

ORACLE

Corso SQL APEX ITALIA MARITTIMA

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Analytic Funtions

Carburante

```
select targa,  
       data,  
       litri,  
       km_progr  
from d04_carburante  
order by targa,data
```

DIFFERENZA TRA KM
PROGRESSIVI
SUCCESSIVI E CORRENTI



Targa	Data	Litri	Km Progr	Km
AA 100 BB	01/01/2023	45	0	662
AA 100 BB	08/01/2023	40	662	601
AA 100 BB	15/01/2023	49	1263	768
AA 100 BB	22/01/2023	45	2031	763
AA 100 BB	29/01/2023	48	2794	737
AA 100 BB	05/02/2023	46	3531	706
AA 100 BB	12/02/2023	48	4237	

Lead()

OVER denota una
funzione analitica

```
select targa,  
       data,  
       litri,  
       km_progr,  
       lead(km_progr) over(partition by targa  
                           order by data ) km_progr_successivi  
from d04_carburante  
order by targa,data
```

TARGA	DATA	LITRI	KM_PROGR	KM_PROGR_SUCCESIVI
AA 100 BB	01/01/2023	45	0	662
AA 100 BB	08/01/2023	40	662	1263
AA 100 BB	15/01/2023	49	1263	2031
AA 100 BB	22/01/2023	45	2031	2794
AA 100 BB	29/01/2023	48	2794	3531
AA 100 BB	05/02/2023	46	3531	4237
AA 100 BB	12/02/2023	48	4237	4997
AA 100 BB	19/02/2023	45	4997	5652
AA 100 BB	26/02/2023	47	5652	6373
AA 100 BB	05/03/2023	41	6373	6989
AA 100 BB	12/03/2023	45	6989	-
BB 200 CC	01/01/2023	45	0	741

Lag()

```
select targa,  
       data,  
       litri,  
       km_progr,  
       lag(km_progr) over(partition by targa  
                           order by data ) km_progr_precedent,  
       lead(km_progr) over(partition by targa  
                           order by data ) km_progr_successivi  
from d04_carburante  
order by targa,data
```

TARGA	DATA	LITRI	KM_PROGR	KM_PROGR_PRECEDENTI	KM_PROGR_SUCCESSIVI
AA 100 BB	01/01/2023	45	0	-	662
AA 100 BB	08/01/2023	40	662	0	1263
AA 100 BB	15/01/2023	49	1263	662	2031
AA 100 BB	22/01/2023	45	2031	1263	2794
AA 100 BB	29/01/2023	48	2794	2031	3531
AA 100 BB	05/02/2023	46	3531	2794	4237
AA 100 BB	12/02/2023	48	4237	3531	4997
AA 100 BB	19/02/2023	45	4997	4237	5652
AA 100 BB	26/02/2023	47	5652	4997	6373
AA 100 BB	05/03/2023	41	6373	5652	6989
AA 100 BB	12/03/2023	45	6989	6373	-
BB 200 CC	01/01/2023	45	0	-	741

Lag()

```
select targa,  
       data,  
       litri,  
       km_progr,  
       lag(km_progr) over(partition by targa  
                           order by data ) km_progr_precedent,  
       lead(km_progr) over(partition by targa  
                           order by data ) km_progr_successivi  
from d04_carburante  
order by targa,data
```

TARGA	DATA	LITRI	KM_PROGR	KM_PROGR_PRECEDENTI	KM_PROGR_SUCCESSIVI
AA 100 BB	01/01/2023	45	0	-	662
AA 100 BB	08/01/2023	40	662	0	1263
AA 100 BB	15/01/2023	49	1263	662	2031
AA 100 BB	22/01/2023	45	2031	1263	2794
AA 100 BB	29/01/2023	48	2794	2031	3531
AA 100 BB	05/02/2023	46	3531	2794	4237
AA 100 BB	12/02/2023	48	4237	3531	4997
AA 100 BB	19/02/2023	45	4997	4237	5652
AA 100 BB	26/02/2023	47	5652	4997	6373
AA 100 BB	05/03/2023	41	6373	5652	6989
AA 100 BB	12/03/2023	45	6989	6373	-
BB 200 CC	01/01/2023	45	0	-	741

