U2M2.LW.Advanced Grouping

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https://github.com/VeraShkrabatouskaya/DataMola_Data-Camping-2022

2. Business analyses tasks – Reports

2.1. Task 01: CREATE Daily Reports Layouts

Create table SA_TRANSACTION.

```
Create table SA_TRANSACTION as
select * from sa_customers.SA_CUSTOMER_DATA_total
left outer join sa_employees.SA_EMPLOYEE_DATA
on sa_customers.SA_CUSTOMER_DATA_total.TOTAL_ID = sa_employees.SA_EMPLOYEE_DATA.EMPLOYEE_ID
left outer join sa_promotions.SA_PROMOTION_DATA
on sa_customers.SA_CUSTOMER_DATA_total.TOTAL_ID = sa_promotions.SA_PROMOTION_DATA.PROMOTION_ID
order by 1
;
```

Script Output | Task completed in 2.08 seconds

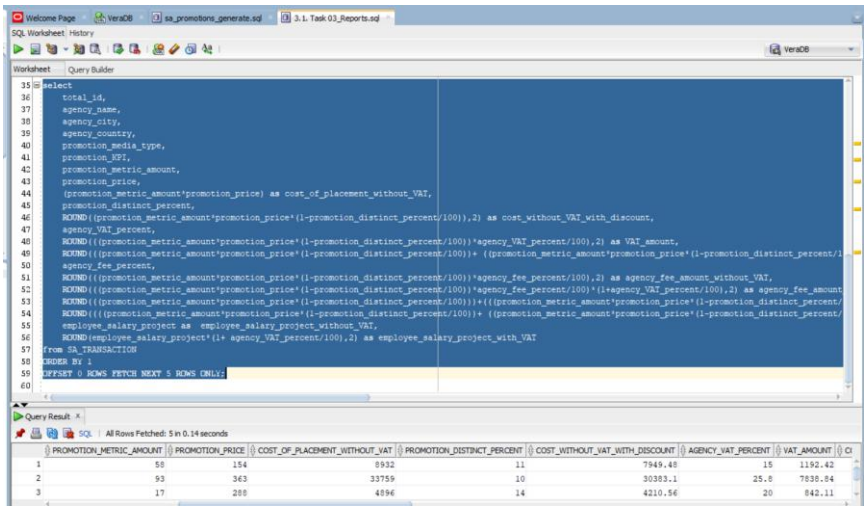
```
Table SA_TRANSACTION created.
```

```
select * from SA_TRANSACTION;
```

Query Result | Fetched 50 rows in 0.031 seconds

TOTAL_ID	TIME_ID	CUSTOMER_NAME	BRAND_NAME	CUSTOMER_ADDRESS	CUSTOMER_CITY	CUSTOMER_COUNTRY	CUSTOMER_EMAIL	CUSTOMER_OFFICE_PH
1	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
2	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
3	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
4	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
5	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
6	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
7	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
8	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000
9	01-JAN-22	Samsung Electronics	SAMSUNG	85 Challenger Rd. Ridgefield Park	New Jersey	United States	www.facebook.com/SamsungUS	1-201-229-4000

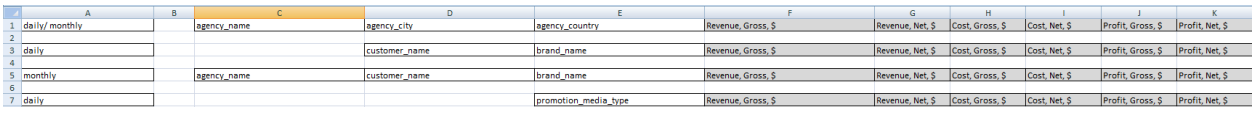
Let's create a selection that takes into account all measurable business budgets.



Code:

```
select
   total_id,
   agency_name,
   agency_city,
   agency_country,
   promotion_media_type,
   promotion_KPI,
   promotion_metric_amount,
   promotion_price,
   (promotion_metric_amount*promotion_price) as cost_of_placement_without_VAT,
   promotion_distinct_percent,
   ROUND((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100)),2) as cost_without_VAT_with_discount,
   agency_VAT_percent,
   ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_VAT_percent/100),2) as VAT_amount,
   ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))+
((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_VAT_percent/100)),2) as
cost_with_VAT_with_discount,
   agency_fee_percent,
   ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100),2) as
agency_fee_amount_without_VAT,
   ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2) as agency_fee_amount_with_VAT,
   ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100)))+(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)),2) as
total_cost_without_VAT_with_discount_with_agency_fee_amount_without_VAT,
   ROUND((((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))+
((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_VAT_percent/100)))+(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100)),2) as
total_cost_with_VAT_with_discount_with_agency_fee_amount_with_VAT,
   employee_salary_project as  employee_salary_project_without_VAT,
   ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2) as employee_salary_project_with_VAT
from SA_TRANSACTION
ORDER BY 1
OFFSET 0 ROWS FETCH NEXT 5 ROWS ONLY;
```

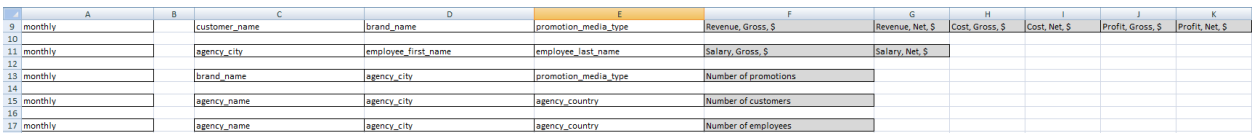
Creation of daily reports layouts in excel.



	A	B	C	D	E	F	G	H	I	J	K
1	daily/ monthly		agency_name	agency_city	agency_country	Revenue, Gross, $	Revenue, Net, $	Cost, Gross, $	Cost, Net, $	Profit, Gross, $	Profit, Net, $
2											
3	daily			customer_name	brand_name	Revenue, Gross, $	Revenue, Net, $	Cost, Gross, $	Cost, Net, $	Profit, Gross, $	Profit, Net, $
4											
5	monthly		agency_name	customer_name	brand_name	Revenue, Gross, $	Revenue, Net, $	Cost, Gross, $	Cost, Net, $	Profit, Gross, $	Profit, Net, $
6											
7	daily				promotion_media_type	Revenue, Gross, $	Revenue, Net, $	Cost, Gross, $	Cost, Net, $	Profit, Gross, $	Profit, Net, $

2.2. Task 02: CREATE Monthly Reports Layouts

Creation of monthly reports layouts in excel.



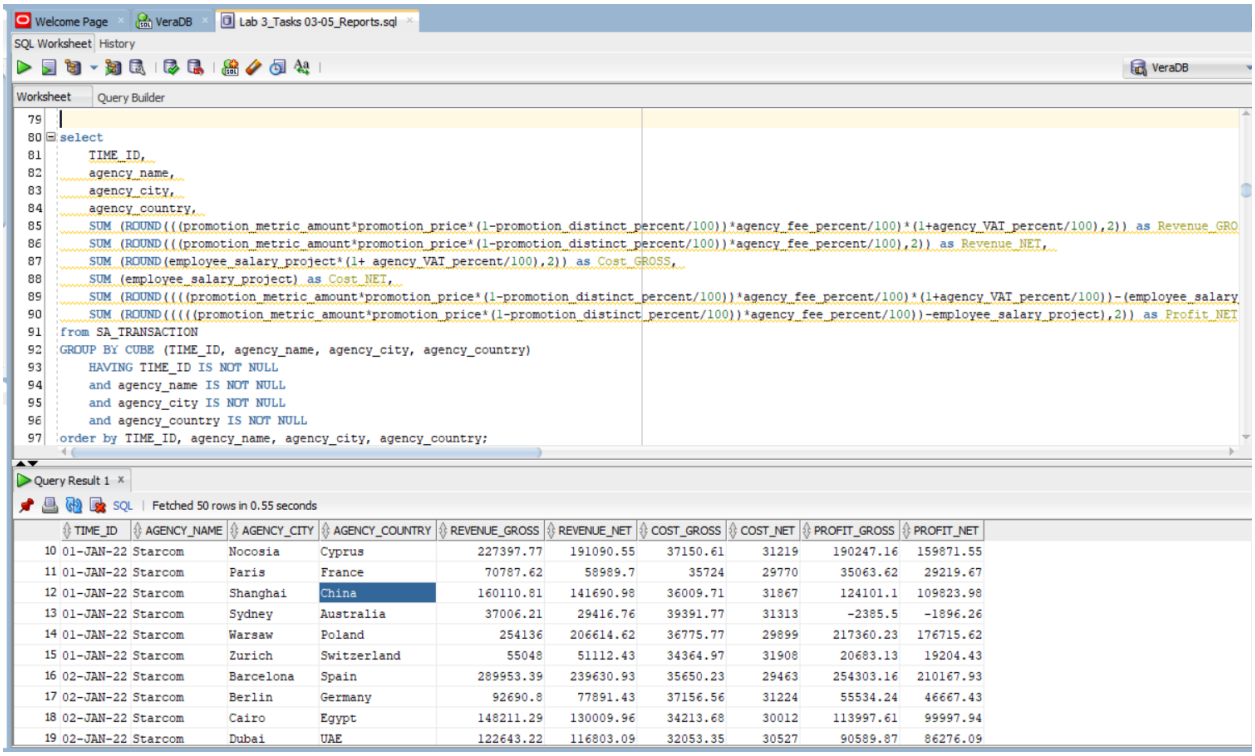
	A	B	C	D	E	F	G	H	I	J	K
9	monthly		customer_name	brand_name	promotion_media_type	Revenue, Gross, $	Revenue, Net, $	Cost, Gross, $	Cost, Net, $	Profit, Gross, $	Profit, Net, $
10											
11	monthly		agency_city	employee_first_name	employee_last_name	Salary, Gross, $	Salary, Net, $				
12											
13	monthly		brand_name	agency_city	promotion_media_type	Number of promotions					
14											
15	monthly		agency_name	agency_city	agency_country	Number of customers					
16											
17	monthly		agency_name	agency_city	agency_country	Number of employees					

