



SQL PROJECT QUESTIONS AND WITH THEIR SOLUTIONS FOR CODEBASIC RESUME CHALLENGE #4

QUESTION NO: 01

PROVIDE THE LIST OF MARKETS IN WHICH CUSTOMER "ATLIQ EXCLUSIVE" OPERATES ITS BUSINESS IN THE APAC REGION.

```
SELECT DISTINCT
    market
FROM
    dim_customer
WHERE
    customer = 'AtliQ exclusive'
    AND region = 'APAC'
;
```

QUESTION NO: 02

WHAT IS THE PERCENTAGE OF UNIQUE PRODUCT INCREASE IN 2021 VS. 2020? THE FINAL OUTPUT CONTAINS THESE FIELDS, UNIQUE_PRODUCTS_2020 UNIQUE_PRODUCTS_2021 PERCENTAGE_CHG

```
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_2020,
    unique_product_2021,
    (unique_product_2021 - unique_product_2020) * 100 / unique_product_2020 AS pct_change
FROM cte1
CROSS JOIN cte2
;
```

QUESTION NO: 03

PROVIDE A REPORT WITH ALL THE UNIQUE PRODUCT COUNTS FOR EACH SEGMENT AND SORT THEM IN DESCENDING ORDER OF PRODUCT COUNTS. THE FINAL OUTPUT CONTAINS 2 FIELDS, SEGMENT PRODUCT_COUNT

```
SELECT
    segment, COUNT(DISTINCT product_code) AS Product_count
FROM
    dim_product
GROUP BY segment
ORDER BY Product_count DESC
;
```

QUESTION NO: 04

FOLLOW-UP: WHICH SEGMENT HAD THE MOST INCREASE IN UNIQUE PRODUCTS IN 2021 VS 2020? THE FINAL OUTPUT CONTAINS THESE FIELDS, SEGMENT PRODUCT_COUNT_2020 PRODUCT_COUNT_2021 DIFFERENCE

```
WITH unique_products AS(
SELECT
p.segment,
count(DISTINCT(CASE WHEN fiscal_year = 2020 THEN s.product_code END)) AS product_count_2020,
count(DISTINCT(CASE WHEN fiscal_year = 2021 THEN s.Product_code END)) AS product_count_2021
FROM fact_sales_monthly s
JOIN dim_product p
ON s.product_code = p.product_code
GROUP BY p.segment
)
SELECT
*,
product_count_2021-product_count_2020 AS difference
FROM unique_products
ORDER BY difference DESC
;
```

QUESTION NO: 05

GET THE PRODUCTS THAT HAVE THE HIGHEST AND LOWEST MANUFACTURING COSTS. THE FINAL OUTPUT SHOULD CONTAIN THESE FIELDS, PRODUCT_CODE PRODUCT MANUFACTURING_COST

```
(SELECT
p.product_code, p.product, m.manufacturing_cost
FROM
dim_product p
JOIN
fact_manufacturing_cost m ON p.product_code = m.product_code
ORDER BY m.manufacturing_cost DESC
LIMIT 1) UNION (SELECT
p.product_code, p.product, m.manufacturing_cost
FROM
dim_product p
JOIN
fact_manufacturing_cost m ON p.product_code = m.product_code
ORDER BY m.manufacturing_cost ASC
LIMIT 1)
;
```

QUESTION NO: 06

GENERATE A REPORT WHICH CONTAINS THE TOP 5 CUSTOMERS WHO RECEIVED AN AVERAGE HIGH PRE_INVOICE_DISCOUNT_PCT FOR THE FISCAL YEAR 2021 AND IN THE INDIAN MARKET. THE FINAL OUTPUT CONTAINS THESE FIELDS, CUSTOMER_CODE CUSTOMER AVERAGE_DISCOUNT_PERCENTAGE

```
SELECT
i.customer_code,
c.customer,
ROUND(AVG(i.pre_invoice_discount_pct) * 100, 2) AS avg_dis_pct
FROM
fact_pre_invoice_deductions i
JOIN
dim_customer c USING (customer_code)
WHERE
```

```
fiscal_year = 2021
AND c.market = 'india'
GROUP BY i.customer_code , c.customer
ORDER BY avg_dis_pct DESC
LIMIT 5;
```

QUESTION NO: 07

GET THE COMPLETE REPORT OF THE GROSS SALES AMOUNT FOR THE CUSTOMER “ATLIQ EXCLUSIVE” FOR EACH MONTH. THIS ANALYSIS HELPS TO GET AN IDEA OF LOW AND HIGH-PERFORMING MONTHS AND TAKE STRATEGIC DECISIONS. THE FINAL REPORT CONTAINS THESE COLUMNS: MONTH YEAR GROSS SALES AMOUNT

```
SELECT
    MONTHNAME(s.date) AS MONTH,
    s.fiscal_year,
    ROUND(SUM(g.gross_price * sold_quantity), 2) AS gross_sales_amt
FROM
    fact_sales_monthly s
    JOIN
    dim_customer c USING (customer_code)
    JOIN
    fact_gross_price g USING (product_code)
WHERE
    customer = 'atliq exclusive'
GROUP BY MONTHNAME(s.date) , s.fiscal_year
ORDER BY fiscal_year;
```

QUESTION NO: 08

IN WHICH QUARTER OF 2020, GOT THE MAXIMUM TOTAL_SOLD_QUANTITY? THE FINAL OUTPUT CONTAINS THESE FIELDS SORTED BY THE TOTAL_SOLD_QUANTITY, QUARTER TOTAL_SOLD_QUANTITY

```
SELECT
    CASE
        WHEN MONTH(date) IN (9 , 10, 11) THEN 'Q1'
        WHEN MONTH(date) IN (12 , 01, 02) THEN 'Q2'
        WHEN MONTH(date) IN (03 , 04, 05) THEN 'Q3'
        ELSE 'Q4'
    END AS Quarters,
    SUM(sold_quantity) AS total_sold_qty
FROM
    fact_sales_monthly
WHERE
    fiscal_year = 2020
GROUP BY Quarters
ORDER BY total_sold_qty DESC;
```

QUESTION NO: 09

WHICH CHANNEL HELPED TO BRING MORE GROSS SALES IN THE FISCAL YEAR 2021 AND THE PERCENTAGE OF CONTRIBUTION? THE FINAL OUTPUT CONTAINS THESE FIELDS, CHANNEL GROSS_SALES_MLN PERCENTAGE

```
WITH x AS (SELECT c.channel,
    round(sum(g.gross_price*s.sold_quantity)/100000,2) AS gross_sales_mln
FROM fact_sales_monthly s
JOIN dim_customer c USING(customer_code)
JOIN fact_gross_price g USING(product_code)
WHERE s.fiscal_year=2021
GROUP BY c.channel)
```

GET THE TOP 3 PRODUCTS IN EACH DIVISION THAT HAVE A HIGH TOTAL_SOLD_QUAN TY IN THE FISCAL_YEAR 2021? THE FINAL OUTPUT CONTAINS THESE FIELDS, DIVISION PRODUCT_CODE