

-- 1 Задание

-- Основной запрос

```
SELECT
    city,
    CASE
        WHEN age >= 0 AND age <= 20 THEN 'young'
        WHEN age >= 21 AND age <= 49 THEN 'adult'
        WHEN age >= 50 THEN 'old'
    END AS age_category,
    COUNT(*) AS customer_count
FROM users
GROUP BY city, age_category
ORDER BY city, customer_count DESC, age_category;
```

-- Задание 2

```
SELECT
    category,
    ROUND(AVG(price)::NUMERIC, 2) avg_price
FROM products prds
WHERE LOWER(prds.name) LIKE '%hair%' OR LOWER(prds.name) LIKE '%home%'
GROUP BY prds.category;
```

-- В выборке учитываются две категории товаров, поскольку остальные товары под другими категориями не попали под LIKE

-- Задание 3

```
WITH sellers_info AS (
    SELECT
        seller_id,
        COUNT(DISTINCT category) total_categ,
        ROUND(AVG(rating)::NUMERIC, 2) avg_rating,
        SUM(revenue) total_revenue
    FROM sellers
    WHERE category != 'Bedding'
    GROUP BY seller_id
    ORDER BY 1
), sellers_by_rich_and_poor AS (
    SELECT
        *,
        CASE
            WHEN total_categ > 1 AND total_revenue > 50000 THEN 'rich'
            WHEN total_categ > 1 AND total_revenue < 50000 THEN 'poor'
        END seller_type
    FROM sellers_info
```

)

```
SELECT * FROM sellers_by_rich_and_poor
WHERE seller_type IS NOT NULL;
```

-- 4 Задание

```
WITH sellers_info AS (
  SELECT
    seller_id,
    COUNT(category) total_categ,
    ROUND(AVG(rating)::NUMERIC, 2) avg_rating,
    SUM(revenue) total_revenue
  FROM sellers
  WHERE category != 'Bedding'
  GROUP BY seller_id
  ORDER BY 1
), sellers_by_rich_and_poor AS (
  SELECT
    *,
    CASE
      WHEN total_categ > 1 AND total_revenue > 50000 THEN 'rich'
      WHEN total_categ > 1 AND total_revenue < 50000 THEN 'poor'
    END seller_type
  FROM sellers_info
), seller_poors AS (
  SELECT *
  FROM sellers
  WHERE seller_id IN (SELECT seller_id FROM sellers_by_rich_and_poor WHERE
seller_type = 'poor')
)
```

-- Отчитываю от 25.10.2023

```
SELECT
  seller_id,
  MAX(
    FLOOR(
      (to_date('25/10/2023', 'DD/MM/YYYY') - to_date(date_reg, 'DD/MM/YYYY')) / 30
    )
  ) month_from_registration,
  (
    SELECT MAX(delivery_days) - MIN(delivery_days) FROM seller_poors
  ) max_delivery_difference
FROM seller_poors
GROUP BY seller_id
ORDER BY 1;
```

-- 5 Задание

```
WITH sellers_info AS (  
    SELECT  
        seller_id,  
        COUNT(category) total_categ,  
        SUM(revenue) total_revenue  
    FROM sellers  
    WHERE EXTRACT(YEAR FROM to_date(date, 'DD/MM/YYYY')) = 2022  
    GROUP BY seller_id  
) , sellers_and_categoryes AS (  
    SELECT seller_id, category  
    FROM sellers  
    WHERE seller_id IN (SELECT seller_id FROM sellers_info WHERE total_categ = 2 AND  
total_revenue > 75000) AND  
        EXTRACT(YEAR FROM to_date(date, 'DD/MM/YYYY')) = 2022  
    ORDER BY 1, 2  
)  
  
SELECT seller_id, STRING_AGG(category, ' - ') AS category_pair FROM  
sellers_and_categoryes GROUP BY seller_id;
```