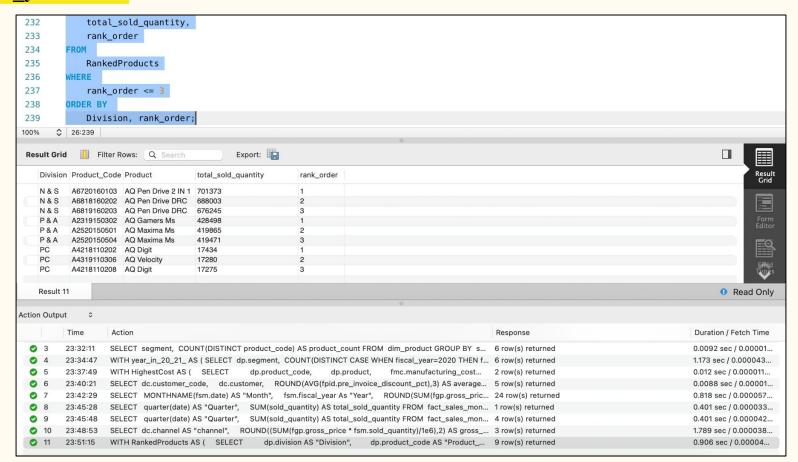# AtliQ Hardware Consumer Goods Insights
Codebasics Challenge

Ankur Shukla

Que 1) Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

```sql
2    -- Que 1) Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.
3  • SELECT
4        DISTINCT market
5    FROM
6        dim_customer
7    WHERE
8        customer="Atliq Exclusive" AND region="APAC";
```

100%   47:8

Result Grid | Filter Rows: | Search | Export:

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Result Grid

Form Editor

Field Types

dim_customer 1   ⓘ Read Only

Action Output ⬍

	Time	Action	Response	Duration / Fetch Time
✅ 1	23:26:38	SELECT DISTINCT market FROM dim_customer WHERE customer="Atliq Exclusive" AND region="APAC" L...	8 row(s) returned	0.016 sec / 0.000017...

```
232        total_sold_quantity,
233        rank_order
234   FROM
235        RankedProducts
236   WHERE
237        rank_order <= 3
238   ORDER BY
239        Division, rank_order;
```

100%   26:239

Result Grid | Filter Rows: Search | Export:

Division	Product_Code	Product	total_sold_quantity	rank_order
N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
N & S	A6818160202	AQ Pen Drive DRC	688003	2
N & S	A6819160203	AQ Pen Drive DRC	676245	3
P & A	A2319150302	AQ Gamers Ms	428498	1
P & A	A2520150501	AQ Maxima Ms	419865	2
P & A	A2520150504	AQ Maxima Ms	419471	3
PC	A4218110202	AQ Digit	17434	1
PC	A4319110306	AQ Velocity	17280	2
PC	A4218110208	AQ Digit	17275	3

Result 11 | ● Read Only

Action Output

	Time	Action	Response	Duration / Fetch Time
✓ 3	23:32:11	SELECT segment, COUNT(DISTINCT product_code) AS product_count FROM dim_product GROUP BY s...	6 row(s) returned	0.0092 sec / 0.00001...
✓ 4	23:34:47	WITH year_in_20_21_ AS (SELECT dp.segment, COUNT(DISTINCT CASE WHEN fiscal_year=2020 THEN f...	6 row(s) returned	1.173 sec / 0.000043...
✓ 5	23:37:49	WITH HighestCost AS (SELECT dp.product_code, dp.product, fmc.manufacturing_cost...	2 row(s) returned	0.012 sec / 0.000011...
✓ 6	23:40:21	SELECT dc.customer_code, dc.customer, ROUND(AVG(fpid.pre_invoice_discount_pct),3) AS average...	5 row(s) returned	0.0088 sec / 0.00001...
✓ 7	23:42:29	SELECT MONTHNAME(fsm.date) AS "Month", fsm.fiscal_year As "Year", ROUND(SUM(fgp.gross_pric...	24 row(s) returned	0.818 sec / 0.000057...
✓ 8	23:45:28	SELECT quarter(date) AS "Quarter", SUM(sold_quantity) AS total_sold_quantity FROM fact_sales_mon...	1 row(s) returned	0.401 sec / 0.000033...
✓ 9	23:45:48	SELECT quarter(date) AS "Quarter", SUM(sold_quantity) AS total_sold_quantity FROM fact_sales_mon...	4 row(s) returned	0.401 sec / 0.000042...
✓ 10	23:48:53	SELECT dc.channel AS "channel", ROUND((SUM(fgp.gross_price * fsm.sold_quantity)/1e6),2) AS gross_...	3 row(s) returned	1.789 sec / 0.000038...
✓ 11	23:51:15	WITH RankedProducts AS (SELECT dp.division AS "Division", dp.product_code AS "Product_...	9 row(s) returned	0.906 sec / 0.00004...

