

آموزش نرم افزار Power BI با رویکرد مدیریت پروژه

Kambiz Kordani PMP,MSc

Linkedin: [@kordani-kambiz](#)

Instagram: [@acemi_social](#)

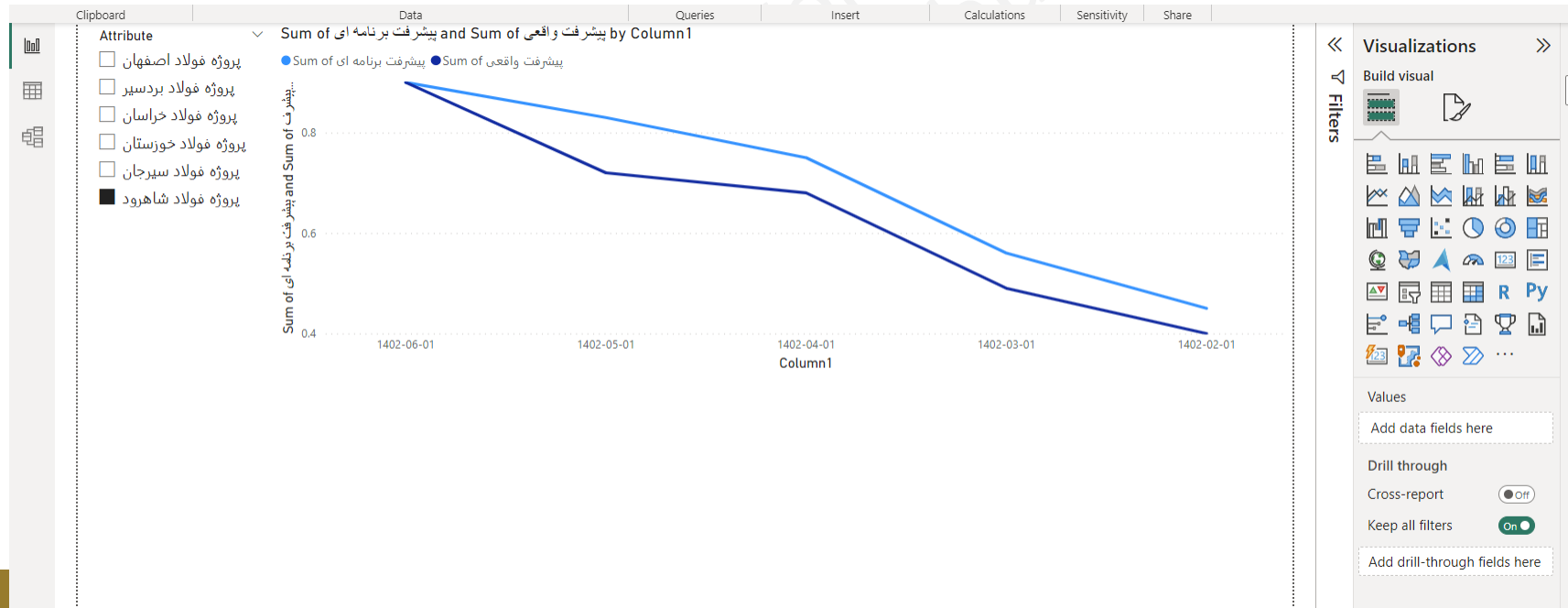


First Session

Project Management Scenarios

Scenario No3:

نام پروژه	تاریخ نوع	1402-02-01		1402-03-01		1402-04-01		1402-05-01		1402-06-01	
		پیشرفت برنامه ای	پیشرفت واقعی	پیشرفت برنامه ای	پیشرفت واقعی	پیشرفت برنامه ای	پیشرفت واقعی	پیشرفت برنامه ای	پیشرفت واقعی	پیشرفت برنامه ای	پیشرفت واقعی
پروژه فولاد خراسان		35%	28%	45%	38%	55%	48%	68%	61%	86%	79%
پروژه فولاد بردسیر		23%	16%	47%	40%	53%	46%	70%	63%	92%	85%
پروژه فولاد شاهرود		45%	38%	56%	49%	75%	68%	83%	76%	90%	83%
پروژه فولاد اصفهان		16%	9%	36%	29%	59%	52%	80%	73%	93%	86%
پروژه فولاد سیرجان		41%	34%	50%	43%	67%	60%	80%	73%	87%	80%
پروژه فولاد خوزستان		63%	56%	72%	65%	82%	75%	90%	83%	94%	87%



Project Management Scenarios



Scenario No4:



TimeSheet csv - Notepad

File Edit Format View Help

CalendarYear;Man month;Office

2012;XYZ Cons ltd 13;

2012;Sterling Co 12;middle east

2012;LeChase Serv 12;central asia

2013;XYZ Cons ltd 30;

