

EJERCITACIÓN WINDOWS FUNCTIONS

EJ. 1:

	ASC category_name	ASC product_name	123 unit_price	123 avg
1	Beverages	Guaraná Fantástica	4,5	37,9791666667
2	Beverages	Ipoh Coffee	46	37,9791666667
3	Beverages	Chartreuse verte	18	37,9791666667
4	Beverages	Côte de Blaye	263,5	37,9791666667
5	Beverages	Steeleye Stout	18	37,9791666667
6	Beverages	Sasquatch Ale	14	37,9791666667
7	Beverages	Lakkalikööri	18	37,9791666667
8	Beverages	Rhönbräu Klosterbier	7,75	37,9791666667
9	Beverages	Outback Lager	15	37,9791666667
10	Beverages	Chai	18	37,9791666667
11	Beverages	Laughing Lumberjack Lager	14	37,9791666667
12	Beverages	Chang	19	37,9791666667
13	Condiments	Gula Malacca	19,450000763	22,8541668256
14	Condiments	Original Frankfurter grüne Soße	13	22,8541668256
15	Condiments	Northwoods Cranberry Sauce	40	22,8541668256
16	Condiments	Louisiana Hot Spiced Okra	17	22,8541668256
17	Condiments	Genen Shouyu	13	22,8541668256

EJ. 2:

	123 avg	123 order_id	ASC customer_id	123 employee_id	1 order_date	2 required_date	1 shipped_date
1	383,0166670481	10.702	ALFKI	4	1997-10-13	1997-11-24	1997-10-21
2	383,0166670481	10.643	ALFKI	6	1997-08-25	1997-09-22	1997-09-02
3	383,0166670481	10.952	ALFKI	1	1998-03-16	1998-04-27	1998-03-24
4	383,0166670481	11.011	ALFKI	3	1998-04-09	1998-05-07	1998-04-13
5	383,0166670481	11.011	ALFKI	3	1998-04-09	1998-05-07	1998-04-13
6	383,0166670481	10.692	ALFKI	4	1997-10-03	1997-10-31	1997-10-13
7	383,0166670481	10.643	ALFKI	6	1997-08-25	1997-09-22	1997-09-02
8	383,0166670481	10.643	ALFKI	6	1997-08-25	1997-09-22	1997-09-02
9	383,0166670481	10.835	ALFKI	1	1998-01-15	1998-02-12	1998-01-21
10	383,0166670481	10.952	ALFKI	1	1998-03-16	1998-04-27	1998-03-24
11	383,0166670481	10.702	ALFKI	4	1997-10-13	1997-11-24	1997-10-21
12	383,0166670481	10.835	ALFKI	1	1998-01-15	1998-02-12	1998-01-21
13	140,2949990273	10.308	ANATR	7	1996-09-18	1996-10-16	1996-09-24
14	140,2949990273	10.926	ANATR	4	1998-03-04	1998-04-01	1998-03-11
15	140,2949990273	10.625	ANATR	3	1997-08-08	1997-09-05	1997-08-14
16	140,2949990273	10.625	ANATR	3	1997-08-08	1997-09-05	1997-08-14
17	140,2949990273	10.625	ANATR	3	1997-08-08	1997-09-05	1997-08-14
18	140,2949990273	10.926	ANATR	4	1998-03-04	1998-04-01	1998-03-11

EJ. 3:

	asc product_name	asc category_name	asc quantity_per_unit	123 unit_price	123 quantity	123 avg
1	Chai	Beverages	10 boxes x 30 bags	14,399999619	10	23,5940594059
2	Chai	Beverages	10 boxes x 30 bags	18	25	23,5940594059
3	Chai	Beverages	10 boxes x 30 bags	18	21	23,5940594059
4	Chai	Beverages	10 boxes x 30 bags	18	60	23,5940594059
5	Chai	Beverages	10 boxes x 30 bags	18	20	23,5940594059
6	Chai	Beverages	10 boxes x 30 bags	18	4	23,5940594059
7	Chai	Beverages	10 boxes x 30 bags	18	10	23,5940594059
8	Chai	Beverages	10 boxes x 30 bags	18	8	23,5940594059
9	Chai	Beverages	10 boxes x 30 bags	18	10	23,5940594059
10	Chai	Beverages	10 boxes x 30 bags	18	40	23,5940594059
11	Chai	Beverages	10 boxes x 30 bags	18	6	23,5940594059
12	Chai	Beverages	10 boxes x 30 bags	18	3	23,5940594059
13	Chai	Beverages	10 boxes x 30 bags	18	15	23,5940594059
14	Chai	Beverages	10 boxes x 30 bags	18	8	23,5940594059
15	Chai	Beverages	10 boxes x 30 bags	18	10	23,5940594059
16	Chai	Beverages	10 boxes x 30 bags	14,399999619	18	23,5940594059
17	Chai	Beverages	10 boxes x 30 bags	18	35	23,5940594059
18	Chai	Beverages	10 boxes x 30 bags	18	30	23,5940594059

