Store Performance Analysis

1.Which are the top 10 stores in terms of Incremental Revenue (IR) generated from the promotions?

Code:

```
WITH ProductRevenue AS (
  SELECT
    store_id,
    city,
  SUM(`quantity_sold(before_promo)` * base_price)
       AS Total_Revenue_Before_promotion,
  SUM(CASE
          WHEN promo_type = 'BOGOF' THEN base_price * 0.5 * (2 * `quantity_sold(after_promo)`)
          WHEN promo_type = '50% Off' THEN base_price * 0.50 * `quantity_sold(after_promo)`
          WHEN promo_type = '25% Off' THEN base_price * 0.75 * `quantity_sold(after_promo)`
          WHEN promo_type = '33% Off' THEN base_price * 0.67 * `quantity_sold(after_promo)`
          WHEN promo_type = '500 Cashback' THEN (base_price - 500) * `quantity_sold(after_promo)`
        END) AS Total_Revenue_After_promotion
      FROM
  retail_events_db.fact_events
      JOIN
    dim_stores using (store_id)
  GROUP BY
     store_id,
    city
),
IR_Calculation AS (
  SELECT * ,
  (Total_Revenue_After_promotion- Total_Revenue_Before_promotion) as Incremental_Revenue
  FROM
     ProductRevenue
)
SELECT store_id, city, Incremental_Revenue FROM
  IR_Calculation
ORDER BY
Incremental_Revenue desc
```

```
LIMIT 10;
```

RESULT:

store_id	city	Incremental_Revenue
STMYS-1	Mysuru	4919313.54
STCHE-4	Chennai	4828030.03
STBLR-0	Bengaluru	4759623.65
STBLR-7	Bengaluru	4717587.33
STCHE-7	Chennai	4647725.72
STBLR-6	Bengaluru	4610220.29
STCHE-3	Chennai	4408650.33
STMYS-3	Mysuru	4402291.98
STCHE-6	Chennai	4035845.71
STBLR-3	Bengaluru	3942443.40

2.Which are the bottom 10 stores when it comes to Incremental Sold Units (ISU) during the promotional period?

CODE:

```
WITH CategorySales AS (
  SELECT
    store_id,
    city,
     SUM(
       CASE
          WHEN fe.promo_type = 'BOGOF' THEN fe.`quantity_sold(after_promo)`* 2
          ELSE fe.`quantity_sold(after_promo)`
       END
     ) AS total_quantity_after_promo,
     SUM(`quantity_sold(before_promo)`) AS total_quantity_before_promo
  FROM
     retail_events_db.fact_events fe
  JOIN
    dim_stores using (store_id)
  GROUP BY
     store_id,
    city
),
ISU_Calculation AS (
  SELECT
     store_id,
    city,
```

```
    (total_quantity_after_promo - total_quantity_before_promo) as Incremental_Sold_Units
  FROM
    CategorySales
)
SELECT *
FROM
  ISU_Calculation
order by Incremental_Sold_Units asc
limit 10;
```

RESULT:

store_id	city	Incremental_Sold_Units
STMLR-0	Mangalore	
STVSK-3	Visakhapatnam	4553
STVSK-4	Visakhapatnam	4988
STTRV-1	Trivandrum	5072
STVJD-1	Vijayawada	5302
STTRV-0	Trivandrum	5306
STMLR-2	Mangalore	5374
STMLR-1	Mangalore	5481
STVJD-0	Vijayawada	5870
STCBE-4	Coimbatore	5942

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3. How does the performance of stores vary by city? Are there any common characteristics among the top-performing stores that could be leveraged across other stores?

CODE:

```
WITH StorePerformance AS (
  SELECT
    ds.store_id,
    ds.city,
  SUM(`quantity_sold(before_promo)` * base_price) AS total_revenue_before_promo,
  SUM(
  CASE
        WHEN promo_type = 'BOGOF' THEN base_price * 0.5 * (2 * `quantity_sold(after_promo)`)
        WHEN promo_type = '50% Off' THEN base_price * 0.50 * `quantity_sold(after_promo)`
        WHEN promo_type = '25% Off' THEN base_price * 0.75 * `quantity_sold(after_promo)`
        WHEN promo_type = '33% Off' THEN base_price * 0.67 * `quantity_sold(after_promo)`
        WHEN promo_type = '500 Cashback' THEN (base_price - 500) * `quantity_sold(after_promo)`
      END) AS total_revenue_after_promo,
          SUM(
      CASE
        WHEN fe.promo_type = 'BOGOF' THEN fe.`quantity_sold(after_promo)`* 2
```

```
            ELSE fe.`quantity_sold(after_promo)`
        END
    ) AS total_quantity_after_promotion,
    SUM(`quantity_sold(before_promo)`) AS total_quantity_before_promotion
  FROM
    fact_events fe
  JOIN
    dim_stores ds ON fe.store_id = ds.store_id
  GROUP BY
    ds.store_id, ds.city
)
SELECT city,
count(store_id) total_stores,
Sum(total_revenue_before_promo) total_revenue_before_promo,
sum(total_revenue_after_promo) total_revenue_after_promo,
sum(total_quantity_before_promotion) total_quantity_before_promotion,
sum(total_quantity_after_promotion) total_quantity_after_promotion,
 round(AVG(total_revenue_after_promo- total_revenue_before_promo),2) AS avg_incremental_revenue,
 round(AVG(total_quantity_after_promotion - total_quantity_before_promotion),2) AS avg_incremental_sold_units
FROM StorePerformance
GROUP BY city
ORDER BY avg_incremental_revenue DESC, avg_incremental_sold_units DESC;
```

