Atliq Mart Sales Analysis

Sql project

objective

- AtliQ Mart is a retail giant with over 50 supermarkets in the southern region of India. All their 50 stores ran a massive promotion during the Diwali 2023 and Sankranti 2024 on their AtliQ branded products.

- The purpose of this project is to analyse the effect of different promotional campaigns launched by Atliq mart on sales volume and provide tangible insights to the sales director to help him increase business growth.

Q1: List of products with a base price greater than 500 and that are featured in promo type of 'BOGOF' (Buy One Get One Free).

```sql
SELECT p.product_name, e.base_price,e.promo_type
from dim_products p join fact_events e
on p.product_code=e.product_code and e.promo_type = 'BOGOF'
where e.base_price >500
group by 1,2,3;
```
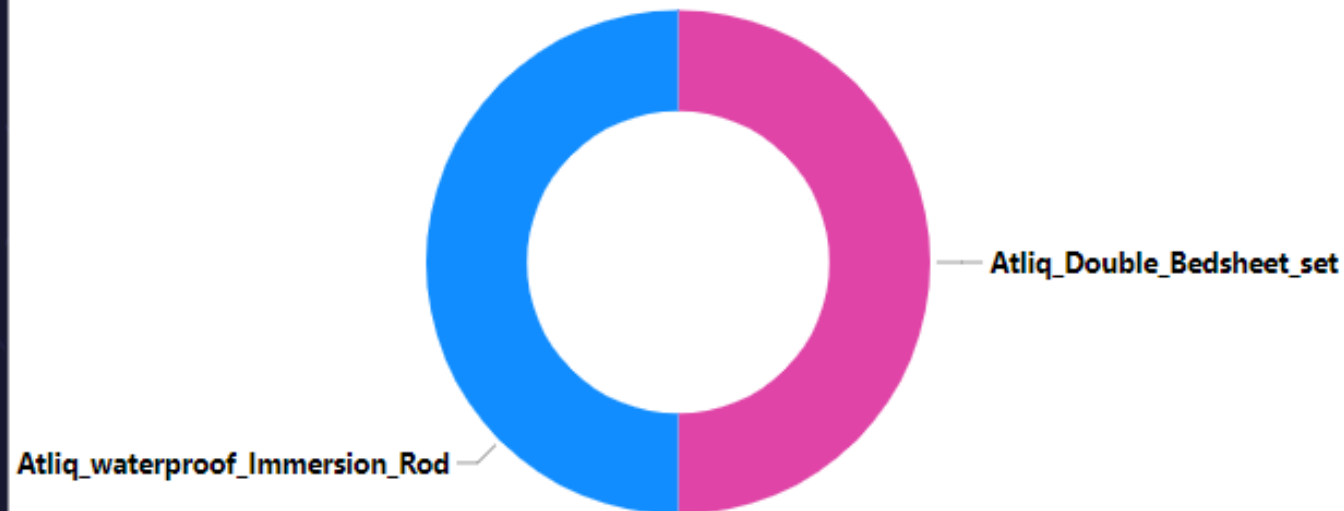
OUTPUT:

	product_name	base_price	promo_type
▶	Atliq_Double_Bedsheet_set	1190	BOGOF
	Atliq_waterproof_Immersion_Rod	1020	BOGOF

