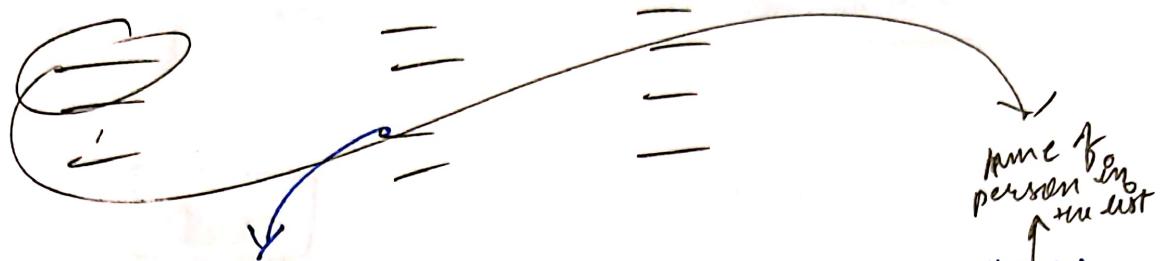
= sumifs (tablename [amount], tablename [Geography], [])

(3) Average

= averageifs (tablename [amount], tablename [Geography], [])

Name, make never again 1 Table.

<u>Name</u>	<u>Amount</u>	<u>Unit</u>
-------------	---------------	-------------



Amount

= sumifs(tallenane[Amount], tallenane[Sales Person], [= = =])

tallenane[Geography], [= = =])

country pick wala cell

(Unit)

= sumifs(tallenane[Unit], tallenane[Sales Person], [= = =])

tallenane[Geography], [= = =])

check whether somebody made certain no. of target or not

= if(Amount select karo each time \rightarrow [conduct?], +, -)

↓
select (+, -) cells

↓
Home: Conditional Formatting

↓
seen sets

↓
 \rightarrow Manage rule

Manage Rule

icon ↓

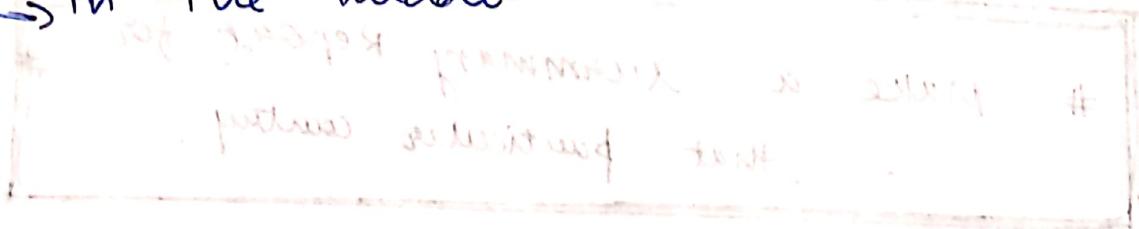
① → value ≥ 1

Type
Number

② → value < 1

Type
Number

→ in the middle = no cell 'icon'.



Left [parent] market, offenes, -

base rule,

market, no

parents and a

grandparent

is

(100) open - ended Questions

* which products to discontinue?

Ques:

- (1) Product sales \$
- (2) Product cost \$
- (3) Unit sold
- (4) Profit \$

Insert Pivot Table:-



Table name

+
(finally) add this data to Data
model.



Rows

Product

values

Amt.

Unit

Profit.



sort for least products



But measurement is hard
at some of least have max-profit

so add measure in pivot table field



Measure name : Profit%

formula : $= [\text{Total profit}] / [\text{sum of And.}]$



No.



% → 1 decimal



Now it become easy to analyse

Profit & less data



Profit% → Home :- Condition for



colour scales.



Now for Example

if u want to drop any :-



Add slicer

* How To add slicer *

open ⚙ Pivot Table fields



right click on any data



slicer values



we can see
detail analysis
per Geography
area