1. **How many unique post types are found in the 'fact_content' table?**

```
SELECT
    COUNT(DISTINCT Post_type) AS Unique_Post_Types
FROM
    fact_content;
```

Unique_Post_Types
4

2. **What are the highest and lowest recorded impressions for each post type?**

```
SELECT
    post_type,
    MAX(impressions) AS highest_impressions,
    MIN(impressions) AS lowest_impressions
FROM fact_content
GROUP BY post_type;
```

post_type	highest_impressions	lowest_impressions
IG Image	129694	23367
IG Reel	339708	87570
IG Carousel	9677	3264
IG Video	73321	8741

3. Filter all the posts that were published on a weekend in the month of march and april and export them to a separate csv file.

```sql
SELECT
    fc.date,
    fc.post_category,
    fc.post_type,
    fc.impressions,
    fc.reach,
    fc.likes,
    fc.comments,
    fc.shares
FROM
    fact_content AS fc
JOIN
    dim_dates AS dd
ON
    fc.date = dd.date
WHERE
    dd.weekday_or_weekend = 'Weekend'
    AND dd.month_name IN ('March', 'April');
```

date	post_category	post_type	impressions	reach	likes	comments	shares
2023-03-04	Earphone	IG Video	12265	3668	327	7	69
2023-03-05	Smartwatch	IG Image	62770	18001	1194	28	273
2023-03-11	Mobile	IG Carousel	5899	1093	53	0	45
2023-03-12	Laptop	IG Image	79416	23474	1235	69	327
2023-03-18	Mobile	IG Carousel	9157	2254	55	6	67
2023-03-19	Smartwatch	IG Carousel	4146	1079	43	1	42
2023-03-25	Earphone	IG Reel	132284	66721	3622	83	1093
2023-03-26	Mobile	IG Image	63425	26113	1994	68	435
2023-04-01	Mobile	IG Carousel	4549	1052	35	1	27

4. **Create a report to get the statistics for the account. The final output includes the following fields:**
   - **month_name**
   - **total_profile_visits**
   - **total_new_followers**

```sql
SELECT
    dd.month_name,
    SUM(fa.profile_visits) as total_profile_visits,
    SUM(fa.new_followers) as total_new_followers
FROM fact_account fa
JOIN dim_dates dd ON fa.date = dd.date
GROUP BY dd.month_name
ORDER BY MIN(dd.date);
```

month_name	total_profile_visits	total_new_followers
January	26512	17053
February	20628	15254
March	23132	18285
April	29852	21799
May	106571	66984
June	103350	76942
July	54352	33302
August	42094	24371
September	41522	28523

28523

5. Write a CTE that calculates the total number of 'likes' for each 'post_category' during the month of 'july' and subsequently, arrange the 'post_category' values in descending order according to their total likes.

```
WITH likes_cte AS (
    SELECT
        post_category,
        SUM(likes) AS total_likes
    FROM fact_content
    JOIN dim_dates ON fact_content.date = dim_dates.date
    WHERE dim_dates.month_name = 'July'
    GROUP BY post_category
)
SELECT
    post_category,
    total_likes
FROM likes_cte
ORDER BY total_likes DESC;
```

post_category	total_likes
Other Gadgets	26519
Tech Tips	20296
Mobile	16338
Earphone	14435
Smartwatch	3918

6. **Create a report that displays the unique post_category names alongside their respective counts for each month. The output should have three columns:**
   - **month_name**
   - **post_category_names**
   - **post_category_count**

```sql
SELECT
    dd.month_name,
    GROUP_CONCAT(DISTINCT fc.post_category) AS post_category_names,
    COUNT(DISTINCT fc.post_category) AS post_category_count
FROM fact_content fc
JOIN dim_dates dd ON fc.date = dd.date
GROUP BY dd.month_name
ORDER BY MIN(dd.date);
```

month_name	post_category_names	post_category_count
January	Earphone,Mobile,Smartwatch	3
February	Earphone,Laptop,Mobile,Smartwatch	4
March	Earphone,Laptop,Mobile,Smartwatch	4
April	Earphone,Laptop,Mobile,Other Gadgets,Smart...	5
May	Earphone,Laptop,Mobile,Other Gadgets,Smart...	6
June	Mobile,Other Gadgets,Smartwatch,Tech Tips	4
July	Earphone,Mobile,Other Gadgets,Smartwatch,T...	5
August	Earphone,Mobile,Other Gadgets,Smartwatch,T...	5
September	Mobile,Other Gadgets,Smartwatch,Tech Tips	4