2013;Sterling Co 15;middle east

2013;LeChase Serv 15;central asia

2014;XYZ Cons ltd 18;

2014;Sterling Co 16;middle east

2014;LeChase Serv 16;central asia

2015;XYZ Cons ltd 21;

2015;Sterling Co 17;middle east

2015;LeChase Serv 17*;central asia

2011;XYZ Cons ltd 13;

2011;Sterling Co 24;middle east

2011;LeChase Serv 5;central asia

*To be confirmed;;

Project Management Scenarios



Scenario No5:

TimeSheet csv - Notepad

File Edit Format View Help

CalendarYear;Man month;Office

2012;XYZ Cons ltd 13;

2012;Sterling Co 12;middle east

2012;LeChase Serv 12;central asia

2013;XYZ Cons ltd 30;

2013;Sterling Co 15;middle east

2013;LeChase Serv 15;central asia

2014;XYZ Cons ltd 18;

2014;Sterling Co 16;middle east

2014;LeChase Serv 16;central asia

2015;XYZ Cons ltd 21;

2015;Sterling Co 17;middle east

2015;LeChase Serv 17*;central asia

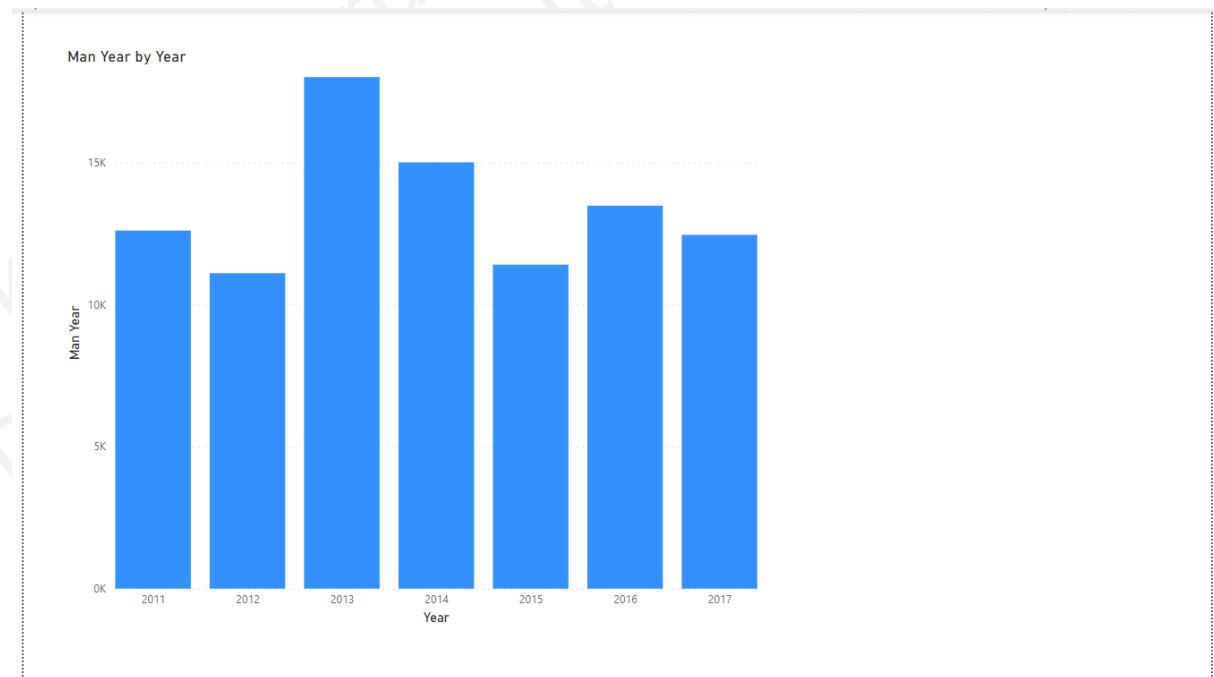
2011;XYZ Cons ltd 13;

2011;Sterling Co 24;middle east

2011;LeChase Serv 5;central asia

*To be confirmed;;

	2016											
Row Labels	1	2	3	4	5	6	7	8	9	10	11	12
XYZ Construction Ltd	450	375	450	500	450	425	500	350	450	475	375	400
Sterling Construction Co (Middle East)	350	350	350	350	350	350	400	325	375	325	250	350
LeChase Construction Services (Central Asia)	325	325	325	400	375	325	375	325	325	350	350	350
Grand Total	1125	1050	1125	1250	1175	1100	1275	1000	1150	1150	975	1100



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Second Session

Page Navigation



- Format your Page
- Insert Background, Wallpaper and ...
- Padding
- Axis Title
- ...

