

Day - 11 | Lookups Date 11/2

2 Index - Match

Lookups → Find out a value & get it in return

→ Pivot & Dashboarding → In next class

Excel → Lecture 2 sheet

Q1 & Q2 → Done in Prev class
(Day - 10)

By giving some input value

Lookups → To find out a value & get return a value

→ Downward or upward

V Lookups → vertical lookup

Student ID	Marks	1	Want mark of Student ID = 3
1	10	2	
2	20	3	
3	30	4	
4	40		

→ Searching across Column → Vertically

Want ID = 3

15/01/23 → Searching on Right Date 4/1/23

Student Id	1	2	3	4	5	6
Marks	10	20	30	40	50	

accurate result ↑
approx 0, 1 ↑

Syntax → = INDEX (you are trying to return) ↑

= VLOOKUP (lookup value, table array, colIndexNum, range lookup)

what are you trying to search where you have to search or excepting the output

Index → Start from 1 in Excel

student
Id ↴ 1

Lookup value → always be in your first column (2)

Table array → whole Table → must be a Number

Col Index Num → what you want as a output

range lookup → i) True (1) → can give Approx value if equal not present

ii) False (0)

↳ only return accurate ans if present but if no get

then → N/A on Excel Spiral

15/9/23 Refer Excel 3 (file)

Date 11/9

$\Rightarrow \text{VLOOKUP}(\text{J12}, \text{C9 : G14}, 2, 0)$

This is if let say \rightarrow we want 38 but it is

Ex-0x

Range

Not present

Lookup $\rightarrow 0$

So, the safe option is Range Lookup $\Rightarrow 1$

(Q3) \rightarrow

Given the ID of the Match, return the name of the team which won the match.

PS $\rightarrow 1$

109579 Winning Team
33589 Chennai Superkings

$= \text{VLOOKUP}(33589, \text{Table-2}, 1, 0)$ accurate
what we have find output index
Range

(Q) \rightarrow find city & venue of given ID

PS $\rightarrow 2$

335986

$= \text{VLOOKUP}(335986, \text{Table-3}, 2, 0) \rightarrow \text{city}$

$= \text{VLOOKUP}(335986, \text{Table-3}, 5, 0) \rightarrow \text{Venue}$

15/9/23

Date: 11.5

(Q5) → give the team name of given ID?

→ ID	Column Name	Value
335990	Team	Deccan chargers

= VLOOKUP (335990, table-4, 7, 0)

→ 335983	Venue	first use
335984	Winner	Match to find index then use VLOOKUP

we can you VLOOKUP & change the col index every time

• ↳ have to change reference everytime

⇒ let there only few index. But let's think where you have 1000 of col → it's difficult to find index.

Match → It helps you get the index No. for column or row, as you need.

= MATCH (lookup_value, lookup_array, Match type)

Name of column

You are trying
to find

Range

meaning all
(column header)

Accurate Approx
Spiral

15/9/23

Date 11/16

→ Lookup value → which value are searching

→ Look up Range → Entire Row / Columns
for column-index Row-Index

→ Match-type → i) 0 → Exact Match

(ii) 1 → Approx Match
value equal to or less than

(iii) -1 → Approx Match
value equal to or greater than

A1	B1	value C1	Col. Index
A1 335983	Venue	Punjab cricket Association Stadium	B1 3

$$\text{col. index} = \text{MATCH}(B1, \text{Table-4}[\#Header], 0) = 5$$

$$(\text{Value}) \text{VLOOKUP} = \text{VLOOKUP}(A1, \text{Table-4}, B1, 0)$$

↳ we are using Match first then VLOOKUP
But we can use match inside VLOOKUP
also.

ID	Col-name	Value	Select & press F9 to see its value
A1 335984	winner(B1)	Delhi Daredevils	↑

$$= \text{VLOOKUP}(A1, \text{Table-4}, [\text{MATCH}(B1, \text{Table-4}[\#Header], 0)], 0)$$

(ii)

