



SQL AD-HOC ANALYSIS



AtliQ Hardware

BY Dr.Ajaysingh Chauhan

```
#1 task :-print a report of indivdual product sales;
#(aggregated on a monthly basis at the product code level)
for croma india customer for fy=2021,in order to tract individual
# product sales and run further product analytics --
# month/product name/variant/sold quantity
# /gross price per item/gross price total;
```

```
select
```

```
    s.date, s.product_code,p.product,p.variant,s.sold_quantity,
    g.gross_price,g.gross_price*s.sold_quantity as gross_price_total
from fact_sales_monthly as s join dim_product as p on p.product_code=s.product_code
join fact_gross_price as g on g.product_code=s.product_code
and g.fiscal_year=get_fiscal_year(s.date)
    where customer_code=90002002
    and get_fiscal_year(date)=2021 and get_fiscal_quarter(date)="q4"
    order by date asc;
```

Result Grid							
		Filter Rows:		Export:	Wrap Cell Content:	Fetch rows:	
	date	product_code	product	variant	sold_quantity	gross_price	gross_price_total
▶	2020-09-01	A0118150101	AQ Dracula HDD – 3.5 Inch SATA 6 Gb/s 5400 R...	Standard	202	19.0573	3849.5746
	2020-09-01	A0118150102	AQ Dracula HDD – 3.5 Inch SATA 6 Gb/s 5400 R...	Plus	162	21.4565	3475.9530
	2020-09-01	A0118150103	AQ Dracula HDD – 3.5 Inch SATA 6 Gb/s 5400 R...	Premium	193	21.7795	4203.4435
	2020-09-01	A0118150104	AQ Dracula HDD – 3.5 Inch SATA 6 Gb/s 5400 R...	Premium Plus	146	22.9729	3354.0434
	2020-09-01	A0219150201	AQ WereWolf NAS Internal Hard Drive HDD – 8....	Standard	149	23.6987	3531.1063
	2020-09-01	A0219150202	AQ WereWolf NAS Internal Hard Drive HDD – 8....	Plus	107	24.7312	2646.2384



#2 task :- , we need a aggregate monthly gross sales report for croma india so that we can tract
#how much sales this particular customer is generating for atliq and manage relationship accordingly
print columns 1)months,2)total gross sales amount to croma india in this month

```
select s.date,sum(g.gross_price*s.sold_quantity) as gross_price_total
      from fact_sales_monthly as s
      join fact_gross_price as g on g.product_code=s.product_code
      and g.fiscal_year=get_fiscal_year(s.date)
where customer_code =90002002
group by s.date order by s.date;
```

Result Grid			Filter Rows:
	date	gross_price_total	
▶	2017-09-01	122407.5582	
	2017-10-01	162687.5716	
	2017-12-01	245673.8042	
	2018-01-01	127574.7372	
	2018-02-01	144799.5182	
	2018-04-01	130643.8976	
	2018-05-01	139165.0975	
	2018-06-01	125735.3786	
	2018-08-01	125409.8801	
	2018-09-01	343337.1651	
	2018-10-01	440562.0754	

#3task :- , generate a yearly report for cromia india where there are two columns ,fiscal_year and
total gross sales amount in that year from cromia;

```
select  get_fiscal_year(date) as fiscal_year,  
        sum(round(s.sold_quantity*g.gross_price,2)) as yearly_sales  
from fact_sales_monthly s  
join fact_gross_price g  
on g.product_code=s.product_code  
and g.fiscal_year=get_fiscal_year(s.date)  
where customer_code=90002002 group by get_fiscal_year(date) order by fiscal_year;
```

Result Grid   Filter Rows:		
	fiscal_year	yearly_sales
▶	2018	1324097.48
	2019	3555079.19
	2020	6502182.12
	2021	23216512.73
	2022	44638199.11

