

```
SQL> SET ECHO ON
SQL> SET FEEDBACK ON
```

_____QRY-01_____

```
SQL> CREATE TABLE INV_CUSTOMER AS
(SELECT I.INV_NUM AS QUOTE_ID,I.INV_DATE AS QUOTE_DT,(C.FNAME||' '||C.LNAME) AS C_NAME FROM
INVOICE I JOIN CUSTOMER C ON I.C_CODE=C.C_CODE WHERE 1=0);
```

Table INV_CUSTOMER created.

```
SQL> ALTER TABLE INV_CUSTOMER ADD PRIMARY KEY(QUOTE_ID);
```

Table INV_CUSTOMER altered.

```
SQL> DESC INV_CUSTOMER;
```

Name	Null	Type
QUOTE_ID	NOT NULL	NUMBER(4)
QUOTE_DT	NOT NULL	DATE
C_NAME		VARCHAR2(21)

```
SQL> SELECT CONSTRAINT_NAME,CONSTRAINT_TYPE FROM USER_CONSTRAINTS WHERE TABLE_NAME LIKE
'INV_CUSTOMER';
```

CONSTRAINT_NAME	C
SYS_C0011207	C
SYS_C0011208	C
SYS_C0011209	P

3 rows selected

```
SQL> INSERT INTO INV_CUSTOMER (QUOTE_ID,QUOTE_DT,C_NAME)
(SELECT INV_NUM,INV_DATE,FNAME||' '||LNAME FROM INVOICE JOIN CUSTOMER ON
INVOICE.C_CODE=CUSTOMER.C_CODE);
```

9 rows inserted.

```
SQL> SELECT * FROM INV_CUSTOMER;
```

QUOTE_ID	QUOTE_DT	C_NAME
1008	17-01-12	Elena Kurtis
1005	17-01-12	Elena Kurtis
1002	16-01-12	Elena Kurtis
1003	16-01-12	Kathy Smith
1006	17-01-12	Bill Johnson
1001	16-01-12	Bill Johnson
1007	17-01-12	Julia Samuels
1004	17-01-12	Ming Lee
1009	22-06-13	GRACE DAWSON

9 rows selected

```
SQL> CREATE OR REPLACE VIEW INV_CUSTOMER_VW AS (SELECT I.INV_NUM AS QUOTE_ID,I.INV_DATE AS
QUOTE_DT,(C.FNAME||' '||C.LNAME) AS C_NAME FROM
INVOICE I JOIN CUSTOMER C ON I.C_CODE=C.C_CODE WHERE 1=0);
```

View INV_CUSTOMER_VW created.

```
SQL> INSERT INTO INV_CUSTOMER_VW (QUOTE_ID,QUOTE_DT,C_NAME)
(SELECT INV_NUM,INV_DATE,FNAME||' '||LNAME FROM INVOICE JOIN CUSTOMER ON
INVOICE.C_CODE=CUSTOMER.C_CODE);
```

Error starting at line : 23 in command -

```
INSERT INTO INV_CUSTOMER_VW (QUOTE_ID,QUOTE_DT,C_NAME)
(SELECT INV_NUM,INV_DATE,FNAME||' '||LNAME FROM INVOICE JOIN CUSTOMER ON
INVOICE.C_CODE=CUSTOMER.C_CODE)
```

Error at Command Line : 23 Column : 48

Error report -

SQL Error: ORA-01733: virtual column not allowed here
01733. 00000 - "virtual column not allowed here"

*Cause:

*Action:

```
SQL> INSERT INTO INV_CUSTOMER_VW
VALUES (1011,'Jagat Raman','12-Jan-1992');
```

Error starting at line : 26 in command -

```
INSERT INTO INV_CUSTOMER_VW
VALUES (1011,'Jagat Raman','12-Jan-1992')
```

Error at Command Line : 26 Column : 1

Error report -

SQL Error: ORA-01733: virtual column not allowed here
01733. 00000 - "virtual column not allowed here"

*Cause:

*Action:

```
SQL> INSERT INTO INV_CUSTOMER_VW
SELECT INV_NUM, NAME INV_DATE
FROM INVOICE I JOIN
(SELECT C_CODE, FNAME||' '||LNAME AS NAME FROM CUSTOMER) C
USING (C_CODE);
```

