Manipulating Text Strings

Dealing with text can seem difficult in Excel since it's primarily used to manipulate numbers but there are a number of ways to take data that does not seem to work together and incorporate them into something you can use.

Here is our dataset:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Number	Gender	NameSet	Title	GivenName	MiddleInitial	Surname	StreetAddress	City	State	StateFull	ZipCode
2	1	female	American	Mrs.	Barbara	M	McCray	3028 Beechwood Avenue	Belvidere	NJ	New Jersey	7823
3	2	male	American	Mr.	Eli	M	Motyka	1392 Braxton Street	Somonauk	IL	Illinois	60552
4	3	male	American	Mr.	Ron	J	Eichorn	3542 Half and Half Drive	Alpaugh	CA	California	93219
5	4	female	American	Ms.	Anne	P	Anderson	3477 Callison Lane	Newark	DE	Delaware	19714
6	5	female	American	Mrs.	Kathleen	A	Ferguson	608 Friendship Lane	Santa Clara	CA	California	95050
7	6	female	American	Ms.	Ann	R	Cheek	4710 Millbrook Road	Aurora	IL	Illinois	60506
8	7	female	American	Ms.	Jennifer	N	Woodward	1829 Byrd Lane	Albuquerque	NM	New Mexico	87102
9	8	female	American	Mrs.	Devona	A	Thompson	3940 Stutler Lane	Johnstown	PA	Pennsylvania	15904
10	9	female	American	Mrs.	Leah	G	Fulton	2832 Sunset Drive	Trigg	AR	Arkansas	12345
11	10	female	American	Ms.	Ilana	H	Deer	4734 Flinderation Road	Schaumburg	IL	Illinois	60173
12	11	male	American	Mr.	Andrew	J	Cummings	4655 Highland View Drive	Sacramento	CA	California	95815
13	12	male	American	Mr.	Raymond	V	Lee	723 Parkway Drive	Phoenix	AZ	Arizona	85034
14	13	female	American	Mrs.	Amelia	D	Hills	710 Bel Meadow Drive	Los Angeles	CA	California	90017
15	14	male	American	Mr.	Thomas	Y	Brown	1264 Cambridge Court	Fort Smith	AR	Arkansas	72908
16	15	male	American	Mr.	Alan	S	Alvarez	4140 Mcwhorter Road	Goodman	MS	Mississippi	39079
17	16	male	American	Mr.	Stephen	K	Riley	4426 Oral Lake Road	Minneapolis	MN	Minnesota	55406
18	17	male	American	Dr.	Arturo	H	Jones	683 Smith Street	Holden	MA	Massachusetts	1520
19	18	female	American	Mrs.	Peggy	K	Welsh	375 Camden Place	Charleston	SC	South Carolina	29405
20	19	female	American	Mrs.	Lillian	J	Mejia	4935 Melody Lane	Richmond	VA	Virginia	23219
21	20	male	American	Mr.	Joshua	L	Newhall	3934 Fraggle Drive	Chicago	IL	Illinois	60631
22	21	female	American	Mrs.	Christen	S	Moore	376 Del Dew Drive	Adelphi	MD	Maryland	20783
23	22	female	American	Mrs.	Inez	L	Witcher	1667 Court Street	Chesterfield	MO	Missouri	63005
24	23	male	American	Mr.	Mario	R	Sims	683 Philli Lane	Delaware	OK	Oklahoma	74027
25	24	female	American	Ms.	Jennifer	H	McMahon	4207 Driftwood Road	San Francisco	CA	California	94108
26	25	male	American	Mr.	Edward	C	Adams	1071 Fannie Street	Tunis	TX	Texas	77878
27	26	female	American	Ms.	Marcia	F	Smith	2233 Clifford Street	Santa Rosa	CA	California	95407
28	27	male	American	Mr.	Jessie	A	Jump	949 Sycamore Lake Road	Appleton	WI	Wisconsin	54913
29	28	male	American	Mr.	Gary	E	Brown	2593 Dale Avenue	Tacoma	WA	Washington	98407
30	29	male	American	Mr.	Seth	P	Hernandez	840 Dovetail Estates	Oklahoma City	OK	Oklahoma	73102
31	30	female	American	Mrs.	Florence	H	Rauch	1201 Eagle Lane	Duluth	MN	Minnesota	55811
32	31	female	American	Ms.	Catherine	L	Bowers	4105 Reynolds Alley	Cypress	CA	California	90630
33	32	female	American	Ms.	Dollie	W	Pineiro	3259 Ersel Street	Dallas	TX	Texas	75215
34	33	female	American	Ms.	Carmen	J	Holloway	1590 Barnes Avenue	Cincinnati	OH	Ohio	45211
35	34	female	American	Mrs.	Helen	J	Courtney	3595 Westfall Avenue	Timberon	NM	New Mexico	79837
36	35	male	American	Mr.	Kenneth	H	Naylor	4794 Yorkshire Circle	Kitty Hawk	NC	North Carolina	27949
37	36	male	American	Mr.	Eduardo	D	Ortega	4628 Grand Avenue	Orlando	FL	Florida	32801
38	37	female	American	Ms.	Jennifer	A	Spearman	2800 Pinnickinnick Street	Rochelle Park	NJ	New Jersey	7662

