Aayush Shah

Batch D1

19BCE245

31 January 2021

Practical 1
Creating tables, Inserting data and Do as directed.

a) Create table client (used to store client information) having following attributes

create table client(clientno varchar2(6), name varchar2(20), city varchar2(15), pincode number(8), state varchar2(15), baldue number(10,5));

b) Create table product (used to store product information) having following attributes:

create table product(productno varchar2(6),description varchar2(15), profitpercent number(4,2), unitmeasure varchar2(10), qtyonhand number(8), reorderlvl number(8), sellprice number(8,2), costprice number(8,2));

c) Create table salesman (used to store salesman information working for the company) having following attributes:

create table salesman(salesmanno varchar2(6), salesmanname varchar2(20), address1 varchar2(30), address2 varchar2(30), city varchar2(20), pincode number(8), state varchar2(20), salamt number(8,2), tgtoget number(6,2), ytdsales number(6,2), remarks varchar2(60));

d) Create table sales_order (used to store client's orders) having following attributes:

create table sales_order(orderno varchar2(6), clientno varchar2(6), orderdate date, salesmanno varchar2(6), delaytype char(1), billyn char(1), delaydate date, orderstatus varchar2(10));

e) **Create table sales_order_details (used to store client's orders with details of each product ordered) having following attributes:**

    create table sales_order_details(orderno varchar2(6), productno
varchar2(6), qtyordered number(8), productrate number(10,2));

f) **Retrieve the structure and all the attributes of the tables.**

```
SQL> desc client;
 Name                                    Null?   Type
 --------------------------------------- ------- ---------------------------
 CLIENTNO                                        VARCHAR2(6)
 NAME                                            VARCHAR2(20)
 CITY                                            VARCHAR2(15)
 PINCODE                                         NUMBER(8)
 STATE                                           VARCHAR2(15)
 BALDUE                                          NUMBER(10,5)
```

```
SQL> desc product;
 Name                                    Null?   Type
 --------------------------------------- ------- ---------------------------
 PRODUCTNO                                       VARCHAR2(6)
 DESCRIPTION                                     VARCHAR2(15)
 PROFITPERCENT                                   NUMBER(4,2)
 UNITMEASURE                                     VARCHAR2(10)
 QTYONHAND                                       NUMBER(8)
 REORDERLVL                                      NUMBER(8)
 SELLPRICE                                       NUMBER(8,2)
 COSTPRICE                                       NUMBER(8,2)
```

```
SQL> desc salesman;
 Name                                    Null?   Type
 --------------------------------------- ------- ---------------------------
 SALESMANNO                                      VARCHAR2(6)
 SALESMANNAME                                    VARCHAR2(20)
 ADDRESS1                                        VARCHAR2(30)
 ADDRESS2                                        VARCHAR2(30)
 CITY                                            VARCHAR2(20)
 PINCODE                                         NUMBER(8)
 STATE                                           VARCHAR2(20)
 SALAMT                                          NUMBER(8,2)
 TGTTOGET                                        NUMBER(6,2)
 YTDSALES                                        NUMBER(6,2)
 REMARKS                                         VARCHAR2(60)
```

```
SQL> desc sales_order;
 Name                                    Null?   Type
 ---------------------------------------- -------- ----------------------------
 ORDERNO                                          VARCHAR2(6)
 CLIENTNO                                         VARCHAR2(6)
 Orderdate                                        DATE
 SALESMANNO                                       VARCHAR2(6)
 DELAYTYPE                                        CHAR(1)
 BILLYN                                           CHAR(1)
 DELAYDATE                                        DATE
 ORDERSTATUS                                      VARCHAR2(10)


SQL> desc sales_order_details;
 Name                                    Null?   Type
 ---------------------------------------- -------- ----------------------------
 ORDERNO                                          VARCHAR2(6)
 PRODUCTNO                                        VARCHAR2(6)
 QTYORDERED                                       NUMBER(8)
 PRODUCTRATE                                      NUMBER(10,2)
```

g) Insert the following data into client table :