Project Management Scenarios



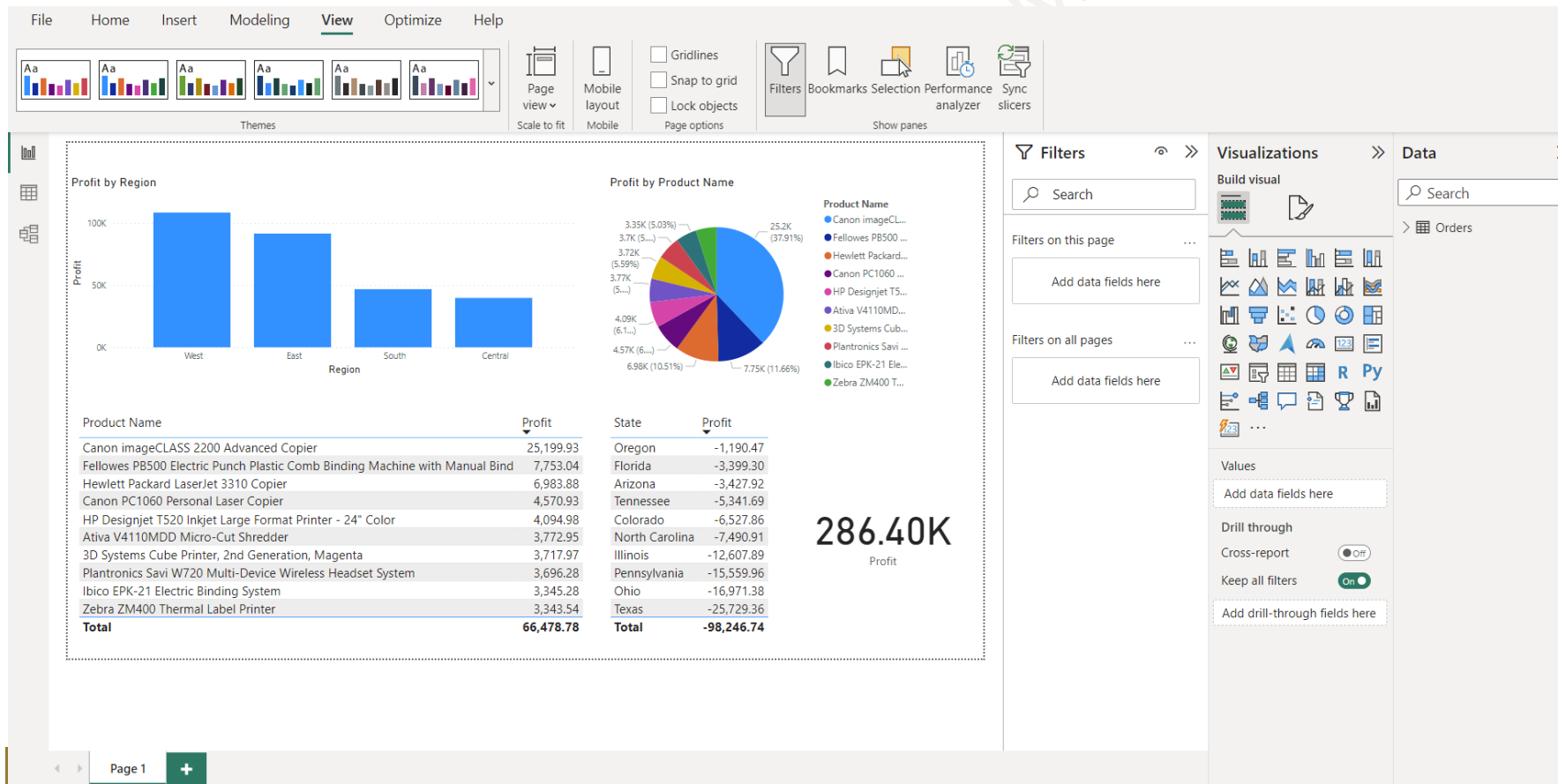
S02-E01

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Segment	Country	Product	Discount Band	Units Sold	Manufacturing F	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Month Number	Month Name	Year				
Government	Canada	Carretera	None	1618.5	\$ 3.00	\$ 20.00	\$ 32,370.00	\$ -	\$ 32,370.00	#####	\$ 16,185.00	1/1/2014	1	January	2014				
Government	Germany	Carretera	None	1321	\$ 3.00	\$ 20.00	\$ 26,420.00	\$ -	\$ 26,420.00	#####	\$ 13,210.00	1/1/2014	1	January	2014				
Government	Germany	Carretera	None	1513	\$ 3.00	\$ 350.00	\$ 529,550.00	\$ -	\$ 529,550.00	#####	\$ 136,170.00	12/1/2014	12	December	2014				
Government	France	Montana	None	1899	\$ 5.00	\$ 20.00	\$ 37,980.00	\$ -	\$ 37,980.00	#####	\$ 18,990.00	6/1/2014	6	June	2014				
Government	Germany	Montana	None	2146	\$ 5.00	\$ 7.00	\$ 15,022.00	\$ -	\$ 15,022.00	#####	\$ 4,292.00	9/1/2014	9	September	2014				
Government	Canada	Paseo	None	292	\$ 10.00	\$ 20.00	\$ 5,840.00	\$ -	\$ 5,840.00	\$ 2,920.00	\$ 2,920.00	2/1/2014	2	February	2014				
Government	Germany	Paseo	None	1006	\$ 10.00	\$ 350.00	\$ 352,100.00	\$ -	\$ 352,100.00	#####	\$ 90,540.00	6/1/2014	6	June	2014				
Government	Mexico	Paseo	None	883	\$ 10.00	\$ 7.00	\$ 6,181.00	\$ -	\$ 6,181.00	\$ 4,415.00	\$ 1,766.00	8/1/2014	8	August	2014				
Government	United States of America	Paseo	None	1143	\$ 10.00	\$ 7.00	\$ 8,001.00	\$ -	\$ 8,001.00	\$ 5,715.00	\$ 2,286.00	10/1/2014	10	October	2014				
Government	Canada	Paseo	None	1725	\$ 10.00	\$ 350.00	\$ 603,750.00	\$ -	\$ 603,750.00	#####	\$ 155,250.00	11/1/2013	11	November	2013				
Government	Canada	Paseo	None	1817	\$ 10.00	\$ 20.00	\$ 36,340.00	\$ -	\$ 36,340.00	#####	\$ 18,170.00	12/1/2014	12	December	2014				