Que 2) What is the percentage of unique product increase in 2021 vs. 2020?

```sql
11    -- Que 2) What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields, unique_products_2020
12  • ⊖ WITH year_in_20_21 as (
13    SELECT
14        COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN product_code END) as unique_products_2020,
15        COUNT(DISTINCT CASE WHEN fiscal_year = 2021 THEN product_code END) as unique_products_2021
16    FROM
17        fact_sales_monthly
18        )
19
20    SELECT
21        unique_products_2020,
22        unique_products_2021,
23        ROUND(ABS(unique_products_2020-unique_products_2021)/(unique_products_2020+unique_products_2021) * 100,2) as percentage_chg
24    FROM
25        year_in_20_21;
26    -- ----------x----------x----------x----------x----------x----------x----------x----------x----------
```

100% ◇ 1:26

Result Grid | ▦ Filter Rows: 🔍 Search   Export: 🖫   ▢ ▦ Result Grid

unique_products_2020	unique_products_2021	percentage_chg	
245	334	15.37	

Result 2   ⓘ Read Only

Action Output ◇

	Time	Action	Response	Duration / Fetch Time
✅ 1	23:26:38	SELECT DISTINCT market FROM dim_customer WHERE customer="Atliq Exclusive" AND region="APAC" L...	8 row(s) returned	0.016 sec / 0.000017...
✅ 2	23:29:02	WITH year_in_20_21 as (SELECT COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN product_code...	1 row(s) returned	0.545 sec / 0.000032...

Que 3) Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

```sql
29    -- Que 3) Provide a report with all the unique product counts for each segment and sort them in descending order of product counts. The fir
30  ● SELECT
31        segment,
32        COUNT(DISTINCT product_code) AS product_count
33    FROM
34        dim_product
35    GROUP BY
36        segment
37    ORDER BY
38        product_count DESC;
39    -- ----------x----------x----------x----------x----------x----------x----------x----------x----------
```