Conversion of output to Visual

Q2: No. of Stores in each City

```sql
select city,count(*) as store_count
from dim_stores
group by city
order by store_count desc;
```
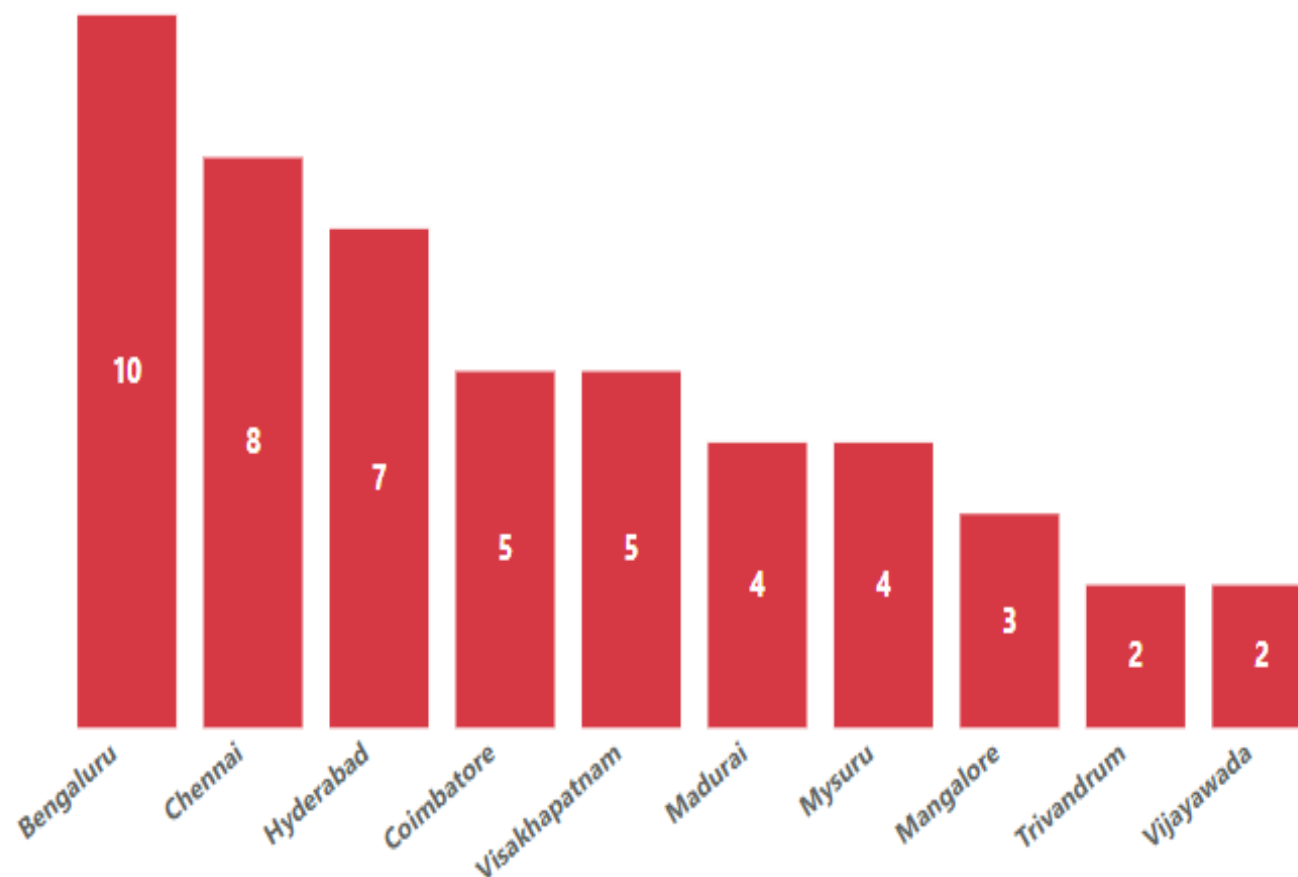
OUTPUT:

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

Conversion of output to Visual

Q3: Total revenue generated for each campaign before and after promotion

```sql
select c.campaign_name,
 concat(round(sum(e.base_price*e.quantity_sold_before_promo)/1000000,2) ,' ','mln')
as total_revenue_before_promotion,
concat(round(sum(CASE when e.promo_type  = '50% OFF'
                THEN 0.5*e.base_price*e.quantity_sold_after_promo
                WHEN e.promo_type = '25% OFF'
                THEN 0.75*e.base_price*e.quantity_sold_after_promo
                WHEN e.promo_type = '33% OFF'
                THEN 0.67*e.base_price*e.quantity_sold_after_promo
                WHEN e.promo_type = '500 Cashback'
                THEN (e.base_price*e.quantity_sold_after_promo-500)
                    WHEN e.promo_type = 'BOGOF'
                    THEN e.base_price*e.quantity_sold_after_promo
                end)/1000000,2) ,' ','mln')
    as total_revenue_after_promotion
    from dim_campaigns c join fact_events e
    on c.campaign_id = e.campaign_id
    group by 1;
```
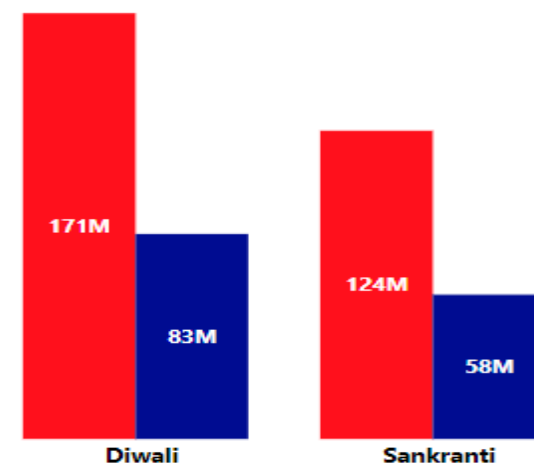
OUTPUT:

campaign_name	total_revenue_before_promotion	total_revenue_after_promotion
Sankranti	58.13 mln	130.33 mln
Diwali	82.57 mln	196.82 mln

Conversion of output to Visual

Q4: Calculate Incremental sold quantity(ISU%) for each category during Diwali campaign. Also rank the categories based on ISU%

```sql
with ISU as(select p.category,
round(sum(case
                WHEN e.promo_type = 'BOGOF'
                THEN 2*e.quantity_sold_after_promo
                else e.quantity_sold_after_promo
                end
- e.quantity_sold_before_promo)*100.0/
sum(e.quantity_sold_before_promo),2)
as ISU_PCT
from dim_products p join fact_events e
using(product_code)
join dim_campaigns c
using(campaign_Id)
where c.campaign_name = 'Diwali'
group by 1)
select category,concat(ISU_PCT,'%')as isu_pct,
dense_rank() over(order by isu_pct desc) AS rnk
from ISU;
```

OUTPUT:

category	isu_pct	rnk
Home Appliances	588.45%	1
Home Care	203.14%	2
Combo1	202.36%	3
Personal Care	31.06%	4
Grocery & Staples	18.05%	5

Conversion of output to Visual

category	isu_pct	rnk
Home Appliances	588.45%	1
Home Care	203.14%	2
Combo1	202.36%	3
Personal Care	31.06%	4
Grocery & Staples	18.05%	5

