

Date 12/5

14/9/23 Day > 1 2

Agenda

→ Array function

→ Pivot, charts, Dashboarding & Macro

Arrays → collection of values → Rows/column of values

Array functions → 1 or more than 1 output

→ SUMPRODUCT(A1:B1), UNIQUER, VLOOKUP, FILTER

(8) → Array func. Calculate Total. Bill amount of product?

Without using Array Functions

A	Price	B	Quantity	C	Total
1	500		5		= A1 * B1 = 2500
2	100		4		= A2 * B2 = 400
					Grand Total → 2900 = C1+C2

With Array functions

A	B	C	D	E
Price	Quantity		Total	Grand Total
500	5		2500	2900

= SUMProduct(A1:A2, B1:B2)

Date: 126

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Q-2 Q-S-B

Q-2 Consider the data for match with id 33598
How many overs were bowled in the first
second Innings?

→ Below is the ball by Data of the match?

Q-2 → use Filter & then find out overs
↳ ctrl + shift + l

Q-2 → array Functions →

using filters as array function

Input: =FILTER(range, condition1, condition2)

Output

overs ← kya h

Can Add
as many
conditions

Inning=1

Inning col=1

= MAX(FILTER(A1:A10, B1:B10))

We will get overs bowled by team

Why +1 → In our data overs are like

we have +1 in over to get

0.1		19.1	correct value
0.2		19.2	
0.3		19.3	
0.4		19.4	
0.5		19.5	
0.6		19.6	

So, Max value of overs will be 19 but with
1, 2, 3, 4, 5 → so have to +1

Date 127

(S1) \rightarrow FILTER (Table[Cover], Table[Running] = 1)

(S2) \rightarrow MAX (FILTER(...)) + 1

because in Pre + Page

give multiple values as Output

X-Lookup \rightarrow advance version of VLookup
and a Array function

formula - XLOOKUP (Search key, Lookup Range, return array)
what you have to search | where you can find | where you will find output

i) search key \rightarrow Question Insert

ii) lookup Range \rightarrow where you can find Insert

iii) result / return array \rightarrow where you found output

(S3) \rightarrow Determine all the first match IDs & city
of match for which each Team has
was player of the 1st Match?

A Table given

A	B	C	D	E	F	G
id	City	Player of Match	Name	Match ID	city	
1 (39218)	Cape Town	SP	BR	39212	Cape	
2	Kolkata	Search in left	PM	39211	Kolkata	Find these

= XLOOKUP ("SR", Player of Match, id, city)

ye search

Kolkata

PM

Kolkata

T

Kolkata

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Date 128

Remove Duplicates → In Data Tab

→ Remove Duplicates

→ Array function → UNIQUE (Range)

