BLACK FRIDAY PREDICTION PROJECT

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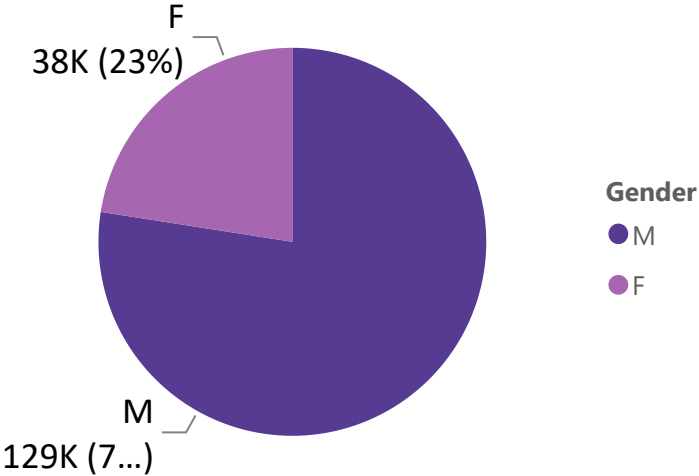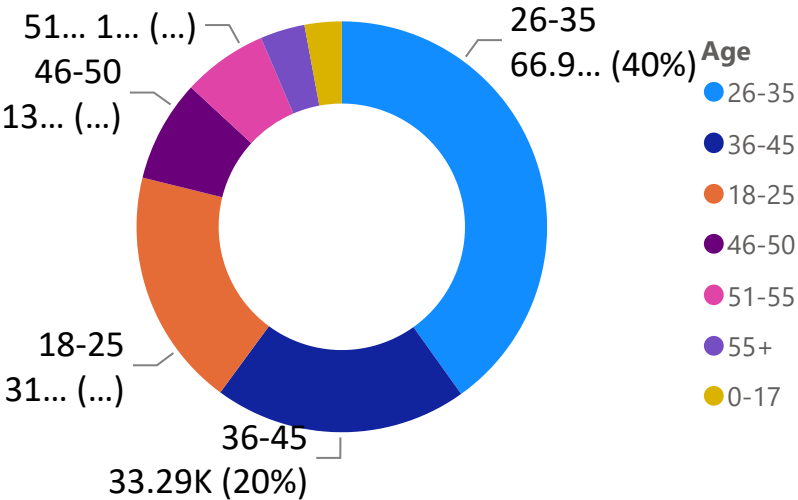
Batch No:- DS0522

Intern Batch:- 33

Problem Statement

A retail company "ABC Private Limited" wants to understand the customer purchase behaviour (specifically, purchase amount) against various products of different categories. They have shared purchase summary of various customers for selected high volume products from last month. The data set also contains customer demographics (age, gender, marital status, city_type, stay_in_current_city), product details (product_id and product category) and Total purchase_amount from last month. Now, they want to build a model to predict the purchase amount of customer against various products which will help them to create personalized offer for customers against different products.

Count of Gender

F
38K (23%)

M
129K (7...)

Gender
- M
- F

Count of Age

26-35
66.9... (40%)

51... 1... (...)
46-50
13... (...)

18-25
31... (...)

36-45
33.29K (20%)

Age
- 26-35
- 36-45
- 18-25
- 46-50
- 51-55
- 55+
- 0-17

Total User Count

166.82K

Count of User_ID

Gender

Gender

- [ ] F
- [ ] M

Total User Count By City

A
41.... (2...)

B
69... (...)