EJ. 4:

	asc customer_id	order_date	min
1	ALFKI	1998-01-15	1997-08-25
2	ALFKI	1997-10-03	1997-08-25
3	ALFKI	1998-04-09	1997-08-25
4	ALFKI	1997-10-13	1997-08-25
5	ALFKI	1997-08-25	1997-08-25
6	ALFKI	1998-03-16	1997-08-25
7	ANATR	1997-08-08	1996-09-18
8	ANATR	1998-03-04	1996-09-18
9	ANATR	1996-09-18	1996-09-18
10	ANATR	1997-11-28	1996-09-18
11	ANTON	1997-09-22	1996-11-27
12	ANTON	1997-05-13	1996-11-27
13	ANTON	1998-01-28	1996-11-27
14	ANTON	1997-09-25	1996-11-27
15	ANTON	1997-04-15	1996-11-27
16	ANTON	1997-06-19	1996-11-27
17	ANTON	1996-11-27	1996-11-27
18	AROUT	1997-02-21	1996-11-15

EJ. 5:

	¹²³ product_id	^{asc} product_name	¹²³ unit_price	¹²³ category_id	¹²³ maxunitprice
1	1	Chai	18	1	263,5
2	2	Chang	19	1	263,5
3	3	Aniseed Syrup	10	2	43,90000153
4	4	Chef Anton's Cajun Seasoning	22	2	43,90000153
5	5	Chef Anton's Gumbo Mix	21,350000381	2	43,90000153
6	6	Grandma's Boysenberry Spread	25	2	43,90000153
7	7	Uncle Bob's Organic Dried Pears	30	7	53
8	8	Northwoods Cranberry Sauce	40	2	43,90000153
9	9	Mishi Kobe Niku	97	6	123,79000092
10	10	Ikura	31	8	62,5
11	11	Queso Cabrales	21	4	55
12	12	Queso Manchego La Pastora	38	4	55
13	13	Konbu	6	8	62,5
14	14	Tofu	23,25	7	53
15	15	Genen Shouyu	13	2	43,90000153
16	16	Pavlova	17,450000763	3	81
17	17	Alice Mutton	39	6	123,79000092
18	18	Carnarvon Tigers	62,5	8	62,5

EJ. 6:

	¹²³ ranking	^{asc} product_name	¹²³ totalquantity
1	1	Camembert Pierrot	1.577
2	2	Raclette Courdavault	1.496
3	3	Gorgonzola Telino	1.397
4	4	Gnocchi di nonna Alice	1.263
5	5	Pavlova	1.158
6	6	Rhönbräu Klosterbier	1.155
7	7	Guaraná Fantástica	1.125
8	8	Boston Crab Meat	1.103
9	9	Tarte au sucre	1.083
10	10	Chang	1.057
11	10	Flotemysost	1.057
12	12	Sir Rodney's Scones	1.016
13	13	Jack's New England Clam Chowder	981
14	13	Lakkalikööri	981
15	15	Alice Mutton	978
16	16	Pâté chinois	903
17	17	Konbu	891
18	18	Manjimup Dried Apples	886
19	19	Steele's Stout	883

EJ. 7:

row_number	customer_id	company_name	contact_name	contact_title	address	
1	1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
2	2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la Constitución 2222
3	3	ANTON	Antonio Moreno Taquería	Antonio Moreno	Owner	Mataderos 2312
4	4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.
5	5	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
6	6	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57
7	7	BLONP	Blondesddsl père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
8	8	BOLID	Bólido Comidas preparadas	Martín Sommer	Owner	C/ Araquil, 67
9	9	BONAP	Bon app'	Laurence Lebihan	Owner	12, rue des Bouchers
10	10	BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.
11	11	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
12	12	CACTU	Cactus Comidas para llevar	Patricio Simpson	Sales Agent	Cerrito 333
13	13	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993
14	14	CHOPS	Chop-suey Chinese	Yang Wang	Owner	Hauptstr. 29
15	15	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
16	16	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gardens 12 Brewery
17	17	DRACD	Drachenblut Delikatessen	Sven Ottlieb	Order Administrator	Walserweg 21
18	18	DUMON	Du monde entier	Janine Labrune	Owner	67, rue des Cinquante Otages
19	19	EASTC	Eastern Connection	Ann Devon	Sales Agent	35 King George

