Data warehousing in Oracle – Practice 2 Solutions

Data Management and Visualization - *Politecnico di Torino*

Queries

6. **Consider the year 2003. Separately for phone rate and month, analyze the (i) average daily income and the (ii) average income for number of calls.**

```
SELECT DateMonth, phoneRateType, SUM(Price)/COUNT(DISTINCT DayDate), SUM(Price)/SU
M(NumberOfCalls)
FROM Facts F, DWABD TimeDim T, PhoneRate P
WHERE F.Id_time = T.Id_time AND
   F.Id_phoneRate = P.Id_phoneRate AND DateYear=2003
GROUP BY phoneRateType, DateMonth
```

7. **Select the daily number of calls for each caller region and the daily number of calls for each caller province.**

```
SELECT Region, Province,
   SUM(SUM(NumberOfCalls)) OVER (
         PARTITION BY Region)/COUNT(DISTINCT DayDate),
   SUM(NumberOfCalls)/COUNT(DISTINCT DayDate)
FROM Facts F, TimeDim T, Location L
WHERE F.Id_time = T.Id_time
   AND F.id_location_caller = L.id_location
GROUP BY Region, Province
```

8. **Consider the year 2003. Separately for phone rate and month, analyze the (i) total income, (ii) thepercentage of income with respect to the total revenue considering all the phone rates, (iii) the percentage of income with respect to the total revenue considering all the months.**

```
SELECT DateMonth, phoneRateType, SUM(Price),
   SUM(Price)/SUM(SUM(Price)) OVER (
         PARTITION BY DateMonth),
   SUM(Price)/SUM(SUM(Price)) OVER (
         PARTITION BY phoneRateType)
FROM Facts F, DWABD TimeDim T, PhoneRate P
WHERE F.Id_time = T.Id_time AND
```

```
    F.Id_phoneRate = P.Id_phoneRate AND DateYear=2003
GROUP BY phoneRateType, DateMonth
```

9. **For each caller province, analyze (i) the total number of calls and (ii) the percentage of number of calls with respect to the total number of calls considering the corresponding region.**

```
SELECT Region, Province, SUM(NumberOfCalls),
    SUM(NumberOfCalls)/SUM(SUM(NumberOfCalls)) OVER (
        PARTITION BY Region)
FROM Facts F, Location L
WHERE F.id_location_caller = L.id_location
GROUP BY Region, Province
```

10. **For each receiver region, select the monthly number of calls and the cumulative monthly number of calls from the beginning of the year.**

```
SELECT DateYear, DateMonth,
    SUM(NumberOfCalls) AS TOTCALLS,
    SUM(SUM(NumberOfCalls)) OVER (
        PARTITION BY DateYear, Region
        ORDER BY DateMonth ROWS UNBOUNDED PRECEDING
    ) AS CUMULATIVECALLS_YEARs
FROM FACTS F, TIMEDIM Te, Location L
WHERE F.ID_time=Te.ID_time AND
    F.id_location_receiver = L.id_location
GROUP BY DateMonth, DateYear, Region;
```