C
56.06K (33....)
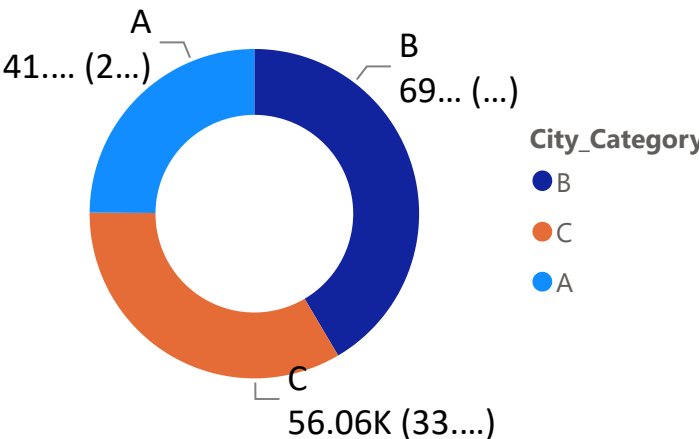
City_Category
- B
- C
- A

Total User Count by Marital_Status

1
67.... (4...)

0
99.62K (59....)
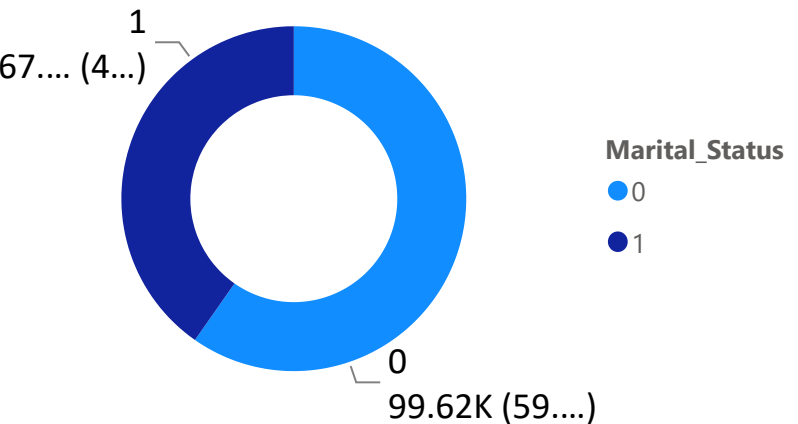
Marital_Status
- 0
- 1

Age

Age

- [ ] 0-17
- [ ] 18-25
- [ ] 26-35
- [ ] 36-45
- [ ] 46-50
- [ ] 51-55
- [ ] 55+

Count of User_ID by Occupation

Occupation
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

- 0 20.97K (12.57%)
- 1 13.51K (8.1%)
- 2 7.5… (4…)
- 3 5.0… (3…)
- 4 22.36K (13.4…)
- 6 5.82K (3.49%)
- 7 17.8K (10.67%)
- 8 0.54K (0.3…)
- 11 3.2… (1…)
- 12 10.4… (6.…)
- 13 2.0… (1…)
- 14 8.3… (…)
- 16 7.33K (4.…)
- 17 14.07K (8.43%)
- 18 1.98K (1.1…)

Sum of Purchase by Occupation

Occupation
- 4
- 0
- 7
- 17
- 1
- 12
- 20
- 14
- 16
- 2
- 6
- 3
- 10
- 15
- 11
- 19
- 13
- 18
- 9
- 8