Lag()

```
with carburante as (  
    select targa,  
           data,  
           litri,  
           km_progr,  
           lead(km_progr) over(partition by targa  
                               order by data ) km_progr_successivi  
    from d04_carburante  
)
```

```
select targa,  
       data,  
       litri,  
       km_progr,  
       km_progr_successivi - km_progr km,  
       case  
           when litri<>0  
           then round(nvl(km_progr_successivi - km_progr,0) /litri,2)  
           else 0  
       end km_medi_litro  
from carburante  
order by targa,data
```


Rank() e Dense_rank()

```
with carburante as (  
    select targa,  
           data,  
           litri,  
           km_progr,  
           rank() over(partition by targa  
                        order by data,km_progr,id ) rank,  
           dense_rank() over(partition by targa  
                              order by data,km_progr,id ) dense_rank  
    from d04_carburante)  
select *  
    from carburante  
    where rank = 1  
order by targa,rank
```

Ratio_to_report()

```
select targa,  
       data,  
       litri,  
       ratio_to_report(litri) over()      perc_litri_su_totale,  
       ratio_to_report(litri) over(partition by targa) perc_litri_su_targa,  
       km_progr  
from d04_carburante
```

TARGA	DATA	LITRI	PERC_LITRI_SU_TOTALE	PERC_LITRI_SU_TARGA	KM_PROGR
AA 100 BB	22/01/2023	48	,0325203252032520325203252032520325	,096192384769539078156312625250501002004	2794
AA 100 BB	15/01/2023	45	,030487804878048780487804878048780487805	,090180360721442885771543086172344689379	2031
AA 100 BB	08/01/2023	49	,033197831978319783197831978319783197832	,098196392785571142284569138276553106212	1263
AA 100 BB	01/01/2023	40	,027100271002710027100271002710027100271	,080160320641282565130260521042084168337	662
AA 100 BB	01/01/2023	45	,030487804878048780487804878048780487805	,090180360721442885771543086172344689379	0
AA 100 BB	05/03/2023	45	,030487804878048780487804878048780487805	,090180360721442885771543086172344689379	6989
AA 100 BB	05/02/2023	48	,0325203252032520325203252032520325	,096192384769539078156312625250501002004	4237
AA 100 BB	12/02/2023	45	,030487804878048780487804878048780487805	,090180360721442885771543086172344689379	4997
AA 100 BB	19/02/2023	47	,031842818428184281842818428184281842818	,094188376753507014028056112224448897796	5652
AA 100 BB	26/02/2023	41	,02777777777777777777777777777777777778	,082164328657314629258517034068136272545	6373
AA 100 BB	29/01/2023	46	,031165311653116531165311653116531165312	,092184368737474949899799599198396793587	3531
BB 200 CC	29/01/2023	46	,031165311653116531165311653116531165312	,093495934959349593495934959349593495935	3008

Ratio_to_report()

```
select targa,  
       data,  
       litri,  
       round(100*ratio_to_report(litri) over(),2)      perc_litri_su_totale,  
       round(100*ratio_to_report(litri) over(partition by targa),2) perc_litri_su_targa,  
       km_progr  
from d04_carburante
```

TARGA	DATA	LITRI	PERC_LITRI_SU_TOTALE	PERC_LITRI_SU_TARGA	KM_PROGR
AA 100 BB	22/01/2023	48	3,25	9,62	2794
AA 100 BB	15/01/2023	45	3,05	9,02	2031
AA 100 BB	08/01/2023	49	3,32	9,82	1263
AA 100 BB	01/01/2023	40	2,71	8,02	662
AA 100 BB	01/01/2023	45	3,05	9,02	0
AA 100 BB	05/03/2023	45	3,05	9,02	6989
AA 100 BB	05/02/2023	48	3,25	9,62	4237
AA 100 BB	12/02/2023	45	3,05	9,02	4997
AA 100 BB	19/02/2023	47	3,18	9,42	5652
AA 100 BB	26/02/2023	41	2,78	8,22	6373
AA 100 BB	29/01/2023	46	3,12	9,22	3531
BB 200 CC	29/01/2023	46	3,12	9,35	3008

Progressivi

```
select targa,  
       data,  
       litri,  
       sum(litri) over(partition by targa) litri_totali,  
       sum(litri) over(partition by targa order by data) litri_totali_progr,  
       sum(litri) over(partition by targa order by data,id  
                        rows between unbounded preceding  
                        and current row) litri_totali_progr2,  
       sum(litri) over(partition by targa order by data  
                        range between unbounded preceding  
                        and current row) litri_totali_progr3  
from d04_carburante  
order by targa,data,id
```