100%   ⬍   22:38

Result Grid | 🔲 | ↻ | Filter Rows: 🔍 Search | Export: 📑 | | 🔲

segment	product_count
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9

Result 3   ⓘ Read Only

Action Output   ⬍

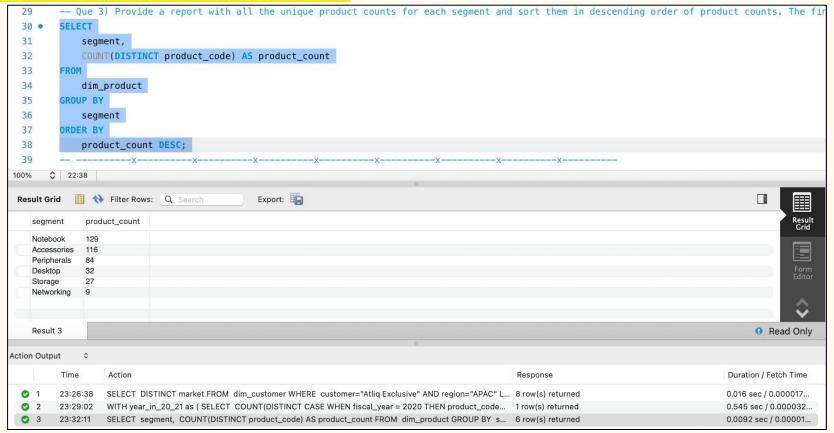|	Time	Action	Response	Duration / Fetch Time
✔ 1	23:26:38	SELECT DISTINCT market FROM dim_customer WHERE customer="Atliq Exclusive" AND region="APAC" L...	8 row(s) returned	0.016 sec / 0.000017...
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✔ 3	23:32:11	SELECT segment, COUNT(DISTINCT product_code) AS product_count FROM dim_product GROUP BY s...	6 row(s) returned	0.0092 sec / 0.00001...

```
59   SELECT
60       segment,
61       product_count_2020,
62       product_count_2021,
63       (product_count_2021 – product_count_2020) AS difference
64   FROM
65       year_in_20_21_
66   ORDER BY
67       difference DESC;
68   -- -----------x-----------x-----------x-----------x-----------x-----------x-----------x-----------x-----------
```

100% ⬍   1:68

Result Grid | 🔲 Filter Rows: 🔍 Search   Export: 💾

segment	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

Result 4   ⓘ Read Only

Action Output ⬍

		Time	Action	Response	Duration / Fetch Time
✅	1	23:26:38	SELECT DISTINCT market FROM dim_customer WHERE customer="Atliq Exclusive" AND region="APAC" L...	8 row(s) returned	0.016 sec / 0.000017...
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✅	3	23:32:11	SELECT segment, COUNT(DISTINCT product_code) AS product_count FROM dim_product GROUP BY s...	6 row(s) returned	0.0092 sec / 0.00001...
✅	4	23:34:47	WITH year_in_20_21_ AS (SELECT dp.segment, COUNT(DISTINCT CASE WHEN fiscal_year=2020 THEN f...	6 row(s) returned	1.173 sec / 0.000043...

```
104    -- Combine the results
105    SELECT * FROM HighestCost
106    UNION ALL
107    SELECT * FROM LowestCost;
108    -- ----------x----------x----------x----------x----------x----------x----------x----------
```

100% ▲▼ | 1:108

Result Grid | Filter Rows: Search | Export:

product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.5364
A2118150101	AQ Master wired x1 Ms	0.8920

Result 5

Read Only

Action Output

		Time	Action	Response	Duration / Fetch Time
✓	1	23:26:38	SELECT DISTINCT market FROM dim_customer WHERE customer="Atliq Exclusive" AND region="APAC" L...	8 row(s) returned	0.016 sec / 0.000017...
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✓	5	23:37:49	WITH HighestCost AS (SELECT dp.product_code, dp.product, fmc.manufacturing_cost...	2 row(s) returned	0.012 sec / 0.000011...

```
        ON
121         dc.customer_code = fpid.customer_code
122     WHERE
123         fiscal_year = 2021 AND market = 'India'
124     GROUP BY
125         dc.customer_code,
126         dc.customer
127     ORDER BY
128         average_discount_percentage DESC
129     LIMIT 5;
```

100%   1:130

Result Grid   Filter Rows: Search   Export: Fetch rows: Result Grid

customer_code	customer	average_discount_percent...
90002009	Flipkart	0.308
90002006	Viveks	0.304
90002002	Croma	0.303
90002003	Ezone	0.303
90002016	Amazon	0.293

Form Editor

Result 6   ⓘ Read Only

Action Output

		Time	Action	Response	Duration / Fetch Time
✓	1	23:26:38	SELECT DISTINCT market FROM dim_customer WHERE customer="Atliq Exclusive" AND region="APAC" L...	8 row(s) returned	0.016 sec / 0.000017...
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✓	6	23:40:21	SELECT dc.customer_code, dc.customer, ROUND(AVG(fpid.pre_invoice_discount_pct),3) AS average...	5 row(s) returned	0.0088 sec / 0.00001...

```
135 •  SELECT
136        MONTHNAME(fsm.date) AS "Month",
137        fsm.fiscal_year As "Year",
138        ROUND(SUM(fgp.gross_price * fsm.sold_quantity),2) AS "Gross sales Amount"
139    FROM
140        fact_sales_monthly fsm
141    JOIN
142        fact_gross_price fgp
```

