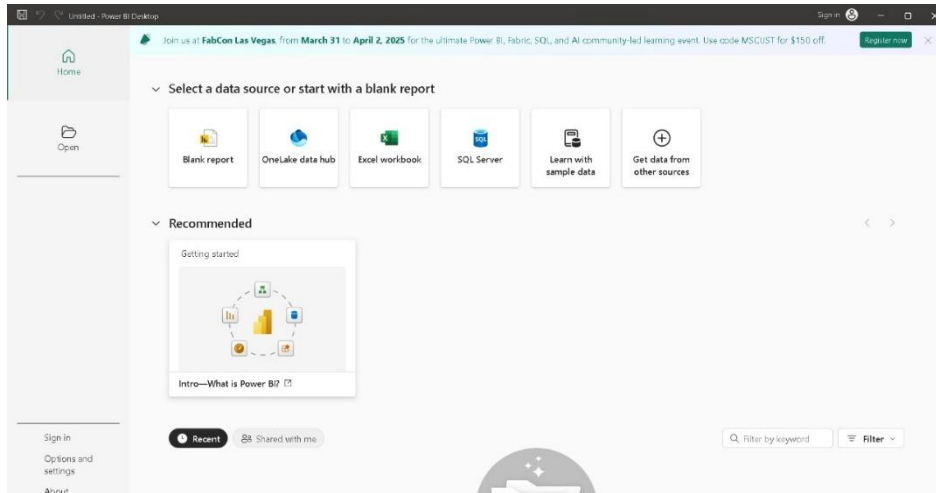


Sustainable Supply Chain Performance Dashboard in Power BI

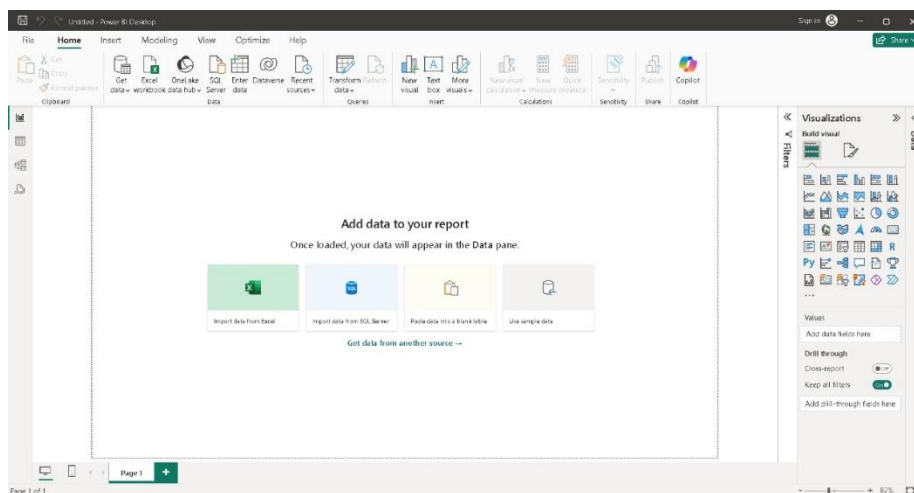
- Week 1 Assignment

Steps to perform in Power BI: -

- 1) Open Power BI

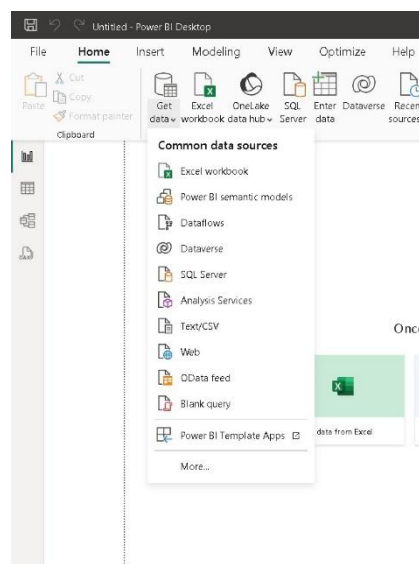


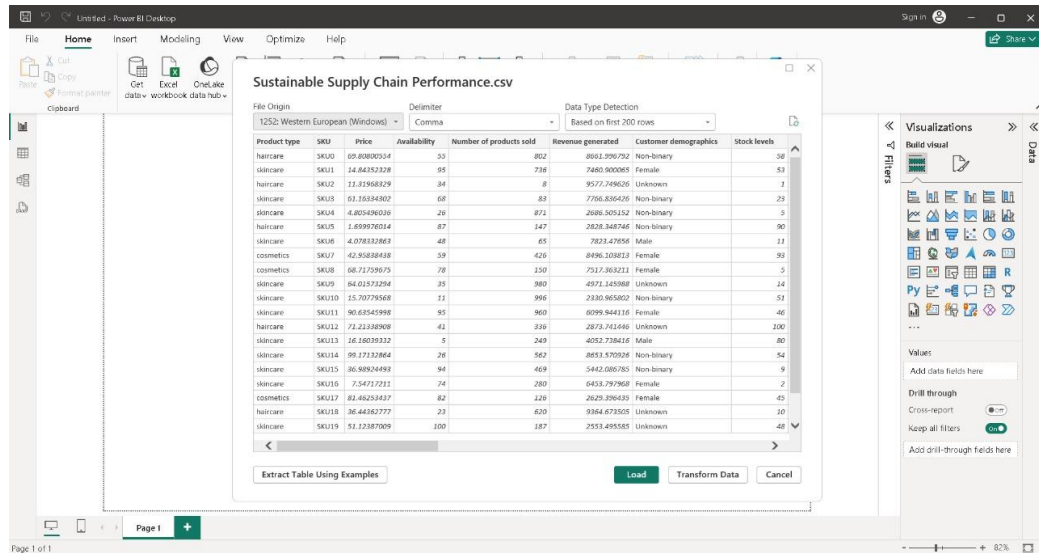
- 2) Click on Blank Report in Home Tab



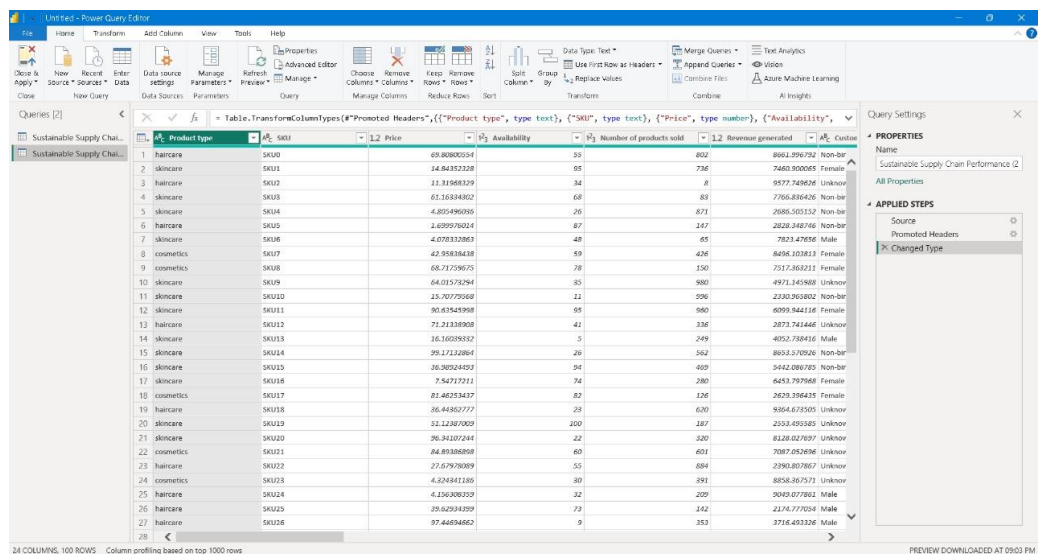
- 3) Loading of CSV Data File in Power BI

- a. Click on Get Data and select CSV.
- b. Load Data from your pc.





4) Click on Transform Data



5) Now make 4 table.

a. Inventory

Attributes: -

- 1) Product type
- 2) SKU
- 3) Availability
- 4) Number of products sold
- 5) Customer demographics
- 6) Stock levels
- 7) Lead times
- 8) Order quantities
- 9) Lead time
- 10) Revenue generated

Duplicate the Loaded table and keep only selected attribute mention above and remove all other columns and named table as Inventory.

