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UnPivot to Convert Cross Tabulated Data Tables into Proper Data Set:

1. Goal is to take a table of cross tabulated data and convert it to a Proper Data Set using the UnPivot Feature so we can use data analysis tools such as Sort and PivotTables, as seen in this picture:

Example 3: UnPivot to Convert Cross Tabulated Data Tables into Proper Data Set

Class/Grades

Student	Busn 216	Busn135	Busn218	BI 348	Math 148	Math 111	Busn 210
Abdi Hyde	3.7	3	3.9	3.6	2.4	3	2.6
Tyrone Lord	3.6	3.4	4	3.6	3.4	4	3.1
Tawanda Redmon	3.8	3.5	3.7	3.8	3.8	3.6	3.6
Earnestine Graff	3.9	4	1.7	2.9	3.1	2.6	3
Zena Pelletier	2.1	1.1	2.3	0.5	3.2	1.9	0.8
Elois Foss	3.8	3.1	2.8	3	0.1	2.6	1.6
Marinda Hairston	2.9	0.3	3.3	3	2.7	2.8	3.1
Thea Marvin	1.8	1.9	0.6	2.2	1.7	3.4	3.1
Carl Hsu	3.5	3.4	3.1	3.3	2.6	2.4	2.8
Dion Mattos	3.7	3	2	3.2	4	2.9	2.1
Shonda Whitmore	2.7	2.9	3.2	2.5	4	0.7	2.7
Laveta Turney	3.3	3.6	0.5	2.9	2.4	2	3.1
Beula Harwood	2.6	3.3	3	2.4	2.5	2.2	3.5
Adria Wall	2.8	4	3	0.9	2.9	3	3.4
Nadene Lantz	2	3.3	0.5	2.4	3	3.7	2.2
Delma Fortner	3.4	3.5	2.6	3.5	3.1	3.2	0.1
Shalanda Mcadams	3.1	3	2.7	0.6	2.5	0.5	2.8
Harriette Cloutier	2.2	4	3	2.4	2.5	2.2	2.1
Hang Lancaster	2.6	2.5	3.6	0.9	3	3	1.1
Kenton Reardon	3.7	3	2.6	3.5	3.3	3	2.8
Lizabeth Solis	2.6	2.8	0	3.4	2.4	1.5	3.8
Luciano Neville	3.7	1.1	3.6	3.5	0.1	2.7	2.8
Gigi Espinal	1.3	2.7	1.8	3.9	3.9	2.9	2
Alethea Rodrigues	2.6	3.2	2.8	2.7	0.7	1.2	0
Veta Mejia	2.3	3.2	3.5	2.6	3.7	3.4	2.6

First record in proper data set:

Student	Class	Grade
Abdi Hyde	Busn 216	3.7
Abdi Hyde	Busn135	3
Abdi Hyde	Busn218	3.9
Abdi Hyde	BI 348	3.6
Abdi Hyde	Math 148	2.4
Abdi Hyde	Math 111	3
Abdi Hyde	Busn 210	2.6

When you UnPivot into proper data set, then you can use data ananysis tasks such as Sort:

Student	Class	Grade
Gigi Espinal	BI 348	3.9
Tawanda Redmon	BI 348	3.8
Abdi Hyde	BI 348	3.6
Tyrone Lord	BI 348	3.6
Delma Fortner	BI 348	3.5
Kenton Reardon	BI 348	3.5
Luciano Neville	BI 348	3.5
Lizabeth Solis	BI 348	3.4
Carl Hsu	BI 348	3.3
Dion Mattos	BI 348	3.2
Elois Foss	BI 348	3
Marinda Hairston	BI 348	3
Earnestine Graff	BI 348	2.9
Laveta Turney	BI 348	2.9

2. Idea Behind UnPivot is that you take the first record of the cross tabulated table and create multiple new records for the student listed in the first column.

- From the Grade for Busn 216, you create a new record with the three fields: Student, Class and Grade:

Student/Quantitative Class	Busn 216	Busn135	Busn218
Abdi Hyde	3.7	3	3.9
Tyrone Lord	3.6	3.4	4

into:

Student	Class	Grade
Abdi Hyde	Busn 216	3.7

- From the Grade for Busn 135, you create a new record with the three fields: Student, Class and Grade:

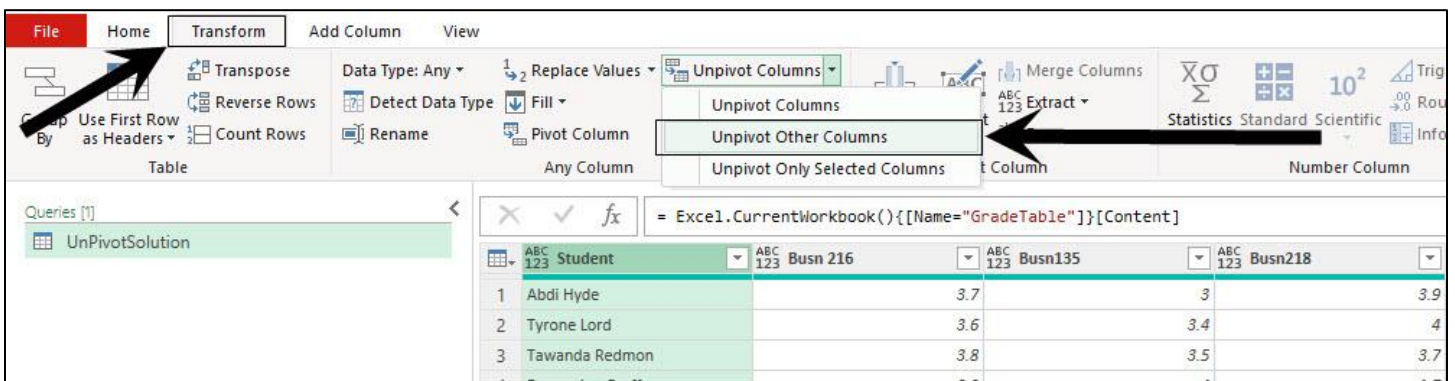| Student/Quantitative Class	Busn 216	Busn135	Busn218
Abdi Hyde	3.7	3	3.9
Tyrone Lord	3.6	3.4	4

into:

Student	Class	Grade
Abdi Hyde	Busn 216	3.7
Abdi Hyde	Busn135	3

- You continue creating records until you have the same number of records as there are columns that are being unpivoted:

Student	Class	Grade
Abdi Hyde	Busn 216	3.7
Abdi Hyde	Busn135	3
Abdi Hyde	Busn218	3.9
Abdi Hyde	BI 348	3.6
Abdi Hyde	Math 148	2.4
Abdi Hyde	Math 111	3
Abdi Hyde	Busn 210	2.6

Same Number of Records as there are Columns being UnPivoted

- To UnPivot a cross tabulated table, select the fields that will not be UnPivoted, then use the "Unpivot Other Columns" command, as shown here:

3. Once we have a proper data set, we can use data analysis tools like Sort and PivotTable:

Now we can Sort:

Student	Class	Grade
Abdi Hyde	BI 348	3.6
Tyrone Lord	BI 348	3.6
Tawanda Redmon	BI 348	3.8
Earnestine Graff	BI 348	2.9
Zena Pelletier	BI 348	0.5
Elois Foss	BI 348	3
Marinda Hairston	BI 348	3
Tea Marvin	BI 348	4
Carl Hsu	BI 348	3.3
Dion Mattos	BI 348	3.2
Shonda Whitmore	BI 348	2.5
Jabari Turney	BI 348	3.7
Beula Harwood	BI 348	2.4
Adria Wall	BI 348	0.9
Nadene Lantz	BI 348	2.4
Delma Fortner	BI 348	3.5
Shalanda Mcadams	BI 348	0.6
Harriette Cloutier	BI 348	2.4
Hang Lancaster	BI 348	0.9
Chantel Mims	BI 348	4
Lizabeth Solis	BI 348	3.4
Luciano Neville	BI 348	3.5
Shihara D.	BI 348	3.9
Alethea Rodrigues	BI 348	2.7
Veta Mejia	BI 348	2.6
Abdi Hyde	Busn 210	2.6
Tyrone Lord	Busn 210	3.1
Tawanda Redmon	Busn 210	3.6

Now we can create a PivotTable:

Student	Average of Grade
Chantel Mims	3.70
Shihara D.	3.69
Tawanda Redmon	3.69
Tyrone Lord	3.59
Jabari Turney	3.57
Tea Marvin	3.46
Abdi Hyde	3.17
Veta Mejia	3.04
Earnestine Graff	3.03
Carl Hsu	3.01
Dion Mattos	2.99
Adria Wall	2.86
Beula Harwood	2.79
Delma Fortner	2.77
Shonda Whitmore	2.67
Harriette Cloutier	2.63
Marinda Hairston	2.59
Luciano Neville	2.50
Nadene Lantz	2.44
Elois Foss	2.43
Hang Lancaster	2.39
Lizabeth Solis	2.36
Shalanda Mcadams	2.17
Alethea Rodrigues	1.89
Zena Pelletier	1.70
Grand Total	**2.84**