Power BI Data Transformation Documentation

This document outlines the data cleaning and transformation steps applied to the "Dirty 1" table using Power Query in Power BI. The goal was to convert an unstructured, multi-header layout into a clean, analysis-ready format.

1. Source

- Connected to the Excel file and selected the sheet named "Sheet".

2. Transposed Table

- Used the Transpose function to flip rows into columns.

- The original data had column headers and segment info stored vertically. Transposing made the structure suitable for tabular formatting.

Table showing Column1 through Column10 with data profiling (Valid/Error/Empty percentages).

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8	Column9	Col...
Valid 38% / Error 0% / Empty 62%	Valid 100% / Error 0% / Empty 0%	Valid 8% / Error 0% / Empty 92%	Valid 15% / Error 0% / Empty 85%	Valid 15% / Error 0% / Empty 85%	Valid 15% / Error 0% / Empty 85%	Valid 15% / Error 0% / Empty 85%	Valid 15% / Error 0% / Empty 85%	Valid 15% / Error 0% / Empty 85%	Valid / Error / Empt...
Ship Mode	Segment	Order Date	2013-03-14	2013-12-16	2013-06-02	2013-10-21	2013-08-27	2013-11-28	
First Class	Consumer		null	null	null	null	null	null	null
null	Corporate		null	null	null	null	null	null	null
null	Home Office		null	null	null	null	null	null	null
Same Day	Consumer		null	null	null	null	null	null	null
null	Corporate		null	null	null	null	null	null	null
null	Home Office		null	null	null	null	null	null	null
Second Class	Consumer		null	null	129.44	null	null	13.36	null
null	Corporate		null	null	null	null	null	null	542.34
null	Home Office		null	null	null	null	null	null	null
Standard Class	Consumer		null	null	null	605.47	null	null	null
null	Corporate		null	null	null	null	788.86	null	null
null	Home Office		null	91.056	null	null	null	null	null

3. Promoted Headers

- Used "Use First Row as Headers".

4. Changed Type

- Applied automatic data type detection to all columns.

5. Filled Down

- Applied Fill Down on the "Ship Mode" and "Segment" columns.

- These columns had merged cells in the original file, resulting in nulls after transformation. Fill Down ensures each row has complete contextual info.

Ship Mode	Segment	Order Date	2013-03-14	2013-12-16	2013-06-02	2013-10-21	2013-08-27	2013-11-28	2013-...
Valid 100% / Error 0% / Empty 0%	Valid 100% / Error 0% / Empty 0%	Valid 0% / Error 0% / Empty 100%	Valid 8% / Error 0% / Empty 92%	Valid 8% / Error 0% / Empty 92%	Valid 8% / Error 0% / Empty 92%	Valid 8% / Error 0% / Empty 92%	Valid 8% / Error 0% / Empty 92%	Valid 8% / Error 0% / Empty 92%	Valid / Empty
4 distinct, 0 unique	3 distinct, 0 unique		2 distinct, 1 unique	2 distinct, 1 unique	2 distinct, 1 unique	2 distinct, 1 unique	2 distinct, 1 unique	2 distinct, 1 unique	2 distinct,
First Class	Consumer		null	null	null	null	null	null	null
First Class	Corporate		null	null	null	null	null	null	null
First Class	Home Office		null	null	null	null	null	null	null
Same Day	Consumer		null	null	null	null	null	null	null
Same Day	Corporate		null	null	null	null	null	null	null
Same Day	Home Office		null	null	null	null	null	null	null
Second Class	Consumer		null	null	129.44	null	null	13.36	null
Second Class	Corporate		null	null	null	null	null	null	542.34
Second Class	Home Office		null	null	null	null	null	null	null
Standard Class	Consumer		null	null	null	605.47	null	null	null
Standard Class	Corporate		null	null	null	null	788.86	null	null
Standard Class	Home Office		null	91.056	null	null	null	null	null

6. Unpivoted Other Columns

- Selected key identifier columns and used **Unpivot Other Columns**.

- To convert wide-format columns (e.g., multiple columns for segments like Consumer, Corporate) into tidy row-based structure (attribute-value pairs).