3. Advanced Grouping tasks – Reports

3.1. Task 03: CREATE Test AdHoc SQL - Daily Reports (CUBE)

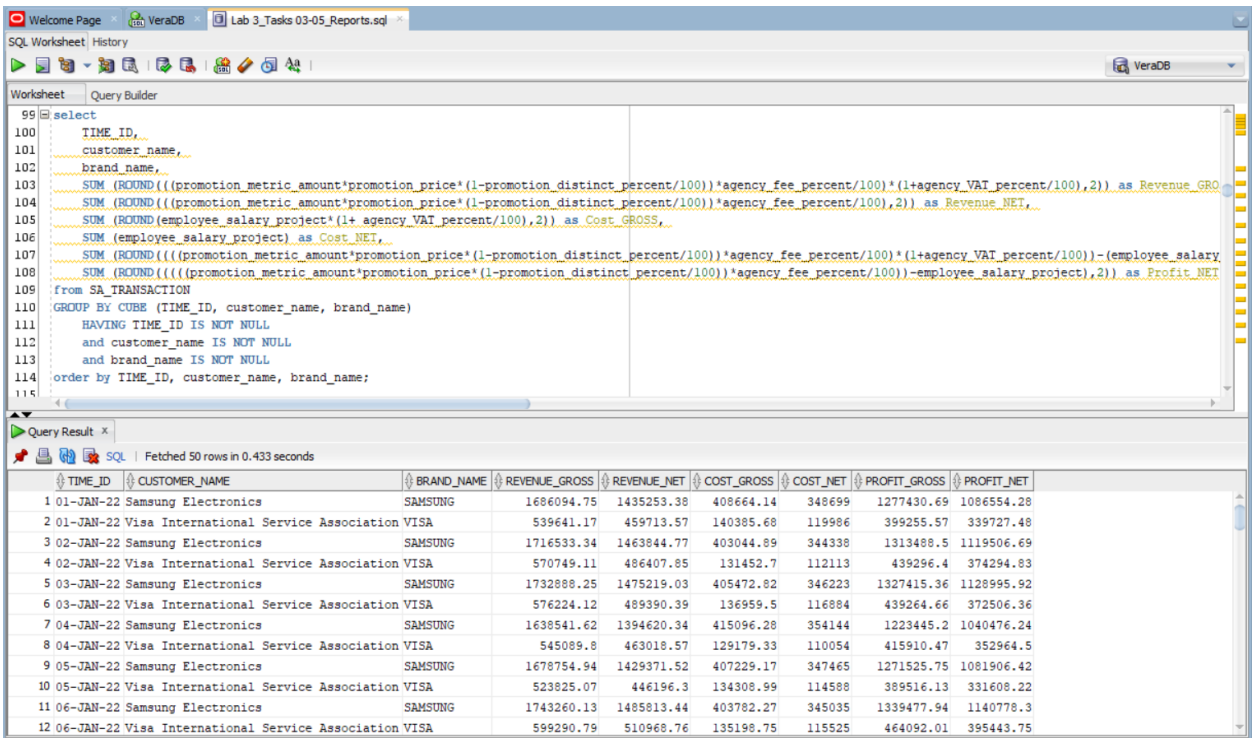
Let's will calculate Daily Reports (According report layouts on task 01).

- USE: CUBE Extension



Code:

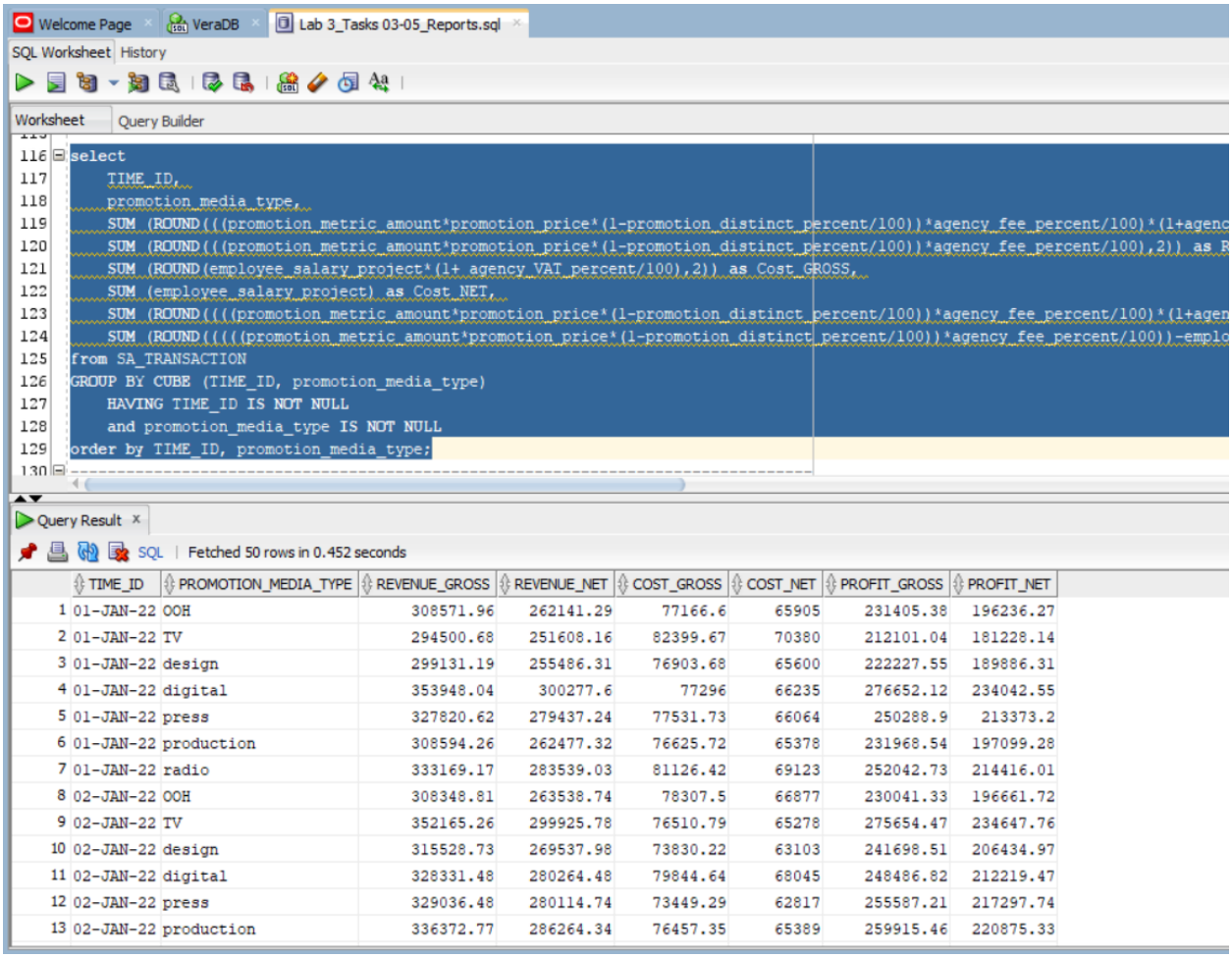
```
select
   TIME_ID,
   agency_name,
   agency_city,
   agency_country,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, agency_name, agency_city, agency_country)
   HAVING TIME_ID IS NOT NULL
   and agency_name IS NOT NULL
   and agency_city IS NOT NULL
   and agency_country IS NOT NULL
order by TIME_ID, agency_name, agency_city, agency_country;
```



	TIME_ID	CUSTOMER_NAME	BRAND_NAME	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET
1	01-JAN-22	Samsung Electronics	SAMSUNG	1686094.75	1435253.38	408664.14	348699	1277430.69	1086554.28
2	01-JAN-22	Visa International Service Association	VISA	539641.17	459713.57	140385.68	119986	399255.57	339727.48
3	02-JAN-22	Samsung Electronics	SAMSUNG	1716533.34	1463844.77	403044.89	344338	1313488.5	1119506.69
4	02-JAN-22	Visa International Service Association	VISA	570749.11	486407.85	131452.7	112113	439296.4	374294.83
5	03-JAN-22	Samsung Electronics	SAMSUNG	1732888.25	1475219.03	405472.82	346223	1327415.36	1128995.92
6	03-JAN-22	Visa International Service Association	VISA	576224.12	489390.39	136959.5	116884	439264.66	372506.36
7	04-JAN-22	Samsung Electronics	SAMSUNG	1638541.62	1394620.34	415096.28	354144	1223445.2	1040476.24
8	04-JAN-22	Visa International Service Association	VISA	545089.8	463018.57	129179.33	110054	415910.47	352964.5
9	05-JAN-22	Samsung Electronics	SAMSUNG	1678754.94	1429371.52	407229.17	347465	1271525.75	1081906.42
10	05-JAN-22	Visa International Service Association	VISA	523825.07	446196.3	134308.99	114588	389516.13	331608.22
11	06-JAN-22	Samsung Electronics	SAMSUNG	1743260.13	1485813.44	403782.27	345035	1339477.94	1140778.3
12	06-JAN-22	Visa International Service Association	VISA	599290.79	510968.76	135198.75	115525	464092.01	395443.75

Code:

```
select
   TIME_ID,
   customer_name,
   brand_name,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, customer_name, brand_name)
   HAVING TIME_ID IS NOT NULL
   and customer_name IS NOT NULL
   and brand_name IS NOT NULL
order by TIME_ID, customer_name, brand_name;
```

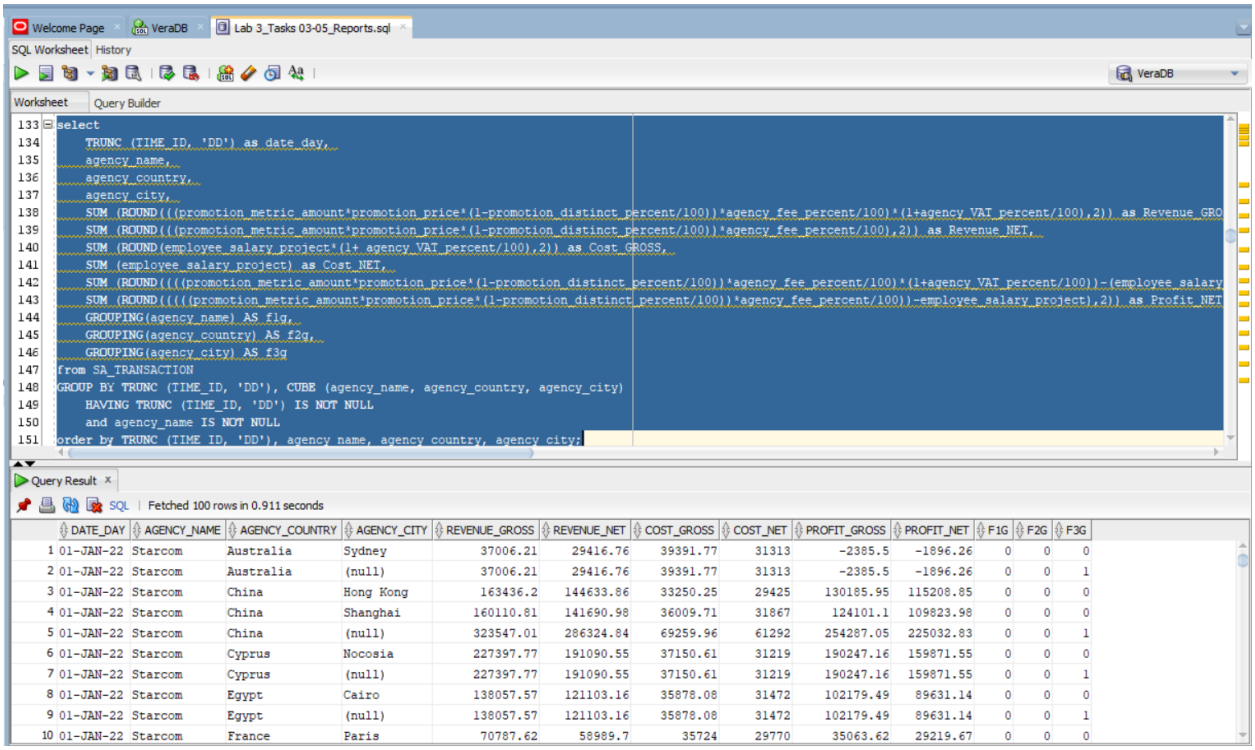


	TIME_ID	PROMOTION_MEDIA_TYPE	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET
1	01-JAN-22	OOH	308571.96	262141.29	77166.6	65905	231405.38	196236.27
2	01-JAN-22	TV	294500.68	251608.16	82399.67	70380	212101.04	181228.14
3	01-JAN-22	design	299131.19	255486.31	76903.68	65600	222227.55	189886.31
4	01-JAN-22	digital	353948.04	300277.6	77296	66235	276652.12	234042.55
5	01-JAN-22	press	327820.62	279437.24	77531.73	66064	250288.9	213373.2
6	01-JAN-22	production	308594.26	262477.32	76625.72	65378	231968.54	197099.28
7	01-JAN-22	radio	333169.17	283539.03	81126.42	69123	252042.73	214416.01
8	02-JAN-22	OOH	308348.81	263538.74	78307.5	66877	230041.33	196661.72
9	02-JAN-22	TV	352165.26	299925.78	76510.79	65278	275654.47	234647.76
10	02-JAN-22	design	315528.73	269537.98	73830.22	63103	241698.51	206434.97
11	02-JAN-22	digital	328331.48	280264.48	79844.64	68045	248486.82	212219.47
12	02-JAN-22	press	329036.48	280114.74	73449.29	62817	255587.21	217297.74
13	02-JAN-22	production	336372.77	286264.34	76457.35	65389	259915.46	220875.33