In this edition we will learn how to concatenate text strings, format them in a cell, and substitute values given for those we need.

Manipulating Text Strings

Concatenating Text

We will start with concatenation, which is attaching values in two cells to one another. It is as simple as adding an "&" between the values, for instance here we will take the columns "Title" through "Surname" and concatenate them. As you can see the result is not useful, we can't use "Mrs.BarbaraMMcCray" on a letter and be taken seriously but it is a simple fix. All we need to do is add a set of quotes and a space between them. This takes us from

	F2		fx	=A2&B2&C2&D2		
	A	B	C	D	E	F
1	Title	GivenName	MiddleInitial	Surname		Concatenated Name
2	Mrs.	Barbara	M	McCray		Mrs.BarbaraMMcCray
3	Mr.	Eli	M	Motyka		
4	Mr.	Ron	J	Eichorn		
5	Ms.	Anne	P	Anderson		
6	Mrs.	Kathleen	A	Ferguson		
7	Ms.	Ann	R	Cheek		
8	Ms.	Jennifer	N	Woodward		
9	Mrs.	Devona	A	Thompson		
10	Mrs.	Leah	G	Fulton		
11	Ms.	Ilana	H	Deer		
12	Mr.	Andrew	J	Cummings		

To:

	F2		fx	=A2&" "&B2&" "&C2&" "&D2		
	A	B	C	D	E	F
1	Title	GivenName	MiddleInitial	Surname		Concatenated Name
2	Mrs.	Barbara	M	McCray		Mrs. Barbara M McCray
3	Mr.	Eli	M	Motyka		
4	Mr.	Ron	J	Eichorn		
5	Ms.	Anne	P	Anderson		
6	Mrs.	Kathleen	A	Ferguson		
7	Ms.	Ann	R	Cheek		
8	Ms.	Jennifer	N	Woodward		
9	Mrs.	Devona	A	Thompson		
10	Mrs.	Leah	G	Fulton		
11	Ms.	Ilana	H	Deer		
12	Mr.	Andrew	J	Cummings		

Formatting Text in a Cell

You can also use the "=CONCATENATE" formula but since it's so much longer this method is preferable.

You saw in the beginning of this document that we also have addresses to contend with. We can't simply keep adding cells to the formula because they would continue on a straight line. We can use a simple function addition to make the addresses look like a standard mailing address.

`=A2&" "&B2&" "&C2&" "&D2&" "&E2&" "&F2&", "&G2&" "&I2`

Results in:

K
Concatenated Name
Mrs. Barbara M McCray 3028 Beechwood Avenue Belvidere, NJ 7823

However, if we add the CHAR() function (which allows us to add a character to a formula) we can force Excel to move to a new line. Since we want three lines we will change to the following:

`=A2&" "&B2&" "&C2&" "&D2&CHAR(10)&E2&" "&CHAR(10)&F2&", "&G2&" "&I2`

Results in:

K
Concatenated Name
Mrs. Barbara M McCray
3028 Beechwood Avenue
Belvidere, NJ 7823

There is one final issue, the zip code for Belvidere, NJ is "07823" not "7823". This is also a simple fix, we add another function, TEXT(), to the formula.

