**PRACTICAL NO. 02**

**QUERY 01**

SQL> SELECT channels.channel\_desc, calendar\_month\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_month\_desc IN ('2000-09', '2000-10')

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY

13 ROLLUP(channels.channel\_desc, calendar\_month\_desc,

14 countries.country\_iso\_code);

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Internet 2000-09 GB 16569.36

Internet 2000-09 US 124223.75

Internet 2000-09 140793.11

Internet 2000-10 GB 14539.14

Internet 2000-10 US 137054.29

Internet 2000-10 151593.43

Internet 292386.54

Direct Sales 2000-09 GB 85222.92

Direct Sales 2000-09 US 638200.81

Direct Sales 2000-09 723423.73

Direct Sales 2000-10 GB 91925.43

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Direct Sales 2000-10 US 682296.59

Direct Sales 2000-10 774222.02

Direct Sales 1497645.75

1790032.29

15 rows selected.

**QUERY 02**

SQL> SELECT channels.channel\_desc, calendar\_month\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_month\_desc IN ('2000-09', '2009-10')

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY

13 CUBE(channels.channel\_desc, calendar\_month\_desc,

14 countries.country\_iso\_code);

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

864216.84

GB 101792.28

US 762424.56

2000-09 864216.84

2000-09 GB 101792.28

2000-09 US 762424.56

Internet 140793.11

Internet GB 16569.36

Internet US 124223.75

Internet 2000-09 140793.11

Internet 2000-09 GB 16569.36

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Internet 2000-09 US 124223.75

Direct Sales 723423.73

Direct Sales GB 85222.92

Direct Sales US 638200.81

Direct Sales 2000-09 723423.73

Direct Sales 2000-09 GB 85222.92

Direct Sales 2000-09 US 638200.81

18 rows selected.

**QUERY 03**

SQL> SELECT channels.channel\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_month\_desc='2000-09'

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY

13 CUBE(channels.channel\_desc,

14 countries.country\_iso\_code);

CHANNEL\_DESC CO SUM(AMOUNT\_SOLD)

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

864216.84

GB 101792.28

US 762424.56

Internet 140793.11

Internet GB 16569.36

Internet US 124223.75

Direct Sales 723423.73

Direct Sales GB 85222.92

Direct Sales US 638200.81

9 rows selected.

**QUERY 04**

SQL> SELECT channels.channel\_desc, calendar\_month\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_month\_desc IN ('2000-09', '2009-10')

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY channels.channel\_desc,

13 ROLLUP( calendar\_month\_desc,

14 countries.country\_iso\_code);

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Internet 2000-09 GB 16569.36

Internet 2000-09 US 124223.75

Internet 2000-09 140793.11

Internet 140793.11

Direct Sales 2000-09 GB 85222.92

Direct Sales 2000-09 US 638200.81

Direct Sales 2000-09 723423.73

Direct Sales 723423.73

8 rows selected.

**QUERY 05**

SQL> SELECT channels.channel\_desc, calendar\_month\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_month\_desc IN ('2000-09', '2009-10')

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY channels.channel\_desc,

13 CUBE( calendar\_month\_desc,

14 countries.country\_iso\_code);

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Internet 140793.11

Internet GB 16569.36

Internet US 124223.75

Internet 2000-09 140793.11

Internet 2000-09 GB 16569.36

Internet 2000-09 US 124223.75

Direct Sales 723423.73

Direct Sales GB 85222.92

Direct Sales US 638200.81

Direct Sales 2000-09 723423.73

Direct Sales 2000-09 GB 85222.92

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Direct Sales 2000-09 US 638200.81

12 rows selected.

**QUERY 06**

SQL> SELECT channels.channel\_desc, calendar\_month\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold) ,

4 GROUPING(channels.channel\_desc) as Ch,

5 GROUPING(calendar\_month\_desc) as Mo,

6 GROUPING(countries.country\_iso\_code) as Co

7 FROM sales, customers, times, channels, countries

8 WHERE sales.time\_id=times.time\_id

9 AND sales.cust\_id=customers.cust\_id

10 AND customers.country\_id = countries.country\_id

11 AND sales.channel\_id = channels.channel\_id

12 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

13 AND times.calendar\_month\_desc IN ('2000-09', '2000-10')

14 AND countries.country\_iso\_code IN ('GB', 'US')

15 GROUP BY

16 ROLLUP(channels.channel\_desc, calendar\_month\_desc,

17 countries.country\_iso\_code);

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD) CH MO CO

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

Internet 2000-09 GB 16569.36 0 0 0

Internet 2000-09 US 124223.75 0 0 0

Internet 2000-09 140793.11 0 0 1

Internet 2000-10 GB 14539.14 0 0 0

Internet 2000-10 US 137054.29 0 0 0

Internet 2000-10 151593.43 0 0 1

Internet 292386.54 0 1 1

Direct Sales 2000-09 GB 85222.92 0 0 0

Direct Sales 2000-09 US 638200.81 0 0 0

Direct Sales 2000-09 723423.73 0 0 1

Direct Sales 2000-10 GB 91925.43 0 0 0

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD) CH MO CO

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

Direct Sales 2000-10 US 682296.59 0 0 0

Direct Sales 2000-10 774222.02 0 0 1

Direct Sales 1497645.75 0 1 1

1790032.29 1 1 1

15 rows selected.