Code:

```
select
   TIME_ID,
   promotion_media_type,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, promotion_media_type)
   HAVING TIME_ID IS NOT NULL
   and promotion_media_type IS NOT NULL
order by TIME_ID, promotion_media_type;
```

- USE: Grouping() function

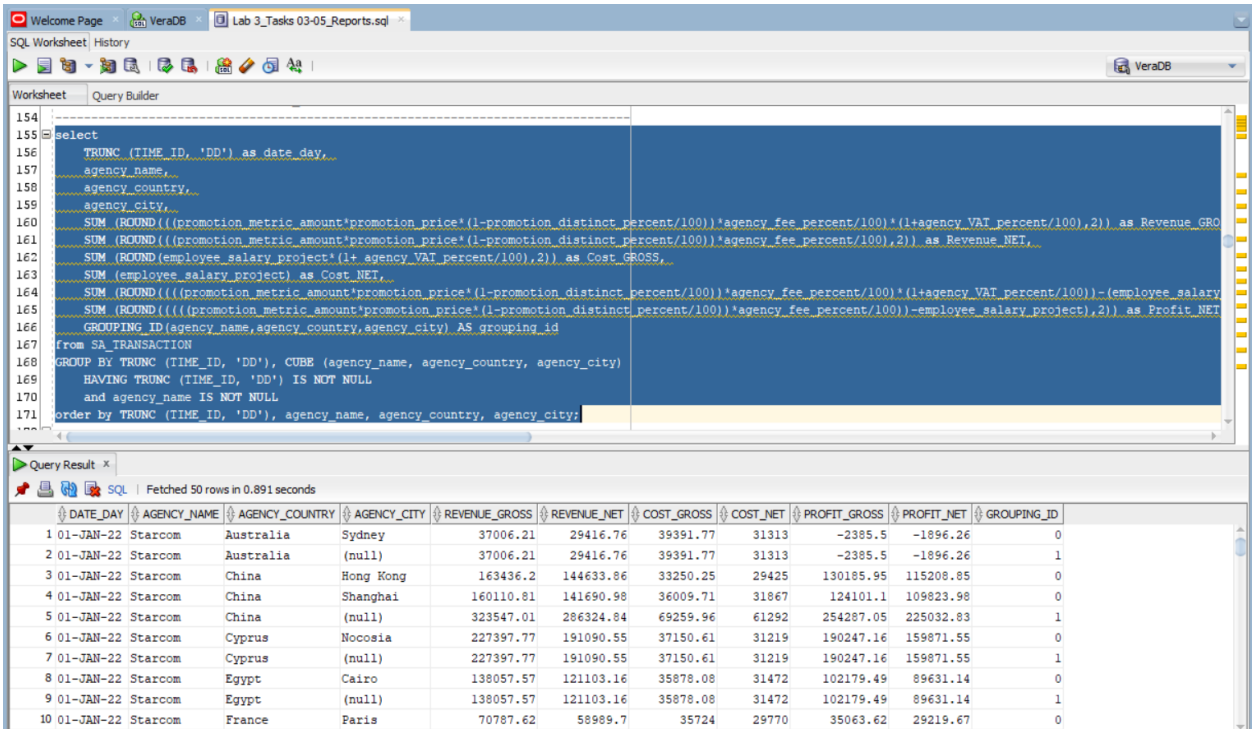


	DATE_DAY	AGENCY_NAME	AGENCY_COUNTRY	AGENCY_CITY	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET	F1G	F2G	F3G
1	01-JAN-22	Starcom	Australia	Sydney	37006.21	29416.76	39391.77	31313	-2385.5	-1896.26	0	0	0
2	01-JAN-22	Starcom	Australia	(null)	37006.21	29416.76	39391.77	31313	-2385.5	-1896.26	0	0	1
3	01-JAN-22	Starcom	China	Hong Kong	163436.2	144633.86	33250.25	29425	130185.95	115208.85	0	0	0
4	01-JAN-22	Starcom	China	Shanghai	160110.81	141690.98	36009.71	31867	124101.1	109823.98	0	0	0
5	01-JAN-22	Starcom	China	(null)	323547.01	286324.84	69259.96	61292	254287.05	225032.83	0	0	1
6	01-JAN-22	Starcom	Cyprus	Nocosia	227397.77	191090.55	37150.61	31219	190247.16	159871.55	0	0	0
7	01-JAN-22	Starcom	Cyprus	(null)	227397.77	191090.55	37150.61	31219	190247.16	159871.55	0	0	1
8	01-JAN-22	Starcom	Egypt	Cairo	138057.57	121103.16	35878.08	31472	102179.49	89631.14	0	0	0
9	01-JAN-22	Starcom	Egypt	(null)	138057.57	121103.16	35878.08	31472	102179.49	89631.14	0	0	1
10	01-JAN-22	Starcom	France	Paris	70787.62	58989.7	35724	29770	35063.62	29219.67	0	0	0

Code:

```
select
   TRUNC (TIME_ID, 'DD') as date_day,
   agency_name,
   agency_country,
   agency_city,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET,
   GROUPING(agency_name) AS f1g,
   GROUPING(agency_country) AS f2g,
   GROUPING(agency_city) AS f3g
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'DD'), CUBE (agency_name, agency_country, agency_city)
   HAVING TRUNC (TIME_ID, 'DD') IS NOT NULL
   and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'DD'), agency_name, agency_country, agency_city;
```

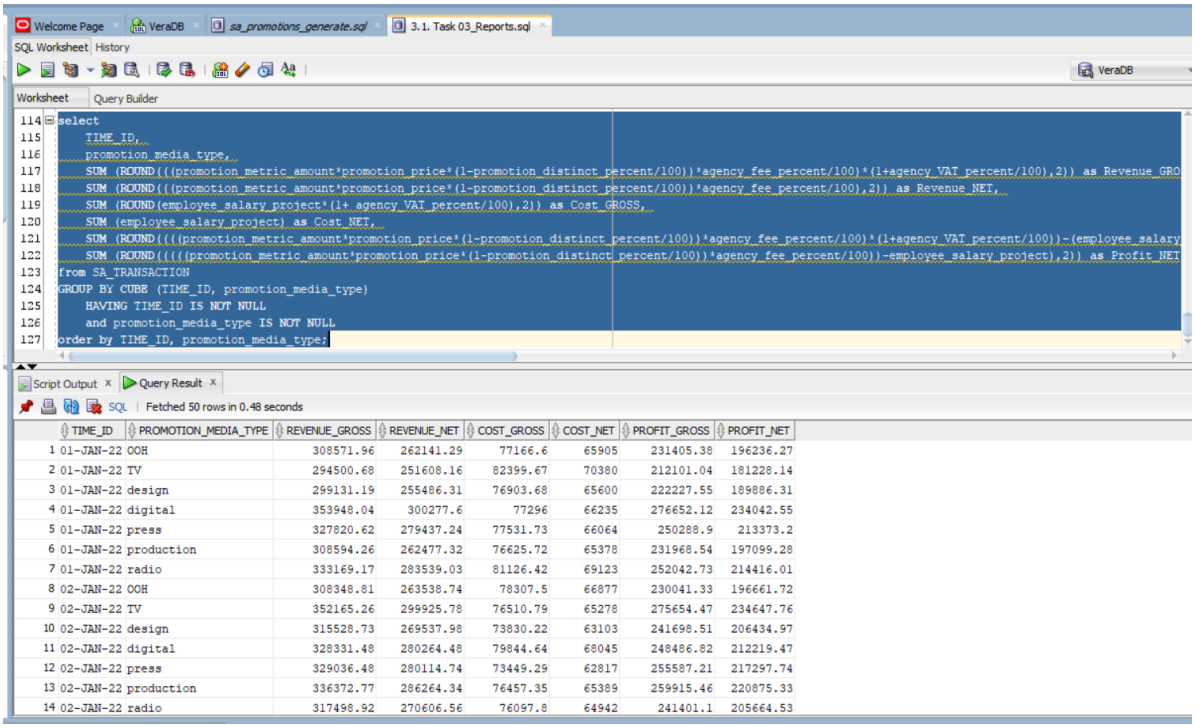
- USE: Grouping_ID function



	DATE_DAY	AGENCY_NAME	AGENCY_COUNTRY	AGENCY_CITY	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET	GROUPING_ID
1	01-JAN-22	Starcom	Australia	Sydney	37006.21	29416.76	39391.77	31313	-2385.5	-1896.26	0
2	01-JAN-22	Starcom	Australia	(null)	37006.21	29416.76	39391.77	31313	-2385.5	-1896.26	1
3	01-JAN-22	Starcom	China	Hong Kong	163436.2	144633.86	33250.25	29425	130185.95	115208.85	0
4	01-JAN-22	Starcom	China	Shanghai	160110.81	141690.98	36009.71	31867	124101.1	109823.98	0
5	01-JAN-22	Starcom	China	(null)	323547.01	286324.84	69259.96	61292	254287.05	225032.83	1
6	01-JAN-22	Starcom	Cyprus	Nocosia	227397.77	191090.55	37150.61	31219	190247.16	159871.55	0
7	01-JAN-22	Starcom	Cyprus	(null)	227397.77	191090.55	37150.61	31219	190247.16	159871.55	1
8	01-JAN-22	Starcom	Egypt	Cairo	138057.57	121103.16	35878.08	31472	102179.49	89631.14	0
9	01-JAN-22	Starcom	Egypt	(null)	138057.57	121103.16	35878.08	31472	102179.49	89631.14	1
10	01-JAN-22	Starcom	France	Paris	70787.62	58989.7	35724	29770	35063.62	29219.67	0

