

DATA VISUALIZATION

Lab Assignment-2

Topic - VlookUp(Vertical Lookup Function)

Worksheet 1: Products

ProductID	Product	Price
101	Product A	120
102	Product B	150
103	Product C	200
104	Product D	90
105	Product E	220
106	Product F	130

Worksheet 2: Orders

OrderID	ProductID	Quantity
1	101	2
2	103	1
3	105	4
4	106	3
5	102	5
6	104	6

Questions:-

1. Use VLOOKUP to find the product names for each ProductID in the Orders worksheet.
2. Use VLOOKUP to find the price for each ProductID in the Orders worksheet, then calculate the TotalPrice by multiplying the Quantity by the Product Price.
3. Use VLOOKUP to check if there are any ProductIDs in the Orders worksheet that do not exist in the Products worksheet.
4. Assume a discount of 10% is given on all products. Use VLOOKUP to find the original price and then calculate the discounted price.
5. Use VLOOKUP to find the price for each ProductID and then calculate the order value. Find the maximum order value from the list.
6. Use VLOOKUP to find out which products from the Products worksheet have not been ordered.
7. Use VLOOKUP to find the Product name and summarize the total quantity sold for each product.

1. Use VLOOKUP to find the product names for each ProductID in the Orders worksheet.

Worksheet 1: Products

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OrderID

OrderID	ProductID	Quantity	Product Name
1	101	2	Product A
2	103	1	Product C
3	105	4	Product E
4	106	3	Product F
5	102	5	Product B
6	104	6	Product D

Formulas:-
 =VLOOKUP(B2,Product!A1:C7,2,FALSE)
 =VLOOKUP(B3,Product!A1:C7,2,FALSE)
 =VLOOKUP(B4,Product!A1:C7,2,FALSE)
 =VLOOKUP(B5,Product!A1:C7,2,FALSE)
 =VLOOKUP(B6,Product!A1:C7,2,FALSE)
 =VLOOKUP(B7,Product!A1:C7,2,FALSE)

2. Use VLOOKUP to find the price for each ProductID in the Orders worksheet, then calculate the TotalPrice by multiplying the Quantity by the Product Price.

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OrderID

OrderID	ProductID	Quantity	Product Name	Product Price	TotalPrice
1	101	2	Product A	120	240
2	103	1	Product C	200	200
3	105	4	Product E	220	880
4	106	3	Product F	130	390
5	102	5	Product B	150	750
6	104	6	Product D	90	540

Formula for calculate total price:-
 =C2*E2
 =C3*E3
 =C4*E4
 =C5*E5
 =C6*E6
 =C7*E7

Formulas:-
 =VLOOKUP(B2,Product!A1:C7,3,FALSE)
 =VLOOKUP(B3,Product!A1:C7,3,FALSE)
 =VLOOKUP(B4,Product!A1:C7,3,FALSE)
 =VLOOKUP(B5,Product!A1:C7,3,FALSE)
 =VLOOKUP(B6,Product!A1:C7,3,FALSE)
 =VLOOKUP(B7,Product!A1:C7,3,FALSE)

3. Use VLOOKUP to check if there are any ProductIDs in the Orders worksheet that do not exist in the Products worksheet.

Excel interface showing the formula bar and the spreadsheet data for step 3.

Formula bar: `=IF(ISNA(VLOOKUP(B2,Product!A1:A7,1,FALSE)),"Not found","Exists")`

OrderID	ProductID	Quantity	Product Name	Product Price	TotalPrice	Check
1	101	2	Product A	120	240	Exists
2	103	1	Product C	200	200	Exists
3	105	4	Product E	220	880	Exists
4	106	3	Product F	130	390	Exists
5	102	5	Product B	150	750	Exists
6	104	6	Product D	90	540	Exists

Formula for Check column (G2):
`=IF(ISNA(VLOOKUP(B2,Product!A1:A7,1,FALSE)),"Not found","Exists")`

4. Assume a discount of 10% is given on all products. Use VLOOKUP to find the original price and then calculate the discounted price.

Excel interface showing the formula bar and the spreadsheet data for step 4.

Formula bar: `=E2*0.9`

OrderID	ProductID	Quantity	Product Name	Product Price	TotalPrice	Check	Discounted price
1	101	2	Product A	120	240	Exists	108
2	103	1	Product C	200	200	Exists	180
3	105	4	Product E	220	880	Exists	198
4	106	3	Product F	130	390	Exists	117
5	102	5	Product B	150	750	Exists	135
6	104	6	Product D	90	540	Exists	81

Formula for Discounted price (H2):
`=E2*0.9`

5. Use VLOOKUP to find the price for each ProductID and then calculate the order value. Find the maximum order value from the list.

Excel interface showing the formula bar and the spreadsheet data for step 5.

Formula bar: `=SUM(E2:E7)`

OrderID	ProductID	Quantity	Product Name	Product Price	TotalPrice	Check	Discounted price
1	101	2	Product A	120	240	Exists	108
2	103	1	Product C	200	200	Exists	180
3	105	4	Product E	220	880	Exists	198
4	106	3	Product F	130	390	Exists	117
5	102	5	Product B	150	750	Exists	135
6	104	6	Product D	90	540	Exists	81

Formula for Order Value (E8):
`=SUM(E2:E7)`

Formula for Maximum Order Value (E9):
`=MAX(E2:E7)`

6. Use VLOOKUP to find out which products from the Products worksheet have not

been ordered.

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I7 =IF(ISNA(VLOOKUP(B7,Product!A2:A7,1,FALSE)),"Not ordered","Ordered")

OrderID	ProductID	Quantity	Product Name	Product Price	TotalPrice	Check	Discounted price	Ordered status
1	101	2	Product A	120	240	Exists	108	Ordered
2	103	1	Product C	200	200	Exists	180	Ordered
3	105	4	Product E	220	880	Exists	198	Ordered
4	106	3	Product F	130	390	Exists	117	Ordered
5	102	5	Product B	150	750	Exists	135	Ordered
6	104	6	Product D	90	540	Exists	81	Ordered
			Order Value		910			
			Max Order Value		220			

Formula: =IF(ISNA(VLOOKUP(B2,Product!A2:A7,1,FALSE)),"Not ordered","Ordered")

7. Use VLOOKUP to find the Product name and summarize the total quantity sold for each product.

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B2 =VLOOKUP(A2,Product!A2:C7,2,FALSE)

ProductID	Product	Total Quantity Sold
101	Product A	2
102	Product B	5
103	Product C	1
104	Product D	6
105	Product E	4
106	Product F	3

Formula: =SUMIF(Orders!B2:B7,A2,Orders!C2:C7)

Formula: =SUMIF(Orders!B2:B7,A3,Orders!C2:C7)

Formula: =SUMIF(Orders!B2:B7,A4,Orders!C2:C7)

Formula: =SUMIF(Orders!B2:B7,A5,Orders!C2:C7)

Formula: =SUMIF(Orders!B2:B7,A6,Orders!C2:C7)

Formula: =SUMIF(Orders!B2:B7,A7,Orders!C2:C7)

Formula: =VLOOKUP(A2,Product!A2:C7,2,FALSE)