Error starting at line : 29 in command -

```
INSERT INTO INV_CUSTOMER_VW
SELECT INV_NUM, NAME INV_DATE
FROM INVOICE I JOIN
(SELECT C_CODE, FNAME||' '||LNAME AS NAME FROM CUSTOMER) C
USING (C_CODE)
```

Error at Command Line : 29 Column : 13

Error report -

SQL Error: ORA-00947: not enough values
00947. 00000 - "not enough values"

*Cause:

*Action:

```
SQL> CREATE OR REPLACE VIEW INV_CUSTOMER_VW
AS SELECT I.INV_NUM AS QUOTE_ID, FNAME||' '||LNAME AS C_NAME,
I.INV_DATE AS QUOTE_DT
FROM INVOICE I JOIN CUSTOMER C
ON C.C_CODE = I.C_CODE;
```

View INV_CUSTOMER_VW created.

SQL> SELECT * FROM INV_CUSTOMER_VW;

QUOTE_ID	C_NAME	QUOTE_DT
1008	Elena Kurtis	17-01-12
1005	Elena Kurtis	17-01-12
1002	Elena Kurtis	16-01-12
1003	Kathy Smith	16-01-12
1006	Bill Johnson	17-01-12
1001	Bill Johnson	16-01-12
1007	Julia Samuels	17-01-12
1004	Ming Lee	17-01-12
1009	GRACE DAWSON	22-06-13

9 rows selected

QRY-03

SQL> SELECT DISTINCT VENDOR.V_CODE,V_NAME
FROM VENDOR JOIN PRODUCT ON VENDOR.V_CODE = PRODUCT.V_CODE
WHERE VENDOR.V_CODE IN (SELECT PRODUCT.V_CODE FROM PRODUCT);

V_CODE	V_NAME
24288	Justin Stores
21344	Gomez Sons
24992	MARTHA ASSOCIATES
25595	HighEnd Supplies
21225	Bryson, Inc.
23119	Blackman Sisters
21231	GnB Supply

7 rows selected

QRY-04

SQL> SELECT P_CODE,DESCRIPT,AVG(P_PRICE) FROM PRODUCT GROUP BY P_CODE,DESCRIPT;

P_COD	DESCRIPT	AVG(P_PRICE)
SB725	7.25in Saw Blade	14.99
JB012	Jigsaw 12in Blade	109.92
SM48X	Steel Malting Mesh	119.95
SH100	Sledge Hammer	14.4
CL025	Hrd. Cloth 1/4in	39.95
JB008	Jigsaw 8in Blade	99.87
MC001	Metal Screw	6.99
WC025	2.5in wide Screw	8.45
HH15X	HANGING HOOK 15IN	5.75
CL050	Hrd. Cloth 1/2in	43.99
RF100	Rat Tail File	4.99

P_COD	DESCRIPT	AVG(P_PRICE)
PP101	PVC Pipe	5.87

AB112 Power Painter	109.99
SB900 9.00 in Saw Blade	17.49
CD00X Cordless Drill	38.95
CH10X Claw Hammer	9.95
HC100 Hicut Chain Saw	256.99

17 rows selected

SQL> SELECT DESCRIPT,AVG(P_PRICE) FROM PRODUCT GROUP BY DESCRIPT;

DESCRIPT	AVG(P_PRICE)
Hicut Chain Saw	256.99
7.25in Saw Blade	14.99
9.00 in Saw Blade	17.49
Jigsaw 12in Blade	109.92
Jigsaw 8in Blade	99.87
Metal Screw	6.99
2.5in wide Screw	8.45
Hrd. Cloth 1/2in	43.99
Rat Tail File	4.99
Power Painter	109.99
Sledge Hammer	14.4

DESCRIPT	AVG(P_PRICE)
PVC Pipe	5.87
HANGING HOOK 15IN	5.75
Hrd. Cloth 1/4in	39.95
Claw Hammer	9.95
Steel Malting Mesh	119.95
Cordless Drill	38.95