Code:

```
select
   TRUNC (TIME_ID, 'DD') as date_day,
   agency_name,
   agency_country,
   agency_city,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET,
   GROUPING_ID(agency_name,agency_country,agency_city) AS grouping_id
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'DD'), CUBE (agency_name, agency_country, agency_city)
   HAVING TRUNC (TIME_ID, 'DD') IS NOT NULL
   and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'DD'), agency_name, agency_country, agency_city;
```

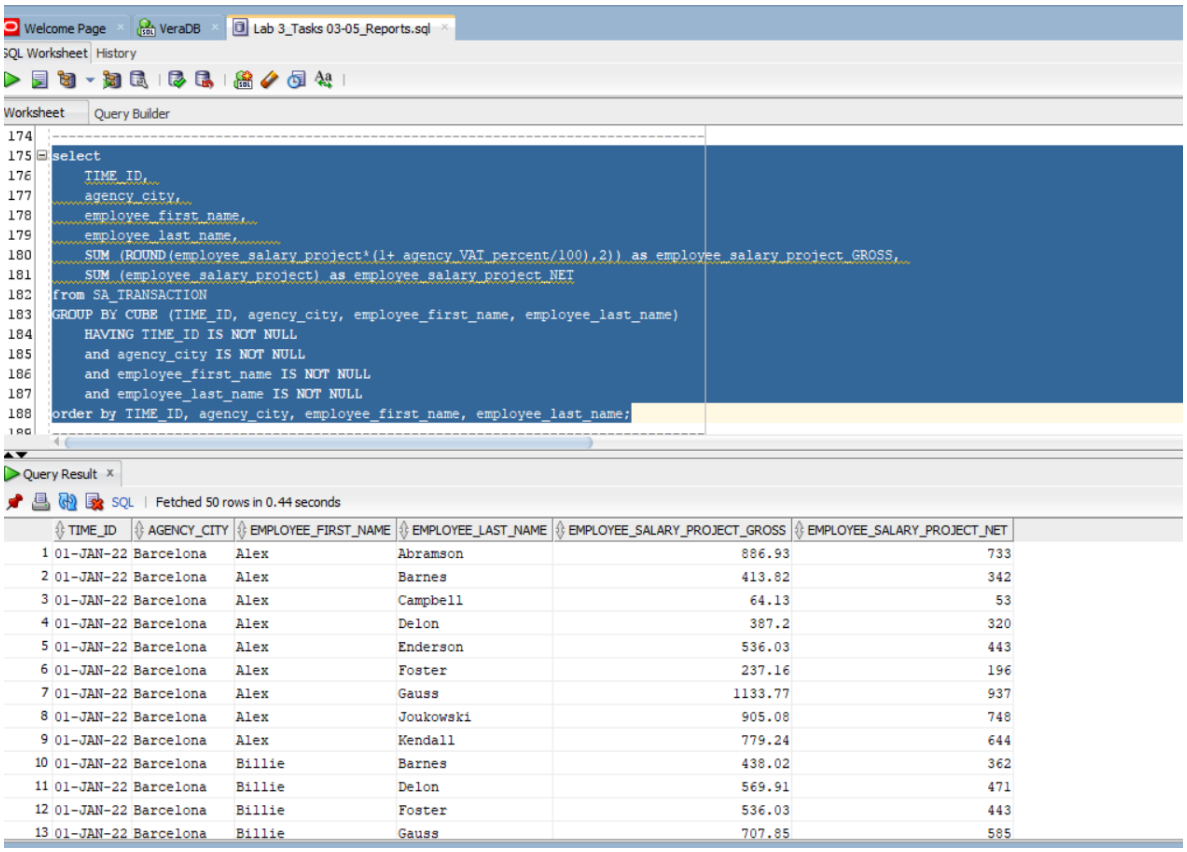


	TIME_ID	PROMOTION_MEDIA_TYPE	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET
1	01-JAN-22	OOH	308571.96	262141.29	77166.6	65905	231405.38	196236.27
2	01-JAN-22	TV	294500.68	251608.16	82399.67	70380	212101.04	181228.14
3	01-JAN-22	design	299131.19	255486.31	76903.68	65600	222227.55	189886.31
4	01-JAN-22	digital	353948.04	300277.6	77296	66235	276652.12	234042.55
5	01-JAN-22	press	327820.62	279437.24	77531.73	66064	250288.9	213373.2
6	01-JAN-22	production	308594.26	262477.32	76625.72	65378	231968.54	197099.28
7	01-JAN-22	radio	333169.17	283539.03	81126.42	69123	252042.73	214416.01
8	02-JAN-22	OOH	308348.81	263538.74	78307.5	66877	230041.33	196661.72
9	02-JAN-22	TV	352165.26	299925.78	76510.79	65278	275654.47	234647.76
10	02-JAN-22	design	315528.73	269537.98	73830.22	63103	241698.51	206434.97
11	02-JAN-22	digital	328331.48	280264.48	79844.64	68045	248486.82	212219.47
12	02-JAN-22	press	329036.48	280114.74	73449.29	62817	255587.21	217297.74
13	02-JAN-22	production	336372.77	286264.34	76457.35	65389	259915.46	220875.33
14	02-JAN-22	radio	317498.92	270606.56	76097.8	64942	241401.1	205664.53

3.2. Task 04: CREATE Test AdHoc SQL - Monthly Reports (ROLLUP & GROUPING SETS)

Let's will calculate Monthly Reports (According report layouts on task 01).

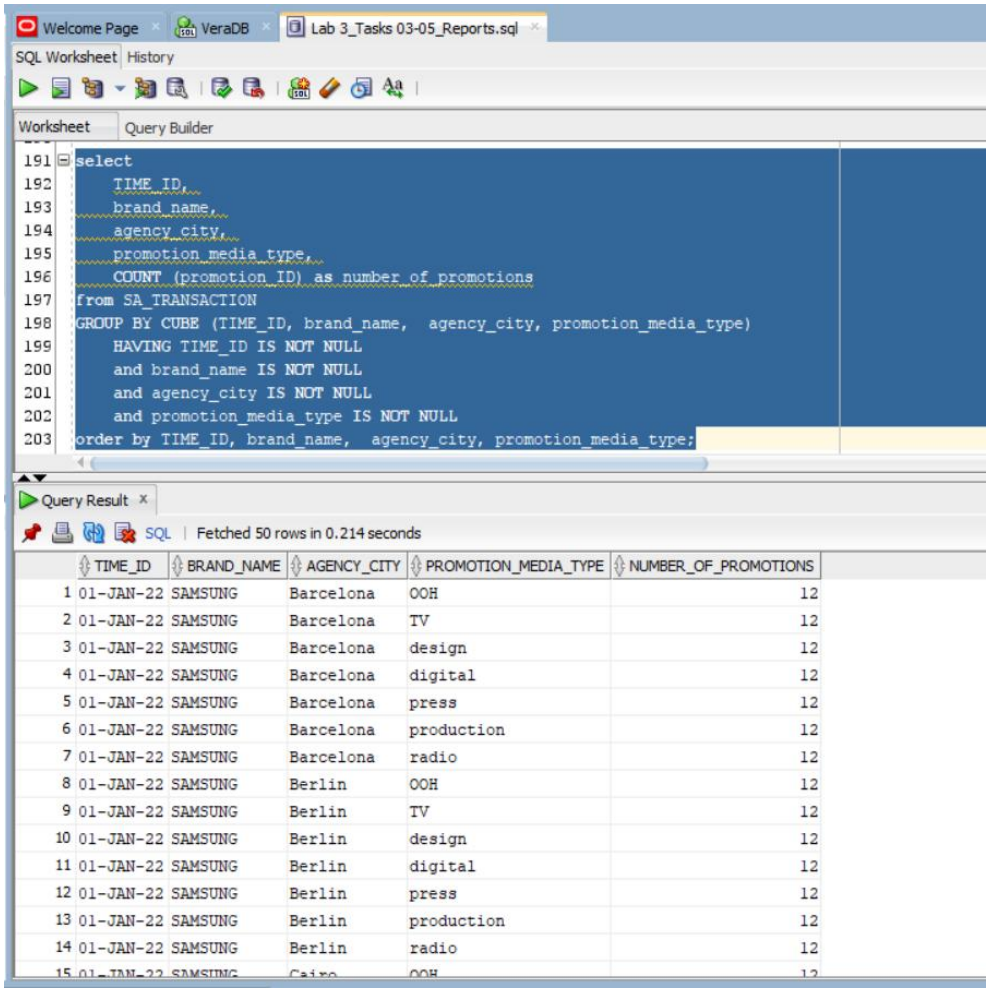
- USE: CUBE Extension



	TIME_ID	AGENCY_CITY	EMPLOYEE_FIRST_NAME	EMPLOYEE_LAST_NAME	EMPLOYEE_SALARY_PROJECT_GROSS	EMPLOYEE_SALARY_PROJECT_NET
1	01-JAN-22	Barcelona	Alex	Abramson	886.93	733
2	01-JAN-22	Barcelona	Alex	Barnes	413.82	342
3	01-JAN-22	Barcelona	Alex	Campbell	64.13	53
4	01-JAN-22	Barcelona	Alex	Delon	387.2	320
5	01-JAN-22	Barcelona	Alex	Enderson	536.03	443
6	01-JAN-22	Barcelona	Alex	Foster	237.16	196
7	01-JAN-22	Barcelona	Alex	Gauss	1133.77	937
8	01-JAN-22	Barcelona	Alex	Joukowski	905.08	748
9	01-JAN-22	Barcelona	Alex	Kendall	779.24	644
10	01-JAN-22	Barcelona	Billie	Barnes	438.02	362
11	01-JAN-22	Barcelona	Billie	Delon	569.91	471
12	01-JAN-22	Barcelona	Billie	Foster	536.03	443
13	01-JAN-22	Barcelona	Billie	Gauss	707.85	585

Code:

```
select
   TIME_ID,
   agency_city,
   employee_first_name,
   employee_last_name,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as employee_salary_project_GROSS,
   SUM (employee_salary_project) as employee_salary_project_NET
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, agency_city, employee_first_name, employee_last_name)
   HAVING TIME_ID IS NOT NULL
   and agency_city IS NOT NULL
   and employee_first_name IS NOT NULL
   and employee_last_name IS NOT NULL
order by TIME_ID, agency_city, employee_first_name, employee_last_name;
```