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File Home Transform Add Column View Tools Help

Close & Apply * New Query Recent Sources * Data Data source settings Manage Parameters * Refresh Preview * Manage * Query Choose Columns * Remove Columns * Keep Rows * Remove Rows * Sort Split Column * Group By * Transform Data Type * Text * Use First Row as Headers * Replace Values * Merge Queries * Append Queries * Combine Files * Text Analytics * Vision * Azure Machine Learning * All Insights

Queries [1] = Table.TransformColumnTypes(*Promoted Headers*,{{"Product type", type text}, {"SKU", type text}, {"Price", type number}, {"Availability", type text}, {"Number of products sold", type number}, {"Revenue generated", type number}, {"Customer", type text}})

Product type	SKU	Price	Availability	Number of products sold	Revenue generated	Customer
haircare	SKU0	69.80900534	55	802	8662.996792	Non-binary
skincare	SKU1	14.84292329	95	736	7460.900065	Female
skincare	SKU2	11.31988239	8	8	9577.749626	Unknown
skincare	SKU3	61.16384302	68	83	7766.836426	Non-binary
skincare	SKU4	4.805496035	26	871	2686.505152	Non-binary
haircare	SKU5	1.60959024	87	147	2828.348766	Non-binary
skincare	SKU6	4.07832863	48	65	7823.47656	Male
cosmetics	SKU7	42.95836438	59	426	8496.103813	Female
skincare	SKU8	68.71759675	78	150	7517.363211	Female
skincare	SKU9	64.01575294	35	980	4973.145988	Unknown
skincare	SKU10	23.70775968	11	596	2330.965802	Non-binary
skincare	SKU11	90.83545988	95	960	6095.944116	Female
haircare	SKU12	71.21338908	41	336	2873.741446	Unknown
skincare	SKU13	16.1605832	5	249	4052.738416	Male
skincare	SKU14	39.17132864	26	562	8653.570926	Non-binary
skincare	SKU15	36.96924593	94	469	5442.086783	Non-binary
skincare	SKU16	7.54717211	74	280	6453.797968	Female
cosmetics	SKU17	81.46253437	82	126	2629.396435	Female
haircare	SKU18	36.44862777	28	620	9364.673505	Unknown
skincare	SKU19	31.12387009	100	187	2553.495585	Unknown
skincare	SKU20	36.34107244	22	320	8128.027697	Unknown
cosmetics	SKU21	84.89386888	60	601	7087.052693	Unknown
haircare	SKU22	27.67978089	55	884	2390.807867	Unknown
cosmetics	SKU23	4.324941186	30	391	8858.367571	Unknown
haircare	SKU24	4.156308359	32	209	9049.077893	Male
haircare	SKU25	39.62934299	73	142	2174.777094	Male
haircare	SKU26	97.44894662	9	353	3716.493326	Male

24 COLUMNS, 100 ROWS Column profiling based on top 1000 rows

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File Home Transform Add Column View Tools Help

Close & Apply * New Query Recent Sources * Data Data source settings Manage Parameters * Refresh Preview * Manage * Query Choose Columns * Remove Columns * Keep Rows * Remove Rows * Sort Split Column * Group By * Transform Data Type * Any * Use First Row as Headers * Replace Values * Merge Queries * Append Queries * Combine Files * Text Analytics * Vision * Azure Machine Learning * All Insights

Queries [1] = Table.TransformColumnTypes(*Promoted Headers*,{{"Product type", type text}, {"SKU", type text}, {"Price", type number}, {"Availability", type text}, {"Number of products sold", type number}, {"Revenue generated", type number}, {"Customer", type text}})

Product type	SKU	Price	Availability	Number of products sold	Revenue generated	Customer
1 haircare	SKU0	69.80900534	55	802	8662.996792	Non-binary
2 skincare	SKU1	14.84292329	95	736	7460.900065	Female
3 haircare	SKU2	11.31988239	8	8	9577.749626	Unknown
4 skincare	SKU3	61.16384302	68	83	7766.836426	Non-binary
5 skincare	SKU4	4.805496035	26	871	2686.505152	Non-binary
6 haircare	SKU5	1.60959024	87	147	2828.348766	Non-binary
7 skincare	SKU6	4.07832863	48	65	7823.47656	Male
8 cosmetics	SKU7	42.95836438	59	426	8496.103813	Female
9 cosmetics	SKU8	68.71759675	78	150	7517.363211	Female
10 skincare	SKU9	64.01575294	35	980	4973.145988	Unknown
11 skincare	SKU10	23.70775968	11	596	2330.965802	Non-binary
12 skincare	SKU11	90.83545988	95	960	6095.944116	Female
13 haircare	SKU12	71.21338908	41	336	2873.741446	Unknown
14 skincare	SKU13	16.1605832	5	249	4052.738416	Male
15 skincare	SKU14	39.17132864	26	562	8653.570926	Non-binary
16 skincare	SKU15	36.96924593	94	469	5442.086783	Non-binary
17 skincare	SKU16	7.54717211	74	280	6453.797968	Female
18 cosmetics	SKU17	81.46253437	82	126	2629.396435	Female
19 haircare	SKU18	36.44862777	28	620	9364.673505	Unknown
20 skincare	SKU19	31.12387009	100	187	2553.495585	Unknown
21 skincare	SKU20	36.34107244	22	320	8128.027697	Unknown
22 cosmetics	SKU21	84.89386888	60	601	7087.052693	Unknown
23 haircare	SKU22	27.67978089	55	884	2390.807867	Unknown
24 cosmetics	SKU23	4.324941186	30	391	8858.367571	Unknown
25 haircare	SKU24	4.156308359	32	209	9049.077893	Male
26 haircare	SKU25	39.62934299	73	142	2174.777094	Male
27 haircare	SKU26	97.44894662	9	353	3716.493326	Male