campaign_name ● Diwali

588 — Home Appliances
203 — Home Care
202 — Combo1
31 — Personal Care
18 — Grocery & Staples
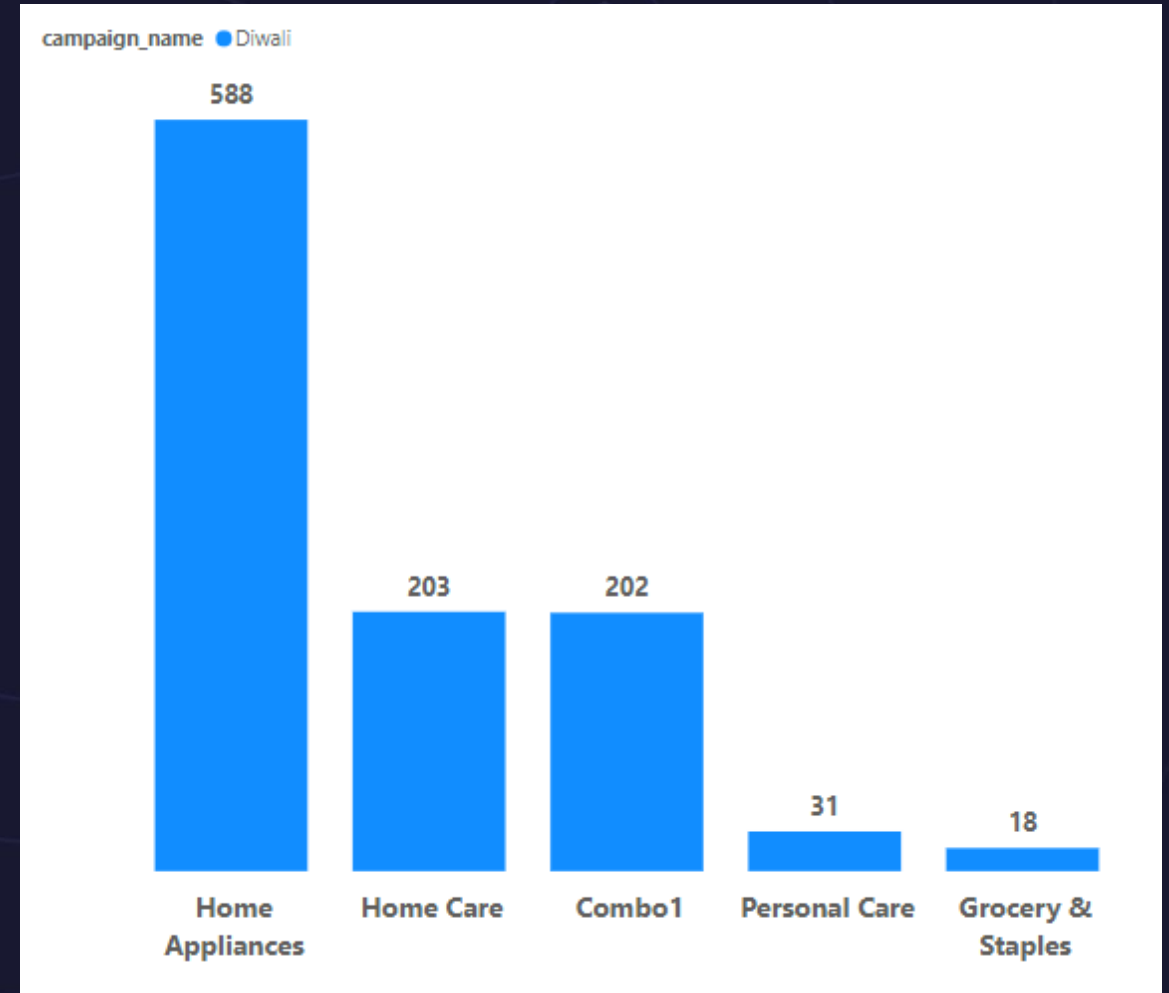
Q5: Top 5 Products based on Incremental Revenue(IR%)

```sql
with incremental_revenue as
(select p.product_name,p.category,
round(((sum(case when e.promo_type = 'BOGOF'
            THEN e.base_price*0.5*quantity_sold_after_promo*2
            when e.promo_type = '500 Cashback'
            THEN (e.base_price*e.quantity_sold_after_promo-500)
            when e.promo_type = '50% OFF'
            THEN 0.5*e.base_price*e.quantity_sold_after_promo
            when e.promo_type = '33% OFF'
            THEN 0.67*e.base_price*e.quantity_sold_after_promo
            when e.promo_type = '25% OFF'
            THEN 0.75*e.base_price*e.quantity_sold_after_promo
            else 0 end)-sum(e.base_price*e.quantity_sold_before_promo)
            )/sum(e.base_price*e.quantity_sold_before_promo))*100.0,2)
            as ir_pct
from fact_events e join dim_products p
using(product_code)
group by 1,2)
select product_name,category,concat(ir_pct,'%') as ir_percentage
from incremental_revenue
group by 1,2
order by ir_pct desc
limit 5;
```

OUTPUT:

product_name	category	ir_percentage
Atliq_waterproof_Immersion_Rod	Home Appliances	266.19%
Atliq_High_Glo_15W_LED_Bulb	Home Appliances	262.98%
Atliq_Double_Bedsheet_set	Home Care	258.27%
Atliq_Curtains	Home Care	255.34%
Atliq_Home_Essential_8_Product_Combo	Combo1	183.26%

