

FUNDAMENTALS OF DATABASES – PRACTICAL SESSION 3

On northwind database, write advanced SQL statements to:

1. List all orders made after '2006-03-24'
2. Show product_code, unit_price, quantity, value of orders details whose order_id = 31.
Note: value can be calculated as $\text{unit_price} * \text{quantity} * (1 - \text{discount})$
3. Write a query to show the order id, order_date, the company name of customer, value of each row for orders made after '2006-03-24'
4. Write a query to show information of each order including: order id, order_date, company name, sub_total value of orders made after '2006-03-24'

	Order id	order_date	company	subtotal
►	45	2006-04-07 00:00:00	Company BB	1402.5
	46	2006-04-05 00:00:00	Company I	3690
	47	2006-04-08 00:00:00	Company F	4200
	48	2006-04-05 00:00:00	Company H	1230
	50	2006-04-05 00:00:00	Company Y	200
	51	2006-04-05 00:00:00	Company Z	1375.25
	55	2006-04-05 00:00:00	Company CC	1218
	56	2006-04-03 00:00:00	Company F	127.5
	58	2006-04-22 00:00:00	Company D	3520
	60	2006-04-30 00:00:00	Company H	1392
	63	2006-04-25 00:00:00	Company C	620
	67	2006-05-24 00:00:00	Company J	200
	69	2006-05-24 00:00:00	Company J	52.5
	70	2006-05-24 00:00:00	Company K	800
	71	2006-05-24 00:00:00	Company A	736
	72	2006-06-07 00:00:00	Company BB	230
	73	2006-06-05 00:00:00	Company I	96.5
	74	2006-06-08 00:00:00	Company F	510
	75	2006-06-05 00:00:00	Company H	510
	76	2006-06-05 00:00:00	Company Y	660
	77	2006-06-05 00:00:00	Company Z	2250
	78	2006-06-05 00:00:00	Company CC	1560
	79	2006-06-23 00:00:00	Company F	2490
	80	2006-04-25 17:03:55	Company D	380
	81	2006-04-25 17:26:53	Company C	0

- Write a query to show information of each order including: order id, order_date, company name, sub_total of orders made after '2006-03-24' and sub_total greater than or equal to 800. Sob_toal Hint: using HAVING

	id	order_date	company	sub_total
►	45	2006-04-07 00:00:00	Company BB	1402.5
	46	2006-04-05 00:00:00	Company I	3690
	47	2006-04-08 00:00:00	Company F	4200
	48	2006-04-05 00:00:00	Company H	1230
	51	2006-04-05 00:00:00	Company Z	1375.25
	55	2006-04-05 00:00:00	Company CC	1218
	58	2006-04-22 00:00:00	Company D	3520
	60	2006-04-30 00:00:00	Company H	1392
	70	2006-05-24 00:00:00	Company K	800
	77	2006-06-05 00:00:00	Company Z	2250
	78	2006-06-05 00:00:00	Company CC	1560
	79	2006-06-23 00:00:00	Company F	2490

- As the company will give rewards for employees who have total value of all order more than 1000\$, the director needs a report listing these employees (full_name, sale in dollars) from high to low. Write a query for this report. The results will look like the below figure.

	full_name	sale in dollars
►	NancyFreehafer	22255.25
	AnneHellung-Larsen	19974.25
	MichaelNeipper	6378
	MariyaSergienko	6278
	JanKotas	5787.5
	RobertZare	3786.5
	AndrewCencini	2997.5

- Show all categories, eliminate duplicated rows, and sort the results according to alphabet order.
- Show minimum, maximum, average, standard deviation, and variance of standard_cost of products.
- Show the average list_price of each category.
- Show the maximum and average shipping_fee of orders to each ship_city.
- Create a stored procedure listing top n categories whose average prices are highest. The procedure should accept n as a parameter.

12. Among average list_prices of categories above, show the minimum values.
13. For each purchase_order, show their id, full_name of person creating, and full_name of person approving.
14. Create a query showing all partners (customers and suppliers) of Northwind. The columns consist of company, full_name, email_address, and type (C for customers, S for suppliers).

	Company	full_name	email_address	type
►	Company A	BedecsAnna	NULL	C
	Company AA	TohKaren	NULL	C
	Company B	Gratacos SolsonaAntonio	NULL	C
	Company BB	RaghavAmritansh	NULL	C
	Company C	AxenThomas	NULL	C
	Company CC	LeeSoo Jung	NULL	C
	Company D	LeeChristina	NULL	C
	Company E	O'DonnellMartin	NULL	C
	Company F	Pérez-OlaetaFrancisco	NULL	C
	Company G	XieMing-Yang	NULL	C
	Company H	AndersenElizabeth	NULL	C
	Company I	MortensenSven	NULL	C
	Company J	WackerRoland	NULL	C
	Company K	KrschnePeter	NULL	C
	Company L	EdwardsJohn	NULL	C
	Company M	LudickAndre	NULL	C
	Company N	GriloCarlos	NULL	C
	Company O	KupkovaHelena	NULL	C
	Company P	GoldschmidtDaniel	NULL	C
	Company Q	BagelJean Philippe	NULL	C
	Company R	Autier MiconiCatherine	NULL	C
	Company S	EggererAlexander	NULL	C
	Company T	LiGeorge	NULL	C
	Company U	ThamBernard	NULL	C
	Company V	RamosLuciana	NULL	C
	Company W	EntinMichael	NULL	C
	Company X	HasselbergJonas	NULL	C
	Company Y	RodmanJohn	NULL	C
	Company Z	LiuRun	NULL	C
	Supplier A	AndersenElizabeth A.	NULL	S
	Supplier B	WeilerCornelia	NULL	S
	Supplier C	KelleyMadeleine	NULL	S
	Supplier D	SatoNaoki	NULL	S
	Supplier E	Hernandez-EchevarriaA...	NULL	S
	Supplier F	HayakawaSatomi	NULL	S
	Supplier G	GlassonStuart	NULL	S
	Supplier H	DuntonBryn Paul	NULL	S
	Supplier I	SandbergMikael	NULL	S
	Supplier J	SousaLuis	NULL	S

15. Show products which Northwind has bought (can be found in table purchase_order_details) but has not sold (in table order_details). The results should look like the table below.

	product_id	product_code	product_name
►	14	NWTDFN-14	Northwind Traders Walnuts
	65	NWTS-65	Northwind Traders Hot Pepper Sauce
	66	NWTS-66	Northwind Traders Tomato Sauce
	77	NWTCO-77	Northwind Traders Mustard
	85	NWTBGM-85	Northwind Traders Brownie Mix