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class : MCA - I.

Sub : DBMS

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Type : practical Lab

Q1) create following tables :

i) client_master

Columnname.	datatype	Size.
clien-no	varchar2	6
name	varchar2	20
address_1	varchar2	30
address_2	varchar2	30
city	varchar2	15
state	varchar2	15
pincode	number	6
bal due	number	10,2

ii) product_master

Columnname.	datatype	Size.
product no	varchar2	
description	varchar2	
profit percent	number	
unit-measure	varchar2	
Qty-on-hand	number	
reorder lv	number	
sellprice	number	
cost-price	number	

Sol:

i) client - master.

```
create table client_master (
    client_no varchar(6) Not Null,
    name varchar(20) Default null,
    address1 varchar(30) Default null,
    address2 varchar(30) Default null,
    city varchar(15) Default null,
    state varchar(15) Default null,
    pincode int Default null,
    bal-due double(10,2) Default null,
);
```

ii) product - master

```
create table product_master (
    product_no varchar(45) Default null,
    description varchar(45) Default null,
    profit-percent int Default null,
    unit-measure varchar(45) Default null,
    qty-on-hand int Default null,
    ReorderLvl int Default null,
    Sellprice double(10,2) Default null,
    Costprice double(10,2) Default null,
);
```


Q2). Insert following data into table.

client_no	Name	City	Pincode	state	Balance due.
0001	Ivan	Bombay	400054	Maharashtra	15000
0002	Vandana	Madras	780001	Tamilnadu	0
0003	Pramada	Bombay	400057	Maharashtra	5000
0004	Raju	Bombay	400056	Maharashtra	0
0005	Ravi	Delhi	100001		2000
0006	Rukmani	Bombay	400050	Maharashtra	0

product no.	Description	profit %	Unit measure	Qty-on hand	purchase Wt	selling price	Cost Price
P00001	1.44 floppies	5	piece	100	20	525	500
P03453	monitors	6	piece	10	3	12000	11200
P06734	mouse	5	piece	20	5	1050	500
P07865	1.22 floppies	5	piece	100	20	525	500
P07868	keyboards	2	piece	10	3	3150	3050
P07885	CD Drive	2.4	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

sol:

i) Insert into client_master

(

client_no,

name,

city,

pincode,

state,

balance

)

values

('0001', 'Ivan', 'Bombay', '400054', 'Maharashtra', '15000'),

('0002', 'Vandana', 'Madras', '780001', 'Tamilnadu', '0'),

('0003', 'Pranada', 'Bombay', 400057, 'Maharashtra', 5000),
 ('0004', 'Basu', 'Bombay', 400056, 'Maharashtra', 0),
 ('0005', 'Ravi', 'Delhi', 100001, '', 2000),
 ('0006', 'Rukmani', 'Bombay', 400050, 'Maharashtra', 0);

ii) Insert into product_master

(
 product_no,
 Description,
 profit_percent,
 unit_measure,
 qty_on_hand,
 Reorderlvl,
 sell_price,
 cost_price

);

values

('p00001', '1.44 Floppies', 5, 'piece', 100, 20, 525, 500),
 ('p03453', 'Monitors', 6, 'piece', 10, 3, 12000, 11200),
 ('p06734', 'Mouse', 5, 'piece', 20, 5, 1050, 500),
 ('p07856', '1.22 Floppies', 5, 'piece', 100, 20, 525, 500),
 ('p07262', 'Keyboards', 2, 'piece', 10, 3, 3150, 3050),
 ('p07885', 'CD Drive', 2, 5, 'piece', 10, 3, 5250, 5100),
 ('p07965', '540 HDD', 4, 'piece', 10, 3, 2400, 2000),
 ('p07975', '1.44 Drive', 5, 'piece', 10, 3, 1050, 1000),
 ('p08865', '1.22 Drive', 5, 'piece', 2, 3, 1050, 1000);

Q3) Answer the following Question.

i) Find out the names of all clients.

Select name from client-master;

name
Ivan
Vandana
pramada
Basu
Ravi
Rukmani

ii) Retrieve the list of names and cities of all the clients.

Select name, city from client-master;

name	city
Ivan	Bombay
Vandana	Madras
pramada	Bombay
Basu	Bombay
Ravi	Delhi
Rukmani	Bombay

iii). List the various products available from the Product-master table.