Spiral

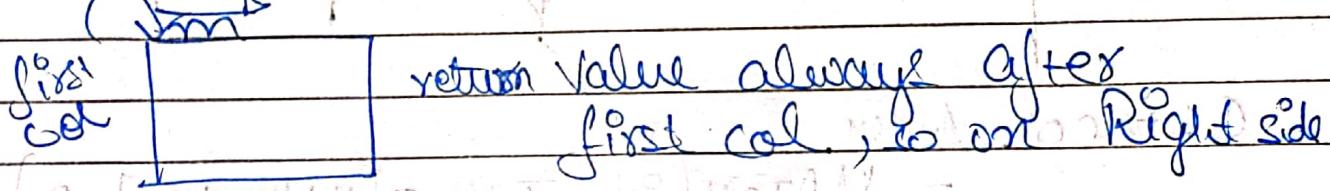
1519123

Date 114

Limitations of Vlookup

- ↳ i) Lookup value should always be available in the first column of the table anyway

- ii) Does not work on left side



IndexMatch → returns the Index Number
for rows/columns

→ when VLOOKUP fails → Index
Works on Right ↳

Syntax → Ticker works on all the direction
↳ basically returning values

We find using col & row index \hookrightarrow

Can use Hatch to
find out the Both
Spiral

13/9/23

(S) → find the first Match ID where each row was Home
have to find on left → VLOOKUP fails

ID	Month	Col Name	Value
SR Tendulkar	id	392181	

C1 → Col_Index

$$= \text{MATCH}(id, \text{Table_5}[\#Headers], 0)$$

Index without headers $\rightarrow 1$

R1 → Row_Index

$$= \text{MATCH}(SR Tendulkar, \text{Table_5}[players of Match], 0)$$

$$= \text{INDEX}(\text{Table_5}, 59, 1) \rightarrow 392181$$

Note → In case of multiple return only
 ↗ first value will be returned.