#Task4 : GET top n products by net sales ??

```
select  p.product , round(sum(net_sales)/1000000,2) as net_sales_mln
from net_sales as s
join dim_product as p
on s.product_code=p.product_code
where fiscal_year= 2021 and s.market = "india"
group by p.product
order by net_sales_mln desc
limit 5
```

	product	net_sales_mln
▶	AQ BZ Allin1	8.54
	AQ Qwerty	7.22
	AQ Trigger	6.78
	AQ Gen Y	6.02
	AQ Trigger Ms	5.74

```
# task 5 : Find top 10 markets by % net_sales in fy 2021
```

```
with cte1 as (  
  select customer,  
    round(sum(net_sales)/1000000,2) as net_sales_mln  
  from gdb0041.net_sales s join dim_customer c  
    on s.customer_code=c.customer_code  
  where s.fiscal_year=2021  
  group by customer)  
  
  select *, net_sales_mln*100/sum(net_sales_mln) over() as pct  
from cte1 order by net_sales_mln desc limit 10 ;
```

	customer	net_sales_mln	pct
▶	Amazon	109.03	13.233402
	Atliq Exclusive	79.92	9.700206
	Atliq e Store	70.31	8.533803
	Sage	27.07	3.285593
	Flipkart	25.25	3.064692
	Leader	24.52	2.976089
	Neptune	21.01	2.550067
	Ebay	19.88	2.412914
	Electricalsocity	16.25	1.972327
	Synthetic	16.10	1.954121



#task 6 : Provide the lists of markets where customer Atliq Exclusive
operates its business in APAC Region ?

```
SELECT * FROM dim_customer;  
select distinct market from dim_customer  
where customer= 'Atliq Exclusive' and region= 'APAC';
```

	market
▶	India
	Indonesia
	Japan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh

#task 7 : What is the percentage of Unique product increase in 2021 versus 2020 ?

```
with cte1 as
( select count(distinct product_code) as unique_product_2020
from fact_sales_monthly where fiscal_year=2020),
cte2 as
(select count(distinct product_code) as unique_product_2021
from fact_sales_monthly where fiscal_year=2021)
select unique_product_2021,unique_product_2020,
((unique_product_2021/unique_product_2020)-1)*100 as pct_changes
from cte1,cte2;
```

Result Grid  Filter Rows: <input data-bbox="973 996 1498 1096" type="text"/> Export:  Wrap Cell Content:			
	unique_product_2021	unique_product_2020	pct_changes
▶	334	245	36.3265




#task 7 : Provide a report with all unique product counts for each segment
and sort them in descending order of product counts

```
select segment, count(distinct product_code) as unique_products  
from dim_product  
group by segment  
order by unique_products desc;
```

Result Grid			Filter Rows:
	segment	unique_products	
▶	Notebook	129	
	Accessories	116	
	Peripherals	84	
	Desktop	32	
	Storage	27	
	Networking	9	



#task 8 : Get the products that have the highest and lowest manufacturing costs ?

```
select p.product,m.product_code,m.manufacturing_cost
from dim_product as p
join fact_manufacturing_cost as m
on p.product_code=m.product_code
where manufacturing_cost in (
(select max(manufacturing_cost) from fact_manufacturing_cost),
(select min(manufacturing_cost) from fact_manufacturing_cost) );
```

Result Grid   Filter Rows: <input data-bbox="1121 878 1579 982" type="text"/> Export: 			
	product	product_code	manufacturing_cost
▶	AQ Master wired x1 Ms	A2118150101	0.8654
	AQ HOME Allin1 Gen 2	A6121110208	263.4207

#task 9 : Generate a report which contains the top 5 customers who
received pre_invoice_discount_pct higher than the average pre_invoice_discount_pct
for the fiscal year 2021 and in the Indian Market ?

```
select c.customer,c.customer_code,pre.pre_invoice_discount_pct
from dim_customer as c join fact_pre_invoice_deductions as pre
using (customer_code)
where fiscal_year=2021
and market='india'
and pre_invoice_discount_pct >
    (select avg(pre_invoice_discount_pct )
    from fact_pre_invoice_deductions)
order by pre_invoice_discount_pct desc
limit 5;
```

