



# Using Key/Helper Columns

VLOOKUP is a powerful function for anyone who is using Excel but, on its face, it's limited to looking up one criterion. If you're looking through a list of customers for Susan Abraham's purchase on April 15<sup>th</sup>, 2019 how can you communicate to Excel which line you want to return? You could use "Susan" as your criterion but then you could get Susan Torres' purchase, you could try "Abraham" but then end up with Dallas Abraham's order. You could try looking up the date but for an organization of any size you'll still be sifting through several orders to find the right one.

What you need in this situation (besides a database) is a Key or Helper Column. A Key or Helper Column concatenates criteria, combining different pieces of data into one cell, allowing you to look up based on multiple criteria while technically using just one. If you only need to look up one specific record then you can use filters to whittle the list down criterion by criterion but if you have a list of more than three or four names to return this method will save you a lot of time,

|    | A         | B        | C          | D           |
|----|-----------|----------|------------|-------------|
| 1  | GivenName | Surname  | Date       | OrderNumber |
| 2  | Barbara   | McCray   | 12/8/2019  | 415314964   |
| 3  | Eli       | Motyka   | 11/23/2019 | 415314965   |
| 4  | Ron       | Eichorn  | 7/20/2019  | 415314966   |
| 5  | Anne      | Anderson | 8/2/2019   | 415314967   |
| 6  | Kathleen  | Ferguson | 5/4/2019   | 415314968   |
| 7  | Ann       | Cheek    | 12/31/2019 | 415314969   |
| 8  | Jennifer  | Woodward | 2/15/2020  | 415314970   |
| 9  | Devona    | Thompson | 3/23/2020  | 415314971   |
| 10 | Leah      | Fulton   | 3/29/2019  | 415314972   |
| 11 | Ilana     | Deer     | 1/15/2020  | 415314973   |
| 12 | Andrew    | Cumming  | 4/22/2020  | 415314974   |
| 13 | Raymond   | Lee      | 5/12/2020  | 415314975   |

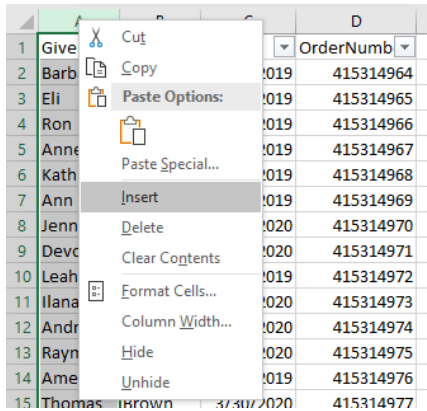
Unless you can be specific with your request Excel will find the first instance of the requested value and return it to you. To the left you can see a simplified customer database with first and last name, order data, and order number.

So, what would happen if you used any of the criteria mentioned above to look up an order number? You can see below when any of the single values are used they arrive at three different results. That's not going to help anyone get any useful information.

|           |           | OrderNumber | Formula              |
|-----------|-----------|-------------|----------------------|
| GivenName | Susan     | 415315540   | =VLOOKUP(K3,B:E,4,0) |
| Surname   | Abraham   | 415314990   | =VLOOKUP(K4,C:E,3,0) |
| Date      | 4/15/2019 | 415317056   | =VLOOKUP(K5,D:E,2,0) |

Let's add a key column and see what happens.

# Using Key/Helper Columns



To add a key column simply right-click on column A and select Insert or press Ctrl, Shift, and + together.

|    | A                     | B         | C        | D          | E           |
|----|-----------------------|-----------|----------|------------|-------------|
| 1  | KeyColumn             | GivenName | Surname  | Date       | OrderNumber |
| 2  | BarbaraMcCray43807    | Barbara   | McCray   | 12/8/2019  | 415314964   |
| 3  | EliMotyka43792        | Eli       | Motyka   | 11/23/2019 | 415314965   |
| 4  | RonEichorn43666       | Ron       | Eichorn  | 7/20/2019  | 415314966   |
| 5  | AnneAnderson43679     | Anne      | Anderson | 8/2/2019   | 415314967   |
| 6  | KathleenFerguson43589 | Kathleen  | Ferguson | 5/4/2019   | 415314968   |
| 7  | AnnCheek43830         | Ann       | Cheek    | 12/31/2019 | 415314969   |
| 8  | JenniferWoodward43876 | Jennifer  | Woodward | 2/15/2020  | 415314970   |
| 9  | DevonaThompson43913   | Devona    | Thompson | 3/23/2020  | 415314971   |
| 10 | LeahFulton43553       | Leah      | Fulton   | 3/29/2019  | 415314972   |
| 11 | IlanaDeer43845        | Ilana     | Deer     | 1/15/2020  | 415314973   |
| 12 | AndrewCummings43943   | Andrew    | Cummings | 4/22/2020  | 415314974   |
| 13 | RaymondLee43963       | Raymond   | Lee      | 5/12/2020  | 415314975   |

You can see in cell A2 the formula is just a concatenation of B2, C2, and E2. You'll lose the date formatting but for our purposes here it's not important. Now, when we combine our criteria into one cell and lookup on the key column we get an order number that doesn't match any of the previous results, meaning those three were all incorrect.

Using a key column we can trick Excel into returning the results of multiple criteria rather than just one.

|           |                   | OrderNumber | Formula              |
|-----------|-------------------|-------------|----------------------|
| GivenName | Susan             | 415315540   | =VLOOKUP(K3,B:E,4,0) |
| Surname   | Abraham           | 415314990   | =VLOOKUP(K4,C:E,3,0) |
| Date      | 4/15/2019         | 415317056   | =VLOOKUP(K5,D:E,2,0) |
| Key       | SusanAbraham43570 | 415359412   | =VLOOKUP(K6,A:E,5,0) |