- 4 259M (13.32%)
- 0 241M (12…)
- 7 211M (10…)
- 17 171M (8.78%)
- 1 152M (7.79%)
- 20 103M (5.3%)
- 14 101… (5.…)
- 16 87M (…)
- 2 85M (4…)
- 6 6… (…)
- 3 5… (…)
- 15 48M (2.46%)
- 18 23M (1.2%)
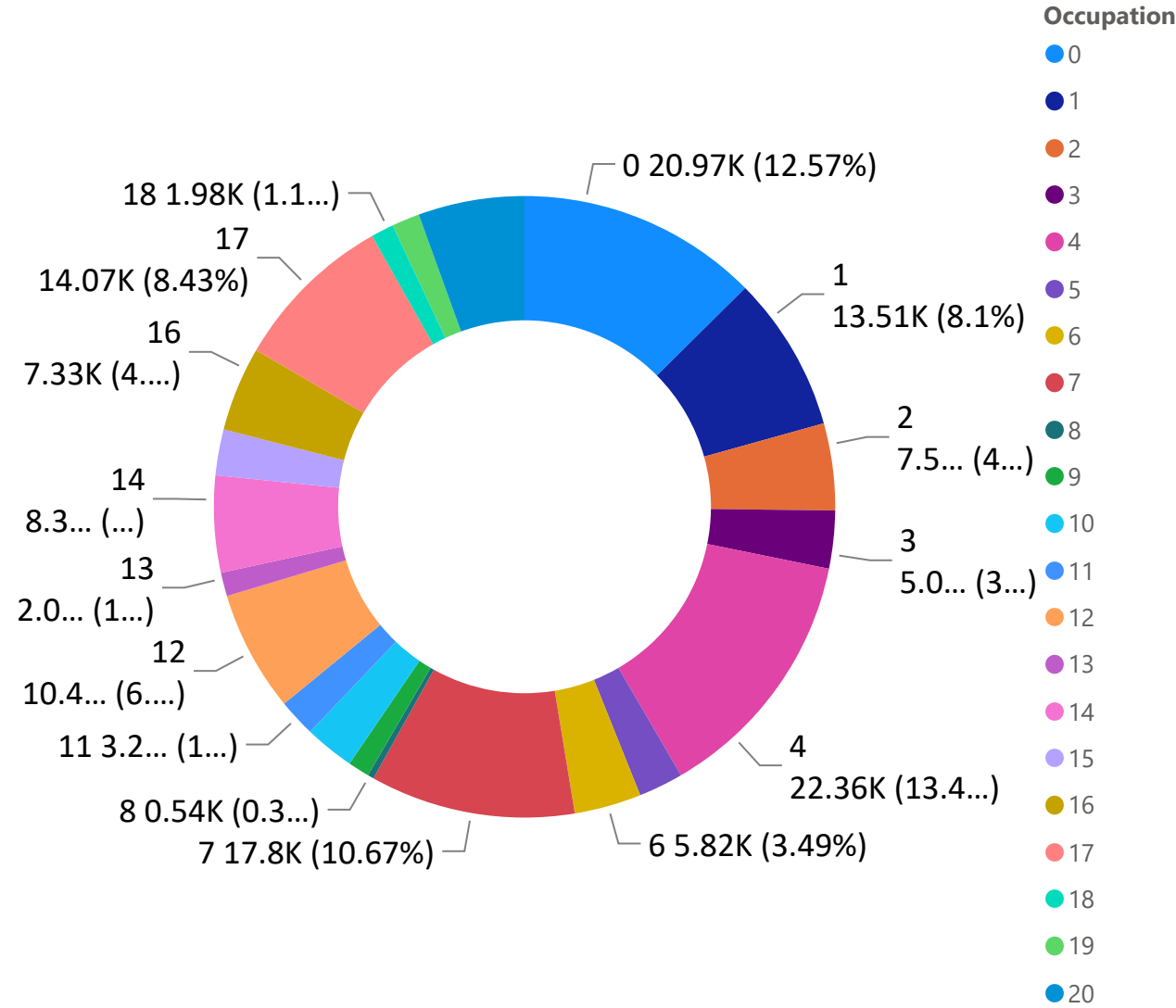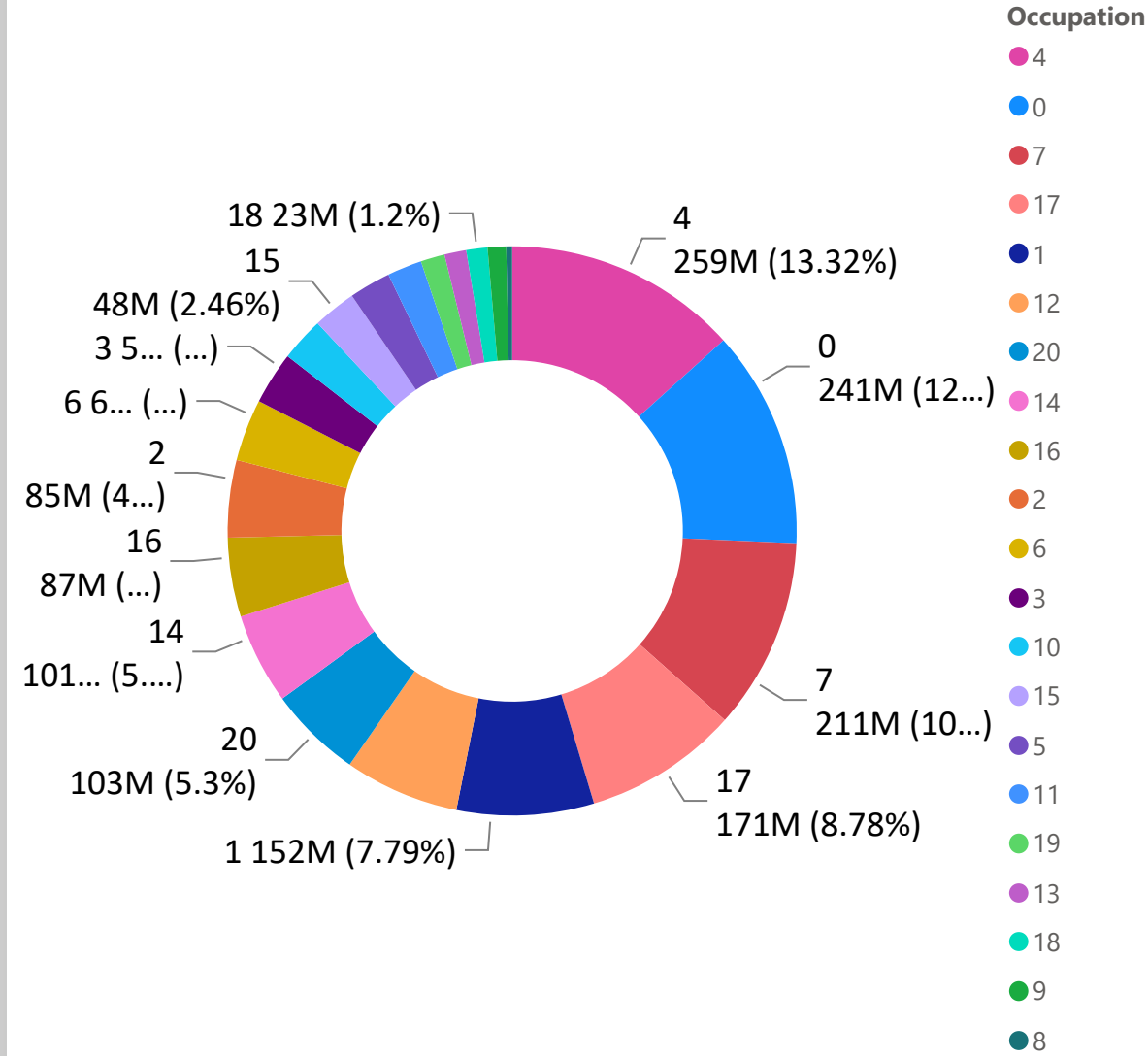
Sum of Purchase by Gender and City_Category