Conversion of output to Visual
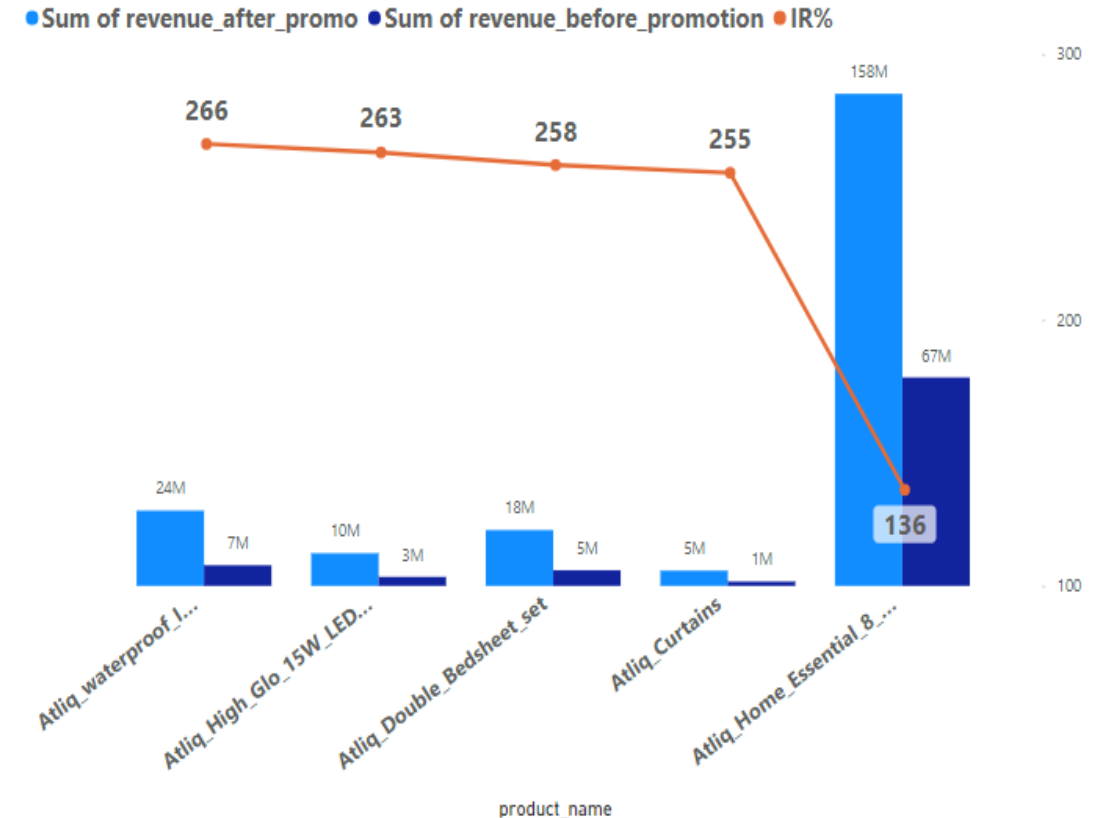
Q6: TOP 10 Stores in terms of incremental revenue%

```sql
select e.store_id,
round(((sum(case when e.promo_type = 'BOGOF'
            THEN e.base_price*0.5*quantity_sold_after_promo*2
        when e.promo_type = '500 Cashback'
            THEN (e.base_price*e.quantity_sold_after_promo-500)
        when e.promo_type = '50% OFF'
            THEN 0.5*e.base_price*e.quantity_sold_after_promo
        when e.promo_type = '33% OFF'
            THEN 0.67*e.base_price*e.quantity_sold_after_promo
        when e.promo_type = '25% OFF'
            THEN 0.75*e.base_price*e.quantity_sold_after_promo
        else 0 end)-sum(e.base_price*e.quantity_sold_before_promo)
    )/sum(e.base_price*e.quantity_sold_before_promo))*100.0,2)
as ir_pct
from fact_events e
group by 1
order by ir_pct desc
limit 10;
```

OUTPUT:

store_id	ir_pct
STCHE-7	168.83
STMDU-0	168.30
STBLR-0	167.67
STBLR-7	166.41
STMYS-3	166.27
STMYS-1	165.55
STCBE-2	163.39
STCHE-3	162.66
STCHE-4	161.94
STBLR-6	160.42