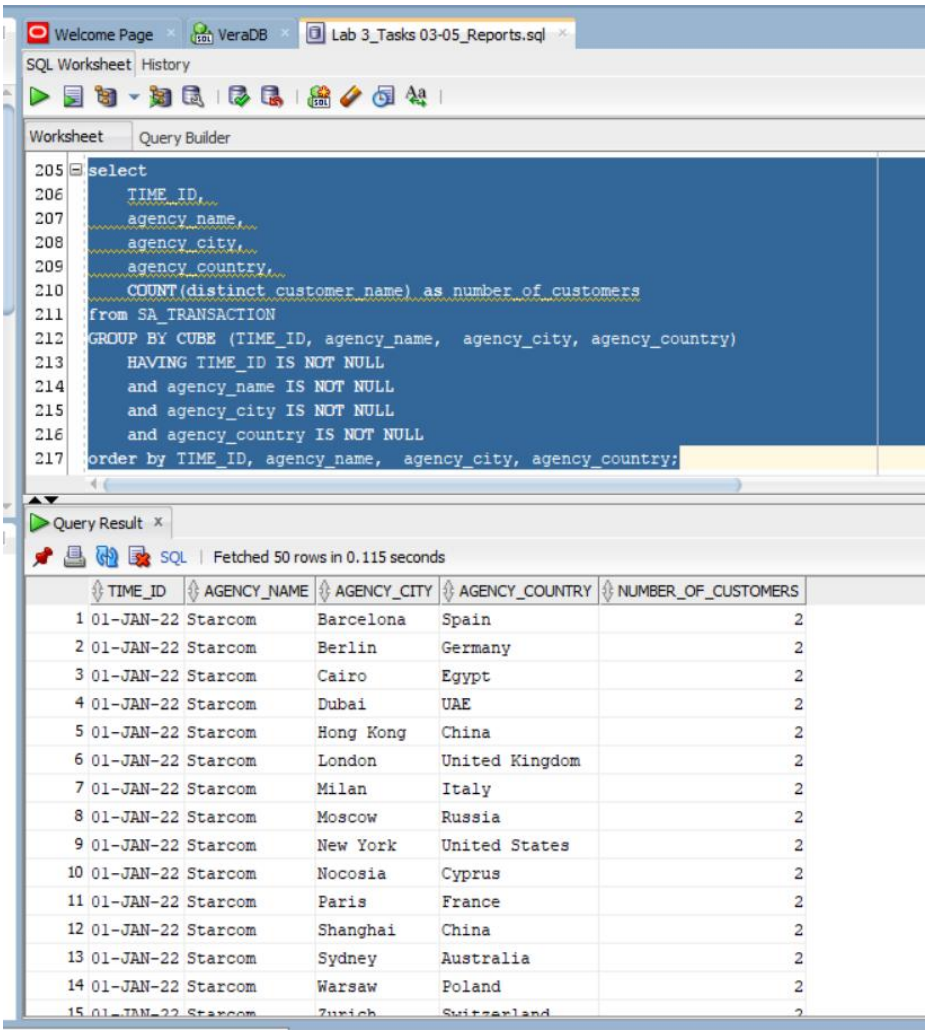


	TIME_ID	BRAND_NAME	AGENCY_CITY	PROMOTION_MEDIA_TYPE	NUMBER_OF_PROMOTIONS
1	01-JAN-22	SAMSUNG	Barcelona	OOH	12
2	01-JAN-22	SAMSUNG	Barcelona	TV	12
3	01-JAN-22	SAMSUNG	Barcelona	design	12
4	01-JAN-22	SAMSUNG	Barcelona	digital	12
5	01-JAN-22	SAMSUNG	Barcelona	press	12
6	01-JAN-22	SAMSUNG	Barcelona	production	12
7	01-JAN-22	SAMSUNG	Barcelona	radio	12
8	01-JAN-22	SAMSUNG	Berlin	OOH	12
9	01-JAN-22	SAMSUNG	Berlin	TV	12
10	01-JAN-22	SAMSUNG	Berlin	design	12
11	01-JAN-22	SAMSUNG	Berlin	digital	12
12	01-JAN-22	SAMSUNG	Berlin	press	12
13	01-JAN-22	SAMSUNG	Berlin	production	12
14	01-JAN-22	SAMSUNG	Berlin	radio	12
15	01-JAN-22	SAMSUNG	Cairo	OOH	12

Code:

```
select
   TIME_ID,
   brand_name,
   agency_city,
   promotion_media_type,
   COUNT (promotion_ID) as number_of_promotions
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, brand_name,  agency_city, promotion_media_type)
   HAVING TIME_ID IS NOT NULL
```

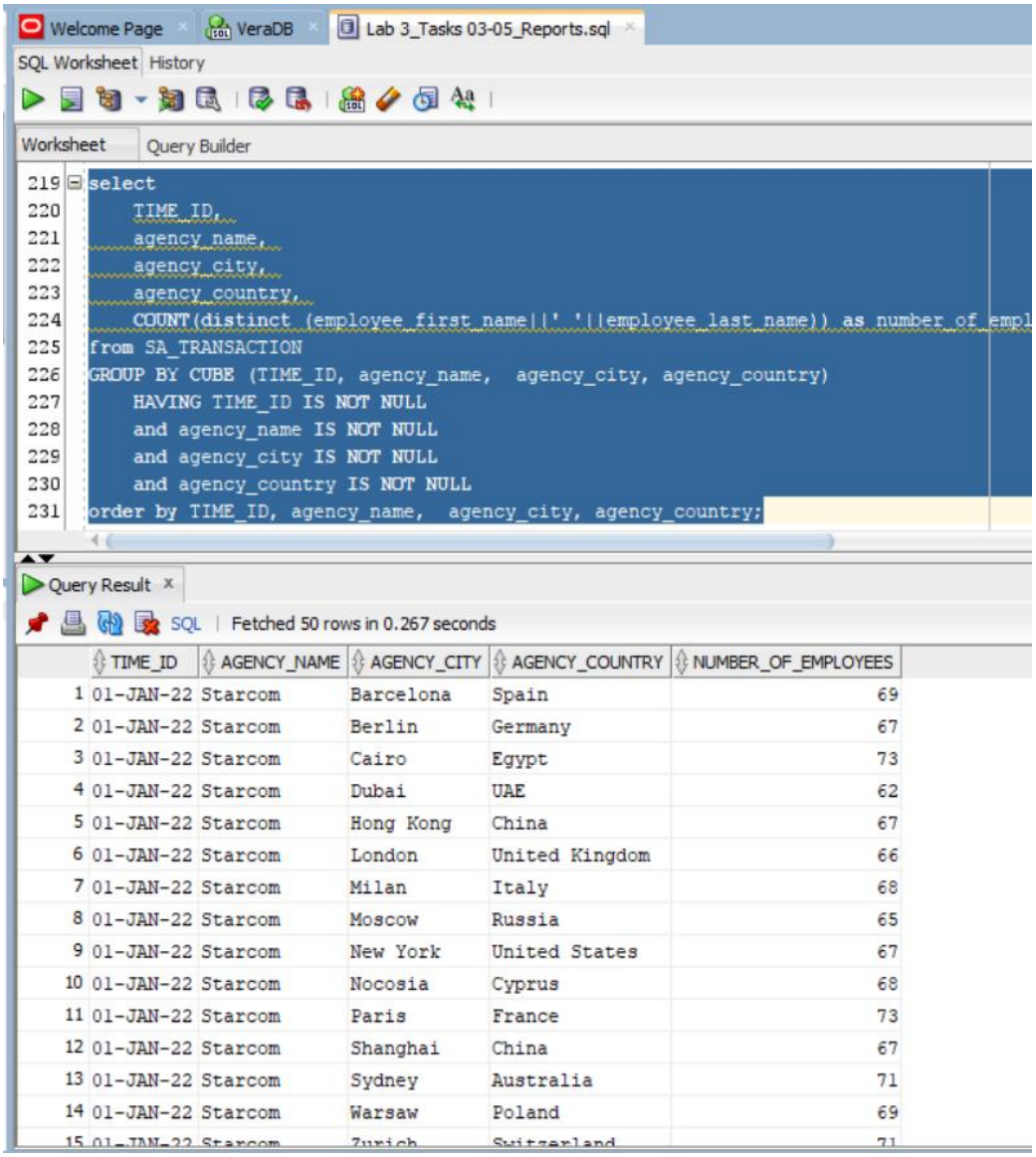
```
   and brand_name IS NOT NULL
   and agency_city IS NOT NULL
   and promotion_media_type IS NOT NULL
order by TIME_ID, brand_name,  agency_city, promotion_media_type;
```



	TIME_ID	AGENCY_NAME	AGENCY_CITY	AGENCY_COUNTRY	NUMBER_OF_CUSTOMERS
1	01-JAN-22	Starcom	Barcelona	Spain	2
2	01-JAN-22	Starcom	Berlin	Germany	2
3	01-JAN-22	Starcom	Cairo	Egypt	2
4	01-JAN-22	Starcom	Dubai	UAE	2
5	01-JAN-22	Starcom	Hong Kong	China	2
6	01-JAN-22	Starcom	London	United Kingdom	2
7	01-JAN-22	Starcom	Milan	Italy	2
8	01-JAN-22	Starcom	Moscow	Russia	2
9	01-JAN-22	Starcom	New York	United States	2
10	01-JAN-22	Starcom	Nocosia	Cyprus	2
11	01-JAN-22	Starcom	Paris	France	2
12	01-JAN-22	Starcom	Shanghai	China	2
13	01-JAN-22	Starcom	Sydney	Australia	2
14	01-JAN-22	Starcom	Warsaw	Poland	2
15	01-JAN-22	Starcom	Zurich	Switzerland	2

Code:

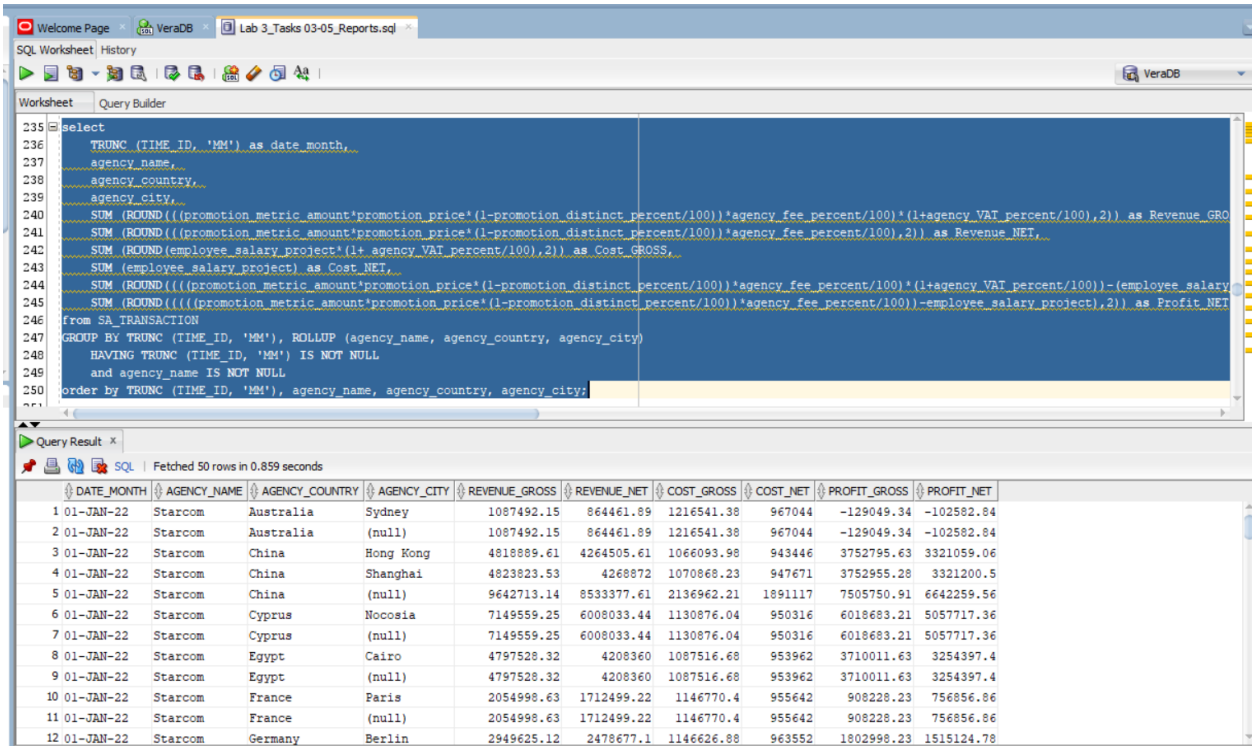
```
select
   TIME_ID,
   agency_name,
   agency_city,
   agency_country,
   COUNT(distinct customer_name) as number_of_customers
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, agency_name,  agency_city, agency_country)
   HAVING TIME_ID IS NOT NULL
   and agency_name IS NOT NULL
   and agency_city IS NOT NULL
   and agency_country IS NOT NULL
order by TIME_ID, agency_name,  agency_city, agency_country;
```