Select * from product-master;

product no.	Description.	profit percent	unit	qty on hand	Reorder lvl	sell price	cost price.
PO0001	1.44 floppies	5	piece	100	20	1150	500
PO3453	monitors	6	piece	10	3	12000	11200
PO6784	mouse	5	piece	20	5	1050	500
PO7856	1.22 floppies	5	piece	100	20	505	500
PO7868	keyboards	2	piece	10	3	3150	3050
PO7885	CD drive	3	piece	10	3	5250	5100
PO7965	540 HDD	4	piece	10	3	2400	2000
PO7975	1.44 Drive	5	piece	10	3	1050	1000
PO8865	1.22 Drive	5	piece	2	3	1050	1000

iv) List all the clients who are located in Bombay.

Select * from client-master where city like '%Bombay%';

client no	name	address1	address2	city	State	pincode	bal.due
0001	Ivan			Bombay	Mah.	400054	15000
0003	pramoda			Bombay	Mah.	400057	5000
0004	Ragu			Bombay	Mah.	400056	0
0006	Rukmani			Bombay	Mah.	400050	0

v) Display the information for client no 0001 and 0002.

Select * from client-master where client-no in('0001', '0002');

client no	name	address1	address2	city	State	pincode	bal.due
0001	Ivan			Bombay	Maharashtra	400054	15000
0002	vandana			Mumbai	Punjab	780001	0

vi) Find the products with description as '1.44 drive' and '1.22 drive'

Select * from product-master where description in ('1.44 drive', '1.22 drive');

product no.	Description	profit percent	unit measure	Qty-on hand	Reorder ln	Sell price	Cost price
PO7975	1.44 drive	5	piece	10	3	1050	1000
PO8865	1.22 drive	5	piece	2	3	1050	1000

vii). Find all the products whose sell price is greater than 5000.

Select * from product master where sell-price > 5000;

product no	Description	profit percent	unit measure	Qty-on hand	Reorder ln	Sell price	Cost price
PO3453	monitor	6	piece	10	3	12000	11200
PO7825	CD drive	3	piece	10	3	5250	5100
PO7965	5.14 HDD	4	piece	10	3	8400	8000

viii). Find the list of all clients who stay^{ing} in city 'Bombay' or 'Delhi' or 'Madras'

Select * from client master where city = 'Bombay' or city = 'Delhi' or city = 'Madras' ;

client no	name	address1	address2	city	state	Pincode	bal.due
0001	Ivan			Bombay	Maharashtra	400054	15000
0002	Vandana			Madras	Tamilnadu	780001	0
0003	Pramada			Bombay	Maharashtra	400057	5000
0004	Raju			Bombay	Maharashtra	400056	0
0005	Ravi			Delhi		100001	2000
0006	Rukmani			Bombay	Maharashtra	400050	0

ix). Find the product where selling price is greater than 2000 and less than or equal to 5000.

Select * from product master where sell-price between 2000 and 5000 ;

product no.	Description	profit percent	unit measure	qty on hand	Reorder lvl	sell price	cost price
PO7868	keyboards	2	piece	10	3	2150	3050

x) List the name, city and state of clients not in the state of maharashtra.

Select name, city, State from client master where State <> 'Maharashtra' ;

name	city	State
vandana	madras	Tamilnadu
Ravi	delhi	

Q4) write queries for following.

i) change the selling price of 1.44 floppy drive to:

Rs. 1150.

update product master.

set

sell-price = 1150

where

description = '1.44 floppies';

ii) delete the record with client no 0001 from client master table.

delete from client-master where client-no = '0001';

iii) change the city of client no '0005' to Bombay.

update client-master

set

city = 'Bombay'

where

client-no = '0005';

iv) change the bal-due of client no 0004 to 1000.

update client-master.

set

bal-due = 1000.

where

client-no = '0004';

v) Find the products whose selling price is more than 1500 and also find the new selling price at original selling price * 15.

Select:

Sell-price * 15

from:

product-master

where:

sell-price > 1500;

sellprice * 15
180000
47250
78750
126000

vi) Find out the name of all clients having 'a' at the second letter in their names.

Select * from client-master where name like '_a%';

client-no	name	address1	address2	city	state	pincode	bal-due
0002	Randam			Madras	Tamilnadu	780001	0
0004	Basu			Bombay	maharashtra	400056	0
0005	Ravi			Delhi		100001	2000

vii) Find out the clients who stay in a city whose second letter is 'a'.