RESULT:

city	total_stores	total_revenue_before_promo	total_revenue_after_promo	total_quantity_before_promotion	total_quantity_after_promotion	avg_incremental_revenue	avg_incremental_sold_units
Chennai	8	26286454	56999698.16	39505	125630	3839155.52	10765.63
Bengaluru	10	32943279	71174628.79	49171	157333	3823134.98	10816.20
Mysuru	4	12946287	26843127.28	18569	54671	3474210.07	9025.50
Hyderabad	7	22678681	45391373.49	34363	103126	3244670.36	9823.29
Madurai	4	10331552	22729208.01	14458	47006	3099414.00	8137.00
Coimbatore	5	12235954	25861276.99	18150	58748	2725064.60	8119.60
Visakhapatnam	5	11454442	22266334.04	17175	50170	2162378.41	6599.00
Vijayawada	2	3587937	7633080.12	5297	16469	2022571.56	5586.00
Trivandrum	2	3201786	6697781.51	4833	15211	1747997.76	5189.00
Mangalore	3	5034816	10010135.20	7529	22362	1658439.73	4944.33

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4. How many stores are there in each city?

CODE:

```
select count(store_id) as total_stores, city from dim_stores group by city order by 1 desc;
```

Result:

total_stores	city
10	Bengaluru
8	Chennai
7	Hyderabad
5	Coimbatore
5	Visakhapatnam
4	Madurai
4	Mysuru
3	Mangalore
2	Trivandrum
2	Vijayawada

❖ COMMON CODE FOR 5 AND 6 QUESTIONS:

```
WITH CategorySales AS (
  SELECT
    store_id,
    city,
  SUM(`quantity_sold(before_promo)` * base_price)
       AS Total_Revenue_Before_promotion,
  SUM(CASE
          WHEN promo_type = 'BOGOF' THEN base_price * 0.5 * (2 * `quantity_sold(after_promo)`)
          WHEN promo_type = '50% Off' THEN base_price * 0.50 * `quantity_sold(after_promo)`
          WHEN promo_type = '25% Off' THEN base_price * 0.75 * `quantity_sold(after_promo)`
          WHEN promo_type = '33% Off' THEN base_price * 0.67 * `quantity_sold(after_promo)`
          WHEN promo_type = '500 Cashback' THEN (base_price - 500) * `quantity_sold(after_promo)`
       END) AS Total_Revenue_After_promotion,
       SUM(
       CASE
          WHEN promo_type = 'BOGOF' THEN `quantity_sold(after_promo)`* 2
          ELSE `quantity_sold(after_promo)`
       END
    ) AS total_quantity_after_promo,
    SUM(`quantity_sold(before_promo)`) AS total_quantity_before_promo
    FROM
  retail_events_db.fact_events
    JOIN
    dim_stores using (store_id)
  GROUP BY
     store_id,
    city
),
```

```
Calculation AS (
   SELECT * ,(total_quantity_after_promo - total_quantity_before_promo) as Incremental_Sold_Units,
   (Total_Revenue_After_promotion- Total_Revenue_Before_promotion) as Incremental_Revenue
FROM
     CategorySales
)
```

5.what is the Average IR and Average ISU by each city?

CODE:

```
 SELECT city,
   AVG(incremental_revenue) AS avg_incremental_revenue,
   AVG(incremental_sold_units) AS avg_incremental_sold_units
FROM Calculation GROUP BY city
 ORDER BY 2 desc;
```

RESULT:

city	avg_incremental_revenue	avg_incremental_sold_units
Chennai	3839155.520000	10765.6250
Bengaluru	3823134.979000	10816.2000
Mysuru	3474210.070000	9025.5000
Hyderabad	3244670.355714	9823.2857
Madurai	3099414.002500	8137.0000
Coimbatore	2725064.598000	8119.6000
Visakhapatnam	2162378.408000	6599.0000
Vijayawada	2022571.560000	5586.0000
Trivandrum	1747997.755000	5189.0000
Mangalore	1658439.733333	4944.3333

6.What is the average IR% and average ISU% ?

CODE:

```
select avg(Incremental_Revenue), avg(Incremental_Sold_Units) from  Calculation;
```

RESULT:

avg(Incremental_Revenue)	avg(Incremental_Sold_Units)
3098109.111800	8833.5200