Q7: Bottom 10 stores in terms Incremental sold units% during campaigns

```sql
with ISU as(select e.store_id,
round(sum(case
                    WHEN e.promo_type = 'BOGOF'
                    THEN 2*e.quantity_sold_after_promo
                    else e.quantity_sold_after_promo
                    end
- e.quantity_sold_before_promo)*100.0/
sum(e.quantity_sold_before_promo),2)
as ISU_PCT
from fact_events e
group by 1)
select store_Id,concat(ISU_PCT,'%')as isu_percentage
from ISU order by isu_pct asc
limit 10;
```

OUTPUT:

store_Id	isu_percentage
STVSK-3	136.36%
STMYS-2	140.51%
STHYD-1	141.31%
STVSK-4	142.35%
STCHE-1	145.18%
STMYS-0	150.59%
STHYD-3	151.85%
STBLR-1	153.12%
STMLR-0	156.80%
STCBE-4	161.82%

Q8: TOP 3 stores in each city in terms of revenue.

```sql
select store_id,city,ir_pct,rnk from
(select store_id,city,ir_pct,
dense_rank() over(partition by city order by ir_pct desc) as rnk
from
(select e.store_id,s.city,
round((((sum(case when e.promo_type = 'BOGOF'
                THEN e.base_price*0.5*quantity_sold_after_promo*2
                when e.promo_type = '500 Cashback'
                THEN (e.base_price*e.quantity_sold_after_promo-500)
                when e.promo_type = '50% OFF'
                THEN 0.5*e.base_price*e.quantity_sold_after_promo
                when e.promo_type = '33% OFF'
                THEN 0.67*e.base_price*e.quantity_sold_after_promo
            when e.promo_type = '25% OFF'
            THEN 0.75*e.base_price*e.quantity_sold_after_promo
            else 0 end)-sum(e.base_price*e.quantity_sold_before_promo)
            )/sum(e.base_price*e.quantity_sold_before_promo))*100.0,2)
as ir_pct
from fact_events e join dim_stores s
using(store_id)
group by 1,2) as a)as b
where rnk<=3
group by 1,2
order by 2,3 desc;
```

OUTPUT:

store_id	city	ir_pct	rnk
STBLR-0	Bengaluru	167.67	1
STBLR-7	Bengaluru	166.41	2
STBLR-6	Bengaluru	160.42	3
STCHE-7	Chennai	168.83	1
STCHE-3	Chennai	162.66	2
STCHE-4	Chennai	161.94	3
STCBE-2	Coimbatore	163.39	1
STCBE-1	Coimbatore	140.28	2
STCBE-3	Coimbatore	135.61	3
STHYD-0	Hyderabad	138.83	1
STHYD-6	Hyderabad	134.50	2
STHYD-2	Hyderabad	132.63	3
STMDU-0	Madurai	168.30	1
STMDU-1	Madurai	140.47	2
STMDU-2	Madurai	138.93	3
STMLR-1	Mangalore	135.94	1
STMLR-2	Mangalore	130.51	2
STMLR-0	Mangalore	92.80	3
STMYS-3	Mysuru	166.27	1
STMYS-1	Mysuru	165.55	2
STMYS-2	Mysuru	101.52	3
STTRV-1	Trivandrum	132.24	1
STTRV-0	Trivandrum	128.58	2
STVJD-0	Vijayawada	136.61	1
STVJD-1	Vijayawada	134.83	2
STVSK-0	Visakhapatnam	133.28	1
STVSK-2	Visakhapatnam	131.17	2
STVSK-1	Visakhapatnam	128.92	3