ClientNo	Name	City	Pincode	State	BalDue
C01	Ivan Bayross	Mumbai	400054	Maharashtra	15000
C02	Mamta Shah	Chennai	780001	Tamil Nadu	0
C03	Chhaya Patel	Mumbai	400057	Maharashtra	5000
C04	Ashni Joshi	Bangalore	560001	Karnataka	0
C05	Harsh Desai	Mumbai	400060	Maharashtra	2000
C06	Deepak Sharma	Mangalore	560050	Karnataka	0

SQL> INSERT INTO client (clientno, name, city, pincode, state, baldue) VALUES('C01','Ivan Bayross','Mumbai',400054,'Maharashtra',15000);

1 row created.

SQL> INSERT INTO client (clientno, name, city, pincode, state, baldue) VALUES ('C02','Mamta Shah','Chennai',780001,'Tamil Nadu',0);

1 row created.

SQL> INSERT INTO client (clientno, name, city, pincode, state, baldue) VALUES ('C03','Chhaya Patel','Mumbai',400057,'Maharashtra',5000);

1 row created.

SQL> INSERT INTO client (clientno, name, city, pincode, state, baldue) VALUES ('C04','Ashni Joshi','Bangalore',560001,'Karnataka',0);

1 row created.

SQL> INSERT INTO client (clientno, name, city, pincode, state, baldue) VALUES ('C05','Harsh Desai','Mumbai',400060,'Maharashtra',2000);

1 row created.

SQL> INTO client (clientno, name, city, pincode, state, baldue) VALUES ('C06','Deepak Sharma','Mangalore',560050,'Karnataka',0);
SP2-0734: unknown command beginning "INTO clien..." - rest of line ignored. SQL>
INSERT INTO client (clientno, name, city, pincode, state, baldue) VALUES ('C06','Deepak Sharma','Mangalore',560050,'Karnataka',0);

1 row created.
SQL> select * from client;

CLIENT	NAME	CITY	PINCODE	STATE	BALDUE
C01	Ivan Bayross	Mumbai	400054	Maharashtra	15000
C02	Mamta Shah	Chennai	780001	Tamil Nadu	0
C03	Chhaya Patel	Mumbai	4000057	Maharashtra	5000

CLIENT	NAME	CITY	PINCODE	STATE	BALDUE
C04	Ashni Joshi	Bangalore	560001	Karnataka	0
C05	Harsh Desai	Mumbai	400060	Maharashtra	2000
C06	Deepak Sharma	Mangalore	560050	Karnataka	0

6 rows selected.

h) Insert the following data into product table :

Product No	Description	Profit Percent	Unit Measure	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	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

SQL> ed

Wrote file afiedt.buf

  1 insert all

  2 into
product(productno,description,profitpercent,unitmeasure,qtyonhand,reorderlvl,sellp
rice,costprice) values ('P00001', '1.44 Floppies', 5, 'Piece', 100, 20, 525, 500)

  3 into
product(productno,description,profitpercent,unitmeasure,qtyonhand,reorderlvl,sellp
rice,costprice) values ('P03453', 'Monitors', 6, 'Piece', 10, 3, 12000, 11200)

  4 into
product(productno,description,profitpercent,unitmeasure,qtyonhand,reorderlvl,sellp
rice,costprice) values ('P06734', 'Mouse', 5, 'Piece', 20, 5, 1050, 500)

  5 into
product(productno,description,profitpercent,unitmeasure,qtyonhand,reorderlvl,sellp
rice,costprice) values ('P07865', '1.22 Floppies', 5, 'Piece', 100, 20, 525, 500)

  6 into
product(productno,description,profitpercent,unitmeasure,qtyonhand,reorderlvl,sellp
rice,costprice) values ('P07868', 'Keyboards', 2, 'Piece', 10, 3, 3150, 3050)

  7* select * from dual

SQL> /

5 rows created.