Result Grid			 Filter Rows:	Export:
	customer	customer_code	pre_invoice_discount_pct	
►	Flipkart	90002009	0.3083	
	Viveks	90002006	0.3038	
	Ezone	90002003	0.3028	
	Croma	90002002	0.3025	
	Amazon	90002016	0.2933	

```
# task 10 : Get the complete report of the Gross sales  
# amount for the customer Atliq Exclusive for each month
```

```
select  
monthname(date) as mnt,s.fiscal_year,  
round(sum(sold_quantity*gross_price),0)  
as gross_sales_amount  
from fact_sales_monthly as s  
join fact_gross_price as p  
using (product_code)  
join dim_customer as c  
using (customer_code)  
where c.customer='Atliq Exclusive'  
group by mnt,s.fiscal_year  
order by s.fiscal_year;
```

Result Grid				Filter Rows:
	mnt	fiscal_year	gross_sales_amount	
►	September	2018	2347704	
	October	2018	2462781	
	November	2018	3766114	
	December	2018	2390016	
	January	2018	2285938	
	February	2018	1985466	
	March	2018	2219880	
	April	2018	1392025	
	May	2018	2310947	
	June	2018	1976110	
	July	2018	2224694	
	August	2018	1498729	
	September	2019	7860039	
	October	2019	8496754	
	November	2019	12362495	
	December	2019	8364101	
	January	2019	7607522	
	February	2019	6218860	
	March	2019	7307169	
	April	2019	4677628	
	May	2019	7796837	
	June	2019	6580394	
	July	2019	7296959	
	August	2019	4630439	
	September	2020	17040562	
	October	2020	19475069	
	November	2020	28512004	
	December	2020	18322529	



task 11 : In which quarter of 2020, we got the maximum total_sold_quantity ?

```
select
  case when month(date) in ( 9,10,11) then 'Q1'
        when month(date) in ( 12,1,2) then 'Q2'
        when month(date) in ( 3,4,5) then 'Q3'
        when month(date) in ( 6,7,8) then 'Q4'
  END AS quarter,
  sum(sold_quantity) as total_sales_qty_2020
from fact_sales_monthly
where fiscal_year=2020
group by quarter
order by total_sales_qty_2020 desc;
```

Result Grid			Filter Rows:
	quarter	total_sales_qty_2020	
►	Q1	7005619	
	Q2	6649642	
	Q4	5042541	
	Q3	2075087	

task 12 : Which channel helped to bring more Gross Sales Amount
in the fiscal year 2021 and the percentage of contribution ?

```
with cte1 as
( select c.channel,
round(sum(s.sold_quantity*g.gross_price)/1000000,0) as gross_sales_mln
from dim_customer as c
join fact_sales_monthly as s
using (customer_code)
join fact_gross_price as g
using (product_code)
where s.fiscal_year=2021
group by c.channel)
select *, gross_sales_mln*100/sum(gross_sales_mln) over() as pct_contribution
from cte1 order by pct_contribution desc;
```

Result Grid  Filter Rows: <input data-bbox="988 972 1480 1053" type="text"/> Export: 			
	channel	gross_sales_mln	pct_contribution
▶	Retailer	3708	73.2083
	Direct	784	15.4788
	Distributor	573	11.3129

```
# task 13 : Get the top 3 products in each division that have a  
# high total sold quantity in the fiscal year 2021 ?
```

```
with cte1 as  
( select division,product,  
  sum(sold_quantity) as total_sold_qty  
  from dim_product as p  
  join fact_sales_monthly as s  
  using (product_code) where fiscal_year=2021  
  group by division, s.product_code,product),  
cte2 as  
( select * ,  
  dense_rank() over(partition by division order by total_sold_qty desc)  
  as rank_order from cte1)  
select * from cte2 where rank_order<4;
```

Result Grid					Filter Rows:	Export:
	division	product	total_sold_qty	rank_order		
▶	N & S	AQ Pen Drive 2 IN 1	701373	1		
	N & S	AQ Pen Drive DRC	688003	2		
	N & S	AQ Pen Drive DRC	676245	3		
	P & A	AQ Gamers Ms	428498	1		
	P & A	AQ Maxima Ms	419865	2		
	P & A	AQ Maxima Ms	419471	3		
	PC	AQ Digit	17434	1		
	PC	AQ Velocity	17280	2		
	PC	AQ Digit	17275	3		