drop table caller cascade constraints;

drop table region cascade constraints;

drop table calls2017 cascade constraints;

drop sequence seq\_calls2017;

create sequence seq\_calls2017;

create table caller(cnrmaurer integer primary key, cname varchar2(20));

create table region (region\_idmaurer integer primary key, region\_name varchar2(20));

create table calls2017(call\_nrmaurer integer, cnr integer references caller(cnrmaurer),

region\_id integer references region (region\_idmaurer),

duration integer,

call\_date date);

select

decode(grouping\_id(cal2.cname), 1, '==all callers', cal2.cname) as caller,

decode(grouping\_id(r.region\_name), 1, '==all regions', r.region\_name) as region,

decode(grouping\_id(to\_char(cal1.CALL\_DATE, 'MM')), 1, '==all months', to\_char(cal1.call\_date, 'MM')) as month,

SUM(duration) as duration

FROM calls2017 cal1

JOIN caller cal2 on cal1.cnr = cal2.cnrmaurer

JOIN region r on cal1.region\_id = r.region\_idmaurer

GROUP BY CUBE (cal2.cname, r.region\_name, to\_char(cal1.CALL\_DATE, 'MM'))

HAVING grouping\_id (cal2.cname, r.region\_name, to\_char(cal1.CALL\_DATE, 'MM')) <> 1

ORDER BY cal2.cname ASC, r.region\_name, to\_char(cal1.CALL\_DATE, 'MM');

drop view viewcallsbritain

create view viewcallsbritain as

SELECT to\_char(call\_date, 'MM') as month, duration as duration,

FIRST\_VALUE(duration) OVER (ORDER BY to\_char(call\_date, 'MM') ROWS BETWEEN 1 PRECEDING AND 0 FOLLOWING ) AS "DurationFormerMonth",

to\_char(duration - FIRST\_VALUE(duration) OVER (ORDER BY to\_char(call\_date, 'MM') ROWS BETWEEN 1 PRECEDING AND 0 FOLLOWING ),'999999.9') AS "change"

FROM calls2017 c INNER JOIN region r on c.region\_id = r.region\_idmaurer where r.region\_name = 'Great Britain';

select \* from viewcallsbritain;

select \* from viewcallsbritain where "change" = (select MAX("change") from viewcallsbritain);

drop view bestcallers;

create view bestcallers as

select r.region\_name, cal2.cname, cal1.duration,

DENSE\_RANK() OVER (ORDER BY duration DESC) AS rank from calls2017 cal1

join region r on cal1.region\_id = r.region\_idmaurer join caller cal2 on cal1.cnr = cal2.cnrmaurer

GROUP BY r.region\_name, cal2.cname, cal1.duration

ORDER BY r.region\_name, rank;

select \* from bestcallers where rank < 3;

1)

Dreistein Austria 03 10

Dreistein Germany 03 110

Dreistein Germany 04 10

Dreistein Great Britain 02 410

Dreistein Great Britain 03 10

Dreistein Great Britain 05 340

Dreistein ==all regions 02 410

Dreistein ==all regions 03 130

Dreistein ==all regions 04 10

Dreistein ==all regions 05 340

Dreistein ==all regions ==all months 890

Einstein Austria 01 100

Einstein Austria 02 230

Einstein Austria 03 130

Einstein Austria 04 110

Einstein Germany 03 120

Einstein Germany 04 30

Einstein Great Britain 02 40

Einstein Great Britain 03 50

Einstein Great Britain 04 150

Einstein ==all regions 01 100

Einstein ==all regions 02 270

Einstein ==all regions 03 300

Einstein ==all regions 04 290

Einstein ==all regions ==all months 960

Vierstein Austria 03 10

Vierstein Austria 04 10

Vierstein Germany 04 20

Vierstein Great Britain 02 120

Vierstein Great Britain 03 20

Vierstein Great Britain 04 10

Vierstein ==all regions 02 120

Vierstein ==all regions 03 30

Vierstein ==all regions 04 40

Vierstein ==all regions ==all months 190

Zweistein Austria 05 20

Zweistein Austria 06 120

Zweistein Austria 08 20

Zweistein Great Britain 02 180

Zweistein Great Britain 03 20

Zweistein Great Britain 04 60

Zweistein ==all regions 02 180

Zweistein ==all regions 03 20

Zweistein ==all regions 04 60

Zweistein ==all regions 05 20

Zweistein ==all regions 06 120

Zweistein ==all regions 08 20

Zweistein ==all regions ==all months 420

==all callers Austria 01 100

==all callers Austria 02 230

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04 100 10 90.0

04 10 100 -90.0

05 100 10 90.0

05 240 100 140.0

3)

05 240 100 140.0

4)

Austria Einstein 100 2

Germany Dreistein 100 2

Germany Einstein 100 2

Great Britain Dreistein 240 1

Great Britain Einstein 100 2

Great Britain Vierstein 100 2

Great Britain Zweistein 100 2

Great Britain Dreistein 100 2