SQL> select * from product;

PRODUC DESCRIPTION   PROFITPERCENT UNITMEASUR QTYONHAND
REORDERLVL SELLPRICE COSTPRICE

------ -------------- ------------- ---------- ---------- ---------- ---------- ----------
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
SQL> spool off;

i) Insert the following data into salesman table :

SalesmanNo	SalesmanName	Address1	Address2	City	PinCode	State
S01	Aman	A/14	Worli	Mumbai	400002	Maharashtra
S02	Omkar	65	Nariman	Mumbai	400001	Maharashtra
S03	Raj	P-7	Bandra	Mumbai	400032	Maharashtra
S04	Ashish	A/5	Juhu	Mumbai	400044	Maharashtra

SalesmanNo	SalAmt	TgtToGet	YtdSales	Remarks
S01	3000	100	50	Good
S02	3000	200	100	Good
S03	3000	200	100	Good
S04	3500	200	150	Good

SQL> ed

Wrote file afiedt.buf

  1 insert all

  2 into
salesman(salesmanno,salesmanname,address1,address2,city,pincode,state,salamt,tg
ttoget,ytdsales,remarks) values ('S01', 'Aman', 'A/14', 'Worli', 'Mumbai',
400002,'Maharashtra',3000,100,50,'Good')

  3 into
salesman(salesmanno,salesmanname,address1,address2,city,pincode,state,salamt,tg
ttoget,ytdsales,remarks) values ('S02', 'Omkar', '65', 'Nariman', 'Mumbai',
400001,'Maharashtra',3000,200,100,'Good')

  4 into
salesman(salesmanno,salesmanname,address1,address2,city,pincode,state,salamt,tg
ttoget,ytdsales,remarks) values ('S03', 'Raj', 'P-7', 'Bandra', 'Mumbai',
400032,'Maharashtra',3000,200,100,'Good')

  5 into
salesman(salesmanno,salesmanname,address1,address2,city,pincode,state,salamt,tg
ttoget,ytdsales,remarks) values ('S04', 'Ashish', 'A/5', 'Juhu', 'Mumbai',
400044,'Maharashtra',3500,200,150,'Good')

  6* select * from dual

SQL> /

4 rows created.

SQL> select * from salesman;

SALESM SALESMANNAME   ADDRESS1   ADDRESS2   CITY
PINCODE STATE   SALAMT TGTTOGET YTDSALES REMARKS

------ ------------------- ---------------------------- ---------------------------- ------------------- ----------
-------------------- ---------- ---------- ---------- --

S01   Aman   A/14   Worli   Mumbai   400002
Maharashtra   3000   100   50 Good

S02   Omkar   65   Nariman   Mumbai   400001
Maharashtra   3000   200   100 Good

S03   Raj   P-7   Bandra   Mumbai   400032
Maharashtra   3000   200   100 Good

S04   Ashish   A/5   Juhu   Mumbai   400044
Maharashtra   3500   200   150 Good

SQL> spool off;

j) Insert the following data into sales_order table :

OrderNo	ClientNo	OrderDate	Salesman No	DeliveryType	Billyn	DeliveryDate	OrderStatus
O19001	C01	12-01-16	S01	F	N	20-01-16	In Process
O19002	C02	25-01-17	S02	P	N	27-01-17	Cancelled
O46865	C03	18-02-17	S03	F	Y	20-02-17	Fulfilled
O19003	C01	03-04-16	S01	F	Y	07-04-16	Fulfilled
O46866	C04	20-05-16	S02	P	N	22-05-16	Cancelled
O19008	C05	24-05-16	S04	F	N	26-05-16	In Process

SQL> ed

Wrote file afiedt.buf
  1 insert into sales_order
  2* values ('O19001', 'C01', TO_DATE('12/01/2016', 'DD/MM/YYYY'), 'S01', 'F', 'N',
TO_DATE('20/01/2016', 'DD/MM/YYYY'), 'In Process')

SQL> /

1 row created.

