

Lab Assignment: 01

Topic: VLOOKUP (MS Excel 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 Product ID in the Orders worksheet.
2. Use VLOOKUP to find the price for each Product ID in the Orders worksheet, then calculate the Total Price by multiplying the Quantity by the Product Price.
3. Use VLOOKUP to check if there are any Product IDs 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 Product ID 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.

Solutions:

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

OrderID	ProductID	Quantity	Product Names
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

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

OrderID	ProductID	Quantity	Product Names	Product Price	Total Price
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

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

Formula:

```
=IF(ISNA(VLOOKUP(B2,Products!A1:C7,1,0)),"Not Found","Exists")
=IF(ISNA(VLOOKUP(B3,Products!A1:C7,1,0)),"Not Found","Exists")
=IF(ISNA(VLOOKUP(B4,Products!A1:C7,1,0)),"Not Found","Exists")
=IF(ISNA(VLOOKUP(B5,Products!A1:C7,1,0)),"Not Found","Exists")
=IF(ISNA(VLOOKUP(B6,Products!A1:C7,1,0)),"Not Found","Exists")
=IF(ISNA(VLOOKUP(B7,Products!A1:C7,1,0)),"Not Found","Exists")
```

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

Formula:

```
=E2*(1-10%)
=E3*(1-10%)
=E4*(1-10%)
=E5*(1-10%)
=E6*(1-10%)
=E7*(1-10%)
```

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

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

	B	C	D	E	F	G	H
1	ProductID	Quantity	Product Names	Product Price	Total Price	Check	Discounted Price
2	101	2	Product A	120	240	Exists	108
3	103	1	Product C	200	200	Exists	180
4	105	4	Product E	220	880	Exists	198
5	106	3	Product F	130	390	Exists	117
6	102	5	Product B	150	750	Exists	135
7	104	6	Product D	90	540	Exists	81
8			Order Value	910			
9			Maximum Value	220			

Formulas shown in the image:

- Cell E8: `=SUM(E2:E7)`
- Cell E9: `=MAX(E2:E7)`

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

	A	B	C	D	E	F	G	H	I
1	OrderID	ProductID	Quantity	Product Names	Product Price	Total Price	Check	Discounted Price	Order Status
2	1	101	2	Product A	120	240	Exists	108	Ordered
3	2	103	1	Product C	200	200	Exists	180	Ordered
4	3	105	4	Product E	220	880	Exists	198	Ordered
5	4	106	3	Product F	130	390	Exists	117	Ordered
6	5	102	5	Product B	150	750	Exists	135	Ordered
7	6	104	6	Product D	90	540	Exists	81	Ordered
8				Order Value	910				
9				Maximum Value	220				

Formula shown in the image:

```

=IF(ISNA(VLOOKUP(B2,Products!A1:C7,1,0)),"Not Ordered","Ordered")
=IF(ISNA(VLOOKUP(B3,Products!A1:C7,1,0)),"Not Ordered","Ordered")
=IF(ISNA(VLOOKUP(B4,Products!A1:C7,1,0)),"Not Ordered","Ordered")
=IF(ISNA(VLOOKUP(B5,Products!A1:C7,1,0)),"Not Ordered","Ordered")
=IF(ISNA(VLOOKUP(B6,Products!A1:C7,1,0)),"Not Ordered","Ordered")
=IF(ISNA(VLOOKUP(B7,Products!A1:C7,1,0)),"Not Ordered","Ordered")

```

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

The screenshot shows an Excel spreadsheet with two sheets: 'Products' and 'Orders'. The 'Products' sheet contains a table with columns 'Product ID', 'Product Name', and 'Total Quantity Sold'. The 'Orders' sheet contains a list of orders with columns 'Product ID', 'Product Name', and 'Total Quantity Sold'. The 'Orders' sheet is currently selected, and a formula box is open showing the following formulas:

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

The formula box contains the following formulas:

- `=SUMIF(Orders!B2:B7,A2,Orders!C2:C7)`
- `=SUMIF(Orders!B2:B7,A3,Orders!C2:C7)`
- `=SUMIF(Orders!B2:B7,A4,Orders!C2:C7)`
- `=SUMIF(Orders!B2:B7,A5,Orders!C2:C7)`
- `=SUMIF(Orders!B2:B7,A6,Orders!C2:C7)`
- `=SUMIF(Orders!B2:B7,A7,Orders!C2:C7)`

The VLOOKUP formula is shown as:

`=VLOOKUP(A2,Products!A1:C7,2,0)`