7. What is the percentage breakdown of total reach by post type? The final output includes the following fields:
   • post_type
   • total_reach • reach_percentage

```sql
WITH reach_cte AS (
    SELECT
        post_type,
        SUM(reach) AS total_reach
    FROM fact_content
    GROUP BY post_type
)
SELECT
    post_type,
    total_reach,
    ROUND((total_reach * 100.0) / (SELECT SUM(total_reach) FROM reach_cte), 2) AS reach_percentage
FROM reach_cte
ORDER BY reach_percentage DESC;
```

post_type	total_reach	reach_percentage
IG Reel	5379091	61.63
IG Image	1866381	21.38
IG Video	1422300	16.30
IG Carousel	60465	0.69

8. Create a report that includes the quarter, total comments, and total saves recorded for each post category. Assign the following quarter groupings: (January, February, March) → "Q1" (April, May, June) → "Q2" (July, August, September) → "Q3" The final output columns should consist of: • post_category • quarter • total_comments • total_saves

```sql
SELECT
    fc.post_category,
    CASE
        WHEN dd.month_name IN ('January', 'February', 'March') THEN 'Q1'
        WHEN dd.month_name IN ('April', 'May', 'June') THEN 'Q2'
        WHEN dd.month_name IN ('July', 'August', 'September') THEN 'Q3'
        ELSE 'Q4'
    END AS quarter,
    SUM(fc.comments) AS total_comments,
    SUM(fc.saves) AS total_saves
FROM fact_content fc
JOIN dim_dates dd ON fc.date = dd.date
GROUP BY post_category, quarter
ORDER BY quarter, post_category;
```

post_category	quarter	total_comments	total_saves
Earphone	Q1	351	2230
Laptop	Q1	418	2837
Mobile	Q1	1836	9843
Smartwatch	Q1	600	2860
Earphone	Q2	589	3602
Laptop	Q2	452	2248
Mobile	Q2	2313	17207
Other Gadgets	Q2	1622	12041
Smartwatch	Q2	1358	12581
Tech Tips	Q2	2201	17649
Earphone	Q3	427	3247
Mobile	Q3	1134	5285
Other Gadgets	Q3	964	4457
Smartwatch	Q3	971	3326

9. **List the top three dates in each month with the highest number of new followers. The final output should include the following columns:**
   month
   date
   new_followers

```sql
WITH ranked_followers AS (
    SELECT
        dd.month_name,
        DATE(fa.date) AS date,
        fa.new_followers,
        ROW_NUMBER() OVER (PARTITION BY dd.month_name ORDER BY fa.new_followers DESC) AS rn
    FROM fact_account fa
    JOIN dim_dates dd ON fa.date = dd.date
    GROUP BY dd.month_name, fa.date, fa.new_followers
)
SELECT
    month_name,
    date,
    new_followers
FROM ranked_followers
WHERE rn <= 3
ORDER BY month_name, new_followers DESC;
```

month_name	date	new_followers
April	2023-04-25	3736
April	2023-04-30	2753
April	2023-04-06	2500
August	2023-08-23	2074
August	2023-08-21	1783
August	2023-08-06	1687
February	2023-02-01	4106
February	2023-02-24	2383
February	2023-02-02	1989
January	2023-01-30	3186
January	2023-01-03	2959
January	2023-01-23	1003
July	2023-07-08	3716
July	2023-07-15	3364

10.Create a stored procedure that takes the 'week_no' as input and generates a report displaying the total shares for each 'post_type'. The output of the procedure should consist of two columns:

post_type

total_shares

```sql
CREATE PROCEDURE GetSharesByWeek(IN week_no_input VARCHAR(255))
BEGIN
    SELECT
        fc.post_type,
        SUM(fc.shares) AS total_shares
    FROM fact_content fc
    JOIN dim_dates dd ON fc.date = dd.date
    WHERE dd.week_no = week_no_input
    GROUP BY fc.post_type
    ORDER BY total_shares DESC;
END;
```

post_type	total_shares
IG Image	1134
IG Reel	659
IG Carousel	40