

## **DBMS PRACTICAL NO.2 - (CONSTRAINTS)**

AIM:

DISCRIPTION:

1. NOT NULL :- - create table table\_name

(column datatype(size) NOT NULL);

2. UNIQUE KEY - create table table\_name

(column datatype (size) UNIQUE KEY  
(COLUMN1,COLUMN2);

3. PRIMARY KEY :- create table table\_name

(column datatype (size) PRIMARY KEY  
(COLUMN1,COLUMN2);

FOREIGN KEY :- - create table table\_name

(column datatype (size) FOREIGN KEY REFERENCE  
table\_name (COLUMN1));

4. DEFAULT:- create table table\_name

( column datatype (size) DEFAULT (XYZ));

5. CHECK :-- create table table\_name

( column datatype(size) CHECK (XYZ));

1. TABLE NAME :- PRODUCT\_MASTER10

COLUMN NAME	DATA TYPE	SIZE	DEFAULT	ATTRIBUTES
PRODUCTNO	VARCHAR2	6		PRIMARY/FIRST LETTER WITH 'P'
DESCRIPTION	VARCHAR2	15		NOTNULL
PROFITPERCENT	NUMBER	4,2		NOTNULL
UNITMEASURE	VARCHAR2	10		NOTNULL
QTYONHAND	NUMBER	8		NOTNULL
REORDERLVL	NUMBER	8		NOTNULL
SELLPRICE	NUMBER	8,2		NOTNULL,CANNOT BE 0
COSTPRICE	NUMBER	8,2		NOTNULL,CANNOT BE 0

PRODUCTN	DESCRIPTIO	PROFIT	UNITME	QTYONH	REORDE	SEL	COSTPR
----------	------------	--------	--------	--------	--------	-----	--------

O	N	PERCENT	ASUREMENT	AND	RLVL	LPRI CE	ICE
P00001	T shirts	5	piece	200	50	350	250
P0345	shirts	6	piece	150	50	500	350
P06734	cotton jeans	5	piece	100	20	600	450
P07865	jeans	5	piece	100	20	750	500
P07868	trousers	2	piece	150	50	850	550
P07885	Pull overs	2.5	piece	80	30	700	450
P07965	Denimshirt	4	piece	100	40	350	250
P07975	Lycra tops	5	piece	70	30	300	175
P08865	skirts	5	piece	75	30	450	300

create table PRODUCT\_MASTER10

(

PRODUCTNO varchar2(6) primary key check(PRODUCTNO like 'P%'),

DESCRIPTION varchar2(15) not null,

PROFITPERCENT number(4,2) not null,

UNITMEASURE varchar2(10) not null,

QTYONHAND number(8) not null,

REORDERLVL number(8) not null,

SELLPRICE number(8,2) not null check(SELLPRICE > 0),

COSTPRICE number(8,2) not null check(SELLPRICE > 0)

);

```
insert into PRODUCT_MASTER10 values ('P00001','T-Shirts',5,'Piece',200,50,350,250);
```

```
insert into PRODUCT_MASTER10 values ('P0345','Shirts',6,'Piece',150,50,500,350);
```

```
insert into PRODUCT_MASTER10 values ('P06734','Cotton Jeans',5,'Piece',100,20,600,450);
```

```
insert into PRODUCT_MASTER10 values ('P07865','Jeans',5,'Piece',100,20,750,500);
```

```
insert into PRODUCT_MASTER10 values('P07868','Trousers',2,'Piece',150,50,850,550);
```

```
insert into PRODUCT_MASTER10 values ('P07885','Pull Overs',2.5,'Piece',80,30,700,450);
```

```
insert into PRODUCT_MASTER10 values ('P07965','Denim Shirts',4,'Piece',100,40,350,250);
```

```
insert into PRODUCT_MASTER10 values ('P07975','Lycra Tops',5,'Piece',70,30,300,175);
```

```
insert into PRODUCT_MASTER10 values('P08865','Skirts',5,'Piece',75,30,450,300);
```

```
select*from PRODUCT_MASTER10;
```

