

Tables for Exercise

Que : 1 Create the following tables:

Table Name : Client_master

Description : Use to store information about clients.

Column Name	Data Type	Size	Attributes
Client_no	Varchar	6	Primary Key / First letter must start with 'C'.
Name	Varchar	20	Not Null
Address1	Varchar	30	
Address2	Varchar	30	
City	Varchar	15	
State	Varchar	15	
Pincode	Numeric	6	
Bal_due	Numeric	10,2	

Table Name : product_master

Description : Use to store information about products.

Column Name	Data Type	Size	Attributes
Product_no	Varchar	6	Primary Key / first letter must start with 'P'
Description	Varchar	5	Not Null
Profit_percent	Numeric	5,2	Not Null
Unit_measure	Varchar	10	Not Null
Qty_on_hand	Numeric	8	Not Null
Reorder_lvl	Numeric	8	Not Null
Sell_price	Numeric	8,2	Not Null, Cannot be 0.
Cost_price	Numeric	8,2	Not Null, Cannot be 0.

Table Name : salesman_master

Description : Use to store information about salesman working in the company

Column Name	Data Type	Size	Attributes
Salesman_no	Varchar	6	Primary Key / First letter must start with 'S'
Salesman_name	Varchar	20	Not Null
Address1	Varchar	30	Not Null
Address2	Varchar	30	
City	Varchar	20	
Pincode	Varchar	6	
State	Varchar	20	
Sal_amt	Numeric	8,2	Not Null, cannot be 0
Tgt_to_get	Numeric	6,2	Not Null, cannot be 0
Ytd_sales	Numeric	6,2	Not Null
Remarks	Varchar	60	

Table Name : sales_order

Description : Use to store information about order

Column Name	Data Type	Size	Attributes
S_order_no	Varchar	6	Primary Key / First letter must start with 'O'
S_order_date	Date		
Client_no	Varchar	6	Foreign Key references client_no of client_master table
Dely_addr	Varchar	25	
Salesman_no	Varchar	6	Foreign Key references salesman_no of salesman_master table.
Dely_type	Char	1	Delivery : part (P) / full (F), Default 'F'
Billed_yn	Char	1	
Dely_date	Date		Cannot be less than s_order_date
Order_status	Varchar	10	Values('In Process', 'Fulfilled', 'BackOrder', 'Canceled')

Table Name : sales_order_details

Description : Use to store information about products ordered.

Column Name	Data Type	Size	Attributes
S_order_no	Varchar	6	Primary Key / Foreign Key references s_order_no of sales_order table.
Product_no	Varchar	6	Primary Key / Foreign Key references product_no of product_master table.
Qty_ordered	Numeric	8	
Qty_disp	Numeric	8	
Product_rate	Numeric	10,2	

Table Name : Challan_Header

Description : Use to store information about challans made for the order.

Column Name	Data Type	Size	Attributes
Challan_no	Varchar	6	Primary Key / first two letters must start with 'CH'.
S_order_no	Varchar	6	Foreign key references s_order_no of sales_order table.
Challan_date	Date		Not Null
Billed_yn	Char	1	Values('Y','N'), Default 'N'.

Que : 2 Insert the following data into their respective tables using the SQL insert statement :

1. Data for client_mastr table :

Client_no	Name	City	Pincode	State	Bal_due
C00001	Ivan Bayross	Bombay	400054	Maharashtra	15000
C00002	Vandana Saitwal	Madras	780001	Tamil Nadu	0
C00003	Pramada Jaguste	Bombay	400057	Maharashtra	5000
C00004	Basu Navindgi	Bombay	400056	Maharashtra	0
C00005	Ravi Sreedharan	Delhi	100001		2000
C00006	Rukmini	Bombay	400050	Maharashtra	0

2. Data for Product_master table :

Product_no	Description	Profit Percent	UOM	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price
P00001	1.44 Floppies	5	Piece	100	20	525	500
P03453	Monitors	6	Piece	10	3	12000	11280
P06734	Mouse	5	Piece	20	5	1050	1000
P07865	1.22 Floppies	5	Piece	100	20	525	500
P07868	Keyboards	2	Piece	10	3	3150	3050
P07885	CD Drive	2.5	Piece	10	3	5250	5100
P07965	540 HDD	4	Piece	10	3	8400	8000
P07975	1.44 Drive	5	Piece	10	3	1050	1000
P08865	1.22 Drive	5	Piece	2	3	1050	1000

3. Data for Salesman_master table :

Salesman No	Salesman Name	Add1	Add2	City	Pincode	State	Sal Amt	Tgt_to Get	Ytd Sales	Remarks
S00001	Kiran	A/14	Worli	Bombay	400002	MAH	3000	100	50	Good
S00002	Manish	65	Nariman	Bombay	400001	MAH	3000	200	100	Good
S00003	Ravi	P-7	Bandra	Bombay	400032	MAH	3000	200	100	Good
S00004	Ashish	A/5	Juhu	Bombay	400044	MAH	3000	200	150	Good

4. Data for sales_order table :

S_order_no	S_order_date	Client_no	Dely Type	Bill YN	Salesman No	Dely_date	Order Status
O19001	12-jan-96	C00001	F	N	S00001	20-jan-96	IP
O19002	25-jan-96	C00002	P	N	S00002	27-jan-96	C
O46865	18-feb-96	C00003	F	Y	S00003	20-feb-96	F
O19003	03-apr-96	C00001	F	Y	S00001	07-apr-96	F
O46866	20-may-96	C00004	P	N	S00002	22-may-96	C
O10008	24-may-96	C00005	F	N	S00004	26-may-96	IP