Government	Germany	Paseo	None	1513	\$ 10.00	\$ 350.00	\$ 529,550.00	\$ -	\$ 529,550.00	#####	\$ 136,170.00	12/1/2014	12	December	2014				
Government	Mexico	Velo	None	1493	\$ 120.00	\$ 7.00	\$ 10,451.00	\$ -	\$ 10,451.00	\$ 7,465.00	\$ 2,986.00	1/1/2014	1	January	2014				
Government	Germany	Velo	None	1006	\$ 120.00	\$ 350.00	\$ 352,100.00	\$ -	\$ 352,100.00	#####	\$ 90,540.00	6/1/2014	6	June	2014				
Government	France	VTT	None	1527	\$ 250.00	\$ 350.00	\$ 534,450.00	\$ -	\$ 534,450.00	#####	\$ 137,430.00	9/1/2013	9	September	2013				
Government	Canada	VTT	None	1817	\$ 250.00	\$ 20.00	\$ 36,340.00	\$ -	\$ 36,340.00	#####	\$ 18,170.00	12/1/2014	12	December	2014				
Government	France	Amarilla	None	2750	\$ 260.00	\$ 350.00	\$ 962,500.00	\$ -	\$ 962,500.00	#####	\$ 247,500.00	2/1/2014	2	February	2014				
Government	France	Amarilla	None	1899	\$ 260.00	\$ 20.00	\$ 37,980.00	\$ -	\$ 37,980.00	#####	\$ 18,990.00	6/1/2014	6	June	2014				
Government	Germany	Amarilla	None	1686	\$ 260.00	\$ 7.00	\$ 11,802.00	\$ -	\$ 11,802.00	\$ 8,430.00	\$ 3,372.00	7/1/2014	7	July	2014				
Government	United States of America	Amarilla	None	1143	\$ 260.00	\$ 7.00	\$ 8,001.00	\$ -	\$ 8,001.00	\$ 5,715.00	\$ 2,286.00	10/1/2014	10	October	2014				
Government	France	Paseo	Low	3945	\$ 10.00	\$ 7.00	\$ 27,615.00	\$ 276.15	\$ 27,338.85	#####	\$ 7,613.85	1/1/2014	1	January	2014				
Government	France	Paseo	Low	1030	\$ 10.00	\$ 7.00	\$ 7,210.00	\$ 72.10	\$ 7,137.90	\$ 5,150.00	\$ 1,987.90	5/1/2014	5	May	2014				
Government	France	Velo	Low	639	\$ 120.00	\$ 7.00	\$ 4,473.00	\$ 44.73	\$ 4,428.27	\$ 3,195.00	\$ 1,233.27	11/1/2014	11	November	2014				
Government	Canada	VTT	Low	1326	\$ 250.00	\$ 7.00	\$ 9,282.00	\$ 92.82	\$ 9,189.18	\$ 6,630.00	\$ 2,559.18	3/1/2014	3	March	2014				
