

Part V of GrEx2 divided into two parts, the second of which I've simplified by subdividing it into two parts (and removing the "top 6 requirement"):

1. Using the active customers' data:

- For each gender code for adult_1:
 - Calculate and report the number of adults with this gender code

Sample output:

	gender	adult1_g
0	F	12629
1	M	3268
2	U	1581
3	B	13

2. (a) Using the active customers' data:

- For each gender code for adult_1:
 - Find the top 6 most ordered purchased product categories:
- For each of the purchased product categories (not just the top 6):
 - Calculate the total spent in the category
 - Calculate the total number of products purchased in the category

Sample outputs:

Using **pivot_table...** (output split into two screenshots to fit this page...):

							qty
deptdescr	Appliances	Cameras & Camcorder Accessori	Home Audio	Mobile Electronic Accessories	Mobile Electronics	Portable Electronics	Small Appliances
adult1_g							
B	0.0	1.0	2.0	10.0	14.0	3.0	10.0
F	2.0	2639.0	7088.0	18255.0	13974.0	6104.0	14622.0
M	2.0	666.0	1948.0	3544.0	2299.0	1440.0	3417.0
U	1.0	3647.0	952.0	2103.0	1647.0	938.0	1958.0
							totamt
Appliances	Cameras & Camcorder Accessori	Home Audio	Mobile Electronic Accessories	Mobile Electronics	Portable Electronics	Small Appliances	
0.00	104.97	719.70	472.47	471.87	834.00	848.22	
1739.85	321097.20	2171664.39	760369.65	800757.84	745500.27	956301.03	
2100.00	89132.16	655876.92	150226.02	144819.54	206839.29	236165.61	
2997.00	390842.25	318808.20	86722.92	91468.41	115611.87	125988.45	

Using **groupby** instead...

		qty	totamt
adult1_g	deptdescr		
B	Cameras & Camcorder Accessori	1	104.97
	Home Audio	2	719.70
	Mobile Electronic Accessories	10	472.47
	Mobile Electronics	14	471.87
	Portable Electronics	3	834.00
	Small Appliances	10	848.22
	Appliances	2	1739.85
	Cameras & Camcorder Accessori	2639	321097.20
F	Home Audio	7088	2171664.39
	Mobile Electronic Accessories	18255	760369.65
	Mobile Electronics	13974	800757.84
	Portable Electronics	6104	745500.27
	Small Appliances	14622	956301.03
	Appliances	2	2100.00
	Cameras & Camcorder Accessori	666	89132.16
	Home Audio	1948	655876.92
M	Mobile Electronic Accessories	3544	150226.02
	Mobile Electronics	2299	144819.54
	Portable Electronics	1440	206839.29
	Small Appliances	3417	236165.61
	Appliances	1	2997.00
U	Cameras & Camcorder Accessori	3647	390842.25
	Home Audio	952	318808.20
	Mobile Electronic Accessories	2103	86722.92
	Mobile Electronics	1647	91468.41
	Portable Electronics	938	115611.87
	Small Appliances	1958	125988.45

2. (b) Get the 6 most common product ordered by gender.

Sample output:

adultl_g	deptdescr	
B	Mobile Electronics	14
	Mobile Electronic Accessories	10
	Small Appliances	10
	Portable Electronics	3
	Home Audio	2
	Cameras & Camcorder Accessori	1
F	Mobile Electronic Accessories	17164
	Small Appliances	14106
	Mobile Electronics	12443
	Home Audio	6336
	Portable Electronics	5155
	Cameras & Camcorder Accessori	2343
M	Mobile Electronic Accessories	3379
	Small Appliances	3342
	Mobile Electronics	2124
	Home Audio	1771
	Portable Electronics	1212
	Cameras & Camcorder Accessori	574
U	Mobile Electronic Accessories	1981
	Small Appliances	1881
	Mobile Electronics	1413
	Home Audio	845
	Portable Electronics	687
	Cameras & Camcorder Accessori	320

Name: deptdescr, dtype: int64

Each row in the item table corresponds to a customer order (i.e. row in item table). So for each gender you want to get the frequency distribution in the **deptdescr** column.

Challenge problem: Incorporate the data from part (a) into part (b) so that the output displays the **qty** and **totamt** next to the number of purchases in each of the (top 6 by gender) categories.