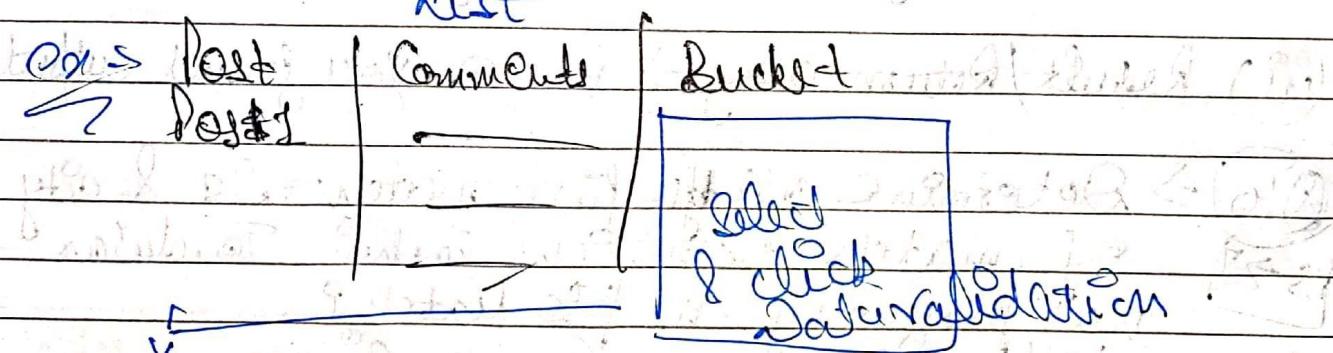
Remove Duplicates

Data Validation → In Data Tab

below the Remove Duplicate

Data Validation → If create a type of Dropdown menu

If you select list



→ Select list & then give values of Drop Down list then it will create a dropdown list of range in the cell Bucket

For More Refer Data Validation sheet Excel → Page 19

Date 129

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Pivot → It provides you summary Table

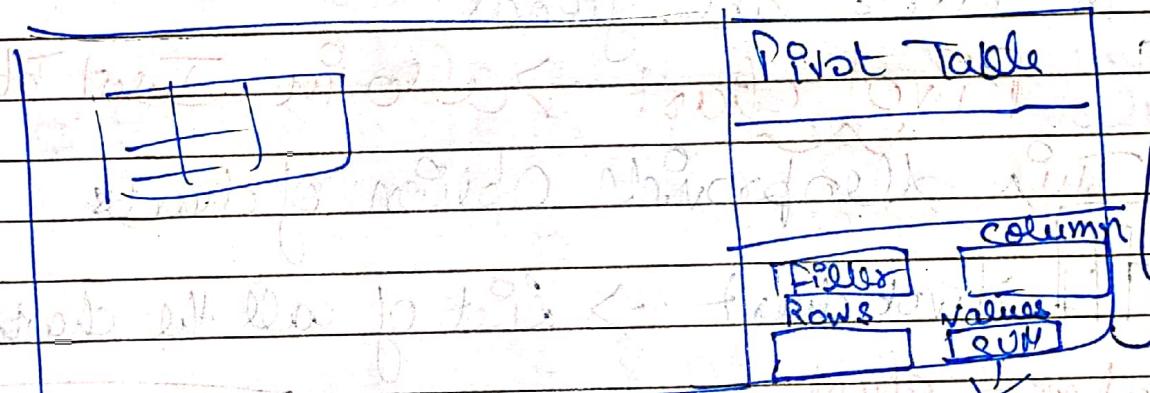
Aggregation

(Q-1) → Insert Tab → Pivot Table

(Q-2) → Enter Table Range

New WorkBook Pivot Worksheet

Enter Range → Enter Okay



Select Value field

→ This is a Type of
Tableau view
in Excel

Setting for

avg, count, SUM

etc

Show
Values

Percentage of Total

→ It is a Type of Custom Report

Spiral

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Can also have compact
outline, etc design Date 1/20

→ Can add Grand Total, Row Total,
Column Total

↳ Form Design Tab

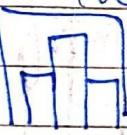
Pivot Table Analyze → Refresh

(Tab)

If you add more things in your
Table after creating pivot you can use
Refresh & that data can be visible
in Pivot Table fields

Pivot chart → also in Insert Tab

This also provide option of charts



→ Pivot chart → List of all the charts

Pie chart

(S-1) → Make Pivot chart field

(S-2) → Row Regions

Values → sum of sales

(S-3) → Make Pivot chart → Pie chart

Data visualization
or
Dashboard

gives many option to edit things
like chart, color, what to display, etc.