Government	Mexico	Carretera	Low	1210	\$ 3.00	\$ 350.00	\$ 423,500.00	\$ 4,235.00	\$ 419,265.00	#####	\$ 104,665.00	3/1/2014	3	March	2014				
Government	United States of America	Carretera	Low	2529	\$ 3.00	\$ 7.00	\$ 17,703.00	\$ 177.03	\$ 17,525.97	#####	\$ 4,880.97	7/1/2014	7	July	2014				
Government	Mexico	Carretera	Low	1397	\$ 3.00	\$ 350.00	\$ 488,950.00	\$ 4,889.50	\$ 484,060.50	#####	\$ 120,840.50	10/1/2014	10	October	2014				
Government	France	Carretera	Low	2155	\$ 3.00	\$ 350.00	\$ 754,250.00	\$ 7,542.50	\$ 746,707.50	#####	\$ 186,407.50	12/1/2014	12	December	2014				
Government	France	Montana	Low	1375.5	\$ 5.00	\$ 20.00	\$ 27,510.00	\$ 275.10	\$ 27,234.90	#####	\$ 13,479.90	7/1/2014	7	July	2014				
Government	Canada	Montana	Low	1830	\$ 5.00	\$ 7.00	\$ 12,810.00	\$ 128.10	\$ 12,681.90	\$ 9,150.00	\$ 3,531.90	8/1/2014	8	August	2014				
Government	United States of America	Paseo	Low	4492.5	\$ 10.00	\$ 7.00	\$ 31,447.50	\$ 314.48	\$ 31,133.03	#####	\$ 8,670.53	4/1/2014	4	April	2014				
Government	France	Paseo	Low	2155	\$ 10.00	\$ 350.00	\$ 754,250.00	\$ 7,542.50	\$ 746,707.50	#####	\$ 186,407.50	12/1/2014	12	December	2014				
Government	France	Velo	Low	3864	\$ 120.00	\$ 20.00	\$ 77,280.00	\$ 772.80	\$ 76,507.20	#####	\$ 37,867.20	4/1/2014	4	April	2014				
Government	Mexico	Velo	Low	362	\$ 120.00	\$ 7.00	\$ 2,534.00	\$ 25.34	\$ 2,508.66	\$ 1,810.00	\$ 698.66	5/1/2014	5	May	2014				
Government	Canada	Velo	Low	2092	\$ 120.00	\$ 7.00	\$ 14,644.00	\$ 146.44	\$ 14,497.56	#####	\$ 4,037.56	11/1/2013	11	November	2013				
Government	Germany	VTT	Low	263	\$ 250.00	\$ 7.00	\$ 1,841.00	\$ 18.41	\$ 1,822.59	\$ 1,315.00	\$ 507.59	3/1/2014	3	March	2014				
Government	Canada	VTT	Low	943.5	\$ 250.00	\$ 350.00	\$ 330,225.00	\$ 3,302.25	\$ 326,922.75	#####	\$ 81,612.75	4/1/2014	4	April	2014				