EJ. 8:

rank	employee_name	birth_date
1	Anne Dodsworth	1966-01-27
2	Janet Leverling	1963-08-30
3	Michael Suyama	1963-07-02
4	Robert King	1960-05-29
5	Laura Callahan	1958-01-09
6	Steven Buchanan	1955-03-04
7	Andrew Fuller	1952-02-19
8	Nancy Davolio	1948-12-08
9	Margaret Peacock	1937-09-19

EJ. 9:

sumordeamount	order_id	customer_id	employee_id	order_date	required_date
4.596,2000045776	10.702	ALFKI	4	1997-10-13	1997-11-24
4.596,2000045776	10.643	ALFKI	6	1997-08-25	1997-09-22
4.596,2000045776	10.952	ALFKI	1	1998-03-16	1998-04-27
4.596,2000045776	11.011	ALFKI	3	1998-04-09	1998-05-07
4.596,2000045776	11.011	ALFKI	3	1998-04-09	1998-05-07
4.596,2000045776	10.692	ALFKI	4	1997-10-03	1997-10-31
4.596,2000045776	10.643	ALFKI	6	1997-08-25	1997-09-22
4.596,2000045776	10.643	ALFKI	6	1997-08-25	1997-09-22
4.596,2000045776	10.835	ALFKI	1	1998-01-15	1998-02-12
4.596,2000045776	10.952	ALFKI	1	1998-03-16	1998-04-27
4.596,2000045776	10.702	ALFKI	4	1997-10-13	1997-11-24
4.596,2000045776	10.835	ALFKI	1	1998-01-15	1998-02-12
1.402,9499902725	10.308	ANATR	7	1996-09-18	1996-10-16
1.402,9499902725	10.926	ANATR	4	1998-03-04	1998-04-01
1.402,9499902725	10.625	ANATR	3	1997-08-08	1997-09-05
1.402,9499902725	10.625	ANATR	3	1997-08-08	1997-09-05
1.402,9499902725	10.625	ANATR	3	1997-08-08	1997-09-05
1.402,9499902725	10.926	ANATR	4	1998-03-04	1998-04-01
1.402,9499902725	10.926	ANATR	4	1998-03-04	1998-04-01





EJ. 10:

	asc category_name	asc product_name	123 unit_price	123 quantity	123 sum
1	Beverages	Chai	14,399999619	10	286.526,9500956535
2	Beverages	Chai	18	25	286.526,9500956535
3	Beverages	Chai	18	21	286.526,9500956535
4	Beverages	Chai	18	60	286.526,9500956535
5	Beverages	Chai	18	20	286.526,9500956535
6	Beverages	Chai	18	4	286.526,9500956535
7	Beverages	Chai	18	10	286.526,9500956535
8	Beverages	Chai	18	8	286.526,9500956535
9	Beverages	Chai	18	10	286.526,9500956535
10	Beverages	Chai	18	40	286.526,9500956535
11	Beverages	Chai	18	6	286.526,9500956535
12	Beverages	Chai	18	3	286.526,9500956535
13	Beverages	Chai	18	15	286.526,9500956535
14	Beverages	Chai	18	8	286.526,9500956535
15	Beverages	Chai	18	10	286.526,9500956535
16	Beverages	Chai	14,399999619	18	286.526,9500956535
17	Beverages	Chai	18	35	286.526,9500956535
18	Beverages	Chai	18	30	286.526,9500956535
19	Beverages	Chai	14,399999619	15	286.526,9500956535






