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| **Oracle SQL for Aggregation in Data Warehouses** |

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| REVISION HISTORY | | | | | |
| Ver. | Description of Change | Author | Date | Approved | |
| Name | Effective Date |
| 1.0 | Initial Version | Gleb Kulvanovski | 14-Nov-2017 |  |  |
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# Task 1

SELECT nvl(DECODE(grouping\_id(Calendar\_month\_desc), 0, Calendar\_month\_desc, 'GRAND TOTAL'), ' ') AS YEAR\_MONTH,

nvl(DECODE(grouping\_id(Calendar\_month\_desc, Channel\_desc), 1, 'Total by Channels', Channel\_desc), ' ') AS CHANNEL,

nvl(DECODE(grouping\_id(Calendar\_month\_desc, Channel\_desc, Country\_name), 1, Channel\_desc || ' Total by States', Country\_name), ' ') AS COUNTRY,

to\_char(ROUND(MAX(Amount\_Sold)), '9,999,999,999,999') AS MAX\_SALES$,

to\_char(ROUND(MIN(Amount\_Sold)), '9,999,999,999,999') AS MIN\_SALES$,

to\_char(SUM(Amount\_Sold), '9,999,999,999,999,999') AS SALES$

FROM SH.Sales s

JOIN SH.Times t ON s.time\_id = t.time\_id

JOIN SH.Channels ch ON s.channel\_id = ch.channel\_id

JOIN SH.Customers cu ON s.cust\_id = cu.cust\_id

JOIN SH.Countries ch ON cu.country\_id = ch.country\_id

WHERE Calendar\_month\_desc = '2000-12' AND Channel\_desc IN ('Internet', 'Direct Sales')

GROUP BY ROLLUP(Calendar\_month\_desc, Channel\_desc, Country\_name);

# Task 2

SELECT NVL(Prod\_Name, 'TOTAL'), SUM(Q1), SUM(Q2), SUM(Q3), SUM(Q4), SUM(Q1)+SUM(Q2)+SUM(Q3)+SUM(Q4) AS YEAR\_SUM

FROM (

SELECT \* FROM (

SELECT Prod\_Name, Amount\_sold, Calendar\_Quarter\_Number

FROM SH.Sales s

JOIN SH.Times t ON s.time\_id = t.time\_id

JOIN SH.Customers cu ON s.cust\_id = cu.cust\_id

JOIN SH.Countries ch ON cu.country\_id = ch.country\_id

JOIN SH.Products pr ON s.prod\_id = pr.prod\_id

WHERE Prod\_category\_desc = 'Photo' AND Calendar\_Year = '2000' AND Country\_region = 'Asia')

PIVOT

(SUM(Amount\_Sold)

FOR Calendar\_quarter\_number

IN(1 AS Q1, 2 AS Q2, 3 AS Q3, 4 AS Q4))

ORDER BY 1)

GROUP BY ROLLUP(Prod\_Name);

# Task 3

Cумма Amount\_sold и количество продаж по регионам и годам, а таже сумма и количесво за все года(1998-2001) для продуктов из категории “Photo”.

SELECT NVL(Country\_region, 'TOTAL') AS COUNTRY, SUM("1998\_SUM\_AMOUNT") AS "1998 SUM", SUM("1998\_COUNT\_S") AS "1998 COUNT",

SUM("1999\_SUM\_AMOUNT") AS "1999 SUM", SUM("1999\_COUNT\_S") AS "1999 COUNT", SUM("2000\_SUM\_AMOUNT") AS "2000 SUM",

SUM("2000\_COUNT\_S") AS "2000 COUNT", SUM("2001\_SUM\_AMOUNT") AS "2001 SUM", SUM("2001\_COUNT\_S") AS "2001 COUNT",

SUM("1998\_SUM\_AMOUNT")+SUM("1999\_SUM\_AMOUNT")+SUM("2000\_SUM\_AMOUNT")+SUM("2001\_SUM\_AMOUNT") AS "Total SUM",

SUM("1998\_COUNT\_S")+SUM("1999\_COUNT\_S")+SUM("2000\_COUNT\_S")+SUM("2001\_COUNT\_S") AS "Total COUNT"

FROM (

SELECT Country\_region, Amount\_sold, Calendar\_Year

FROM SH.Sales s

JOIN SH.Times t ON s.time\_id = t.time\_id

JOIN SH.Customers cu ON s.cust\_id = cu.cust\_id

JOIN SH.Countries ch ON cu.country\_id = ch.country\_id

JOIN SH.Products pr ON s.prod\_id = pr.prod\_id

WHERE Prod\_category\_desc = 'Photo')

PIVOT (SUM(Amount\_sold) AS Sum\_Amount, COUNT(1) AS Count\_S

FOR Calendar\_Year IN (1998, 1999, 2000, 2001))

GROUP BY ROLLUP(Country\_Region);