Project Management Scenarios

S02-E02: Sample Report Design

Export report to CSV

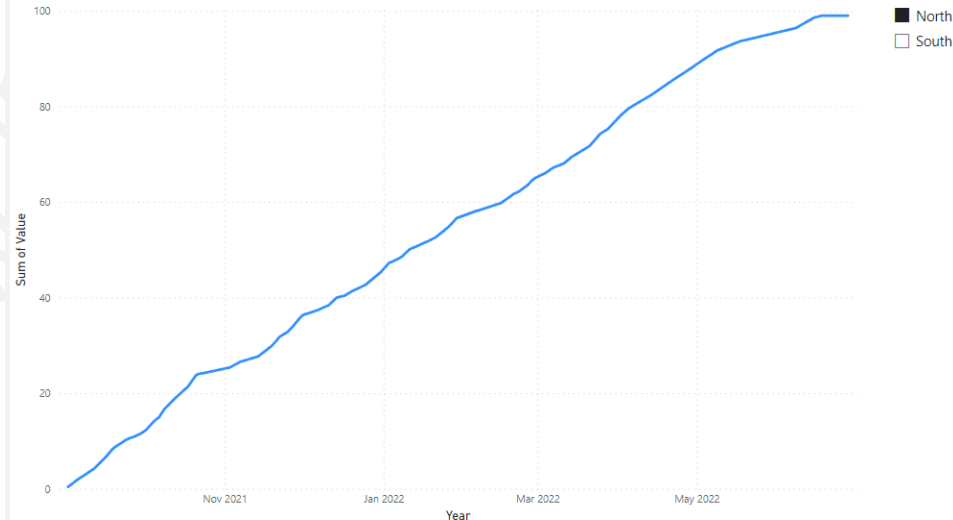


Project Management Scenarios

S02-E03: Append Queries

A		B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Activity Name	Original Duration	Start	Finish	2-Sep-21	3-Sep-21	4-Sep-21	5-Sep-21	6-Sep-21	7-Sep-21	8-Sep-21	9-Sep-21	10-Sep-21	11-Sep-21	12-Sep-21	13-Sep-21	14-Sep-21	15-Sep-21	16-Sep-21	
1. Activity Name	300d	2-Sep-21	28-Jun-22	0.14%	0.28%	0.42%	0.57%	0.71%	0.77%	0.84%	0.90%	0.97%	1.03%	1.09%	1.43%	1.77%	2.10%	2.44%	
2. Building Project	200d	2-Sep-21	18-Jun-22	0.17%	0.33%	0.50%	0.66%	0.83%	0.92%	1.01%	1.10%	1.28%	1.38%	1.73%	2.07%	2.42%	2.78%	3.14%	
3. North Site	205d	2-Sep-21	25-Mar-22	0.47%	0.95%	1.42%	1.89%	2.37%	2.82%	3.14%	3.39%	3.65%	3.88%	4.89%	5.91%	6.93%	7.94%	8.95%	
4. Access Road	23d	2-Sep-21	24-Sep-21	3.00%	6.00%	9.00%	12.00%	15.00%	15.83%	16.67%	17.50%	18.33%	19.17%	20.00%	28.75%	37.50%	46.25%	55.00%	
5. Levelling	5d	2-Sep-21	6-Sep-21	20.00%	40.00%	60.00%	80.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
6. Compaction	5d	7-Sep-21	12-Sep-21	0.00%	0.00%	0.00%	0.00%	16.67%	33.33%	50.00%	66.67%	83.33%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
7. Sub Base	4d	13-Sep-21	16-Sep-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	50.00%	75.00%	100.00%	
8. Base	3d	17-Sep-21	19-Sep-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
9. Gravel	5d	20-Sep-21	24-Sep-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
10. Trap Handling	27d	25-Sep-21	21-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
11. Excavation	8d	25-Sep-21	3-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
12. Lean Concrete	3d	3-Oct-21	5-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
13. Rebaring	7d	6-Oct-21	12-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
14. Formwork	6d	13-Oct-21	18-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
15. Concrete	3d	19-Oct-21	21-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
16. Trenches	56d	28-Sep-21	22-Nov-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
17. Excavation	10d	28-Sep-21	7-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
18. Lean Concrete	3d	8-Oct-21	9-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
19. Rebaring Footing	15d	10-Oct-21	24-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
20. Formwork Footing	10d	25-Oct-21	3-Nov-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
21. Concrete Footing	4d	4-Nov-21	7-Nov-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
22. Rebaring Wall	7d	8-Nov-21	14-Nov-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
23. Formwork Wall	5d	15-Nov-21	19-Nov-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
24. Concrete Wall	3d	20-Nov-21	22-Nov-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
25. Piling Foundation	63d	1-Oct-21	1-Dec-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
26. Excavation	9d	1-Oct-21	9-Oct-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Plan																			

Sum of Value by Year, Quarter, Month and Day



Append Queries

Power Query

Table A

Id	Name	Code
Val1	Val2	Val3
Val4	Val5	Val6
Val7	Val8	Val9

Table B

Id	Name	Address
Val10	Val11	Val12
Val13	Val14	Val15



Id	Name	Code	Address
Val1	Val2	Val3	<i>null</i>
Val4	Val5	Val6	<i>null</i>
Val7	Val8	Val9	<i>null</i>
Val10	Val11	<i>null</i>	Val12
Val13	Val14	<i>null</i>	Val15

Append Operation

Unpivot Columns

Power Query

Attributes			
	A1	A2	A3
Values	Val1	Val2	Val3
	Val4	Val5	Val6
	Val7	Val8	Val9

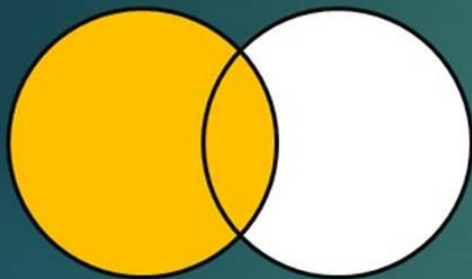


	Attributes	Values
	A1	Val1
	A2	Val2
	A3	Val3
	A1	Val4
	A2	Val5
	A3	Val6
	A1	Val7
	A2	Val8
	A3	Val9