OUTPUT :-

```

SQL> create table PRODUCT_MASTER10
2 (
3  PRODUCTNO varchar2(6) primary key ,check(PRODUCTNO like 'P%'),
4  DESCRIPTION varchar2(15) not null,
5  PROFITPERCENT number(4,2) not null,
6  UNITMEASURE varchar2(10) not null,
7  QTYONHAND number(8) not null,
8  REORDERLVL number(8) not null,
9  SELLPRICE number(8,2) not null ,check(SELLPRICE > 0),
10 COSTPRICE number(8,2) not null ,check(SELLPRICE > 0)
11 );

Table created.

SQL> insert into PRODUCT_MASTER10 values ('P00001','T-Shirts',5,'Piece',200,50,350,250);
1 row created.

SQL> insert into PRODUCT_MASTER10 values ('P0345','Shirts',6,'Piece',150,50,500,350);
1 row created.

SQL> insert into PRODUCT_MASTER10 values ('P06734','Cotton Jeans',5,'Piece',100,20,600,450);
1 row created.

SQL> insert into PRODUCT_MASTER10 values ('P07865','Jeans',5,'Piece',100,20,750,500);
1 row created.

SQL> insert into PRODUCT_MASTER10 values('P07868','Trousers',2,'Piece',150,50,850,550);
1 row created.

SQL> insert into PRODUCT_MASTER10 values ('P07885','Pull Overs',2.5,'Piece',80,30,700,450);
1 row created.

SQL> insert into PRODUCT_MASTER10 values ('P07965','Denim Shirts',4,'Piece',100,40,350,250);
1 row created.

SQL> insert into PRODUCT_MASTER10 values ('P07975','Lycra Tops',5,'Piece',70,30,300,175);
1 row created.

SQL> insert into PRODUCT_MASTER10 values('P08865','Skirts',5,'Piece',75,30,450,300);
1 row created.

```

PRODUC	DESCRIPTION	PROFITPERCENT	UNITMEASUR	QTYONHAND	REORDERLVL	SELLPRICE
	COSTPRICE					
P00001	T-Shirts 250		5 Piece	200	50	350

P0345	Shirts 350		6 Piece	150	50	500
P06734	Cotton Jeans 450		5 Piece	100	20	600

PRODUC	DESCRIPTION	PROFITPERCENT	UNITMEASUR	QTYONHAND	REORDERLVL	SELLPRICE
	COSTPRICE					
P07865	Jeans 500		5 Piece	100	20	750
P07868	Trousers 550		2 Piece	150	50	850
P07885	Pull Overs 450		2.5 Piece	80	30	700

PRODUC	DESCRIPTION	PROFITPERCENT	UNITMEASUR	QTYONHAND	REORDERLVL	SELLPRICE
	COSTPRICE					
P07965	Denim Shirts 250		4 Piece	100	40	350
P07975	Lycra Tops 175		5 Piece	70	30	300
P08865	Skirts 300		5 Piece	75	30	450

9 rows selected.

## 2. TABLE NAME :-SALESMAN\_MASTER18

COLUMN NAME	DATA TYPE	SIZE	DEFAULT	ATTRIBUTES
SALESMANNO	VARCHAR2	6		PRIMARY/FIRST LETTER WITH 'S'
SALESMANNAME	VARCHAR2	20		NOTNULL
ADDRESS1	VARCHAR2	30		NOTNULL
ADDRESS2	VARCHAR2	30		NOTNULL
CITY	VARCHAR2	20		
PINCODE	NUMBER	8		
STATE	VARCHAR2	20		
SALAMT	NUMBER	8,2		NOTNULL
TGTTGET	NUMBER	6,2		NOTNULL
YTDSALES	NUMBER	6,2		NOTNULL
REMARKS	VARCHAR2	60		