5. Data for sales_order_details table :

S_order_no	Product_no	Qty_ordered	Qty_disp	Product_rate
O19001	P00001	4	4	525
O19001	P07965	2	1	8400
O19001	P07885	2	1	5250
O19002	P00001	10	0	525
O46865	P07868	3	3	3150
O46865	P07885	3	1	5250
O46865	P00001	10	10	525
O46865	P03453	4	4	1050
O19003	P03453	2	2	1050
O19003	P06734	1	1	12000
O46866	P07965	1	0	8400
O46866	P07975	1	0	1050
O10008	P00001	10	5	525
O10008	P07975	5	3	1050

6. Data for challan_header table :

Challan_no	S_order_no	Challan_date	Billed
CH9001	O19001	12-dec-95	Y
CH6865	O46865	12-nov-95	Y
CH3965	O10008	12-oct-95	Y

7. Data for challan_details table :

Challan_no	Product_no	Qty_disp
CH9001	P00001	4
CH9001	P07965	1
CH9001	P07885	1
CH6865	P07868	3
CH6865	P03453	4
CH6865	P00001	10
CH3965	P00001	5
CH3965	P07975	2

Perform the following queries on the basis of these tables.

Single Table Retrieval:

1. Find out the names of all the clients.
2. Print the entire client-master table.
3. Retrieve the list of names and the cities of all the clients.
4. List the various products available from the product_master table.
5. Find the name of all clients having 'a' as the second letter in their names.
6. Find out the clients who stay in a city whose second letter is 'a'.
7. Find the list of all clients who stay in 'Bombay' or city 'Delhi' or city 'Madras'.
8. List all the clients who are located in Bombay.
9. Print the list of clients whose bal_due are greater than value 10000.
10. Print the information from sales_order table of orders placed in the month of January.
11. Display the order information for client_no 'c00001' and 'c00002'.
12. Find the products with description as '1.44 Drive' and '1.22 Drive'.
13. Find the products whose selling price is greater than 2000 and less than or equal to 5000.
14. Find the products whose selling price is more than 1500 and also find the new selling price as original price * 15.
15. Rename the new column in the above query as new_price.
16. Find the products whose cost price is less than 1500.
17. List the products in sorted order of their description.
18. Calculate the square root of the price of the each product.
19. Divide the cost of product '540 HDD' by difference between its price and 100.
20. List the names, city and state of clients not in the state of 'Maharashtra'.
21. List the products_no, description, sell_price of products whose description begin with letter 'M'.
22. List of all orders that were canceled in the month of March.

Set functions and concatenation:

23. Count the total number of orders.
24. Calculate the average price of all the products.
25. Calculate the minimum price of products.
26. Determine the maximum and minimum product prices. Rename the title as max_price and min_price respectively.
27. Count the numbers of products having price greater than or equal to 1500.
28. Find all products whose qty_on_hand is less than recorder level.
29. Print the information of client_master, product_master, sales_order, table in the following format for all the records: -
{cust_name} has placed order {order_no} on {s_order_date}.

Having and Group By:

30. Print the description and total qty sold for each product.
31. Find the value of each product sold.
32. Calculate the average qty sold for each client that has a maximum order value of 15000.00
33. Find out the total sales amount receivable for the month of Jan. it will be the sum total of all the billed orders for the month.
34. Print the information of product_master, order_detail table in the following format for all the records:-
{description} worth RS. {total sales for the products} was sold.
35. Print the information of product_master, order_detail table in the following format for all the records:-
{description} worth Rs. {total sales for the product} was ordered in the month of {s_order_date} in the month format}.

Joins and Correlation :

36. find out the products which has been sold to 'ivan bayross'.
37. Find out the products and their quantities that will have to delivered in the current month.
38. Find the product_no and description of moving products.
39. Find the names of the clients who have purchased 'CD Drive'.
40. List the product_no and s_order_no of customers having qty_ordered less than 5 from the order details Table for the product '1.44 Floppies'.
41. Find the products and their quantities for the orders placed by 'Vandana Saitwal' and 'Ivan Bayross'.
42. Find the products and their quantities for the orders placed by client_no 'C00001' and 'C00002'.

Nested Queries:

43. find the product_no and description of non-moving products.

44. Find the customers name, address1, address2, city and pincode for the client who has placed order no "O19001".
45. Find the client name who have placed orders before the month of may,96.
46. Find out if product "1.44 Drive" is ordered by any client and print client_no, name to whom it was sold.
47. Find the name of clients who have placed ordered worth Rs. 10000 or more.

Query Using Date:

48. Display the order no and day on which client placed their order.
49. Display the month (in alphabets) and date when the order must be delivered.
50. Display s_order_date in the format "dd-month-yy" e.g. 12-February-96.
51. Find the date, fifteen days after todays date.
52. Find the no of days elapsed between todays date and the delivery date of the orders placed by the clients.

Table updations:

53. Change the s_order_Date of client_no 'C00001' to 24/07/96.
54. Change the selling price of '1.44 Drive' to Rs. 1150.00
55. Delete the record with order no 'O19001' from the order table.
56. Delete all the records having delivery date before 10-Jul-96.
57. Change the city of client_no 'C00005' to 'Bombay'.
58. Change the delivery date of order no 'O10008' to 16-08-96.
59. Change the bal_due of client_no 'C00001' to 1000.
60. Change the cost price of '1.22 Floppy Drive' to Rs. 950.00.