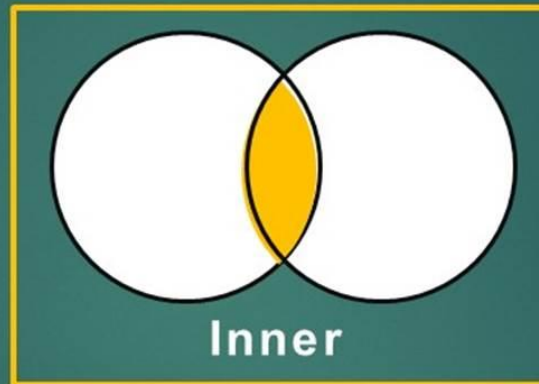
Unpivot

Power Query Commands

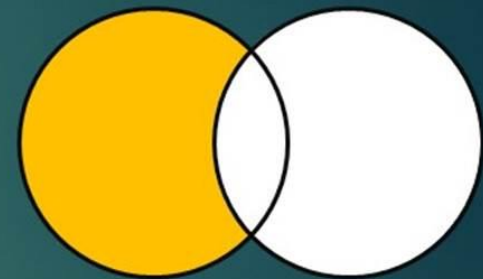
Merge Queries – Join Kind



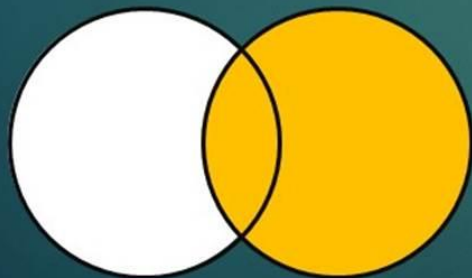
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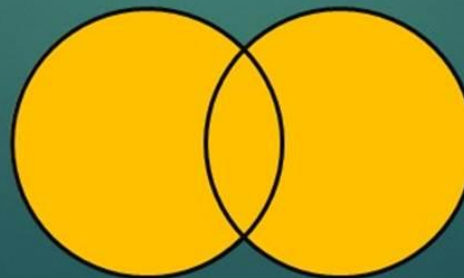
Inner



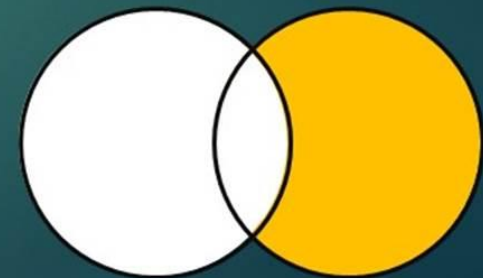
Left Anti



Right Outer



Full Outer



Right Anti

Project Management Scenarios

S02-E04: Connect to a folder

Name	Date modified	Type	Size
Rg 1	8/27/2023 10:40 AM	File folder	
Rg 2	8/27/2023 10:40 AM	File folder	