24 COLUMNS, 100 ROWS Column profiling based on top 1000 rows

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Similarly, repeat this step and remove all unnecessary columns.

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Name Inventory Manage relationships New measure Quick measure New column New table Mark as date table

Product type	SKU	Availability	Number of products sold	Customer demographics	Stock levels	Lead times	Order quantities	Lead time	Revenue generated
haircare	SKU0	55	802	Non-binary	58	7	96	29	8661.9967923928
skincare	SKU1	95	736	Female	53	30	37	23	7460.90006544585
haircare	SKU2	34	8	Unknown	1	10	88	12	9577.74962586873
skincare	SKU3	68	83	Non-binary	23	13	59	24	7766.83642568523
skincare	SKU4	26	871	Non-binary	5	3	56	5	2686.50515156745
haircare	SKU5	87	147	Non-binary	90	27	66	10	2828.34874597576
skincare	SKU6	48	65	Male	11	15	58	14	7823.47655953174
cosmetics	SKU7	59	426	Female	93	17	11	22	8496.10381308984
cosmetics	SKU8	78	150	Female	5	10	15	13	7517.36321063113
skincare	SKU9	35	980	Unknown	14	27	83	29	4971.14598758556
skincare	SKU10	11	996	Non-binary	51	13	80	18	2330.96580209195
skincare	SKU11	95	960	Female	46	23	60	28	6099.94411558145
haircare	SKU12	41	336	Unknown	100	30	85	3	2873.74144602144
skincare	SKU13	5	249	Male	80	8	48	23	4052.73941623787
skincare	SKU14	26	562	Non-binary	54	29	78	25	8653.5709264698
skincare	SKU15	94	469	Non-binary	9	8	69	14	5442.0867839767
skincare	SKU16	74	280	Female	2	5	78	3	6453.79796817629
cosmetics	SKU17	82	126	Female	45	17	85	7	2629.39643484526
haircare	SKU18	23	620	Unknown	10	10	46	18	9364.67350507617
skincare	SKU19	100	187	Unknown	48	11	94	20	2553.49558499121
skincare	SKU20	22	320	Unknown	27	12	68	29	8128.02769685119
cosmetics	SKU21	60	601	Unknown	69	25	7	19	7087.05269635744
haircare	SKU22	55	884	Unknown	71	1	63	22	2390.8078655617
cosmetics	SKU23	30	391	Unknown	84	5	29	11	8858.36757101148
haircare	SKU24	32	209	Male	4	26	2	28	9049.0778609399
haircare	SKU25	73	142	Male	82	11	52	19	2174.77705435065
haircare	SKU26	9	353	Male	59	16	48	26	3716.49332589404
cosmetics	SKU27	42	352	Unknown	47	9	62	25	2686.4572235798
cosmetics	SKU28	12	394	Female	48	15	24	13	6117.32461508399
cosmetics	SKU29	3	253	Female	45	5	67	16	8318.90319461718

Table: Inventory (100 rows)

Repeat this steps for rest of the table also.

b. Manufacturing Table

Attributes: -

- 1) Product type
- 2) SKU
- 3) Production volumes I
- 4) Manuacturing lead time
- 5) Manufacturing costs
- 6) Inspection results

The screenshot shows the Power BI Desktop interface with the 'Manufacturing' table selected. The table has 100 rows and 7 columns: Product type, SKU, Production volumes, Manufacturing lead time, Manufacturing costs, Inspection results, and Defect rates. The data is categorized by product type (haircare, skincare, cosmetics) and SKU (SKU0 to SKU29). The 'Inspection results' column shows various statuses like 'Pending', 'Fail', and 'Pass'. The 'Defect rates' column shows numerical values.

