**LAB-3 VLOOKUP**

**Introduction**

The purpose of this document is to demonstrate the application of Excel's VLOOKUP function in solving a variety of data-related queries. VLOOKUP, one of Excel's most commonly used functions, is essential for searching and retrieving data from a table or dataset. In this document, practical examples will be explored to showcase how VLOOKUP can efficiently find, match, and return the required data based on specified conditions.

**Objective**

The primary objective of this document is to:

1. Understand the functionality and use cases of the VLOOKUP function.
2. Apply VLOOKUP to solve specific tasks related to sales data retrieval, such as finding values for different products across months.
3. Demonstrate how VLOOKUP can simplify data analysis by automating the process of data lookups in Excel.

RAW DATA

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| **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 |

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

QUESTIONS

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| 1.Use VLOOKUP to find the product names for each ProductID in the Orders WorkSheet | | | |
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| 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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| 3. Use VLOOKUP to check if there are any ProductIDs in the Orders worksheet that do not exist in the Products worksheet. | | | |
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| 4. Assume a discount of 10% is given on all products. Use VLOOKUP to find the original price and then calculate the discounted price. | | | |
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| 5. Use VLOOKUP to find the price for each ProductID and then calculate the order value. Find the maximum order value from the list. | | | |
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| 6. Use VLOOKUP to find out which products from the Products worksheet have not been ordered. | | | |
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Question 1

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| Use VLOOKUP to find the product names for each ProductID in the Orders Worksheet |
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| |  |  |  |  | | --- | --- | --- | --- | | **OrderID** | **ProductID** | **Quantity** | **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 |   Question 2   |  | | --- | | 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. | | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **OrderID** | **ProductID** | **Name** | **Quantity** | **Product Price** | **Total Price** | | 1 | 101 | Product A | 2 | 120 | 240 | | 2 | 103 | Product C | 1 | 200 | 200 | | 3 | 105 | Product E | 4 | 220 | 880 | | 4 | 106 | Product F | 3 | 130 | 390 | | 5 | 102 | Product B | 5 | 150 | 750 | | 6 | 104 | Product D | 6 | 90 | 540 |   Question 3   |  | | --- | | 3. Use VLOOKUP to check if there are any ProductIDs in the Orders worksheet that do not exist in the Products worksheet. | | |

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| **OrderID** | **ProductID** | **Name** | **Quantity** | **Product Price** | **Total Price** | **Found/Not Found** |
| 1 | 101 | Product A | 2 | 120 | 240 | Found |
| 2 | 103 | Product C | 1 | 200 | 200 | Found |
| 3 | 105 | Product E | 4 | 220 | 880 | Found |
| 4 | 106 | Product F | 3 | 130 | 390 | Found |
| 5 | 102 | Product B | 5 | 150 | 750 | Found |
| 6 | 104 | Product D | 6 | 90 | 540 | Found |

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

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| **OrderID** | **ProductID** | **Product Price** | **Discount** |
| 1 | 101 | 120 | 108 |
| 2 | 103 | 200 | 180 |
| 3 | 105 | 220 | 198 |
| 4 | 106 | 130 | 117 |
| 5 | 102 | 150 | 135 |
| 6 | 104 | 90 | 81 |

Question 5

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| 5. Use VLOOKUP to find the price for each ProductID and then calculate the order value. Find the maximum order value from the list. |
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| **OrderID** | **ProductID** | **Name** | **Quantity** | **Product Price** | **Total Price** |
| 3 | 105 | Product E | 4 | 220 | 880 |
| 5 | 102 | Product B | 5 | 150 | 750 |
| 6 | 104 | Product D | 6 | 90 | 540 |
| 4 | 106 | Product F | 3 | 130 | 390 |
| 1 | 101 | Product A | 2 | 120 | 240 |
| 2 | 103 | Product C | 1 | 200 | 200 |

Question 6

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| 6. Use VLOOKUP to find out which products from the Products worksheet have not been ordered. |
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| **OrderID** | **ProductID** | **Name** | **Quantity** | **Product Price** | **Total Price** | **Ordered/Not Ordered** |
| 3 | 105 | Product E | 4 | 220 | 880 | Ordered |
| 5 | 102 | Product B | 5 | 150 | 750 | Ordered |
| 6 | 104 | Product D | 6 | 90 | 540 | Ordered |
| 4 | 106 | Product F | 3 | 130 | 390 | Ordered |
| 1 | 101 | Product A | 2 | 120 | 240 | Ordered |
| 2 | 103 | Product C | 1 | 200 | 200 | Ordered |

Question 7

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| 7. Use VLOOKUP to find the Product name and summarize the total quantity sold for each product. |
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| |  |  |  |  | | --- | --- | --- | --- | | **OrderID** | **ProductID** | **Name** | **Quantity** | | 3 | 105 | Product E | 4 | | 5 | 102 | Product B | 5 | | 6 | 104 | Product D | 6 | | 4 | 106 | Product F | 3 | | 1 | 101 | Product A | 2 | | 2 | 103 | Product C | 1 | |