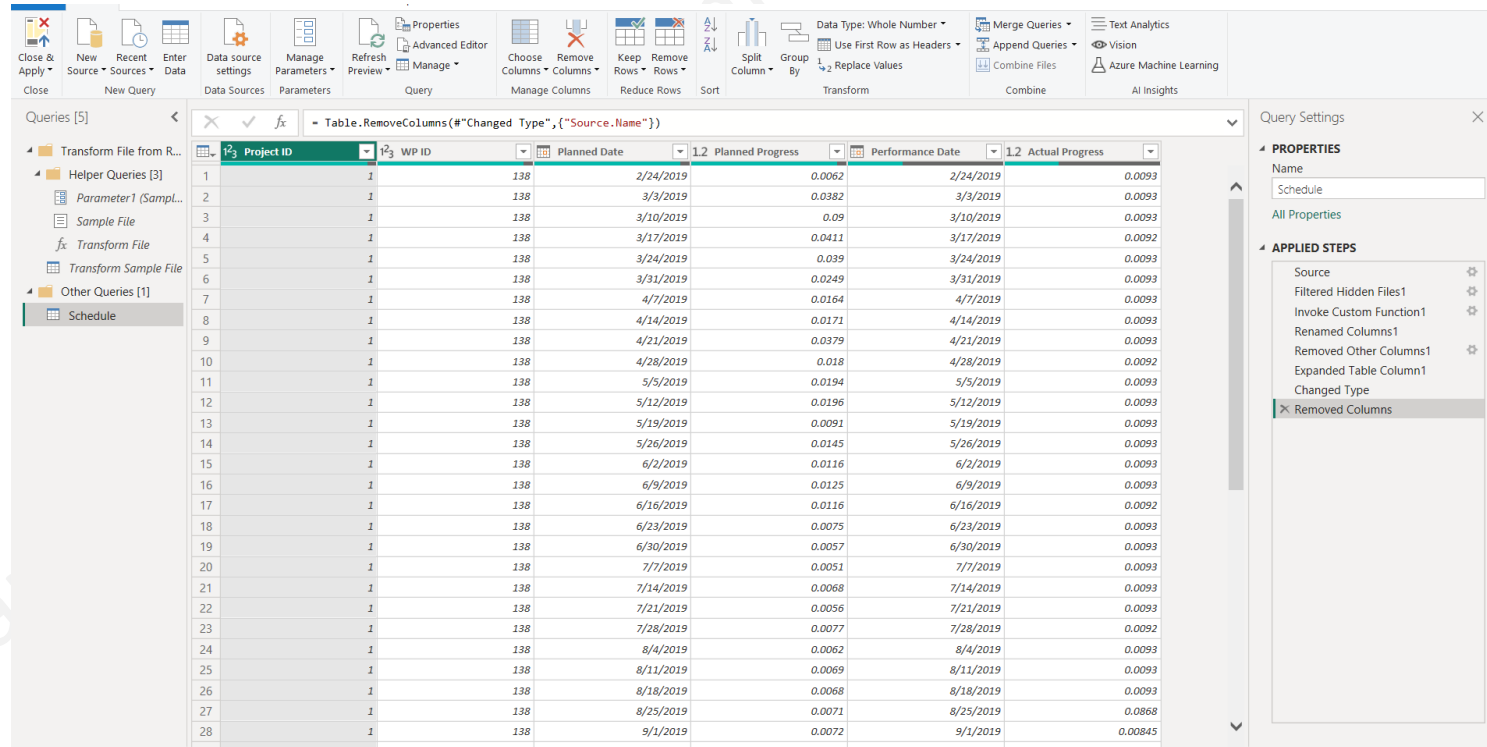


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2	1	3/3/2019	0.0382	3/3/2019	0.0093
3	1	3/10/2019	0.09	3/10/2019	0.0093
4	1	3/17/2019	0.0411	3/17/2019	0.0092
5	1	3/24/2019	0.039	3/24/2019	0.0093
6	1	3/31/2019	0.0249	3/31/2019	0.0093
7	1	4/7/2019	0.0164	4/7/2019	0.0093
8	1	4/14/2019	0.0171	4/14/2019	0.0093
9	1	4/21/2019	0.0379	4/21/2019	0.0093
10	1	4/28/2019	0.018	4/28/2019	0.0092
11	1	5/5/2019	0.0194	5/5/2019	0.0093
12	1	5/12/2019	0.0196	5/12/2019	0.0093
13	1	5/19/2019	0.0091	5/19/2019	0.0093
14	1	5/26/2019	0.0145	5/26/2019	0.0093
15	1	6/2/2019	0.0116	6/2/2019	0.0093
16	1	6/9/2019	0.0125	6/9/2019	0.0093
17	1	6/16/2019	0.0116	6/16/2019	0.0092
18	1	6/23/2019	0.0075	6/23/2019	0.0093
19	1	6/30/2019	0.0057	6/30/2019	0.0093
20	1	7/7/2019	0.0051	7/7/2019	0.0093
21	1	7/14/2019	0.0068	7/14/2019	0.0093
22	1	7/21/2019	0.0056	7/21/2019	0.0093
23	1	7/28/2019	0.0077	7/28/2019	0.0092
24	1	8/4/2019	0.0062	8/4/2019	0.0093
25	1	8/11/2019	0.0069	8/11/2019	0.0093
26	1	8/18/2019	0.0068	8/18/2019	0.0093
27	1	8/25/2019	0.0071	8/25/2019	0.0068
28	1	9/1/2019	0.0072	9/1/2019	0.00845

Project Management Scenarios

S02-E05: Engineering Timesheet

Discipline	Project	Engineer	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb	3-Feb	4-Feb	5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	16-Feb	17-Feb
Architecture	Project A	Eng 004	1	4	4	7	2	3	4	7	3	3	6	2	2														4																
Architecture	Project A	Eng 005														7	1	8	0	6	8	1	8	8	7	0	5	4	8															4	2
Architecture	Project A	Eng 006																												8	7	6	0	1	5	0	2	0	2	3	7	1	3		
Architecture	Project B	Eng 004														1	2	1	6	7	3	6	1	0	0	4	6	1																1	5
Architecture	Project B	Eng 005	2	1	6	8	2	6	3	1	7	2	5	5	5																														
Architecture	Project B	Eng 006												5	5	8	6	1	7	3	6	4	3	7	2	1	1	5	7															3	7
Architecture	Project C	Eng 004																												0	2	5	6	3	6	1	4	6	6	1	5	1	3		
Architecture	Project C	Eng 005																												7	5	6	0	4	0	4	6	0	6	1	2	1	5		
Architecture	Project C	Eng 010	3	5	1	2	3	6	0	6	1	0	2																																