**Advanced VLOOKUP**

**Worksheet 1:-Products**

|  |  |  |  |
| --- | --- | --- | --- |
| **Product ID** | **Product** | **Category** | **Price** |
| **101** | **Product A** | **Electronics** | **120** |
| **102** | **Product B** | **Furniture** | **150** |
| **103** | **Product C** | **Electronics** | **200** |
| **104** | **Product D** | **Clothing** | **90** |
| **105** | **Product E** | **Furniture** | **220** |
| **106** | **Product F** | **Electronics** | **130** |

**Worksheet 2: Orders**

|  |  |  |
| --- | --- | --- |
| **Order ID** | **Product ID** | **Quantity** |
| **1** | **101** | **2** |
| **2** | **103** | **1** |
| **3** | **105** | **4** |
| **4** | **106** | **3** |
| **5** | **102** | **5** |
| **6** | **104** | **6** |

**Q 1: *Use VLOOKUP to dynamically find the unit price for each Product ID in the Orders worksheet and calculate the total price***

Solution:-

**Step:-1** **Create a column (D1) named Unit Price**

**Step:- 2** In the cell B2 use the following formula to find out the Unit Price

**=VLOOKUP(B2,Sheet1!A1:D7,4,0**) where **B2** is the cell containing the Product ID for the first order, **Sheet1!A1:D7** specifies the range of the lookup table (the entire Products data),**4** indicates that we want to return the value from the 4thcolumn in the selected range, which is the Price,**0** specifies that we are looking for an exact match

**Step:-3** Create a column (E1) named Total Price

**Step**:-4 In cell E2 use the formula =C2\*D2 to get Total price where C2is the quantity, and D2 (where you pasted your VLOOKUP formula) is the unit price

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Order ID** | **Product ID** | **Quantity** | **Unit Price** | **Total Price** |
| 1 | 101 | 2 | 120 | 240 |
| 2 | 103 | 1 | 200 | 200 |
| 3 | 105 | 4 | 220 | 880 |
| 4 | 106 | 3 | 130 | 390 |
| 5 | 102 | 5 | 150 | 750 |
| 6 | 104 | 6 | 90 | 540 |

**Q:-2 *Use nested VLOOKUP to find the category of each product in the Orders worksheet***

**Solution:-**

**Step:-1** Create a Column (D1) named Category,

**Step:-2** Use the following nested VLOOKUP formula to find out the Category,

**=VLOOKUP(VLOOKUP(B2,Sheet1!A1:D7,4,0),Sheet1!A1:D7,3,0)** , The inner VLOOKUP retrieves the price of the product (as shown previously),

The outer VLOOKUP using the same Product ID fetchesthe category (which is in the 3rd column of the range)

|  |  |  |  |
| --- | --- | --- | --- |
| **Order ID** | **Product ID** | **Quantity** | **Category** |
| 1 | 101 | 2 | Electronics |
| 2 | 103 | 1 | Electronics |
| 3 | 105 | 4 | Furniture |
| 4 | 106 | 3 | Electronics |
| 5 | 102 | 5 | Furniture |
| 6 | 104 | 6 | Clothing |

**Advanced HLOOKUP**

Worksheet:- Monthly Sales

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Product** | **Jan** | **Feb** | **Mar** | **Apr** | **May** |
| Product A | 120 | 130 | 140 | 150 | 160 |
| Product B | 150 | 160 | 170 | 180 | 190 |
| Product C | 200 | 210 | 220 | 230 | 240 |
| Product D | 90 | 100 | 110 | 120 | 130 |
| Product E | 220 | 230 | 240 | 250 | 260 |
| Product F | 130 | 140 | 150 | 160 | 170 |

**Q:-1 *Use HLOOKUP to dynamically find the sales for Product B in a specified month***

**Solution: -**

**Step:-1** Create a column (I3) named Product B.

**Step:-2** Create a dropdown list in column H4 to get the Sales for every month.

**Step:-3** Use the following formula to dynamically find the sales for Product B in a specified month,

**=HLOOKUP(H4,A1:F7,3,0)** Where **H4** is the lookup value, **A1:F7** is the table array,3 is the row inex,**0** is for exact match.

|  |  |
| --- | --- |
| **Month** | **Product B** |
| **Jan** | **150** |

|  |  |
| --- | --- |
| **Month** | **Product B** |
| **Feb** | **160** |

|  |  |
| --- | --- |
| Month | Product B |
| Mar | 170 |

|  |  |
| --- | --- |
| **Month** | **Product B** |
| **Apr** | **180** |

|  |  |
| --- | --- |
| **Month** | **Product B** |
| **May** | **190** |