Code:

```
select
   TIME_ID,
   agency_name,
   agency_city,
   agency_country,
   COUNT(distinct (employee_first_name||' '||employee_last_name)) as number_of_employees
from SA_TRANSACTION
GROUP BY CUBE (TIME_ID, agency_name,  agency_city, agency_country)
   HAVING TIME_ID IS NOT NULL
   and agency_name IS NOT NULL
   and agency_city IS NOT NULL
   and agency_country IS NOT NULL
order by TIME_ID, agency_name,  agency_city, agency_country;
```

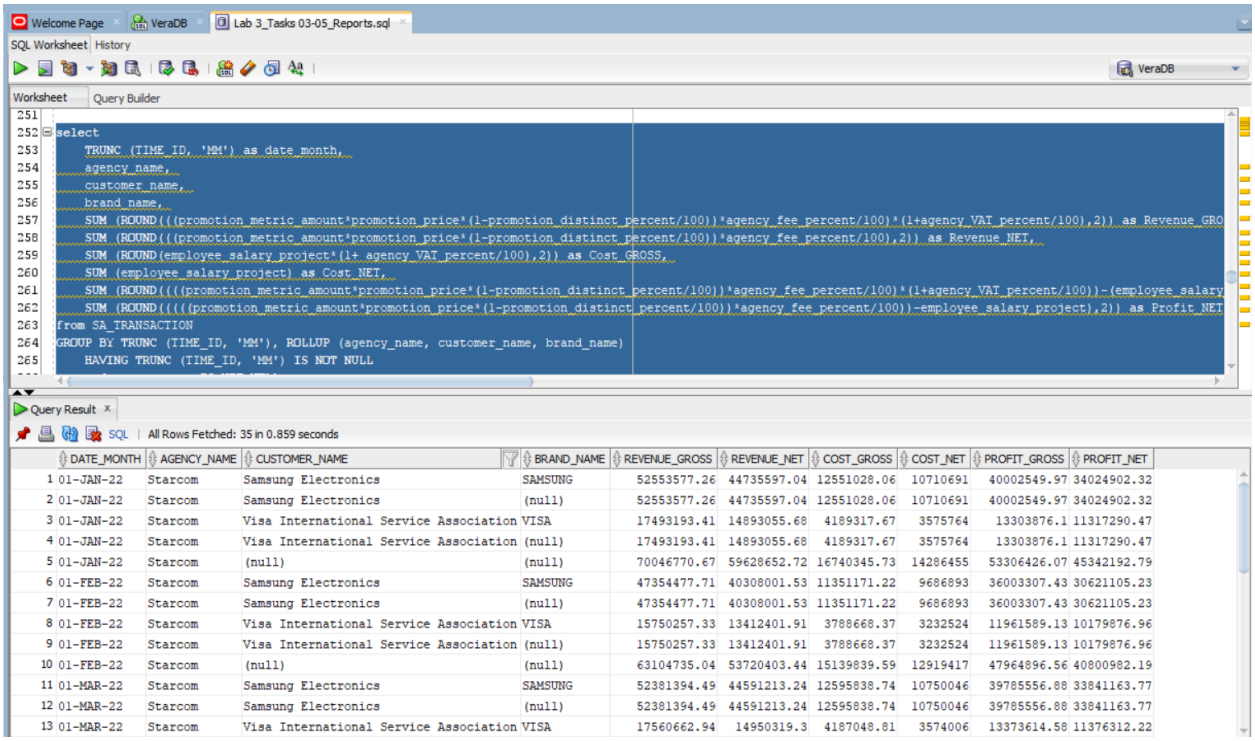
- USE: ROLLUP Extension



	DATE_MONTH	AGENCY_NAME	AGENCY_COUNTRY	AGENCY_CITY	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET
1	01-JAN-22	Starcom	Australia	Sydney	1087492.15	864461.89	1216541.38	967044	-129049.34	-102582.84
2	01-JAN-22	Starcom	Australia	(null)	1087492.15	864461.89	1216541.38	967044	-129049.34	-102582.84
3	01-JAN-22	Starcom	China	Hong Kong	4818889.61	4264505.61	1066093.98	943446	3752795.63	3321059.06
4	01-JAN-22	Starcom	China	Shanghai	4823823.53	4268872	1070868.23	947671	3752955.28	3321200.5
5	01-JAN-22	Starcom	China	(null)	9642713.14	8533377.61	2136962.21	1891117	7505750.91	6642259.56
6	01-JAN-22	Starcom	Cyprus	Nocosia	7149559.25	6008033.44	1130876.04	950316	6018683.21	5057717.36
7	01-JAN-22	Starcom	Cyprus	(null)	7149559.25	6008033.44	1130876.04	950316	6018683.21	5057717.36
8	01-JAN-22	Starcom	Egypt	Cairo	4797528.32	4208360	1087516.68	953962	3710011.63	3254397.4
9	01-JAN-22	Starcom	Egypt	(null)	4797528.32	4208360	1087516.68	953962	3710011.63	3254397.4
10	01-JAN-22	Starcom	France	Paris	2054998.63	1712499.22	1146770.4	955642	908228.23	756856.86
11	01-JAN-22	Starcom	France	(null)	2054998.63	1712499.22	1146770.4	955642	908228.23	756856.86
12	01-JAN-22	Starcom	Germany	Berlin	2949625.12	2478677.1	1146626.88	963552	1802998.23	1515124.78

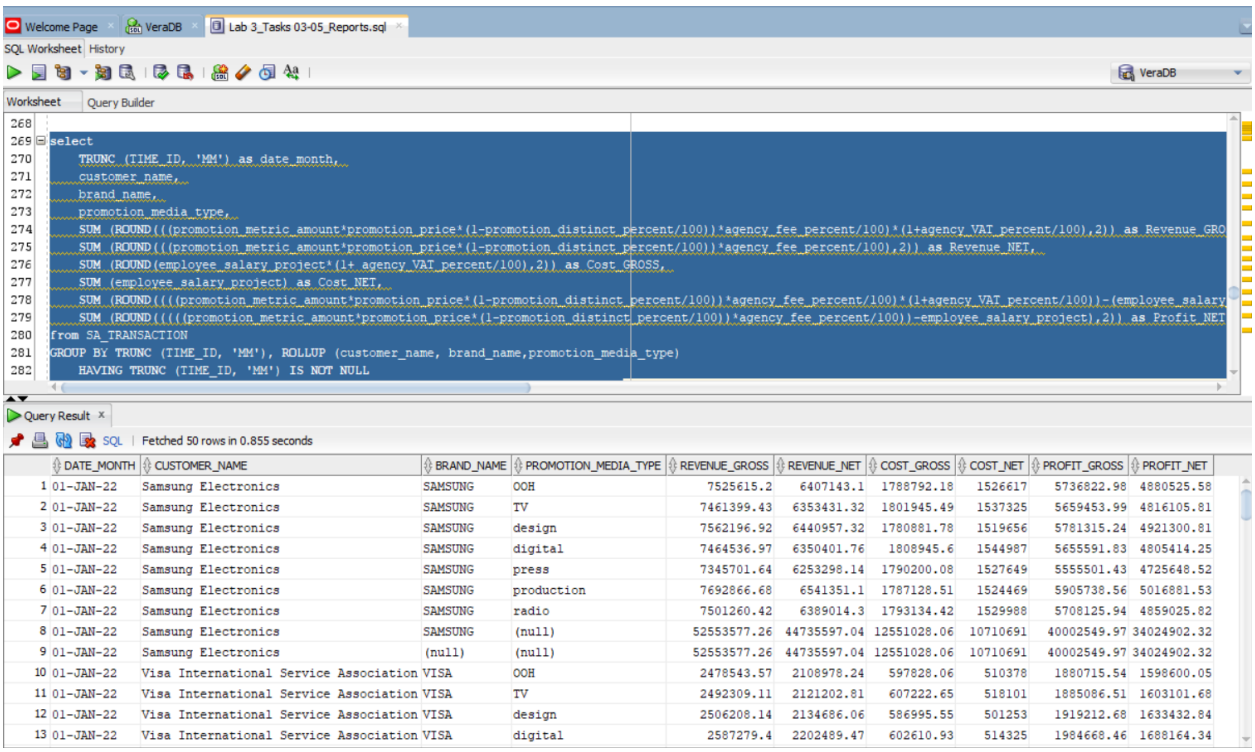
Code:

```
select
   TRUNC (TIME_ID, 'MM') as date_month,
   agency_name,
   agency_country,
   agency_city,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), ROLLUP (agency_name, agency_country, agency_city)
   HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
   and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'MM'), agency_name, agency_country, agency_city;
```



Code:

```
select
   TRUNC (TIME_ID, 'MM') as date_month,
   agency_name,
   customer_name,
   brand_name,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), ROLLUP (agency_name, customer_name, brand_name)
   HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
   and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'MM'), agency_name, customer_name, brand_name;
```



```
select
    TRUNC (TIME_ID, 'MM') as date_month,
    customer_name,
    brand_name,
    promotion_media_type,
    SUM (ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GRO
    SUM (ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
    SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
    SUM (employee_salary_project) as Cost_NET,
    SUM (ROUND((((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary
    SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), ROLLUP (customer_name, brand_name,promotion_media_type)
    HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
```

