SELF REVIEW QUESTIONS

READ THE QUESTIONS AND WRITE DOWN APPROPRIATE SQL STATEMENTS, AS ANSWERS.

1) **Create the tables described below:**

a) **Table Name:** Client_master
Description: Used to store client information.

Column Name	Data Type	Size	Attributes
client_no	varchar2	6	Primary Key / first letter must start with 'C'
name	varchar2	20	Not Null
address1	varchar2	30	
address2	varchar2	30	
city	varchar2	15	
pincode	number	8	
state	varchar2	15	
bal_due	number	10,2	

b) **Table Name:** product_master
Description: Used to store product information.

Column Name	Data Type	Size	Attributes
product_no	varchar2	6	Primary Key / first letter must start with 'P'
description	varchar2	15	Not Null
profit_percent	number	4,2	Not Null
unit_measure	varchar2	10	Not Null
qty_on_hand	number	8	Not Null
reorder_lvl	number	8	Not Null
sell_price	number	8,2	Not Null, cannot be 0.
cost_price	number	8,2	Not Null, cannot be 0.

c) **Table Name:** salesman_master
Description: Used to store salesman working for the company.

Column Name	Data Type	Size	Attributes
salesman_no	varchar2	6	Primary Key / first letter must start with 'S'
salesman_name	varchar2	20	Not Null
address1	varchar2	30	Not Null
address2	varchar2	30	
city	varchar2	20	
pincode	varchar2	8	
state	varchar2	20	
sal_amt	number	8,2	Not Null, cannot be 0
tgt_to_get	number	6,2	Not Null, cannot be 0
ytd_sales	number	6,2	Not Null
remarks	varchar2	60	

d) **Table Name:** sales_order
Description: Used to store client's orders

Column Name	Data Type	Size	Attributes
order_no	varchar2	6	Primary Key / first letter must start with 'O'
order_date	date		
client_no	varchar2	6	Foreign Key references client_no of client_master table
dely_Addr	varchar2	25	
salesman_no	varchar2	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 order_date
order_status	varchar2	10	Values ('In Process', 'Fulfilled', 'BackOrder', 'Cancelled')

e) **Table Name:** sales_order_details
Description: Used to store client's orders with details of each product ordered.

Column Name	Data Type	Size	Attributes
order_no	varchar2	6	Primary Key / Foreign Key references order_no of the sales_order table
product_no	varchar2	6	Primary Key / Foreign Key references product_no of the product_master table.
qty_ordered	number	8	
qty_disp	number	8	
product_rate	number	10,2	

2) Insert the following data into their respective tables:

a) Data for **client_master** 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	Delhi	2000
C00006	Rukmini	Bombay	400050	Maharashtra	0

b) Data for **product_master** table:

product no	description	profit percent	uom	qty on hand	reorder level	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

c) Data for **salesman_master** table:

salesman no	salesman name	address 1	address 2	city	pincode	state	salamt	tgt_to get	ytd sales	remarks
S00001	Kiran	A/14	Worli	Bombay	400002	Maharastra	3000	100	50	Good
S00002	Manish	65	Nariman	Bombay	400001	Maharastra	3000	200	100	Good
S00003	Ravi	P-7	Bandra	Bombay	400032	Maharastra	3000	200	100	Good
S00004	Ashish	A/5	Juhu	Bombay	400044	Maharastra	3500	200	150	Good

d) Data for **sales_order** table:

order no	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	In Process
O19002	25-Jan-96	C00002	P	N	S00002	27-Jan-96	Cancelled
O46865	18-Feb-96	C00003	F	Y	S00003	20-Feb-96	Fulfilled
O19003	03-Apr-96	C00001	F	Y	S00001	07-Apr-96	Fulfilled
O46866	20-May-96	C00004	P	N	S00002	22-May-96	Cancelled
O19008	24-May-96	C00005	F	N	S00004	26-May-96	In Process

c) Data for **sales_order_details** table:

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
O19008	P00001	10	5	525
O19008	P07975	5	3	1050

3) Exercises on computations on table data:

a) Find the names of all clients having 'a' as the second letter in their names.
b) Find out the clients who stay in a city whose second letter is 'a'.
c) Find the list of all clients who stay in 'Bombay' or 'Delhi'
d) Print the list of clients whose bal_due is greater than value 10000.
e) Print the information from sales_order table for orders placed in the month of January.
f) Display the order information for client_no 'C00001' and 'C00002'.
g) Find products whose selling price is greater than 2000 and less than or equal to 5000.
h) Find products whose selling price is more than 1500. Calculate a new selling price as, original selling price * .15. Rename the new column in the above query as new_price.
i) List the names, city and state of clients who are not in the state of 'Maharashtra'.
j) Count the total number of orders.
k) Calculate the average price of all the products.
l) Determine the maximum and minimum product prices. Rename the output as max_price and min_price respectively.
m) Count the number of products having price greater than or equal to 1500.
n) Find all the products whose qty_on_hand is less than reorder level.

4) Exercise on Date Manipulation:

a) Display the order number and day on which clients placed their order.
b) Display the month (in alphabets) and date when the order must be delivered.
c) Display the order_date in the format 'DD-Month-YY'. e.g. 12-February-96.
d) Find the date, 15 days after today's date.
e) Find the number of days elapsed between today's date and the delivery date of the orders placed by the clients.

5) Exercises on using Having and Group By Clauses:

a) Print the description and total qty sold for each product.
b) Find the value of each product sold.
c) Calculate the average qty sold for each client that has a maximum order value of 15000.00.
d) Find out the sum total of all the billed orders for the month of January.

6) Exercises on Joins and Correlation:

a) Find out the products, which have been sold to 'Ivan Bayross'.
b) Find out the products and their quantities that will have to be delivered in the current month.
c) Find the product_no and description of constantly sold i.e. rapidly moving products.
d) Find the names of clients who have purchased 'CD Drive'.
e) List the product_no and order_no of customers having qty_ordered less than 5 from the sales_order_details table for the product '1.44 Floppies'.
f) Find the products and their quantities for the orders placed by 'Ivan Bayross' and 'Vandana Saitwal'.
g) Find the products and their quantities for the orders placed by client_no 'C00001' and 'C00002'.

7) Exercise on Sub-queries:

a) Find the product_no and description of non-moving products i.e. products not being sold.
b) Find the customer name, address1, address2, city and pincode for the client who has placed order no 'O19001'.
c) Find the client names who have placed orders before the month of May'96.
d) Find out if the product '1.44 Drive' has been ordered by any client and print the client_no, name to whom it was sold.
e) Find the names of clients who have placed orders worth Rs. 10000 or more.

8) Exercise on Constructing Sentences with data:

a) Print information from product_master, sales_order_detail tables in the following format for all the records :-
{description} worth Rs. {total sales for the product} was sold.

b) Print information from product_master, sales_order_detail tables in the following format for all the records :-
{description} worth Rs. {total sales for the product} was ordered in the month of {order_date in month format}.

c) Print information from client_master, product_master, sales_order tables in the following format for all the records :-
{cust_name} has placed order {order_no} on {order_date}.