(M) → HLOOKUP

→ 100% for V Schwag

Name	SR Tendulkar	V Schwag	V Kohli
Matches	800	97	98
100%	200	22	21

How should

I know
 VLOOKUP were

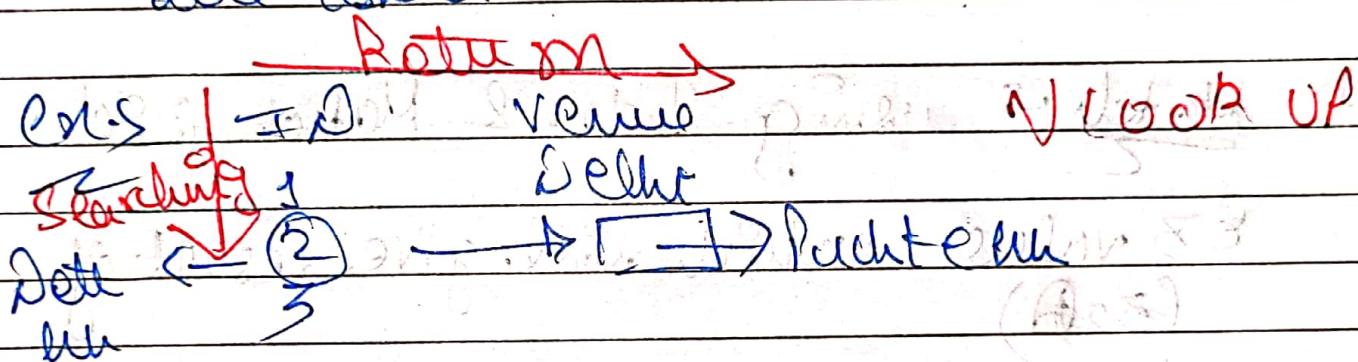
Date..... 11a

player name \rightarrow ✓ Schweg
No of row \rightarrow = HLOOKUP

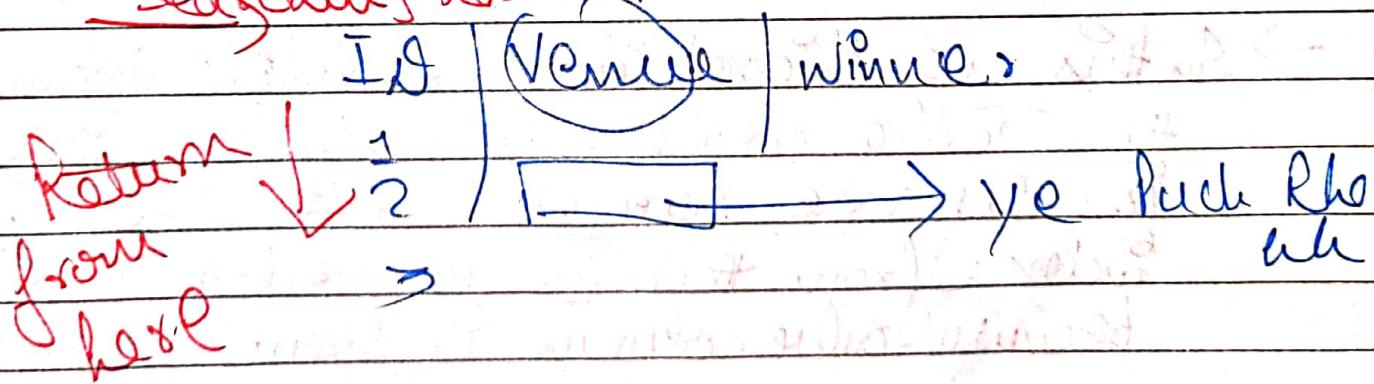
Final \rightarrow

See, here a Row value is given, so we have to find data horizontally or in column.

\rightarrow In Prev question, column values like IN, etc. are given & venue, etc were asked



HLOOKUP \rightarrow Do Rukawat =
Searching here



\Rightarrow = HLOOKUP("Schweg", Table-6{#ALL}, 3,0)

16/9/23

Assignment

Date 1/20

① We begin by using index function to determine the position of desired value & then we apply the match function on top of it to obtain desired result.

↳ Option ① → No

Match then Index

② Match → using Index & Match function

E3 value, which will give result of
(32A)

=INDEX(B2:B9, MATCH(A3,A2:A9,0))

→ In this we did not give col-index because the Table array → searching space is only one column, so it will take index from that or no need to give because only column in search space.

③ Choose appropriate v/lookup function

limitations → option ① → Return only the first Match

option ② → Cannot fetch value present on the left side of the selected table array.

Spiral

Date 10/1

15/9/23

(Q) Get the match ID ->

using given dataset find id on basis
of Date with VLOOKUP.

=> | 10 | date ← VLOOKUP can not find on
Left Side

→ Can Use INDEX option (Q) None of these

(S) No of Toss Won

→ Formula to find Total tosses won by MI?

(Q) = HLOOKUP (Table 1[#Headers], [Mumbai Indians]),

Table 1[#All], 3, FALSE)

(2) = HLOOKUP ("Mumbai Indians", Table 1[#All], 3,
FALSE)

(3) = HLOOKUP ("Mumbai Indians", Table 1[#All],
MATCH (C6, Table 1[#All], [Team]), 0),
Tosses FALSE).

(Q) All of the above

Date 122

16/9/23

⑥ → No of Matches per Seasons

Total No of Matches played in each Season

→ Pivot question → Not Done in Class

⑦ → Pivot Table → Not Done yet

⑧ → Not Done yet

→ Additional Problems

Tableau Questions

① → Indians on app

→ Find the month 8 years when the majority of registered Indian customers signed up on the app?

→ Column → MONTH(signup)

Row → custid

↳ Measure → Count Distinct

Filter → Year → 2020, 2021

Option 3 → July 2021

Spiral

(NTD) → Convert Cust ID to Measure

↳ Then count distinct

Date 12/3

16/12/23

② → Customer tier

↳ determine which customer tier is currently performing the most transaction?

Row → Transaction Id → Measure → Count Distinct

Col → Current Tier

Filters → Registered or Not → Only Registered

option (25) → Slides

③ → Top 10 Nationalities

↳ option option which are among top 10 by no of customers registered for program

Columns → Customer Nationality

Rows → NTD (custid)

Filters → Customer Nation → Deselect Null

① → Pakistan

Top 10 Cust by Nation

② → Egypt

↳ Create set of Nationality

→ Top 10 by NTD of cust set

④ → Item with most refunds

Column → sum (Quantity)

Row → Item Name

Filters → Item refund or not → Item refund

Refund Transactions Not → Refund

Spiral

Date 124

16/9/23

Refund Transaction added in filter to remove amount of freebies.

Q) Which product category?

Ans) Determine the product category with highest average total spend.

Rows → Product Category

Columns → Avg (Total Spend)

Data required for which product category?

Avg of total spend for each product category.

Total spend for each product category.

Which category has what?

Left hand side category

Second most spent

Third most spent

Fourth most spent

Spiral