Product type	SKU	Production volumes	Manufacturing lead time	Manufacturing costs	Inspection results	Defect rates
haircare	SKU0	215	29	46.2796792405083	Pending	0.226410360949925
skincare	SKU1	517	30	53.61676895373	Pending	4.85406802638871
haircare	SKU2	971	27	30.6880193482842	Pending	4.58059261919023
skincare	SKU3	937	18	35.624741297125	Fail	4.74664862064775
skincare	SKU4	414	3	92.0651605987129	Fail	3.145579522833
haircare	SKU5	104	17	56.7664755574318	Fail	2.77919351157116
skincare	SKU6	314	24	1.08506856958707	Pending	1.00091061920414
cosmetics	SKU7	564	1	99.4661086025991	Fail	0.398177186850651
cosmetics	SKU8	769	8	11.4230271395657	Pending	2.70986269110996
skincare	SKU9	963	23	47.9576016349516	Pending	3.84461447876759
skincare	SKU10	830	5	96.5273527853109	Pass	1.72731392835594
skincare	SKU11	362	11	27.5923630866637	Pending	0.0211698213729944
haircare	SKU12	563	3	32.321286213424	Fail	2.16122374755591
skincare	SKU13	173	10	97.8290501101733	Pending	1.63107423007154
skincare	SKU14	558	14	5.79143662986299	Pending	0.100682851565094
skincare	SKU15	580	7	97.1212817514743	Pass	2.26440576119855
skincare	SKU16	399	21	77.10634249785	Pass	1.01256308925805
cosmetics	SKU17	453	16	47.6796803683553	Fail	0.102020754918176
haircare	SKU18	374	17	27.1078080548439	Pending	2.23193911072926
skincare	SKU19	694	16	82.373205879902	Fail	3.64645086541703
skincare	SKU20	309	6	65.6862596084886	Pass	4.23141657353454
cosmetics	SKU21	791	4	61.7351289541609	Pending	0.0186075676310149
haircare	SKU22	780	28	50.1206396129773	Fail	2.59127547321112
cosmetics	SKU23	568	29	98.6099572427039	Pending	1.34229156272273
haircare	SKU24	447	3	40.3823597029248	Pending	3.69131029262873
haircare	SKU25	934	23	78.2803831184154	Pending	3.79723121711418
haircare	SKU26	171	4	15.9722297571818	Pass	2.11931973672492
cosmetics	SKU27	291	4	10.5282450700422	Fail	2.86466783788337
cosmetics	SKU28	171	7	59.4293818106916	Fail	0.815757075925672
cosmetics	SKU29	329	7	39.2928755860657	Pass	3.67809893658049

c. Supply Table

Attributes: -

- 1) Supplier name
- 2) Location
- 3) Lead time
- 4) transportation modes
- 5) Routes

The screenshot shows the Power BI Desktop interface with the 'Supplier Table' selected. The table has 100 rows and 5 columns: Supplier name, Location, Lead time, Transportation modes, and Routes. The data is categorized by supplier name (Supplier 1 to Supplier 5) and location (Mumbai, Kolkata, Bangalore, Chennai). The 'Transportation modes' column shows various modes like Road, Air, and Sea. The 'Routes' column shows various routes like Route A, Route B, and Route C.

Supplier name	Location	Lead time	Transportation modes	Routes
Supplier 3	Mumbai	29	Road	Route B
Supplier 3	Mumbai	23	Road	Route B
Supplier 1	Mumbai	12	Air	Route C
Supplier 5	Kolkata	24	Rail	Route A
Supplier 1	Delhi	5	Air	Route A
Supplier 4	Bangalore	10	Road	Route A
Supplier 3	Kolkata	14	Sea	Route A
Supplier 4	Bangalore	22	Road	Route C
Supplier 4	Mumbai	13	Sea	Route B
Supplier 2	Chennai	29	Rail	Route B
Supplier 5	Kolkata	18	Road	Route B
Supplier 2	Kolkata	28	Air	Route A
Supplier 4	Kolkata	3	Road	Route B
Supplier 5	Bangalore	23	Road	Route B
Supplier 1	Kolkata	25	Air	Route B
Supplier 1	Bangalore	14	Sea	Route B
Supplier 1	Bangalore	3	Air	Route A
Supplier 1	Chennai	7	Air	Route C
Supplier 2	Kolkata	18	Sea	Route A
Supplier 4	Chennai	20	Road	Route C
Supplier 1	Chennai	29	Air	Route B
Supplier 5	Chennai	19	Air	Route C
Supplier 4	Kolkata	22	Rail	Route C
Supplier 5	Kolkata	11	Rail	Route A
Supplier 2	Bangalore	28	Air	Route A
Supplier 4	Kolkata	19	Road	Route B
Supplier 2	Bangalore	26	Rail	Route A
Supplier 5	Mumbai	25	Sea	Route B
Supplier 1	Mumbai	13	Air	Route A
Supplier 1	Kolkata	16	Road	Route B