Q9: TOP 2 promotional offers in terms of incremental revenue%.
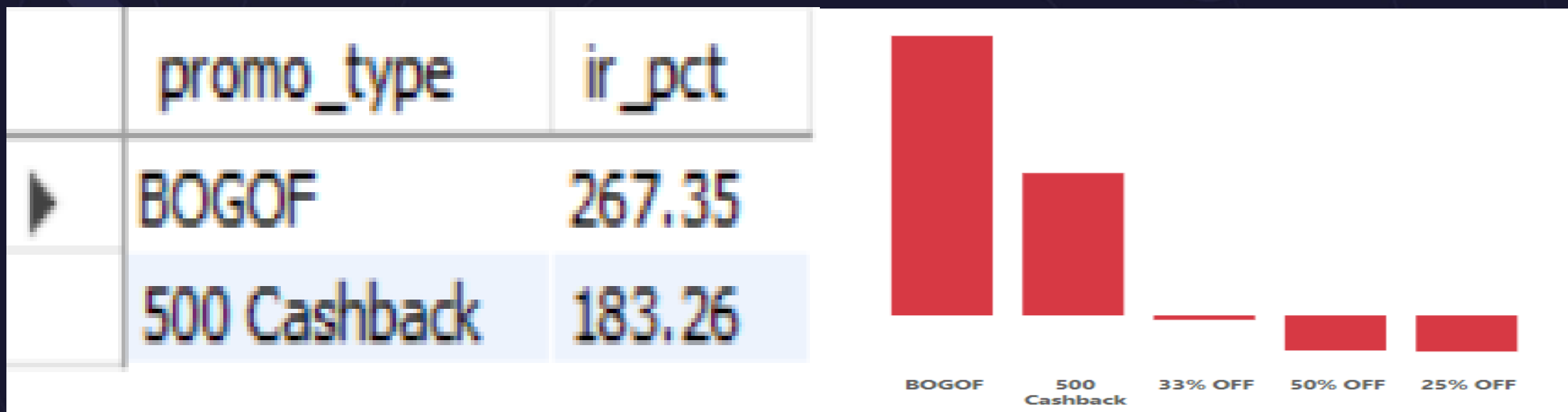
```sql
select e.promo_type,
round(((sum(case when e.promo_type = 'BOGOF'
            THEN e.base_price*0.5*quantity_sold_after_promo*2
            when e.promo_type = '500 Cashback'
            THEN (e.base_price*e.quantity_sold_after_promo-500)
            when e.promo_type = '50% OFF'
            THEN 0.5*e.base_price*e.quantity_sold_after_promo
            when e.promo_type = '33% OFF'
            THEN 0.67*e.base_price*e.quantity_sold_after_promo
            when e.promo_type = '25% OFF'
            THEN 0.75*e.base_price*e.quantity_sold_after_promo
            else 0 end)-sum(e.base_price*e.quantity_sold_before_promo)
      )/sum(e.base_price*e.quantity_sold_before_promo))*100.0,2)
as ir_pct
from fact_events e
group by 1
order by ir_pct desc
limit 2;
```

OUTPUT:

promo_type	ir_pct
BOGOF	267.35
500 Cashback	183.26

Conversion of output to Visual

Q10: BOTTOM 2 promotional offers in terms of incremental sold units%.

```sql
with ISU as(select e.promo_type,
round(sum(case
                WHEN e.promo_type = 'BOGOF'
                THEN 2*e.quantity_sold_after_promo
                else e.quantity_sold_after_promo
                end
- e.quantity_sold_before_promo)*100.0/
sum(e.quantity_sold_before_promo),2)
as ISU_PCT
from fact_events e
group by 1)
select promo_type,concat(ISU_PCT,'%')as isu_percentage
from ISU
order by isu_pct asc
limit 2;
```
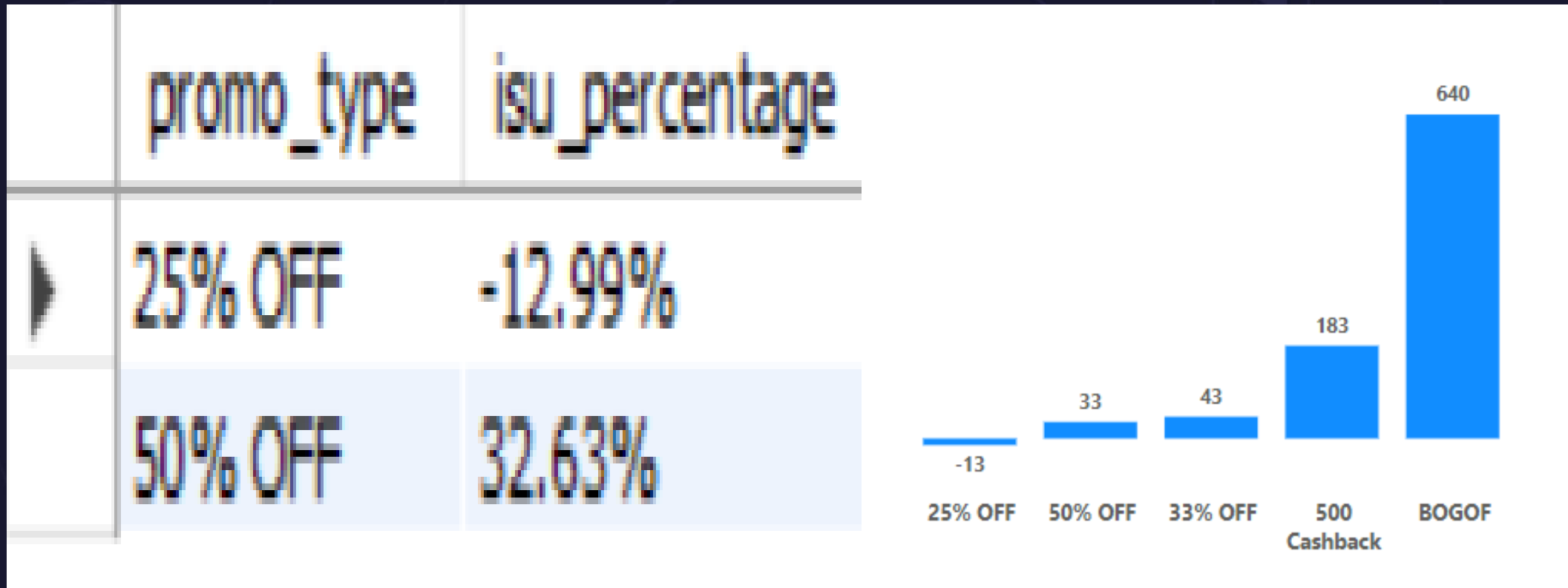
OUTPUT:

promo_type	isu_percentage
25% OFF	-12.99%
50% OFF	32.63%

Conversion of output to Visual

Q11: Correlation between product category and promo type.

```sql
with promo_per_category as
(select p.category,e.promo_type,
round(((sum(case when e.promo_type = 'BOGOF'
            THEN e.base_price*0.5*quantity_sold_after_promo*2
        when e.promo_type = '500 Cashback'
        THEN (e.base_price*e.quantity_sold_after_promo-500)
        when e.promo_type = '50% OFF'
        THEN 0.5*e.base_price*e.quantity_sold_after_promo
        when e.promo_type = '33% OFF'
        THEN 0.67*e.base_price*e.quantity_sold_after_promo
        when e.promo_type = '25% OFF'
        THEN 0.75*e.base_price*e.quantity_sold_after_promo
        else 0 end)-sum(e.base_price*e.quantity_sold_before_promo)
        )/sum(e.base_price*e.quantity_sold_before_promo))*100.0,2)
as ir_pct
from fact_events e join dim_products p
using(product_code)
group by 1,2
order by ir_pct desc)
select category,promo_type,ir_pct,
dense_rank() over(partition by category order by ir_pct desc) as rnk
from promo_per_category
group by 1,2;
```

OUTPUT:

category	promo_type	ir_pct	rnk
Combo1	500 Cashback	183.26	1
Grocery & Staples	BOGOF	275.53	1
Grocery & Staples	33% OFF	-4.28	2
Grocery & Staples	25% OFF	-34.06	3
Home Appliances	BOGOF	265.21	1
Home Care	BOGOF	257.63	1
Home Care	25% OFF	-35.53	2
Personal Care	50% OFF	-33.60	1
Personal Care	25% OFF	-38.42	2

Insights

- Bangalore has the highest no. of stores.

- Home Appliances products saw highest growth in sales during Diwali campaign.

- Stores saw a 224.2% increase in revenue due to Sankranti campaign
  And an increase of 238.3% due to Diwali campaign.

- Atliq waterproof immersion rod witnessed the highest IR%

- Stores in Bangalore & Chennai witnessed the highest IR% while stores in Mangalore
  had the lowest IR%.

- Promo types – "BOGOF" & "500 Cashback" led to increase in store revenue while
  "25% OFF" offer resulted in losses.