Data Management and Visualization
Politecnico di Torino
Data warehousing in Oracle – Practice 1

Queries

1) Select the yearly income for each phone rate, the total income for each phone rate, the total yearly income and the total income.

```
SELECT SUM(Price), dateYear, phoneRateType
FROM DWABD.Facts F, DWABD.TimeDim T, DWABD.PhoneRate P
WHERE F.Id_time = T.Id_time and F.Id_phoneRate = P.Id_phoneRate
GROUP BY cube(phoneRateType, dateYear)

SELECT dateYear, phoneRateType, SUM(Price),
SUM(SUM(Price)) OVER (PARTITION BY phoneRateType), SUM(SUM(Price)) OVER
(PARTITION BY dateYear), SUM(SUM(Price)) OVER ()
FROM DWABD.Facts F, DWABD.TimeDim T, DWABD.PhoneRate P
WHERE F.Id_time = T.Id_time and F.Id_phoneRate = P.Id_phoneRate
GROUP BY phoneRateType, dateYear
```

2) Select the monthly number of calls and the monthly income. Associate the RANK() to each month according to its income (1 for the month with the highest income, 2 for the second, etc., the last month is the one with the least income).

```
SELECT DateMonth,DateYear, SUM(NumberOfCalls) as TotNumOfCalls, SUM(price) as
totalIncome, RANK() over (ORDER BY SUM(price) DESC) as RankIncome
FROM DWABD.FACTS F, DWABD.TIMEdim Te
WHERE F.id_time=Te.id_time
GROUP BY DateMonth,DateYear;
```

3) For each month in 2003, select the total number of calls. Associate the RANK() to each month according to its total number of calls (1 for the month with the highest number of calls, 2 for the second, etc., the last month is the one with the least number of calls).

```
SELECT DateMonth, SUM(NumberOfCalls) as TotNumOfCalls,
RANK() over (ORDER BY SUM(NumberOfCalls) DESC) as RankNumOfCalls
FROM dwabd.FACTS F, dwabd.TIMEDIM Te
WHERE F.id_time=Te.id_time
AND DateYear=2003
GROUP BY DateMonth;
```

4) For each day in July 2003, select the total income and the average income over the last 3 days.

```
SELECT DateMonth, SUM(Price), AVG(SUM(Price)) OVER (ORDER BY DateMonth
RANGE BETWEEN INTERVAL '2' day preceding and current row) as avglast3days
FROM DWABD.FACTS F, DWABD.TIMEDIM Te
WHERE F.ID_time=Te.ID_time AND DateYear=2003 AND DateMonth= '20-JUL-03'
```

```
GROUP BY DateMonth;


SELECT DateMonth, SUM(Price),
 AVG(SUM(Price)) OVER (ORDER BY DateMonth ROWS 2 preceding) as avglast3days
FROM DWABD.FACTS F, DWABD.TIMEDIM Te
WHERE F.ID_time=Te.ID_time AND DateYear=2003 AND DateMonth= '7-2003' GROUP
BY DateMonth
ORDER BY DateMonth;
```

5) Select the monthly income and the cumulative monthly income from the beginning of the year.

```
SELECT DateYear, DateMonth, SUM(Price) AS TOTINCOME,
SUM(SUM(PRICE)) OVER( PARTITION BY DateYear ORDER BY DateMonth ROWS UNBOUNDED
PRECEDING) AS CUMULATIVEINCOME
 FROM DWABD.FACTS F, DWABD.TIMEDIM Te
WHERE F.ID_time=Te.ID_time
GROUP BY DateMonth, DateYear;
```