	Ship Mode	Segment	Attribute	Value
	Valid 100%	Valid 100%	Valid 100%	Valid 100%
	Error 0%	Error 0%	Error 0%	Error 0%
	Empty 0%	Empty 0%	Empty 0%	Empty 0%
	4 distinct, 0 unique	3 distinct, 0 unique	822 distinct, 822 unique	
1	First Class	Consumer	2013-01-15	149.95
2	First Class	Consumer	2013-08-15	243.6
3	First Class	Consumer	2013-12-24	9.568
4	First Class	Consumer	2013-04-07	8.96
5	First Class	Consumer	2013-05-19	34.2
6	First Class	Consumer	2013-09-05	31.984
7	First Class	Consumer	2013-08-12	286.65
8	First Class	Consumer	2013-07-05_16	514.03
9	First Class	Consumer	2013-04-30_18	1000.95
10	First Class	Consumer	2013-03-23	9.912
11	First Class	Consumer	2013-12-30	39.128
12	First Class	Consumer	2014-04-18	106.5
13	First Class	Consumer	2014-11-21	18.176
14	First Class	Consumer	2014-12-23	194.32
15	First Class	Consumer	2014-03-23	59.48
16	First Class	Consumer	2014-10-30	182.91
17	First Class	Consumer	2014-04-16	2298.9
18	First Class	Consumer	2014-11-02	197.72
19	First Class	Consumer	2014-11-30_40	440.144
20	First Class	Consumer	2014-11-22	32.985
21	First Class	Consumer	2014-12-11	196.62
22	First Class	Consumer	2014-12-21_53	47.976
23	First Class	Consumer	2015-12-10	1056.86
24	First Class	Consumer	2015-07-25	73.2
25	First Class	Consumer	2015-02-12	1366.04
26	First Class	Consumer	2015-08-15	15.552
27	First Class	Consumer	2015-06-05	75.88
28	First Class	Consumer	2015-12-06_60	191.82
29	First Class	Consumer	2015-08-14	125.92
30	First Class	Consumer	2015-12-17	34.944
31	First Class	Consumer	2015-06-15	58.4
32	First Class	Consumer	2015-05-06_67	79.14

umn profiling based on top 1000 rows

7. Extracted Text Before Delimiter

- Extracted using text before delimiter "_" in date field.

☰▾	A^B_C Ship Mode ▾	A^B_C Segment ▾	A^B_C Attribute ▾	ABC 123 Value ▾
	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%
	● Error 0%	● Error 0%	● Error 0%	● Error 0%
	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%
	4 distinct, 0 unique	3 distinct, 0 unique	604 distinct, 444 unique	
1	First Class	Consumer	2013-01-15	149.95
2	First Class	Consumer	2013-08-15	243.6
3	First Class	Consumer	2013-12-24	9.568
4	First Class	Consumer	2013-04-07	8.96
5	First Class	Consumer	2013-05-19	34.2
6	First Class	Consumer	2013-09-05	31.984
7	First Class	Consumer	2013-08-12	286.65
8	First Class	Consumer	2013-07-05	514.03
9	First Class	Consumer	2013-04-30	1000.95
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28	First Class	Consumer	2015-12-06	191.82
29	First Class	Consumer	2015-08-14	125.92
30	First Class	Consumer	2015-12-17	34.944
31	First Class	Consumer	2015-06-15	58.4
32	First Class	Consumer	2015-05-06	79.14

umn profiling based on top 1000 rows

8. Renamed Columns

- Renamed generic columns (like "Attribute", "Value") to meaningful names such as Date, Sales.

9. Changed Type1

- Re-applied column data types for Date as date and decimal number for Sales.

	Ship Mode	Segment	Date	Sales
	● Valid 100%	● Valid 100%	● Valid 100%	● Valid 100%
	● Error 0%	● Error 0%	● Error 0%	● Error 0%
	● Empty 0%	● Empty 0%	● Empty 0%	● Empty 0%
	4 distinct, 0 unique	3 distinct, 0 unique	604 distinct, 444 unique	800 distinct, 782 unique
1	First Class	Consumer	2013-01-15	149.95
2	First Class	Consumer	2013-08-15	243.6
3	First Class	Consumer	2013-12-24	9.568
4	First Class	Consumer	2013-04-07	8.96
5	First Class	Consumer	2013-05-19	34.2
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7	First Class	Consumer	2013-08-12	286.65
8	First Class	Consumer	2013-07-05	514.03
9	First Class	Consumer	2013-04-30	1000.95
10	First Class	Consumer	2013-03-23	9.912
11	First Class	Consumer	2013-12-30	39.128
12	First Class	Consumer	2014-04-18	106.5
13	First Class	Consumer	2014-11-21	18.176
14	First Class	Consumer	2014-12-23	194.32
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23	First Class	Consumer	2015-12-10	1056.86
24	First Class	Consumer	2015-07-25	73.2
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26	First Class	Consumer	2015-08-15	15.552
27	First Class	Consumer	2015-06-05	75.88
28	First Class	Consumer	2015-12-06	191.82
29	First Class	Consumer	2015-08-14	125.92
30	First Class	Consumer	2015-12-17	34.944
31	First Class	Consumer	2015-06-15	58.4
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