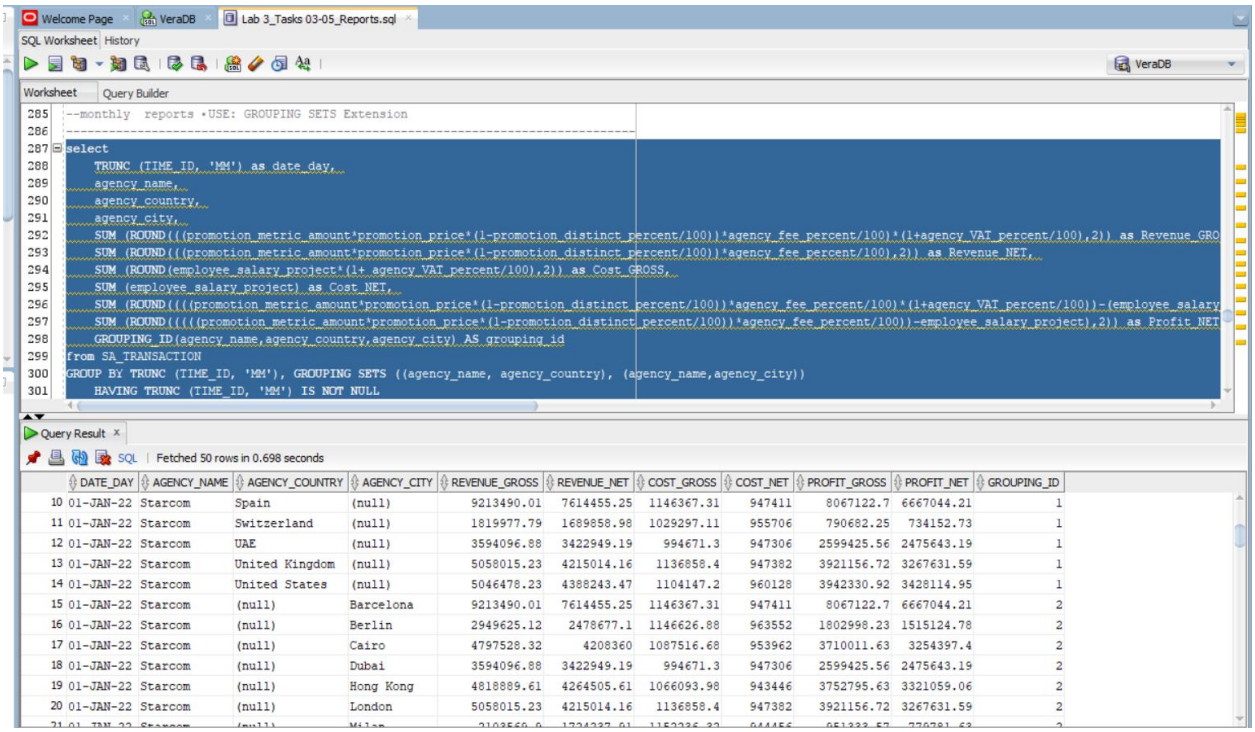
Fetched 50 rows in 0.855 seconds

	DATE_MONTH	CUSTOMER_NAME	BRAND_NAME	PROMOTION_MEDIA_TYPE	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET
1	01-JAN-22	Samsung Electronics	SAMSUNG	OOH	7525615.2	6407143.1	1788792.18	1526617	5736822.98	4880525.58
2	01-JAN-22	Samsung Electronics	SAMSUNG	TV	7461399.43	6353431.32	1801945.49	1537325	5659453.99	4816105.81
3	01-JAN-22	Samsung Electronics	SAMSUNG	design	7562196.92	6440957.32	1780881.78	1519656	5781315.24	4921300.81
4	01-JAN-22	Samsung Electronics	SAMSUNG	digital	7464536.97	6350401.76	1808945.6	1544987	5655591.83	4805414.25
5	01-JAN-22	Samsung Electronics	SAMSUNG	press	7345701.64	6253298.14	1790200.08	1527649	5555501.43	4725648.52
6	01-JAN-22	Samsung Electronics	SAMSUNG	production	7692866.68	6541351.1	1787128.51	1524469	5905738.56	5016881.53
7	01-JAN-22	Samsung Electronics	SAMSUNG	radio	7501260.42	6389014.3	1793134.42	1529988	5708125.94	4859025.82
8	01-JAN-22	Samsung Electronics	SAMSUNG	(null)	52553577.26	44735597.04	12551028.06	10710691	40002549.97	34024902.32
9	01-JAN-22	Samsung Electronics	(null)	(null)	52553577.26	44735597.04	12551028.06	10710691	40002549.97	34024902.32
10	01-JAN-22	Visa International Service Association	VISA	OOH	2478543.57	2108978.24	597828.06	510378	1880715.54	1598600.05
11	01-JAN-22	Visa International Service Association	VISA	TV	2492309.11	2121202.81	607222.65	518101	1885086.51	1603101.68
12	01-JAN-22	Visa International Service Association	VISA	design	2506208.14	2134686.06	586995.55	501253	1919212.68	1633432.84
13	01-JAN-22	Visa International Service Association	VISA	digital	2587279.4	2202489.47	602610.93	514325	1984668.46	1688164.34

Code:

```
select
   TRUNC (TIME_ID, 'MM') as date_month,
   customer_name,
   brand_name,
   promotion_media_type,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), ROLLUP (customer_name, brand_name,promotion_media_type)
   HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
order by TRUNC (TIME_ID, 'MM'), customer_name, brand_name,promotion_media_type;
```

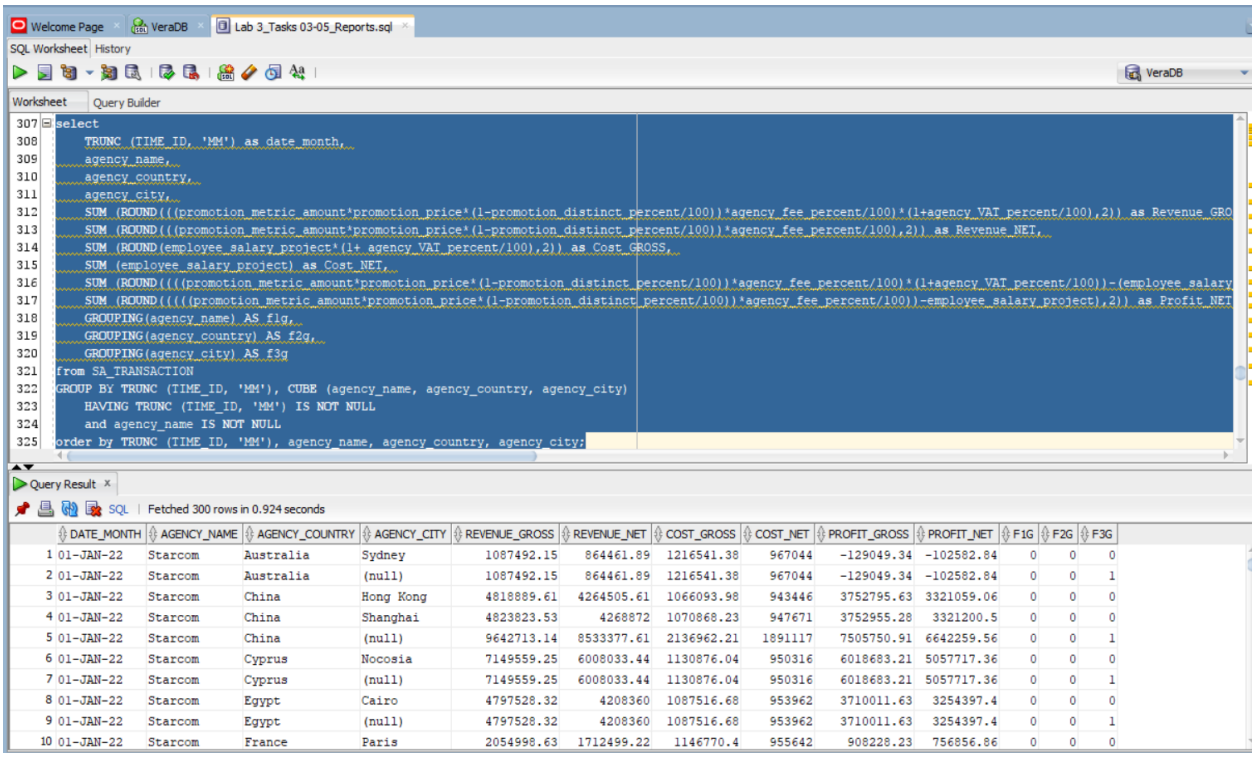
- USE: GROUPING SETS Extension & Grouping_ID function



Code:

```
select
   TRUNC (TIME_ID, 'MM') as date_day,
   agency_name,
   agency_country,
   agency_city,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET,
   GROUPING_ID(agency_name,agency_country,agency_city) AS grouping_id
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), GROUPING SETS ((agency_name, agency_country), (agency_name,agency_city))
   HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
   and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'MM'), agency_name, agency_country, agency_city;
```

- USE: Grouping() function




```
select
    TRUNC (TIME_ID, 'MM') as date_month,
    agency_name,
    agency_country,
    agency_city,
    SUM (ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GRO
    SUM (ROUND(((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
    SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
    SUM (employee_salary_project) as Cost_NET,
    SUM (ROUND((((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary
    SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
    GROUPING(agency_name) AS f1g,
    GROUPING(agency_country) AS f2g,
    GROUPING(agency_city) AS f3g
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), CUBE (agency_name, agency_country, agency_city)
    HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
    and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'MM'), agency_name, agency_country, agency_city;
```

	DATE_MONTH	AGENCY_NAME	AGENCY_COUNTRY	AGENCY_CITY	REVENUE_GROSS	REVENUE_NET	COST_GROSS	COST_NET	PROFIT_GROSS	PROFIT_NET	F1G	F2G	F3G
1	01-JAN-22	Starcom	Australia	Sydney	1087492.15	864461.89	1216541.38	967044	-129049.34	-102582.84	0	0	0
2	01-JAN-22	Starcom	Australia	(null)	1087492.15	864461.89	1216541.38	967044	-129049.34	-102582.84	0	0	1
3	01-JAN-22	Starcom	China	Hong Kong	4818889.61	4264505.61	1066093.98	943446	3752795.63	3321059.06	0	0	0
4	01-JAN-22	Starcom	China	Shanghai	4823823.53	4268872	1070868.23	947671	3752955.28	3321200.5	0	0	0
5	01-JAN-22	Starcom	China	(null)	9642713.14	8533377.61	2136962.21	1891117	7505750.91	6642259.56	0	0	1
6	01-JAN-22	Starcom	Cyprus	Nocosia	7149559.25	6008033.44	1130876.04	950316	6018683.21	5057717.36	0	0	0
7	01-JAN-22	Starcom	Cyprus	(null)	7149559.25	6008033.44	1130876.04	950316	6018683.21	5057717.36	0	0	1
8	01-JAN-22	Starcom	Egypt	Cairo	4797528.32	4208360	1087516.68	953962	3710011.63	3254397.4	0	0	0
9	01-JAN-22	Starcom	Egypt	(null)	4797528.32	4208360	1087516.68	953962	3710011.63	3254397.4	0	0	1
10	01-JAN-22	Starcom	France	Paris	2054998.63	1712499.22	1146770.4	955642	908228.23	756856.86	0	0	0

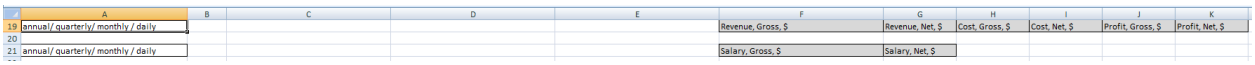
Code:

select

```
   TRUNC (TIME_ID, 'MM') as date_month,
   agency_name,
   agency_country,
   agency_city,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS,
   SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET,
   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS,
   SUM (employee_salary_project) as Cost_NET,
   SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS,
   SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET,
   GROUPING(agency_name) AS f1g,
   GROUPING(agency_country) AS f2g,
   GROUPING(agency_city) AS f3g
from SA_TRANSACTION
GROUP BY TRUNC (TIME_ID, 'MM'), CUBE (agency_name, agency_country, agency_city)
   HAVING TRUNC (TIME_ID, 'MM') IS NOT NULL
   and agency_name IS NOT NULL
order by TRUNC (TIME_ID, 'MM'), agency_name, agency_country, agency_city;
```