`=A2&" "&B2&" "&C2&" "&D2&CHAR(10)&E2&" "&CHAR(10)&G2&", "&H2&" "&TEXT(I2,"00000")`

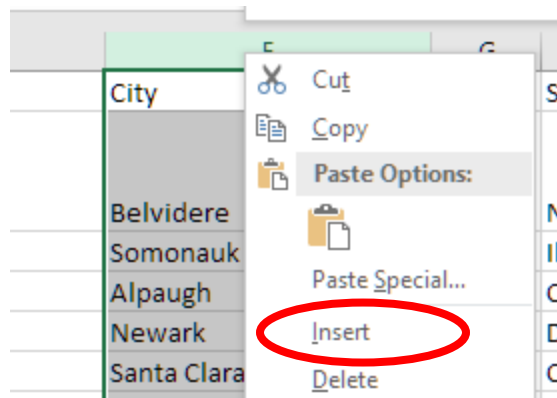In this case since we want to make a 4 digit number into a 5 digit we add TEXT(I2,"00000") in place of I2 which gives us:
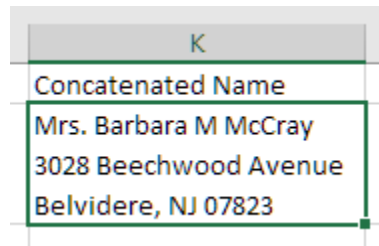
Substituting Values

What if instead of printing "Avenue", "Lane", "Street", or "Drive" we want abbreviations "Ave.", "Ln.", "St." and "Dr."? To do this we can add a new column that changes "StreetAddress" in the way we want.

To start right click the letter of the column after where you want to add the new column and click "Insert" which will add a new blank column in front of the one you selected.

With the new blank column you can enter the following formula which may look tricky but is in fact the same thing just repeated as many times as we need it. The formula we'll use is SUBSTITUTE() and ours will look like this

`=SUBSTITUTE(SUBSTITUTE(SUBSTITUTE(SUBSTITUTE(E2,"Avenue","Ave."),"Street","St."),"Drive","Dr."),"Lane","Ln.")`

This nested formula looks at the value of cell E2 4 different times, first checking if it is "Avenue" and changing to "Ave." then "Street" to "St." and so on.

	A	B	C	D	E	F
	Title	GivenName	MiddleInitial	Surname	StreetAddress	AbbreviatedAddress
	Mrs.	Barbara	M	McCray	3028 Beechwood Avenue	3028 Beechwood Ave.
	Mr.	Eli	M	Motyka	1392 Braxton Street	1392 Braxton St.
	Mr.	Ron	J	Eichorn	3542 Half and Half Drive	3542 Half and Half Dr.
	Ms.	Anne	P	Anderson	3477 Callison Lane	3477 Callison Ln.
	Mrs.	Kathleen	A	Ferguson	608 Friendship Lane	608 Friendship Ln.

L
Concatenated Name
Mrs. Barbara M McCray
3028 Beechwood Ave.
Belvidere, NJ 07823
Mr. Eli M Motyka
1392 Braxton St.
Somonauk, IL 60552
Mr. Ron J Eichorn
3542 Half and Half Dr.
Alpaugh, CA 93219
Ms. Anne P Anderson
3477 Callison Ln.
Newark, DE 19714
Mrs. Kathleen A Ferguson
608 Friendship Ln.
Santa Clara, CA 95050

If you replace the E2 in the address formula we worked on above to now use F2 your result will become:

Which is much cleaner and more useful for mailing and reading.

With that you have a presentable name and address but more importantly you've seen a number of ways to manipulate text in MS Excel, a highly undervalued feature.