(S-4) → Select the column I Right
click & hold

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Date 12/1

(S-5) → goto View Tab & uncheck Gridlines

How To add filters In Charts] → Quick filters

(S-1) → goto Pivot chart Analysis Tab

(S-2) → go to Insert slicer

States → Go understand what column reflects, what are the values, we generally run → Descriptive state

(S-1) → goto file & at last click Options

(S-2) → Then go to Add-ins ← last 2nd

(S-3) → In Address → Inactive → Analysis Toolpak
Do not do anything ← with this

→ At bottom Manage → Excel Addins
& then → go

(S-4) → click on Analysis Toolpak & ok
↳ ticked

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Stat sheet

Date 13/2

Now → In , Data Tab → new option

Data Analyze → select Table & click on it

You see lot stat analize
then g

↳ select Descriptive statistics

↳ Input Range → your label column

Output Range → select any cell

↳ → select Summary statistics

Summary Stats

Mean

Standard Error

Median

Mode

1. Cell

Count

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Date 133

Macros → You can Automate a work
in some way.

Roll No	ID	Engli	Math	% Marks	→ Calculating	Batch 1
1	1	48	50	96%		
2	2	100	50	87%		

Given

ID	Eng	Math	% Marks	Batch 2
4	30	100	60%	Have to calculate it for every batch
5	92	86	88%	

Also Macros

(S-1) In the View Tab at Last find Macros

(S-2) click on Macros & select Record Macro

Name
→ Shortcut Key
→ Store Macro
Description

→ Click Okay

(S-3) Now do the steps to create % Marks
 $= \text{SUM}(\text{Column Range}) / 300$

(S-4) Stop Macro Recording

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Date 184

(S-5) → Go to Batch → 2 & goto View
Macro → Select & Run your
Macros
↳ Macros will auto generate
with New values.

→ You can also edit Macro

↳ go to view Macro & edit
option
VPA → Language used in Macros
↳ Can edit Macro if you know VPA
Better.

★ → If you create a Macro in your file
Save it using diff format

↳ macro enabled workbook

Spiral

17/12/23

Day \rightarrow 11 Assignment

Date 135

(6) \rightarrow No of Matches per season

\rightarrow From below option choose correct option which will help us in summarizing the total No of matches played in each season

(1) \rightarrow Select Table, Insert \rightarrow Pivot Table

Row \rightarrow Date

\leftarrow Remove quarter Date

Value \rightarrow id \rightarrow convert it to count

(3) \rightarrow On empty cell \rightarrow Insert \rightarrow Pivot Table

Select
all table

Row \rightarrow Date \rightarrow Remove quarter Date

Value \rightarrow id \rightarrow convert to count

Value field settings

(7) \rightarrow A Nehra, Nehru, AT Raydu

Find no of Times All 3 have won player of the Match

\rightarrow Make Pivot Table

Row \rightarrow player of Match \rightarrow filters of 3 players

Value \rightarrow id \rightarrow Count

Given in Question

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14/6/23

Date. 1361

Q3) Impaired vented to what is the %?

↳ Find out who has impaired as impaired the most in the DB.

→ Select Table → Pivot Table

Row → Impaired

Value → id → count

Longer table on filter icon → see more options

Sort & filter <→ Then select Descending ← Then select count of id

→ In Pivot Tab designer → select pivot chart
→ bar chart ←

→ Publish to Power BI (A 26)

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17/6/23 Day -> 12 Assignment Date (12/7)

- ① \rightarrow Matches won by MI
↳ Determining the No of Matches in which MI won by a margin greater than 50 runs & it was not an Eliminator Match

\rightarrow There are 3 conditions i) > 50 runs win margin

ii) N \rightarrow Eliminator
(iii) Winner \rightarrow MI Team

= COUNTIFS(Winner, "MI", result, ">50")
Range Criteria
Eliminator, N))

option(4) \rightarrow 12

- ② \rightarrow Matches won by CSK
Match city \rightarrow Mumbai \rightarrow Conditions
given winning team \rightarrow CSK

= COUNTIFS(Winner, "CSK", city, "Mumbai")

option(4) \rightarrow 11

Spiral

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Date. 138

③ → Runs scored by V Kohli
↳ Using the Array functions Determine
the total no of runs scored by
V Kohli in 1st Innings.