EJ. 11:

	asc country	123 order_id	shipped_date	123 freight	123 sum
1	Argentina	10.409	1997-01-14	29,829999924	595,08007812
2	Argentina	10.448	1997-02-24	38,819999695	595,08007812
3	Argentina	10.521	1997-05-02	17,219999313	595,08007812
4	Argentina	10.531	1997-05-19	8,119999886	595,08007812
5	Argentina	10.716	1997-10-27	22,569999695	595,08007812
6	Argentina	10.782	1997-12-22	1,100000024	595,08007812
7	Argentina	10.819	1998-01-16	19,760000229	595,08007812
8	Argentina	10.828	1998-02-04	90,849998474	595,08007812
9	Argentina	10.881	1998-02-18	2,839999914	595,08007812
10	Argentina	10.898	1998-03-06	1,269999981	595,08007812
11	Argentina	10.916	1998-03-09	63,770000458	595,08007812
12	Argentina	10.937	1998-03-13	31,510000229	595,08007812
13	Argentina	10.958	1998-03-27	49,560001373	595,08007812
14	Argentina	10.986	1998-04-21	217,86000061	595,08007812
15	Austria	10.258	1996-07-23	140,509994507	7.053,40039062
16	Austria	10.263	1996-07-31	146,059997559	7.053,40039062
17	Austria	10.351	1996-11-20	162,330001831	7.053,40039062
18	Austria	10.353	1996-11-25	360,630004883	7.053,40039062
19	Austria	10.368	1996-12-02	101,949996948	7.053,40039062

EJ. 12:

	 customer_id	 company_name	 sum	 rank
1	QUICK	QUICK-Stop	117.483,390147686	1
2	SAVEA	Save-a-lot Markets	115.673,3896427155	2
3	ERNSH	Ernst Handel	113.236,6797819138	3
4	HUNGO	Hungry Owl All-Night Grocers	57.317,390162468	4
5	RATTC	Rattlesnake Canyon Grocery	52.245,900346756	5
6	HANAR	Hanari Carnes	34.101,1499738693	6
7	FOLKO	Folk och få HB	32.555,5500192642	7
8	MEREP	Mère Paillarde	32.203,9002342224	8
9	KOENE	Königlich Essen	31.745,7498931885	9
10	QUEEN	Queen Cozinha	30.226,1001796722	10
11	WHITC	White Clover Markets	29.073,44992733	11
12	FRANK	Frankenversand	28.722,709939003	12
13	BERGS	Berglunds snabbköp	26.968,1499304771	13
14	PICCO	Piccolo und mehr	26.259,9500846863	14
15	SUPRD	Suprêmes délices	24.704,4003038406	15
16	BONAP	Bon app'	23.850,949985981	16
17	HILAA	HILARION-Abastos	23.611,5799446106	17
18	BOTTM	Bottom-Dollar Markets	22.607,6999607086	18
19	LEHMS	Lehmanns Marktstand	21.282,0199766159	19

EJ. 13:

	 employee_id	 first_name	 last_name	 hire_date	 rank
1	3	Janet	Leverling	1992-04-01	1
2	1	Nancy	Davolio	1992-05-01	2
3	2	Andrew	Fuller	1992-08-14	3
4	4	Margaret	Peacock	1993-05-03	4
5	5	Steven	Buchanan	1993-10-17	5
6	6	Michael	Suyama	1993-10-17	5
7	7	Robert	King	1994-01-02	7
8	8	Laura	Callahan	1994-03-05	8
9	9	Anne	Dodsworth	1994-11-15	9

EJ. 14:

	¹²³ product_id	¹²³ product_name	¹²³ unit_price	¹²³ rank
1	38	Côte de Blaye	263,5	1
2	29	Thüringer Rostbratwurst	123,790000916	2
3	9	Mishi Kobe Niku	97	3
4	20	Sir Rodney's Marmalade	81	4
5	18	Carnarvon Tigers	62,5	5
6	59	Raclette Courdavault	55	6
7	51	Manjimup Dried Apples	53	7
8	62	Tarte au sucre	49,299999237	8
9	43	Ipoh Coffee	46	9
10	28	Rössle Sauerkraut	45,599998474	10
11	27	Schoggi Schokolade	43,900001526	11
12	63	Vegie-spread	43,900001526	11
13	8	Northwoods Cranberry Sauce	40	13
14	17	Alice Mutton	39	14
15	56	Gnocchi di nonna Alice	38	15
16	12	Queso Manchego La Pastora	38	15
17	69	Gudbrandsdalsost	36	17
18	72	Mozzarella di Giovanni	34,799999237	18
19	60	Camembert Pierrot	34	19

EJ. 15:

	¹²³ order_id	¹²³ product_id	¹²³ quantity	¹²³ lag
1	10.248	11	12	[NULL]
2	10.248	42	10	12
3	10.248	72	5	10
4	10.249	14	9	5
5	10.249	51	40	9
6	10.250	41	10	40
7	10.250	51	35	10
8	10.250	65	15	35
9	10.251	22	6	15
10	10.251	57	15	6
11	10.251	65	20	15
12	10.252	20	40	20
13	10.252	33	25	40
14	10.252	60	40	25
15	10.253	31	20	40
16	10.253	39	42	20
17	10.253	49	40	42
18	10.254	24	15	40
19	10.254	55	21	15

EJ. 16:

	¹²³ order_id	^{asc} order_date	^{asc} customer_id	^{lag} lag
1	10.643	1997-08-25	ALFKI	[NULL]
2	10.692	1997-10-03	ALFKI	1997-08-25
3	10.702	1997-10-13	ALFKI	1997-10-03
4	10.835	1998-01-15	ALFKI	1997-10-13
5	10.952	1998-03-16	ALFKI	1998-01-15
6	11.011	1998-04-09	ALFKI	1998-03-16
7	10.308	1996-09-18	ANATR	[NULL]
8	10.625	1997-08-08	ANATR	1996-09-18
9	10.759	1997-11-28	ANATR	1997-08-08
10	10.926	1998-03-04	ANATR	1997-11-28
11	10.365	1996-11-27	ANTON	[NULL]
12	10.507	1997-04-15	ANTON	1996-11-27
13	10.535	1997-05-13	ANTON	1997-04-15
14	10.573	1997-06-19	ANTON	1997-05-13
15	10.677	1997-09-22	ANTON	1997-06-19
16	10.682	1997-09-25	ANTON	1997-09-22
17	10.856	1998-01-28	ANTON	1997-09-25
18	10.355	1996-11-15	AROUT	[NULL]
19	10.383	1996-12-16	AROUT	1996-11-15

EJ. 17:

	¹²³ product_id	^{asc} product_name	¹²³ unit_price	¹²³ lastunitprice	¹²³ pricedifference
1	1	Chai	18	[NULL]	[NULL]
2	2	Chang	19	18	1
3	3	Aniseed Syrup	10	19	-9
4	4	Chef Anton's Cajun Seasoning	22	10	12
5	5	Chef Anton's Gumbo Mix	21,350000381	22	-0,64999962
6	6	Grandma's Boysenberry Spread	25	21,35000038	3,64999962
7	7	Uncle Bob's Organic Dried Pears	30	25	5
8	8	Northwoods Cranberry Sauce	40	30	10
9	9	Mishi Kobe Niku	97	40	57
10	10	Ikura	31	97	-66
11	11	Queso Cabrales	21	31	-10
12	12	Queso Manchego La Pastora	38	21	17
13	13	Konbu	6	38	-32
14	14	Tofu	23,25	6	17,25
15	15	Genen Shouyu	13	23,25	-10,25
16	16	Pavlova	17,450000763	13	4,45000076
17	17	Alice Mutton	39	17,45000076	21,54999924
18	18	Carnarvon Tigers	62,5	39	23,5
19	19	Teatime Chocolate Biscuits	9,199999809	62,5	-53,29999924

EJ. 18:

	product_name	unit_price	nextprice
1	Chai	18	19
2	Chang	19	10
3	Aniseed Syrup	10	22
4	Chef Anton's Cajun Seasoning	22	21,35000038
5	Chef Anton's Gumbo Mix	21,350000381	25
6	Grandma's Boysenberry Spread	25	30
7	Uncle Bob's Organic Dried Pears	30	40
8	Northwoods Cranberry Sauce	40	97
9	Mishi Kobe Niku	97	31
10	Ikura	31	21
11	Queso Cabrales	21	38
12	Queso Manchego La Pastora	38	6
13	Konbu	6	23,25
14	Tofu	23,25	13
15	Genen Shouyu	13	17,45000076
16	Pavlova	17,450000763	39
17	Alice Mutton	39	62,5
18	Carnarvon Tigers	62,5	9,19999981
19	Teatime Chocolate Biscuits	9,199999809	81

EJ. 19:

	category_name	totalsales	nextttotales
1	Beverages	286.526,9500956535	113.694,7496814728
2	Condiments	113.694,7496814728	177.099,1006007195
3	Confections	177.099,1006007195	251.330,4997959137
4	Dairy Products	251.330,4997959137	100.726,7999253273
5	Grains/Cereals	100.726,7999253273	178.188,8009858131
6	Meat/Poultry	178.188,8009858131	105.268,6001739502
7	Produce	105.268,6001739502	141.623,0891823769
8	Seafood	141.623,0891823769	[NULL]