**QUERY 07**

SQL> SELECT channels.channel\_desc, calendar\_month\_desc,

2 countries.country\_iso\_code,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_month\_desc IN ('2000-09', '2009-10')

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY GROUPING SETS((channels.channel\_desc, calendar\_month\_desc,countries.country\_iso\_code),

13 (channels.channel\_desc,countries.country\_iso\_code),

14 (calendar\_month\_desc,countries.country\_iso\_code));

CHANNEL\_DESC CALENDAR CO SUM(AMOUNT\_SOLD)

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

Internet 2000-09 GB 16569.36

Direct Sales 2000-09 GB 85222.92

Internet 2000-09 US 124223.75

Direct Sales 2000-09 US 638200.81

2000-09 GB 101792.28

2000-09 US 762424.56

Direct Sales GB 85222.92

Internet GB 16569.36

Direct Sales US 638200.81

Internet US 124223.75

10 rows selected.

**QUERY 08**

SQL> SELECT calendar\_month\_desc as month,calendar\_quarter\_desc

2 calendar\_year as year,

3 SUM(amount\_sold)

4 FROM sales, customers, times, channels, countries

5 WHERE sales.time\_id=times.time\_id

6 AND sales.cust\_id=customers.cust\_id

7 AND customers.country\_id = countries.country\_id

8 AND sales.channel\_id = channels.channel\_id

9 AND channels.channel\_desc IN ('Direct Sales', 'Internet')

10 AND times.calendar\_year ='1999'

11 AND countries.country\_iso\_code IN ('GB', 'US')

12 GROUP BY rollup (calendar\_year,calendar\_quarter\_desc,calenda

MONTH QUARTER YEAR SUM(AMOUNT\_SOLD)

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

1999-01 1999-01 1999 974627.95

1999-02 1999-01 1999 1089255.92

1999-03 1999-01 1999 754026.7

1999-01 1999 2817910.57

1999-04 1999-02 1999 708060.57

1999-05 1999-02 1999 818055.52

1999-06 1999-02 1999 729677.52

1999-02 1999 2255793.61

1999-07 1999-03 1999 893452.47

1999-08 1999-03 1999 883460.92

1999-09 1999-03 1999 923577.01

MONTH QUARTER YEAR SUM(AMOUNT\_SOLD)

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

1999-03 1999 2700490.4

1999-10 1999-04 1999 715831.36

1999-11 1999-04 1999 742248.42

1999-12 1999-04 1999 841572.17

1999-04 1999 2299651.95

1999 10073846.5

10073846.5

18 rows selected.

**QUERY 09**

SQL> SELECT channel\_total,channel\_class,

TO\_CHAR(SUM(amount\_sold), '9,999,999,999') SALES$

FROM sales, customers, times, channels, countries

WHERE sales.time\_id=times.time\_id

AND sales.cust\_id=customers.cust\_id

AND customers.country\_id = countries.country\_id

AND sales.channel\_id= channels.channel\_id

AND channels.channel\_desc IN ('Direct Sales', 'Internet')

AND times.calendar\_month\_desc IN ('2000-09', '2000-10')

AND countries.country\_iso\_code IN ('GB', 'US')

GROUP BY ROLLUP(channel\_total,channel\_class),ROLLUP(countries.country\_region,country\_iso\_code);

Output:

CHANNEL\_TOTAL CHANNEL\_CLASS SALES$

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

208,257

208,257

1,581,775

1,581,775

1,790,032

Channel total 208,257

Channel total 208,257

Channel total 1,581,775

Channel total 1,581,775

Channel total 1,790,032

Channel total Direct 177,148

CHANNEL\_TOTAL CHANNEL\_CLASS SALES$

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

Channel total Direct 177,148

Channel total Direct 1,320,497

Channel total Direct 1,320,497

Channel total Direct 1,497,646

Channel total Indirect 31,109

Channel total Indirect 31,109

Channel total Indirect 261,278

Channel total Indirect 261,278

Channel total Indirect 292,387

20 rows selected.