⇒ = FILTER(batmen run, batmen = "V Kohli")
Column

After that this will create Rows

Then use SUM() on those
Rows

| Option 3 → 48 |

④ → Sequential Numbers

function allows you to generate
a list of sequential numbers in an array.

Ex- Sequence (3, 2)

Index	Col 1	Col 2	Col 3
Row 1	1	2	3
2	1	2	3

Count of value

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Date: 15/9

Q5) \Rightarrow 2nd highest tosses won

\rightarrow Using pivot table, determine the team that has won the second-highest no of tosses

Row \rightarrow toss-winner

Value \rightarrow count of id \rightarrow also sort in descending order

Option 4) \rightarrow Kolkata Knight Riders

Q6) \rightarrow Toss win equals match win

\rightarrow Pivot table, the percentage of teams winning the toss & also winning the game across all seasons. Option \rightarrow 51023

(S-1) \rightarrow Make a New Column with Cond M

$TW-W = IF(toss\ winner = winner, 66\ Yes, 11\ No)$

\leftarrow col name

(S-2) \rightarrow Make Pivot Table

Row \rightarrow winners

Value \rightarrow id \rightarrow count

\rightarrow also show values as %

Bubble \rightarrow show grand total

Column \rightarrow TW-W

OR

Row \rightarrow TW-W Value \rightarrow count of Toss-W % of Total

17/01/23

(1) → formatting

→ we cannot add custom formatting to cells in Excel

↳ option 2 → False

→ we can add custom formatting to cells.

(2) → average. Result Margin

Create a line plot of avg result margin across all games when chennai CSK were winners of the match

Steps → 1. Refreshed with Data tab

(2-1) → Insert pivot table with Chennai CSK

(2-2) → date field to rows (No of game)

(2-3) → result margin → in Value

Summarize it to avg

(2-4) → winner to filter

(2-5) → click on winner filter above pivot table & select only CSK

(2-6) → Refresh Data

(2-7) → go to insert tab & insert a 2D line chart

(option 1) → Highest avg result margin → 2009

Date 14/1

14/1/23

Q → Above Average?

→ Determine which of the following venues had a higher than average number of matches played.

(1) → Make Pivot Table

Row → venue

Value → id → Value field settings
↓
Count

(2) → Select all the pivot Table

→ In Home Tab → Conditional formatting

Above Avg ← Top/Bottom Rule

→ Apply green colour

option (3) → Eden garden

option (4) → Wankhede Stadium

(10) → Relative absolute macro

→ select correct ordering of steps

2 → 3 → 1 → 4 Option (3)

(2) → click on View → under Macro → select record macro

(3) → Add a name, shortcut for that macro

(4) → Perform the steps that you want to Record

(5) → Stop the Recording

Spiral

(Tableau)

Date: 14/4

14/4/23 Additional Problems

① → Profit Contribution

→ Determine which market had the least percentage contribution to total sales.

Rows → Market (Quick Cal Table)

Marks → Text → Total Sales → Percentage of Total

Option ② → South

② → Product Type Profit

→ In year 2012, determine which product type had the highest percentage contribution to total sales.

Column → Product type

Row → SUM(Sales)

→ Quick Table cal

Filter → Date → Years → 2012

(%) of Total

Option ② → Espresso

③ → StoreId

→ Select the store id with highest sales value?

Row → StoreId

Col → SUM(Sales)

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Sort by Desc acc to Sales

option ④ → 702

④

Store id Profit →

↳ Store ID which generates highest Profit

Row → Store ID

Col → Sum (Profit)

Sort by Desc acc to Profit

⑤

option ⑤ → 815

Total expenses

↳ Store id with highest total expense

Note

Total Expense = Cogs + marketing + other expenses

Create calculated field → Cogs + marketing + other expenses

Row → Storeid

Column →

Total Expense

sort by desc acc to

Option ① → 702

P.S.H.P ← Check

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Date: 14/11/2023

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⑥ → Profit Margin

↳ profit Margin for year 2012 & 2013

Col → YEAR (Date)

Row → Profit Margin

↳ Create calculate field

$$\left(\frac{\text{Sum}(Profit)}{\text{Sum}(Sales)} \right) \times 100$$

option ②

$$2012 = 26.35\%$$

$$2013 = 36.71\%$$

⑦ → Compare COGS

↳ of various products in 2012 & 2013
& select the statements that are correct.