City_Category ● A ● B ● C

- 1528M
- 537M
- 625M
- 365M
- 417M
- 147M
- 170M
- 100M

Sum of Purchase

1.5bn
1.0bn
0.5bn
0.0bn

Gender: M, F
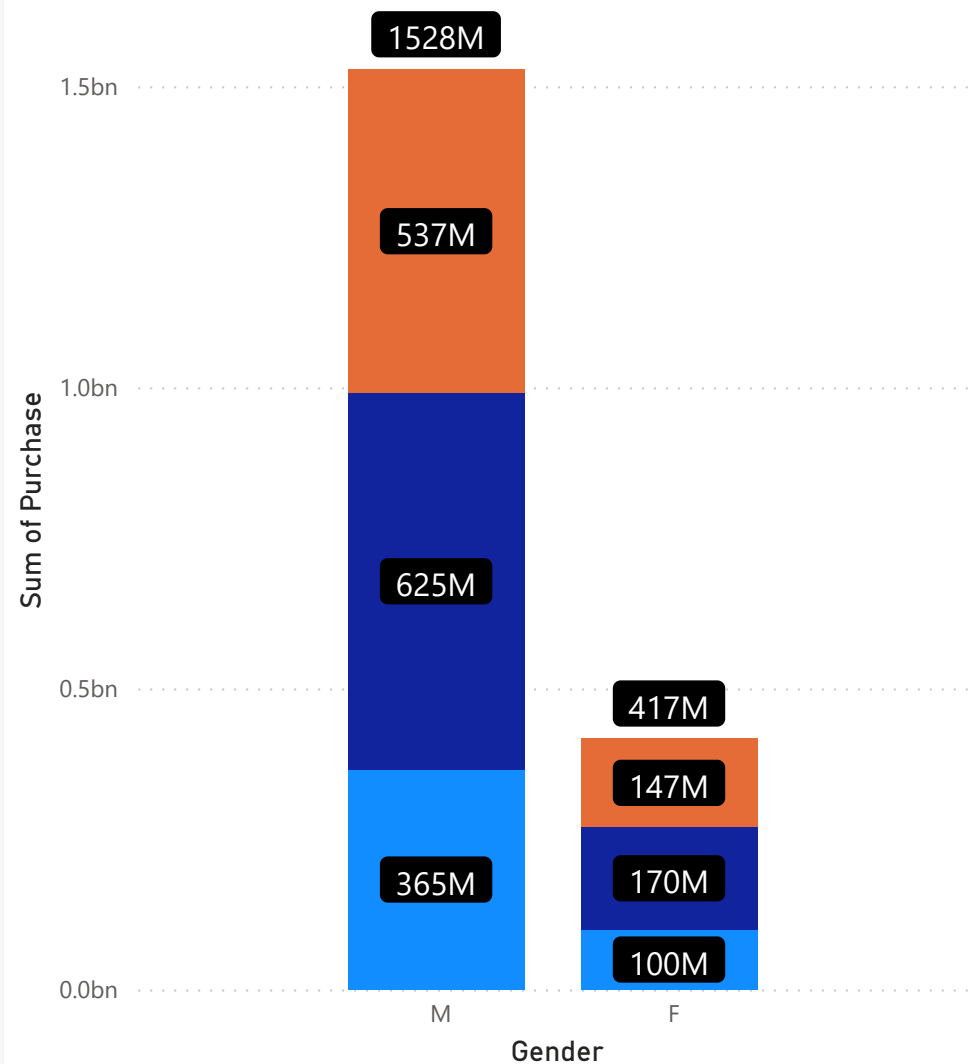
Sum of Purchase by City_Category and Marital_Status