100% ⇕   1:155

Result Grid | 🔳 ↔ | Filter Rows: 🔍 Search | Export: 🖫

Month	Year	Gross sales Amount
November	2021	20464999.10
October	2021	13218636.20
December	2021	12944659.65
January	2021	12399392.98
September	2021	12353509.79
May	2021	12150225.01
March	2021	12144061.25
July	2021	12092346.32
February	2021	10129735.57
June	2021	9824521.01
November	2020	7522892.56
April	2021	7311999.95
August	2021	7178707.59
October	2020	5135902.35
December	2020	4830404.73
January	2020	4740600.16
September	2020	4496259.67
February	2020	3996227.77
August	2020	2786648.26
July	2020	2551159.16
June	2020	1695216.60
May	2020	783813.42
April	2020	395035.35
March	2020	378770.97

Result Grid

Form Editor

Field Types

Query Stats

Execution Plan

```
159 •  SELECT
160        quarter(date) AS "Quarter",
161        SUM(sold_quantity) AS total_sold_quantity
162    FROM
163        fact_sales_monthly
164    WHERE
165        fiscal_year = 2020
166    GROUP BY
167        quarter(date)
168    ORDER BY
169        total_sold_quantity DESC
170    LIMIT 1 -- THIS LIMIT IS OPTIONAL IF YOU REMOVE IT YOU WILL ABLE TO SEE total_sold_quantity for all the 4 Quarter
```

100% ⌵   20:165

Result Grid | Filter Rows: Q Search   Export:

Quarter	total_sold_quantity
4	8425822
3	5246770
1	3704398
2	3395899

Result 9   ⓘ Read Only

Action Output ⌵

		Time	Action	Response	Duration / Fetch Time
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✔	7	23:42:29	SELECT MONTHNAME(fsm.date) AS "Month", fsm.fiscal_year As "Year", ROUND(SUM(fgp.gross_pric...	24 row(s) returned	0.818 sec / 0.000057...
✔	8	23:45:28	SELECT quarter(date) AS "Quarter", SUM(sold_quantity) AS total_sold_quantity FROM fact_sales_mon...	1 row(s) returned	0.401 sec / 0.000033...
✔	9	23:45:48	SELECT quarter(date) AS "Quarter", SUM(sold_quantity) AS total_sold_quantity FROM fact_sales_mon...	4 row(s) returned	0.401 sec / 0.000042...

```
            AND fsm.fiscal_year = fgp.fiscal_year
194   JOIN
195       dim_customer dc
196   ON
197       dc.customer_code = fsm.customer_code
198   WHERE
199       fsm.fiscal_year = 2021
200   GROUP BY
201       dc.channel
202   ORDER BY
203       gross_sales_mln DESC
204   LIMIT 1 -- OPTIONAL
```

100%   1:204

Result Grid | Filter Rows: | Search | Export: | Result Grid

channel	gross_sales_mln	percentage
Retailer	1219.08	73.23%
Direct	257.53	15.47%
Distributor	188.03	11.30%

Result 10   ℹ Read Only

Action Output

		Time	Action	Response	Duration / Fetch Time
✓	2	23:29:02	WITH year_in_20_21 as (SELECT COUNT(DISTINCT CASE WHEN fiscal_year = 2020 THEN product_code...	1 row(s) returned	0.545 sec / 0.000032...
✓	3	23:32:11	SELECT segment, COUNT(DISTINCT product_code) AS product_count FROM dim_product GROUP BY s...	6 row(s) returned	0.0092 sec / 0.00001...
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