SALESMANNO	SALESMANNAME	ADDRESS1	ADDRESS2	CITY	PINCODE	STATE	SALAMT	TGTOGET	YTDSALES
S00001	Aman	A/14	WORLI	MUMBAI	400002	MAHARASHTRA	3000	100	50
S00002	Omkar	65	NARIMAN	MUMBAI	400001	MAHARASHTRA	3000	200	100
S00003	Raj	P-7	BANDRA	MUMBAI	400032	MAHARASHTRA	3000	200	100
S00004	Ashish	A/5	JUHU	MUMBAI	400044	MAHARASHTRA	3500	200	150

create table SALESMAN\_MASTER18

(

SALESMANNO varchar2(6) primary key check(SALESMANNO LIKE 'S%'),

SALESMAN\_NAME char(20) not null,

ADDRESS1 varchar2(30) not null,

ADDRESS2 varchar2(30) not null,

CITY varchar2(20),

PINODE number(8),

STATE varchar2(20),

```
SALAMT number(8,2) not null,  
TGTTGET number(6,2) not null,  
YTDSALES number(6,2) not null,  
REMARKS varchar2(60)  
);
```

```
insert into SALESMAN_MASTER18 values ('S00001', 'Aman', 'A/14',  
'Worli', 'Mumbai', 400002, 'Maharashtra', 3000, 100, 50, 'Good');
```

```
insert into SALESMAN_MASTER18 values ('S00002', 'Omkar', 65,  
'Nariman', 'Mumbai', 400001, 'Maharashtra', 3000, 200, 100,  
'Good');
```

```
insert into SALESMAN_MASTER18 values ('S00003', 'Raj', 'P-5',  
'Bandra', 'Mumbai', 400032, 'Maharashtra', 3000, 200, 100, 'Good');
```

```
insert into SALESMAN_MASTER18 values ('S00004', 'Ashish', 'A/5',  
'Juhu', 'Mumbai', 400044, 'Maharashtra', 3500, 200, 150, 'Good');
```

```
select*from SALESMAN_MASTER18;
```

OUTPUT :-



```

SQL> create table SALESMAN_MASTER18
2  (
3  SALESMANNO varchar2(6) primary key check(SALESMANNO LIKE 'S%'),
4  SALESMAN_NAME char(20) not null,
5  ADDRESS1 varchar2(30) not null,
6  ADDRESS2 varchar2(30) not null,
7  CITY varchar2(20),
8  PINODE number(8),
9  STATE varchar2(20),
10 SALAMT number(8,2) not null,
11 TGTTOGET number(6,2) not null,
12 YTDsales number(6,2) not null,
13 REMARKS varchar2(60)
14 );

```

Table created.

```

SQL> insert into SALESMAN_MASTER18 values ('S00001', 'Aman', 'A/14', 'Worli', 'Mumbai', 400002, 'Mah
arashtra', 3000, 100, 50, 'Good');

```

1 row created.

```

SQL> insert into SALESMAN_MASTER18 values ('S00002', 'Onkar', 65, 'Nariman', 'Mumbai', 400001, 'Maha
rashtra', 3000, 200, 100, 'Good');

```

1 row created.

```

SQL> insert into SALESMAN_MASTER18 values ('S00003', 'Raj', 'P-5', 'Bandra', 'Mumbai', 400032, 'Maha
rashtra', 3000, 200, 100, 'Good');

```

1 row created.

```

SQL> insert into SALESMAN_MASTER18 values ('S00004', 'Ashish', 'A/5', 'Juhu', 'Mumbai', 400044, 'Mah
arashtra', 3500, 200, 150, 'Good');

```

1 row created.

SALESH SALESMAN_NAME	ADDRESS1			
ADDRESS2	CITY			PINCODE
STATE	SALAMT	TGTTGET	YTDsales	
REMARKS				
S00001 Anan Worli Maharashtra Good	A/14 Mumbai	100	50	400002
	3000			
SALESH SALESMAN_NAME	ADDRESS1			
ADDRESS2	CITY			PINCODE
STATE	SALAMT	TGTTGET	YTDsales	
REMARKS				
S00002 Onkar Marina Maharashtra Good	65 Mumbai	200	100	400001
	3000			
SALESH SALESMAN_NAME	ADDRESS1			
ADDRESS2	CITY			PINCODE
STATE	SALAMT	TGTTGET	YTDsales	
REMARKS				
S00003 Raj Bandra Maharashtra Good	P-5 Mumbai	200	100	400032
	3000			
SALESH SALESMAN_NAME	ADDRESS1			
ADDRESS2	CITY			PINCODE
STATE	SALAMT	TGTTGET	YTDsales	
REMARKS				
S00004 Ashish Juhu Maharashtra	A/5 Mumbai	200	150	400044
	3500			