B

C

0 472M

0 394M

1 324M

1 290M

A

0 294M

1 171M
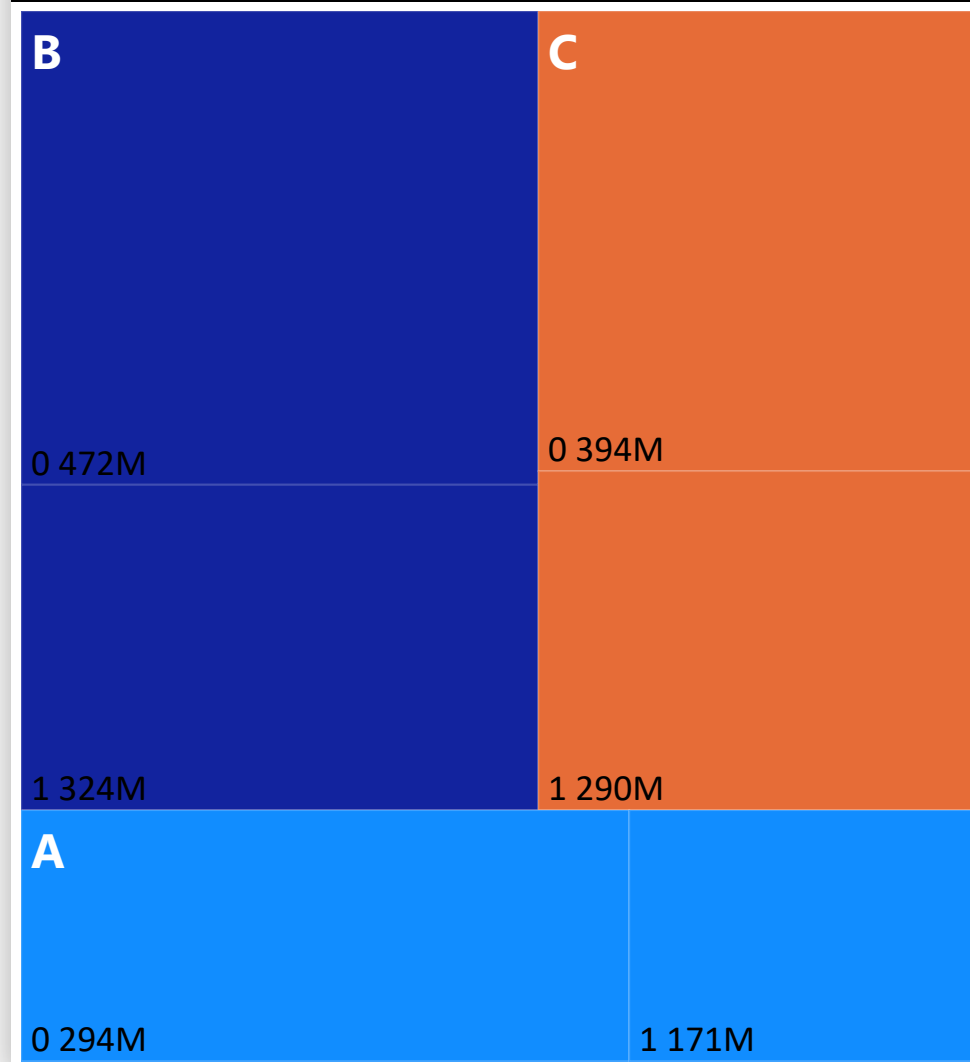
Total Purchase

2bn

Total Purchase

City_Category	Sum of Purchase
B	795M
C	684M
A	465M
Total	1945M

Marital_Status	Sum of Purchase
0	1159455486
1	785362913
Total	1944818399

Occupation	A	B	C	Total
4	76770268	105451672	76839994	259061934
0	58654067	102223900	79802931	240680898
7	51079538	80481707	79900349	211461594
17	28639234	66310614	75877726	170827574
1	38242242	60622291	52687861	151552394
12	26951405	53385947	46626305	126963657
20	34360431	44019179	24645491	103025101
14	26806389	40378404	33331393	100516186
16	19425043	36901224	30826631	87152898
2	26724140	34306895	24345487	85376522
6	11617598	36092778	20814373	68524749
3	15762678	23581771	18733877	58078326
10	7134828	15293661	26085034	48513523
15	11475839	19580471	16866962	47923272
5	8467813	23152297	14285912	45906022
11	8094914	16590235	13556595	38241744
19	5815187	11192866	9583998	26592051
13	1119561	5988702	17059024	24167287
Total	465007352	795469852	684341195	1944818399

Product_ID	A	B	C	Total
P00025442	5471513	9865100	12658553	**27995166**
P00110742	5373062	10005741	11343506	**26722309**
P00059442	5447499	8973276	9917568	**24338343**
P00184942	4374877	8822830	11137180	**24334887**
P00112142	4650132	8358296	11207578	**24216006**
P00237542	4806521	8638106	9980949	**23425576**
P00057642	4785523	8165935	10151322	**23102780**
P00010742	3822022	8414463	9927668	**22164153**
P00110842	5047842	7737262	8605618	**21390722**
P00046742	3928422	7859484	9364976	**21152882**
P00080342	4408019	7561796	9160491	**21130306**
P00148642	4326651	7758164	8731472	**20816287**
P00145042	4238384	7755326	8417632	**20411342**
P00114942	4327307	7424842	7450761	**19202910**
P00112542	3950827	6630883	7567327	**18149037**
P00270942	3597561	6514931	6411243	**16523735**
P00242742	3237614	6162183	6955341	**16355138**
P00111142	3588996	6296563	6444681	**16330240**
Total	**465007352**	**795469852**	**684341195**	**1944818399**