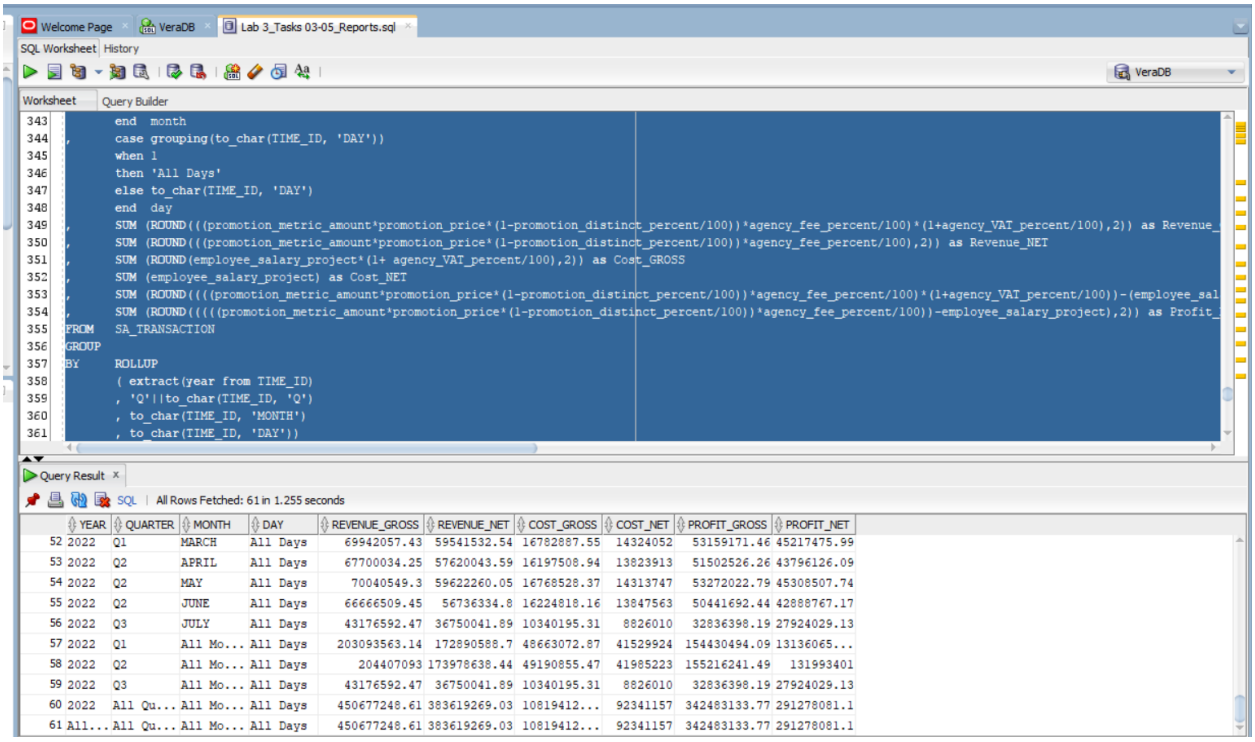
3.3. Task 05: CREATE Test AdHoc SQL – ROLLUP by Time

Creation of annual/ quarterly/ monthly / daily reports layouts in excel.



Let's will calculate Time Based Reports

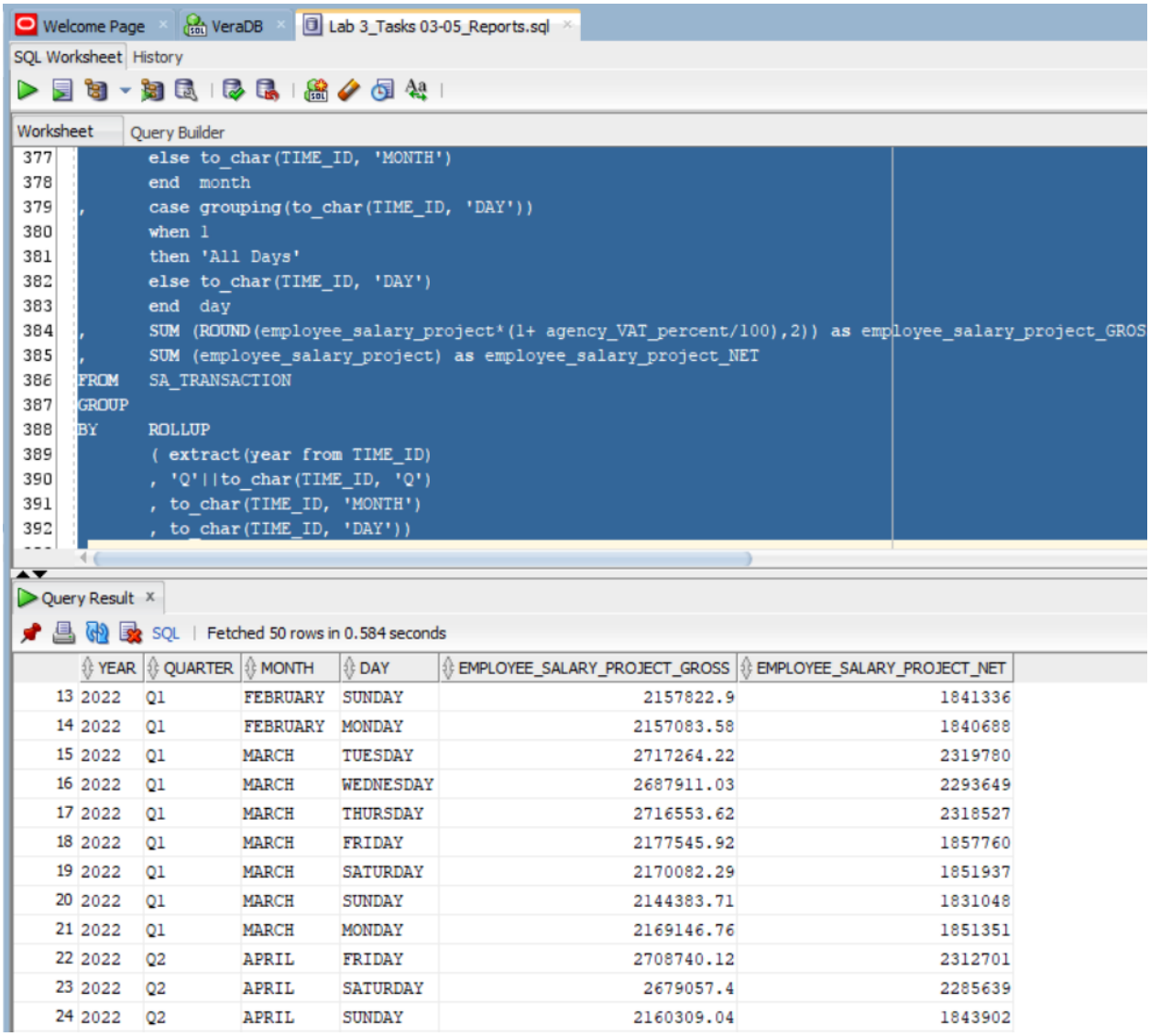
- USE: ROLLUP & Grouping() function



Code:

```
SELECT case grouping(extract(year from TIME_ID))
      when 1
      then 'All Years'
      else to_char(extract(year from TIME_ID))
      end  year
,     case grouping('Q'||to_char(TIME_ID, 'Q'))
      when 1
      then 'All Quarters'
      else 'Q'||to_char(TIME_ID, 'Q')
      end  quarter
,     case grouping(to_char(TIME_ID, 'MONTH'))
      when 1
      then 'All Months'
      else to_char(TIME_ID, 'MONTH')
      end  month
,     case grouping(to_char(TIME_ID, 'DAY'))
      when 1
      then 'All Days'
      else to_char(TIME_ID, 'DAY')
      end  day
,     SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100),2)) as Revenue_GROSS
```

```
,     SUM (ROUND(((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100),2)) as Revenue_NET
,     SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as Cost_GROSS
,     SUM (employee_salary_project) as Cost_NET
,     SUM (ROUND((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100)*(1+agency_VAT_percent/100))-(employee_salary_project*(1+
agency_VAT_percent/100)),2)) as Profit_GROSS
,     SUM (ROUND(((((promotion_metric_amount*promotion_price*(1-
promotion_distinct_percent/100))*agency_fee_percent/100))-employee_salary_project),2)) as Profit_NET
FROM   SA_TRANSACTION
GROUP
BY    ROLLUP
      ( extract(year from TIME_ID)
      , 'Q'||to_char(TIME_ID, 'Q')
      , to_char(TIME_ID, 'MONTH')
      , to_char(TIME_ID, 'DAY'))
;
```



	YEAR	QUARTER	MONTH	DAY	EMPLOYEE_SALARY_PROJECT_GROSS	EMPLOYEE_SALARY_PROJECT_NET
13	2022	Q1	FEBRUARY	SUNDAY	2157822.9	1841336
14	2022	Q1	FEBRUARY	MONDAY	2157083.58	1840688
15	2022	Q1	MARCH	TUESDAY	2717264.22	2319780
16	2022	Q1	MARCH	WEDNESDAY	2687911.03	2293649
17	2022	Q1	MARCH	THURSDAY	2716553.62	2318527
18	2022	Q1	MARCH	FRIDAY	2177545.92	1857760
19	2022	Q1	MARCH	SATURDAY	2170082.29	1851937
20	2022	Q1	MARCH	SUNDAY	2144383.71	1831048
21	2022	Q1	MARCH	MONDAY	2169146.76	1851351
22	2022	Q2	APRIL	FRIDAY	2708740.12	2312701
23	2022	Q2	APRIL	SATURDAY	2679057.4	2285639
24	2022	Q2	APRIL	SUNDAY	2160309.04	1843902

Code:

```
SELECT case grouping(extract(year from TIME_ID))
    when 1
    then 'All Years'
    else to_char(extract(year from TIME_ID))
    end  year
,   case grouping('Q'||to_char(TIME_ID, 'Q'))
    when 1
    then 'All Quarters'
    else 'Q'||to_char(TIME_ID, 'Q')
    end  quarter
,   case grouping(to_char(TIME_ID, 'MONTH'))
    when 1
    then 'All Months'
    else to_char(TIME_ID, 'MONTH')
    end  month
,   case grouping(to_char(TIME_ID, 'DAY'))
    when 1
    then 'All Days'
    else to_char(TIME_ID, 'DAY')
    end  day
,   SUM (ROUND(employee_salary_project*(1+ agency_VAT_percent/100),2)) as employee_salary_project_GROSS
,   SUM (employee_salary_project) as employee_salary_project_NET
FROM   SA_TRANSACTION
GROUP
BY    ROLLUP
    ( extract(year from TIME_ID)
    , 'Q'||to_char(TIME_ID, 'Q')
    , to_char(TIME_ID, 'MONTH')
    , to_char(TIME_ID, 'DAY'))
;
```