SQL> ed

Wrote file afiedt.buf

```
  1  insert into sales_order
  2* values ('019002', 'C02', TO_DATE('25/01/2017', 'DD/MM/YYYY'), 'S02', 'P', 'N',
TO_DATE('27/01/2017', 'DD/MM/YYYY'), 'Cancelled')

SQL> /

1 row created.



SQL> ed
Wrote file afiedt.buf
  1  insert into sales_order
  2* values ('046865', 'C03', TO_DATE('18/02/2017', 'DD/MM/YYYY'), 'S03', 'F', 'Y',
TO_DATE('20/02/2017', 'DD/MM/YYYY'), 'Fullfilled')

SQL> /

1 row created.



SQL> ed
Wrote file afiedt.buf
  1  insert into sales_order
  2* values ('019003', 'C01', TO_DATE('03/04/2016', 'DD/MM/YYYY'), 'S01', 'F', 'Y',
TO_DATE('07/04/2016', 'DD/MM/YYYY'), 'Fullfilled')

SQL> /

1 row created.



SQL> ed
Wrote file afiedt.buf
  1  insert into sales_order
  2* values ('046866', 'C04', TO_DATE('20/05/2016', 'DD/MM/YYYY'), 'S04', 'P', 'N',
TO_DATE('22/05/2016', 'DD/MM/YYYY'), 'Cancelled')

SQL> /

1 row created.



SQL> ed

Wrote file afiedt.buf

  1  insert into sales_order

  2* values ('019008', 'C05', TO_DATE('24/05/2016', 'DD/MM/YYYY'), 'S05', 'F', 'N',
TO_DATE('26/05/2016', 'DD/MM/YYYY'), 'In Process')

SQL> /

1 row created.
```

```
SQL> select * from sales_order;
ORDERN CLIENT ORDERSTA SALESM D B DELAYDAT ORDERSTATU
------ ------ -------- ------ - - -------- ----------
O19001 C01    12-01-16 S01    F N 20-01-16 In Process
O19002 C02    25-01-17 S02    P N 27-01-17 Cancelled
O46865 C03    18-02-17 S03    F Y 20-02-17 Fullfilled
O19003 C01    03-04-16 S01    F Y 07-04-16 Fullfilled
O46866 C04    20-05-16 S04    P N 22-05-16 Cancelled
O19008 C05    24-05-16 S05    F N 26-05-16 In Process
6 rows selected.

SQL> spool off;
```

k) Insert the following data into sales_order_details table :

OrderNo	ProductNo	QtyOrdered	ProductRate
O19001	P00001	4	525
O19001	P07965	2	8400
O19001	P07885	2	5250
O19002	P00001	10	525
O46865	P07868	3	3150

```
SQL> ed

Wrote file afiedt.buf

  1  insert all
  2  into sales_order_details values ('O19001', 'P00001', 4, 525)
  3  into sales_order_details values ('O19001', 'P07965', 2, 8400)
  4  into sales_order_details values ('O19001', 'P07885', 2, 5250)
  5  into sales_order_details values ('O19002', 'P00001', 10, 525)
  6  into sales_order_details values ('O46865', 'P07868', 3, 3150)
  7* select * from dual
SQL> /
5 rows created.



SQL> select * from sales_order_details;

ORDERN PRODUC QTYORDERED PRODUCTRATE
------ ------ ---------- -----------
O19001 P00001     4       525
O19001 P07965     2       8400
O19001 P07885     2       5250
O19002 P00001    10       525
O46865 P07868     3       3150

SQL> spool off;
```

1) Do as directed.

1. List all the clients who are located in Mumbai or Chennai. (Use logical operator)

SQL> select * from client where city='Mumbai' or city='Chennai';

CLIENT	NAME	CITY	PINCODE	STATE	BALDUE
C01	Ivan Bayross	Mumbai	400054	Maharashtra	15000
C02	Mamta Shah	Chennai	780001	Tamil Nadu	0
C03	Chhaya Patel	Mumbai	4000057	Maharashtra	5000
C05	Harsh Desai	Mumbai	400060	Maharashtra	2000

SQL> spool off;

2. Find the names of salesman who have a salary equal to Rs. 3000.

SQL> select salesmanname from salesman where salamt=3000;

SALESMANNAME

Aman
Omkar
Raj

SQL> spool off;

3. List the salesman who are associated with orders given.

SQL> select orderno,salesmanno from sales_order;

ORDERN SALESM
------ ------
O19001 S01
O19002 S02
O46865 S03
O19003 S01
O46866 S04
O19008 S05

6 rows selected.