17 rows selected

QRY-05

SQL> SELECT P_CODE,DESCRIPT,P_PRICE FROM PRODUCT
WHERE P_PRICE >=(SELECT AVG(P_PRICE)FROM PRODUCT);

P_COD	DESCRIPT	P_PRICE
AB112	Power Painter	109.99
JB012	Jigsaw 12in Blade	109.92
JB008	Jigsaw 8in Blade	99.87
HC100	Hicut Chain Saw	256.99
SM48X	Steel Malting Mesh	119.95

5 rows selected

QRY-06

SQL> SELECT V_CODE,V_NAME,V_CONTACT FROM VENDOR
WHERE V_CODE NOT IN (SELECT V_CODE FROM PRODUCT WHERE V_CODE IS NOT NULL);

V_CODE	V_NAME	V_CONTACT
-----	-----	-----

21226 Superloo, Inc.	Ching-Hun
24004 Almeda House	Almeda
22587 Dowling, Inc.	Simon Singh
25501 SilverminesLtd.	Anne White
25443 Super Systems	Ted Hwang

5 rows selected

QRY-07

SQL> SELECT P_CODE,P_PRICE FROM PRODUCT;

P_COD	P_PRICE
AB112	109.99
SB725	14.99
SB900	17.49
CL025	39.95
CL050	43.99
JB012	109.92
JB008	99.87
CD00X	38.95
CH10X	9.95
SH100	14.4
RF100	4.99

P_COD	P_PRICE
HC100	256.99
PP101	5.87
MC001	6.99
WC025	8.45
SM48X	119.95
HH15X	5.75

17 rows selected

SQL> UPDATE PRODUCT
SET P_PRICE=(SELECT AVG(P_PRICE) FROM PRODUCT)
WHERE V_CODE NOT IN
(SELECT V_CODE FROM VENDOR WHERE VENDOR.V_STATE IN ('TN','KY'));

5 rows updated.

SQL> SELECT P_CODE,P_PRICE FROM PRODUCT;

P_COD	P_PRICE
AB112	53.44
SB725	14.99
SB900	17.49
CL025	53.44
CL050	53.44
JB012	109.92
JB008	99.87
CD00X	53.44
CH10X	9.95

SH100	14.4
RF100	4.99

P_COD	P_PRICE
-----	-----
HC100	256.99
PP101	5.87
MC001	6.99
WC025	8.45
SM48X	53.44
HH15X	5.75

17 rows selected

SQL> ROLLBACK;

Rollback complete.

QRY-08

```
SQL> SELECT DISTINCT CUSTOMER.C_CODE,LNAME,FNAME FROM CUSTOMER
JOIN INVOICE ON INVOICE.C_CODE = CUSTOMER.C_CODE
WHERE INVOICE.INV_NUM IN
(SELECT INV_NUM FROM LINE JOIN PRODUCT ON PRODUCT.P_CODE = LINE.P_CODE
WHERE UPPER(DESCRIPT) LIKE '%BLADE%');
```

C_CODE	LNAME	FNAME
-----	-----	-----
10012	Smith	Kathy
10014	Johnson	Bill
10015	Samuels	Julia

3 rows selected

```
SQL> SELECT DISTINCT CUSTOMER.C_CODE,LNAME,FNAME FROM CUSTOMER
JOIN INVOICE ON INVOICE.C_CODE = CUSTOMER.C_CODE
WHERE INVOICE.INV_NUM IN
(SELECT INV_NUM FROM LINE JOIN PRODUCT ON PRODUCT.P_CODE = LINE.P_CODE
WHERE UPPER(DESCRIPT) LIKE '%JIGSAW 12IN BLADE%');
```

C_CODE	LNAME	FNAME
-----	-----	-----
10014	Johnson	Bill

1 rows selected

QRY-09

```
SQL> SELECT DISTINCT CUSTOMER.C_CODE,LNAME,FNAME FROM CUSTOMER
JOIN INVOICE ON INVOICE.C_CODE = CUSTOMER.C_CODE
WHERE INVOICE.INV_NUM IN
(SELECT INV_NUM FROM LINE JOIN PRODUCT ON PRODUCT.P_CODE = LINE.P_CODE
WHERE UPPER(DESCRIPT) LIKE '%HAMMER%' OR UPPER(DESCRIPT) LIKE '%DRILL%' OR
UPPER(DESCRIPT)LIKE '%SAW%');
```