### 3. TABLE NAME :- SALES\_ORDER30

COLUMN NAME	DATA TYPE	SIZE	DEFAULT	ATTRIBUTES
ORDERNO	VARCHAR2	6		PRIMARY/FIRST LETTER WITH 'O'
CLIENTNO	VARCHAR2	6		NOTNULL
ORDERDATE	DATE			NOT NULL
SALESMANNO	VARCHAR2	6		NOTNULL
DELYTYPE	CHAR	1	F	
BILLYN	CHAR	1		
DELYDATE	DATE			
ORDERSTATUS	VARCHAR2	10		

ORDERNO	CLIENTNO	ORDERDATE	SALESMANNO	DELYTYPE	BILLYN	DELYDATE
019001	C00001	12-JUNE-04	S00001	F	N	20-JULY-02
019002	C00002	25-JUNE-04	S00002	P	N	27-JUNE-02
046865	C00003	18-FEB-04	S00003	F	Y	20-FEB-02
019003	C00001	03-APR-04	S00001	F	Y	07-APR-02

046866	C00004	20-MAY-04	S00002	P	N	22-MAY-02
019008	C00005	24-MAY-04	S00004	F	N	26-JULY-02

```
create table SALES_ORDER30
(
ORDERNO varchar2(6) primary key check(ORDERNO LIKE 'O%'),
CLIENTNO varchar2(6) not null,
ORDERDATE date not null,
SALESMANNO varchar2(6) not null,
DELYTYPE char(1) DEFAULT 'F',
BILLYN char(1),
DELYDATE Date,
ORDERSTATUS varchar2(10)
);
```

```
insert into SALES_ORDER30 values ('019001', 'C00001', '12-JUNE-04', 'S00001', 'F', 'N', '20-JULY-02', 'INPROCESS');

insert into SALES_ORDER30 values ('019002', 'C00002', '25-JUNE-04', 'S00002', 'P', 'N', '27-JUNE-02', 'CANCELLED');

insert into SALES_ORDER30 values ('046865', 'C00003', '18-FEB-04', 'S00003', 'F', 'Y', '20-FEB-02', 'FULFILLED');
```

insert into SALES\_ORDER30 values ('019003','C00001', '03-APR-04',  
'S00001', 'F', 'Y', '07-APR-02', 'FULFILLED');

insert into SALES\_ORDER30 values ('046866', 'C00004', '20-MAY-  
04', 'S00002', 'P', 'N', '22-MAY-02', 'CANCELLED');

insert into SALES\_ORDER30 values ('019008', 'C00005', '24-MAY-  
04', 'S00004', 'F', 'N', '26-JULY-02', 'INPROCESS');

select\*from SALES\_ORDER30;