Row → sum (Costs)

Col → Date

Marks → Col 8 → Product

option ② → Dairying didn't change from 2012 to 2013

option ③ → COGS of MINT domain came from 2012 to 2013.

⑧ → Marketing Cost

↳ Determine the cost of marketing for central market under small market size.

Row → Market

Marks → Text → SUM (Marketing)

Filter → Market size → Small

option ① → 4,424

Spiral

14/9/03

Date 9/4/03

(a) \rightarrow Major & Minor market sales

\hookrightarrow Find the state with the highest sales in major & minor market respectively.

Rows \rightarrow Market Size, Profit

Col \rightarrow sum (Sales)

option (1) \rightarrow Major Market \rightarrow California

Minor Market \rightarrow Nevada

Spiral

18/9/23 Day 22 Additional Problems

Date 146

(Excel)

- ① → Profit Contribution
↳ which market had the least percentage contribution to total sales.

Row → Market

Values → SUM of sales
↳ convert/show values as % of Total

Option ② → South

- ② → Product type Profit →

↳ In the year 2012, determine which product type had the highest percentage contribution to total sales?

Rows → Product Type

Values → SUM of Sales

Filters → Date → Select 2012

option ② → espresso

- ③ → Store Id

↳ select the store id with highest sales value.

Row → store id , value → sales
Sort by desc → sales

option ④ → 702

Spiral

18/9/23

Date 147

(4) \rightarrow store id Profit

\hookrightarrow find store id which generated highest profit.

Row \rightarrow store id, value \rightarrow Profit

\rightarrow sort by desc profit

Option (3) \rightarrow 815

(5) \rightarrow Total expenses

\hookrightarrow determine store id with highest total expense

Note: Total Expense = Cogs + marketing + other expense

(5-1) \rightarrow create a new column name

\hookrightarrow total_expense = cogs + marketing + other expense

(5-2) \rightarrow create Pivot Table

Row \rightarrow store id

Value \rightarrow Total expense

Sort by desc

Option 1 \rightarrow 702

(6) \rightarrow

P.T.O

Spiral

18/9/23

Date 148

(6) → Profit Margin

↳ Determine the profit margin for years 2012 & 2013

Note: Profit Margin = $\frac{\text{Profit}}{\text{Sales}} \times 100$

(5-1) → Create this Column

(5-2) → Pivot Table

Row → Date → Remove (Year, Day, Month)
Value → Profit / Sales

Option (2) → 2012 → 26.35
2013 → 36.71 Now Divide both by 100

Do this in pivot sum (Profit) & (Sales)

Pivot Table Sum (Sales)

(7) → Compare Costs

↳ compare the costs of various products in 2012 & 2013 & select the statement if True

Row → Product

Column → Year (Date)

Values → sum of costs

option (2) → costs of advertising didn't change from 2012 to 2013

option (4) → costs of Mint stayed the same from 2012 to 2013

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Date 149

⑧ → Marketing Cost

↳ Determine the cost of marketing for central market under small market size.

Row → Market

Value → marketing

Filter → Market size → Select
small market

option 2) $\rightarrow 4,424$

⑨ → Major & Minor market sales

↳ find state with highest sales in major and minor market respectively.

Row → Market Size → State

Value → Sum of Sales

Sort by desc

option 1) \rightarrow Major Market \Rightarrow California

Minor Market \Rightarrow Nevada

Spiral