d. Supply Chain Table

Attributes: -

- 1) Product type
- 2) SKU
- 3) Price
- 4) Availability
- 5) Number of products sold
- 6) Revenue generated
- 7) Customer demographics
- 8) Stock levels
- 9) Lead times
- 10) Order quantities
- 11) Shipping times
- 12) Shipping carriers
- 13) Shipping costs
- 14) Supplier name
- 15) Location
- 16) Lead time
- 17) Transportation modes
- 18) Routes

Product type	SKU	Price	Availability	Number of products sold	Revenue generated	Customer demographics	Stock levels	Lead times	Order quantities	Shipping times
haircare	SKU0	69.8080055421158	55	802	8661.99679239238	Non-binary	58	7	96	
skincare	SKU1	14.8435232750843	95	736	7460.90006544585	Female	53	30	37	
haircare	SKU2	11.3196832930906	34	8	9577.74962586873	Unknown	1	10	88	
skincare	SKU3	61.1633430164377	68	83	7766.83642586523	Non-binary	23	13	59	
skincare	SKU4	4.80549603634589	26	871	2686.50515156745	Non-binary	5	3	56	
haircare	SKU5	1.69997601386594	87	147	2828.34874597576	Non-binary	90	27	66	
skincare	SKU6	4.07833286310794	48	65	7823.47655953174	Male	11	15	58	
cosmetics	SKU7	42.9583843824601	59	426	8496.10381308984	Female	93	17	11	
cosmetics	SKU8	68.7175967485273	78	150	7517.36321063113	Female	5	10	15	
skincare	SKU9	64.0157329412785	35	980	4971.14598758556	Unknown	14	27	83	
skincare	SKU10	15.7077956819121	11	996	2330.96580209195	Non-binary	51	13	80	
skincare	SKU11	90.6354599822887	95	960	6099.94471558145	Female	46	23	60	
haircare	SKU12	71.2133890753601	41	336	2873.74144602144	Unknown	100	30	85	
skincare	SKU13	16.16039331738	5	249	4052.73841623787	Male	80	8	48	
skincare	SKU14	99.1713286386242	26	562	8653.5709264698	Non-binary	54	29	78	
skincare	SKU15	36.9892449286269	94	469	5442.08678539767	Non-binary	9	8	69	
skincare	SKU16	7.54717210979127	74	280	6453.79796817629	Female	2	5	78	
cosmetics	SKU17	81.462534369237	82	126	2629.39643484526	Female	45	17	85	
haircare	SKU18	36.4436277704609	23	620	9364.67350507617	Unknown	10	10	46	
skincare	SKU19	51.1238700879647	100	187	2553.49558499121	Unknown	48	11	94	
skincare	SKU20	96.3410724399634	22	320	8128.02769685119	Unknown	27	12	68	
cosmetics	SKU21	84.8938689849508	60	601	7087.05269635744	Unknown	69	25	7	
haircare	SKU22	27.679780886502	55	884	2390.80786655617	Unknown	71	1	63	
cosmetics	SKU23	4.32434118586416	30	391	8858.36757101148	Unknown	84	5	29	
haircare	SKU24	4.15630835931111	32	209	9049.0778609399	Male	4	26	2	
haircare	SKU25	39.6293439850926	73	142	2174.77705435065	Male	82	11	52	
haircare	SKU26	97.4469466178928	9	353	3716.49332589404	Male	59	16	48	
cosmetics	SKU27	92.557360812402	42	352	2686.45722357598	Unknown	47	9	62	
cosmetics	SKU28	2.39727470559714	12	394	6117.32461508399	Female	48	15	24	

6) Click on Apply & Close Button.