OUTPUT :-

```
SQL> create table SALES_ORDER30
 2 (
 3 ORDERNO varchar2(6) primary key check(ORDERNO LIKE '0%'),
 4 CLIENTNO varchar2(6) not null,
 5 ORDERDATE date not null,
 6 SALESMANNO varchar2(6) not null,
 7 DELVTYPE char(1) DEFAULT 'F',
 8 BILLYN char(1),
 9 DELVDATE Date,
10 ORDERSTATUS varchar2(10)
11 );

Table created.

SQL> insert into SALES_ORDER30 values ('019001', 'C00001', '12-JUNE-04', 'S00001', 'N', '20-JULY-02',
'INPROCESS');
insert into SALES_ORDER30 values ('019001', 'C00001', '12-JUNE-04', 'S00001', 'N', '20-JULY-02', 'IN
*
ERROR at line 1:
ORA-00947: not enough values

SQL> insert into SALES_ORDER30 values ('019001', 'C00001', '12-JUNE-04', 'S00001', 'F', 'N', '20-JULY
-02', 'INPROCESS');

1 row created.

SQL> insert into SALES_ORDER30 values ('019002', 'C00002', '25-JUNE-04', 'S00002', 'P', 'N', '27-JUN
E-02', 'CANCELLED');

1 row created.

SQL> insert into SALES_ORDER30 values ('046865', 'C00003', '18-FEB-04', 'S00003', 'F', 'Y', '20-FEB-
02', 'FULFILLED');

1 row created.

SQL> insert into SALES_ORDER30 values ('019003', 'C00001', '03-APR-04', 'S00001', 'F', 'Y', '07-APR-0
2', 'FULFILLED');

1 row created.

SQL> insert into SALES_ORDER30 values ('046866', 'C00004', '20-MAY-04', 'S00002', 'P', 'N', '22-MAY-
02', 'CANCELLED');

1 row created.

SQL> insert into SALES_ORDER30 values ('019008', 'C00005', '24-MAY-04', 'S00004', 'F', 'N', '26-JULY
-02', 'INPROCESS');

1 row created.
```

```

ORDERNO CLIENT ORDERDATE SALESMAN D B DELYDATE ORDERSTATUS
-----
019001 C00001 12-JUN-04 S00001 F N 20-JUL-02 INPROCESS
019002 C00002 25-JUN-04 S00002 P N 27-JUN-02 CANCELLED
046865 C00003 18-FEB-04 S00003 F Y 20-FEB-02 FULFILLED
019003 C00001 03-APR-04 S00001 F Y 07-APR-02 FULFILLED
046866 C00004 20-MAY-04 S00002 P N 22-MAY-02 CANCELLED
019008 C00005 24-MAY-04 S00004 F N 26-JUL-02 INPROCESS

```

6 rows selected.

#### 4. TABLE NAME :- SALES\_ORDER\_DETAILS10

COLUMN NAME	DATA TYPE	SIZE	DEFAULT	ATTRIBUTES
ORDERNO	VARCHAR2	6		FOREIGN KEY REFERENCES ORDERNO FROMSALES_ORDER10
PRODUCTNO	VARCHAR2	6		
QTYORDERED	NUMBER	8		
QTYDISP	NUMBER	8		
PRODUCTRTE	NUMBER	10,2		

--	--	--	--	--

ORDERNO	PRODUCTNO	QTYORDERED	QTYDISP	PRODUCTRT
019001	P00001	4	4	525
019001	P07965	2	1	8400
019001	P07885	2	1	5250
019002	P00001	10	0	525
046865	P07868	3	3	3150
046865	P07885	3	1	5250
046865	P00001	10	10	525
046865	P0345	4	4	1050
019003	P03453	2	2	1050
019003	P06734	1	1	12000
046866	P07965	1	0	8400
046866	P07975	1	0	1050
019008	P00001	10	5	525
019008	P07975	5	3	1050

create table SALES\_ORDER\_DETAILS10

(

```
ORDERNO varchar2(6) constraint c4 references SALES_ORDER30
(ORDERNO),
PRODUCTNO varchar2(6),
QTYORDERED number(8),
QTYDISP number(8),
PRODUCTRATE number(10,2)
);
```

```
insert into SALES_ORDER_DETAILS10 values('O19001', 'P00001', 4,
4, 525);
```

```
insert into SALES_ORDER_DETAILS10 values('O19001', 'P07965', 2,
1, 8400);
```

```
insert into SALES_ORDER_DETAILS10 values('O19001', 'P07885', 2,
1, 5250);
```

```
insert into SALES_ORDER_DETAILS10 values('O19002', 'P00001',
10, 0, 525);
```

```
insert into SALES_ORDER_DETAILS10 values('O46865', 'P07868', 3,
3, 3150);
```

```
insert into SALES_ORDER_DETAILS10 values('O46865', 'P07885', 3,
1, 5250);
```

```
insert into SALES_ORDER_DETAILS10 values('O46865', 'P00001',
10, 10, 525);
```

```
insert into SALES_ORDER_DETAILS10 values('O46865', 'P0345', 4, 4,
1050);
```

```
insert into SALES_ORDER_DETAILS10 values('O19003', 'P03453', 2,
2, 1050);
```



```
insert into SALES_ORDER_DETAILS10 values('O19003', 'P06734', 1,
1, 12000);
```

```
insert into SALES_ORDER_DETAILS10 values('O46866', 'P07965', 1,
0, 8400);
```