Select * from client-master where city like '_a%';

client-no	name	address1	address2	city	state	pincode	bal-due
0002	Randam			Madras	Tamilnadu	780001	0

viii). List the product in sorted order of their description.

Select * from product-master order by Description;

product no.	Description	profit percent	unit	Qty on hand	Orders	sell price	Cost price
po8865	1.22 drive	5	piece	2	3	1050	1000
po7856	1.22 floppy	5	piece	100	20	525	500
po7975	1.44 drive	5	piece	10	3	1050	1000
po0001	1.44 floppy	5	piece	100	20	1150	500
po7965	540 HDD	4	piece	10	3	8400	8000
po7885	cd drive	3	piece	10	3	5250	5100
po7868	keyboard	2	piece	10	3	3150	3050
po2453	monitor	6	piece	10	3	12000	11200
po6734	mouse	5	piece	20	5	1050	500

ix). Count the total number of orders.

Select count(*) from client-master;

count(*)	6
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x) Calculate the average price of all product.

Select avg(sell-price) from product-master;

avg(sell-price)	3736.111111
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xii) calculate the minimum price of product.

select min(sell-price) from product-master;

min(sell-price)

525

xii) Determine the maximum and minimum prices. Rename the title as 'max-price' and 'min-price' respectively.

select

min(sell-price) as 'min-price',

max(sell-price) as 'max-price'

from

product-master;

min-price	max-price
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525

max-price

12000

xiii) Count the number of products having price greater than or equal to 1500.

select count(*) from product-master where

sell-price \geq 1500 ;

count(*)

4

Q5). Create the following tables:

i) Salesman - master.

Columnname.	Datatype	Size	Attributes
Salesman no	varchar2	6	primary
sal name	varchar2	20	not null
Address	varchar2		
city	varchar2	20	
State	varchar2	20	
pincode	Number	6	
sal-amt	Number	8,2	not null cannot be 0
tgt-to-get	Number	6,2	not null cannot be 0
Ytd_Sale	Number	6,2	not null cannot be 0
Remarks	varchar2	30	

ii) Sales order.

Columnname.	Datatype	Size	Attributes
S_order_no	varchar2	6	primary
S_order_date	date	6	prim
client_no	varchar2	25	primary refer client
Delv-add.	varchar2	6	
Salesman no	varchar2	6	foreign key ref...
Delv_Type	char	1	Delivery post (P)/full
Billed - yn	char	1	
Delv-date	Date		cannot less than S order
order_status	varchar2	10	value 1p, c, F.

iii) Sales order - details.

Columnname	Datatype	Size	Attributes
S_order_no	varchar2	6	primary Key
product_no	varchar2	6	foreign key product no.
Qty - order	number	8	
Qty - disp	number	8	
product_rate	number	10,2	

sol:

i). Salesman master.

Create table Salesman_master (

Salesman no.	varchar(6)	not null.
sal-name	varchar(20)	not null.
Address.	varchar(50)	null.
city.	varchar(20)	null.
state	varchar(20)	null.
pincode.	int.	null.
sal-amt	decimal(8,2)	not null.
Tgt to get	decimal(6,2)	not null.
Ytd Sale.	decimal(6,2)	not null.
Remark.	varchar(30)	null.

Primary key (Salesman_no)

);

ii). Sales_order.

Create table Sales_order (

S_order-no	varchar(6)	not null.
S_order-date	Date	null.
client-no	varchar(6)	not null.
Dely-add.	varchar(50).	
Salesman-no	varchar(6).	
Dely-type.	char(1)	Default 'F'.
Billed-yn	char(1).	
Dely-date	Date.	
order-status.	varchar(10).	

primary key (S_order-no),

check (S_Order-no Regexp '^[0-9]*')

check (Dely-type in ('F', 'P'))

Check (order_status in ('P', 'F', 'C')),
 Check (only_date >= s_order_date),

Foreign key (client_no)

References client_master (client_no),

Foreign key (salesman_no)

References salesman_master (salesman_no).

);

iii) sales_order_details.

Create table sales_order_details (

s_order_no varchar(6) not null;

product_no varchar(6) not null;

Qty_order int;

Qty_disp int;

product_rate decimal(10,2);

primary key (s_order_no, product_no),

Foreign key (s_order_no)

References sales_order (s_order_no),

Foreign key (product_no)

References product_master (product_no)

);