Sum of Purchase by Occupation and City_Category
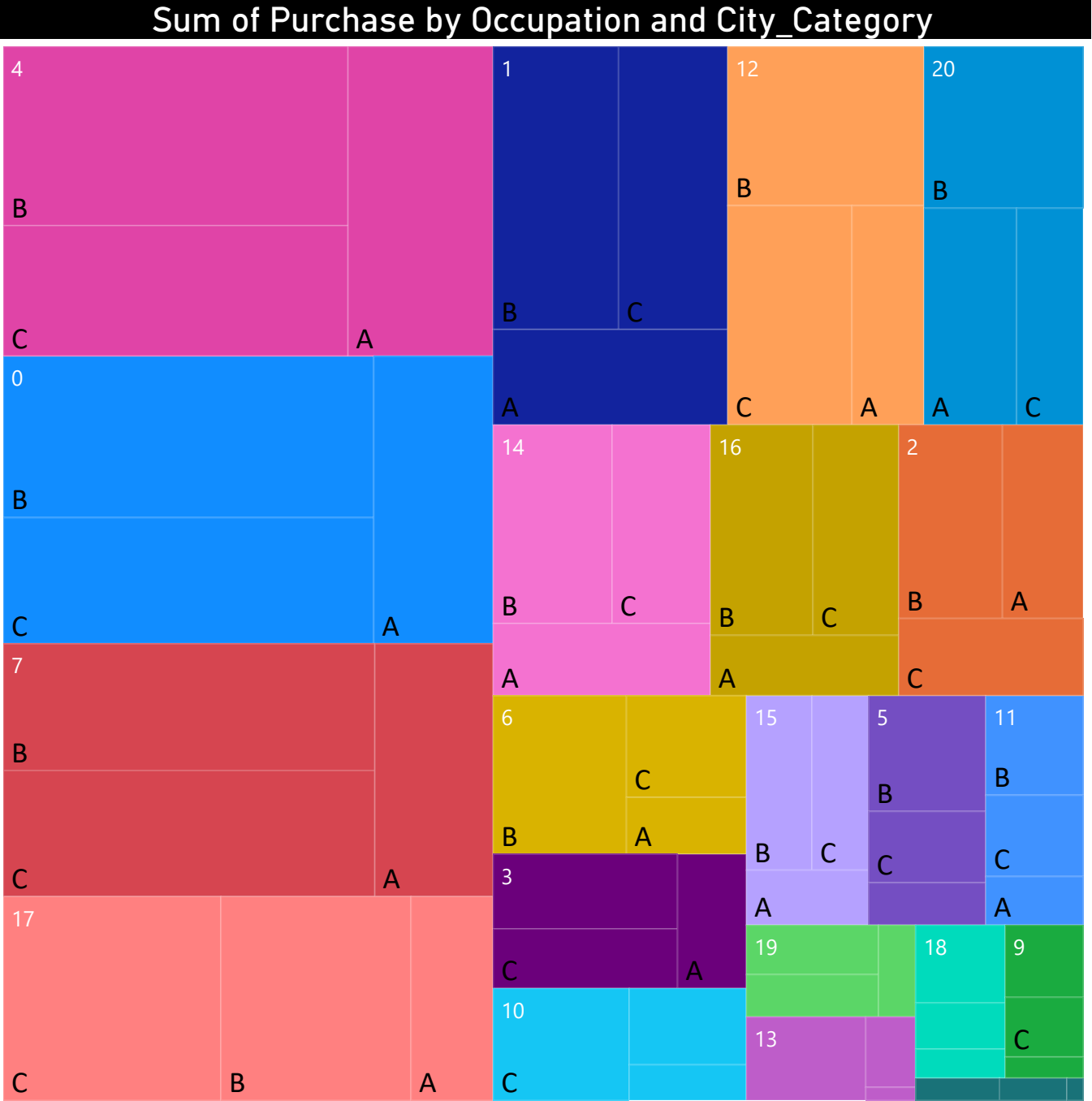
Sum of Purchase by Age and Gender

F 152M (7.79%)

M
626M (32....)