4. List the orders whose status is either cancelled or fulfilled. (Use IN)

SQL> select * from sales_order where orderstatus IN ('Cancelled','Fullfilled');

ORDERN	CLIENT	ORDERSTA	SALESM	D	B	DELAYDAT	ORDERSTATU
O19002	C02	25-01-17	S02	P	N	27-01-17	Cancelled
O46865	C03	18-02-17	S03	F	Y	20-02-17	Fullfilled
O19003	C01	03-04-16	S01	F	Y	07-04-16	Fullfilled
O46866	C04	20-05-16	S04	P	N	22-05-16	Cancelled

SQL> spool off;

5. *List products whose selling price is greater than 500 and less than or equal to 750. (Use logical as well as BETWEEN operator). Notice the difference.*

SQL> select * from product where sellprice>500 AND sellprice<=750;

```
PRODUC DESCRIPTION    PROFITPERCENT UNITMEASUR  QTYONHAND
REORDERLVL  SELLPRICE  COSTPRICE


------ --------------- ------------- ---------- ---------- ---------- ---------- ----------
P00001 1.44 Floppies        5 Piece        100        20      525        500
P07865 1.22 Floppies        5 Piece        100        20      525        500
```

SQL> select * from product where sellprice BETWEEN 501 AND 750;

```
PRODUC DESCRIPTION    PROFITPERCENT UNITMEASUR  QTYONHAND
REORDERLVL  SELLPRICE  COSTPRICE


------ --------------- ------------- ---------- ---------- ---------- ---------- ----------
P00001 1.44 Floppies        5 Piece        100        20      525        500
P07865 1.22 Floppies        5 Piece        100        20      525        500
```

SQL> spool off;

6. *List the names of all clients have 'a' as the second letter in their names.*

SQL> select name from client where name LIKE '_a%';

```
NAME
--------------------
Mamta Shah
Harsh Desai
```

SQL> spool off;

7. *List the products whose selling price is more than 500 with the new selling price calculated as original selling price plus 15%.*

SQL> select * from product where (sellprice*1.15)>500;

```
PRODUC DESCRIPTION     PROFITPERCENT UNITMEASUR  QTYONHAND
REORDERLVL  SELLPRICE  COSTPRICE


------ --------------- ------------- ---------- ---------- ---------- ---------- ----------
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
```

SQL> spool off;

8. *List the name, city and state of clients who are not in the state of "Maharashtra".*

SQL> select name,city,state from client where NOT state='Maharashtra';

```
NAME              CITY          STATE
----------------- ------------- -------------
Mamta Shah        Chennai       Tamil Nadu
Ashni Joshi       Bangalore     Karnataka
Deepak Sharma     Mangalore     Karnataka
```

SQL> spool off;

9. List the products with highest to lowest selling price.

SQL> select * from product ORDER BY sellprice DESC;

```
PRODUC DESCRIPTION    PROFITPERCENT UNITMEASUR  QTYONHAND
REORDERLVL  SELLPRICE  COSTPRICE

------ -------------- ------------- ---------- ---------- ---------- ---------- ----------
PO3453 Monitors       6 Piece        10     3     12000     11200
PO7868 Keyboards      2 Piece        10     3     3150      3050
PO6734 Mouse          5 Piece        20     5     1050      500
PO7865 1.22 Floppies  5 Piece        100    20    525       500
PO0001 1.44 Floppies  5 Piece        100    20    525       500
```

SQL> spool off;

10. List the orders ordered in the year 2017.

SQL> select * from sales_order where extract(year from orderdate)=2017;

```
ORDERN CLIENT ORDERSTA SALESM D B DELAYDAT ORDERDATE
------ ------ -------- ------ - - -------- ----------
O19002 CO2    25-01-17 SO2    P N 27-01-17 Cancelled
O46865 CO3    18-02-17 SO3    F Y 20-02-17 Fullfilled
```