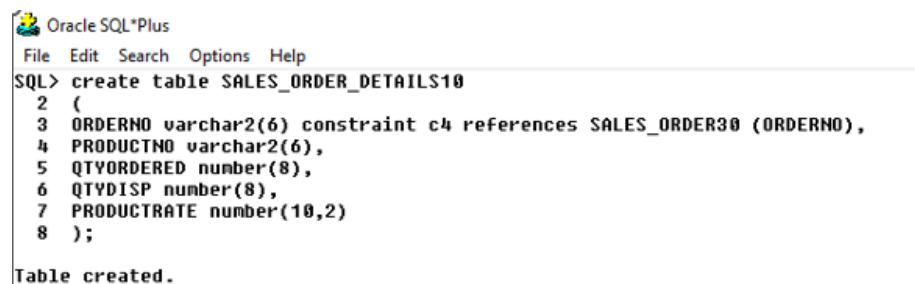
```
insert into SALES_ORDER_DETAILS10 values('O46866', 'P07975', 1,
0, 1050);
```

```
insert into SALES_ORDER_DETAILS10 values('O19008', 'P00001', 10,
5, 525);
```

```
insert into SALES_ORDER_DETAILS10 values('O19008', 'P07975', 5,
3, 1050);
```

```
select*from SALES_ORDER_DETAILS10;
```

OUTPUT :

A screenshot of the Oracle SQL\*Plus command-line interface. The window title is "Oracle SQL\*Plus". The menu bar includes "File", "Edit", "Search", "Options", and "Help". The command prompt shows the creation of a table named "SALES\_ORDER\_DETAILS10" with the following structure:

```
SQL> create table SALES_ORDER_DETAILS10
2  (
3  ORDERNO varchar2(6) constraint c4 references SALES_ORDER30 (ORDERNO),
4  PRODUCTNO varchar2(6),
5  QTYORDERED number(8),
6  QTYDISP number(8),
7  PRODUCTRATE number(10,2)
8  );
```

The output of the command is "Table created.".

```

SQL> insert into SALES_ORDER_DETAILS10 values('019001', 'P00001', 4, 4, 525);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('019001', 'P07965', 2, 1, 8400);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('019001', 'P07885', 2, 1, 5250);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('019002', 'P00001', 10, 0, 525);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('046865', 'P07868', 3, 3, 3150);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('046865', 'P07885', 3, 1, 5250);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('046865', 'P00001', 10, 10, 525);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('046865', 'P0345', 4, 4, 1050);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('019003', 'P03453', 2, 2, 1050);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('019003', 'P06734', 1, 1, 12000);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('046866', 'P07965', 1, 0, 8400);
1 row created.
SQL> insert into SALES_ORDER_DETAILS10 values('046866', 'P07975', 1, 0, 1050);
1 row created.

```

```
SQL> select*from SALES_ORDER_DETAILS10;
```

ORDERN	PRODUC	QTYORDERED	QTYDISP	PRODUCTRATE
019001	P00001	4	4	525
019001	P07965	2	1	8400
019001	P07885	2	1	5250
019002	P00001	10	0	525
046865	P07868	3	3	3150
046865	P07885	3	1	5250
046865	P00001	10	10	525
046865	P0345	4	4	1050
019003	P03453	2	2	1050
019003	P06734	1	1	12000
046866	P07965	1	0	8400

ORDERN	PRODUC	QTYORDERED	QTYDISP	PRODUCTRATE
046866	P07975	1	0	1050
019008	P07975	5	3	1050

13 rows selected.