M 38M (1.95%)

M 106M (5.43%)

M 115M (5.9...)

F 41M (2...)

M 287M (1...)

F 75M (3.88%)

M 301M (15.49%)

F 89M (4.58%)

Age
- 26-35
- 36-45
- 18-25
- 46-50
- 51-55
- 55+
- 0-17
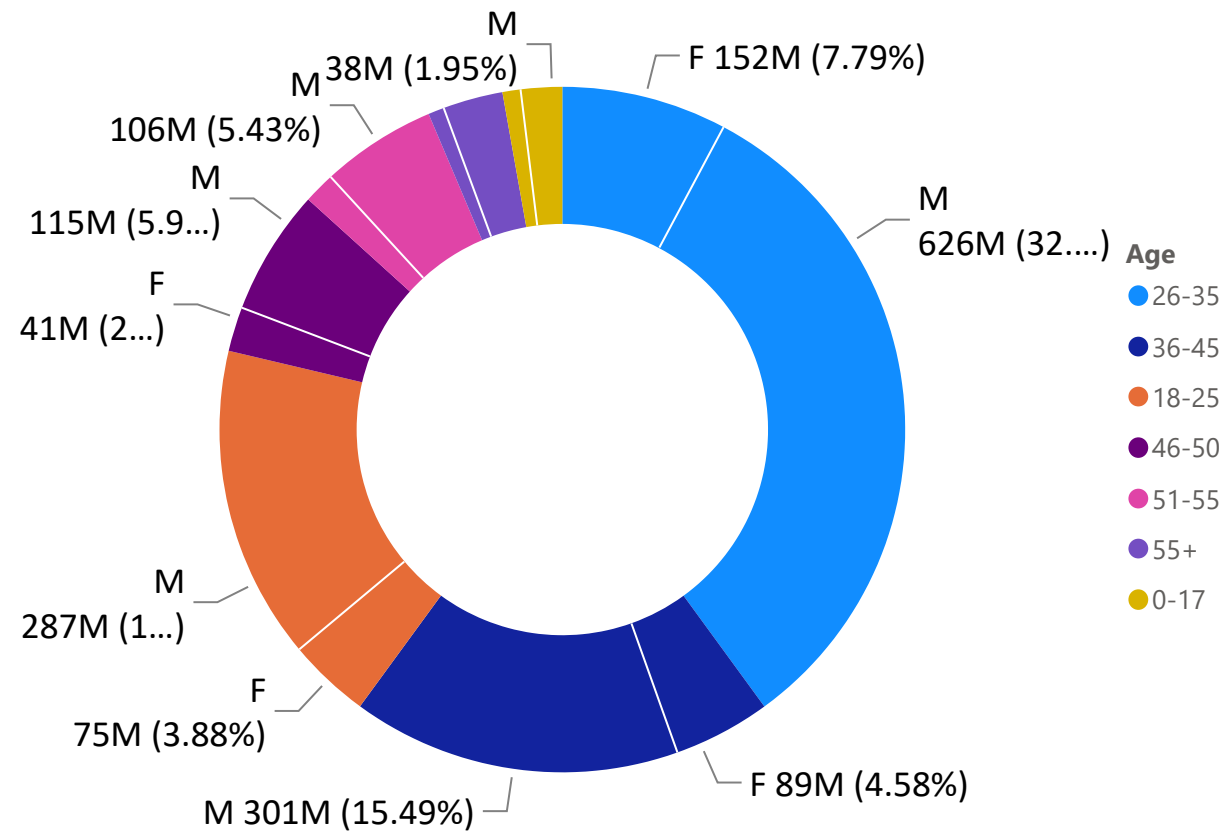
Conclusion

Top Buyer
1004277

Top Selling Product ID
P00025442

Top Product Category
1

Top City
B

Top age
26-35

Top Occupation
4

Top Marital Status
0