C_CODE	LNAME	FNAME
-----	-----	-----

10012 Smith	Kathy
10018 Lee	Ming
10011 Kurtis	Elena
10014 Johnson	Bill
10015 Samuels	Julia

5 rows selected

QRY-10

```
SQL> SELECT P_CODE,SUM(L_UNITS) AS TOT_QTY FROM LINE JOIN INVOICE
ON LINE.INV_NUM = INVOICE.INV_NUM
GROUP BY LINE.P_CODE
HAVING SUM(L_UNITS)>(SELECT AVG(L_UNITS) FROM LINE);
```

P_COD	TOT_QTY
SB725	8
RF100	6
HH15X	20
CH10X	5
PP101	17

5 rows selected

QRY-11

```
SQL> SELECT CUSTOMER.C_CODE,CUSTOMER.LNAME FROM CUSTOMER
WHERE CUSTOMER.C_CODE IN
(SELECT DISTINCT C_CODE FROM INVOICE JOIN LINE
ON LINE.INV_NUM = INVOICE.INV_NUM
WHERE P_CODE IN ('HC100','JB012'));
```

C_CODE	LNAME
10014	Johnson

1 rows selected

QRY-12

```
SQL> COLUMN AV_PRICE FORMAT 999.99;
SQL> COLUMN DF_PRICE FORMAT 999.99;
SQL> SELECT P_CODE,P_PRICE,(SELECT AVG(P_PRICE) FROM PRODUCT) AV_PRICE,
P_PRICE - (SELECT AVG(P_PRICE) FROM PRODUCT) AS DF_PRICE
FROM PRODUCT;
```

P_COD	P_PRICE	AV_PRICE	DF_PRICE
AB112	109.99	53.44	56.55
SB725	14.99	53.44	-38.45
SB900	17.49	53.44	-35.95
CL025	39.95	53.44	-13.49

CL050	43.99	53.44	-9.45
JB012	109.92	53.44	56.48
JB008	99.87	53.44	46.43
CD00X	38.95	53.44	-14.49
CH10X	9.95	53.44	-43.49
SH100	14.4	53.44	-39.04
RF100	4.99	53.44	-48.45

P_COD	P_PRICE	AV_PRICE	DF_PRICE
HC100	256.99	53.44	203.55
PP101	5.87	53.44	-47.57
MC001	6.99	53.44	-46.45
WC025	8.45	53.44	-44.99
SM48X	119.95	53.44	66.51
HH15X	5.75	53.44	-47.69

17 rows selected

QRY-13

```
SQL> COLUMN AV_PRICE FORMAT 999.99
SQL> SELECT INV_NUM,P_CODE,L_UNITS,
(SELECT AVG(L_UNITS) FROM LINE LP WHERE LP.P_CODE=LX.P_CODE) AS AV_PRICE FROM LINE LX
WHERE LX.L_UNITS>(SELECT AVG(L_UNITS) FROM LINE LZ
WHERE LX.P_CODE=LZ.P_CODE);
```

INV_NUM	P_COD	L_UNITS	AV_PRICE
1003	SB725	5	2.67
1004	RF100	3	2.00
1004	CH10X	2	1.25
1005	PP101	12	8.50

4 rows selected

QRY-14

```
SQL> SELECT C_CODE,FNAME,LNAME
FROM CUSTOMER C
WHERE EXISTS(SELECT C_CODE FROM INVOICE I WHERE I.C_CODE=C.C_CODE);
```

C_CODE	FNAME	LNAME
10014	Bill	Johnson
10011	Elena	Kurtis
10012	Kathy	Smith
10018	Ming	Lee
10015	Julia	Samuels
10020	GRACE	DAWSON

6 rows selected

```
SQL> --MADE BY YOGESH JOG
SQL> SET FEEDBACK OFF
SQL> SET ECHO OFF
SQL> SPOOL OFF
```