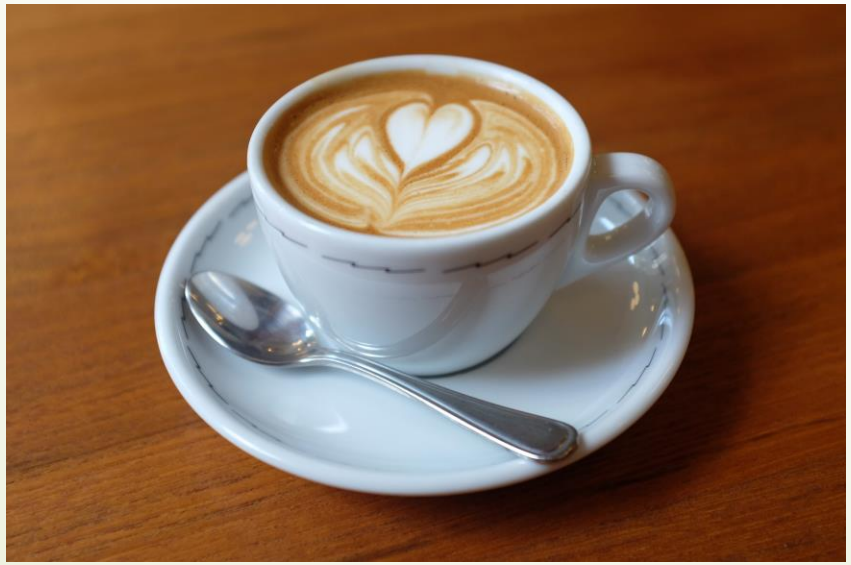
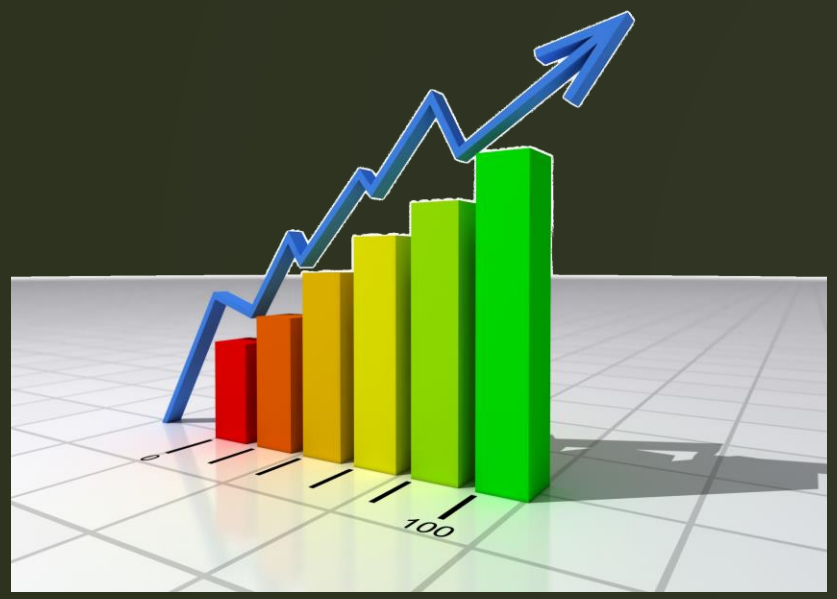
Coffee Shop sales analysis

Using SQL



Yearly sales



```
select year(date) as year,sum(sales) as total_sales
from facttable
group by year;
```

Result Grid | Filter

year	total_sales
2010	401159
2011	418652

Total Sales and total orders

```sql
select sum(sales) as total_sales,
count(productId) as total_orders
from facttable;
```

Result Grid | Filter Rows:

	total_sales	total_orders
▶	819811	4248

Profit and margin

```
select sum(sales) as total_sales,sum(profit) as profit,
avg(margin) as avg_margin
from facttable;
```

Result Grid | Filter Rows:

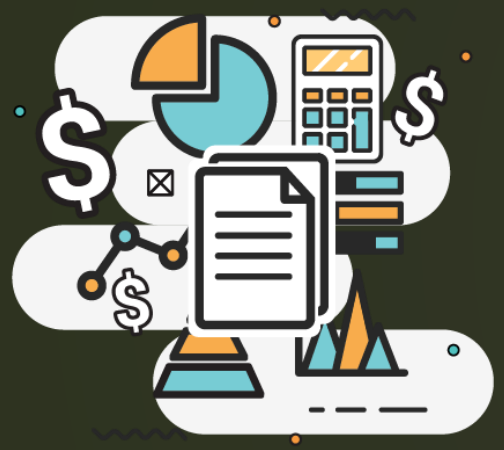
total_sales	profit	avg(margin)
819811	259543	104.2933

Margin vs Budget margin

```
select (sum(profit)/sum(sales))*100 as margin,
(sum(budget_profit)/sum(budget_sales))*100 as budget_margin
from facttable;
```

	margin	budget_margin
▶	31.6589	34.6789

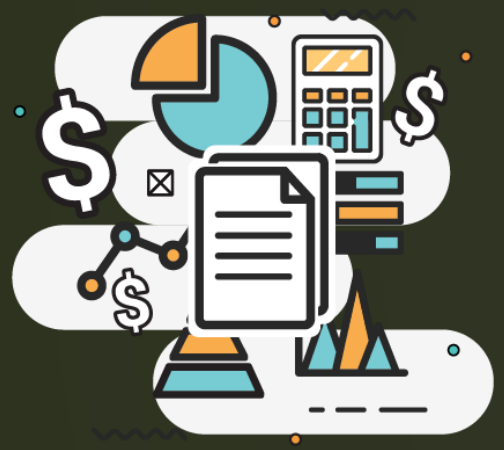
Budget profit vs profit



```
select sum(profit) as total_profit,
sum(budget_profit) as total_budget_profit,
sum(profit)-sum(budget_profit) as diff from facttable;
```

	total_profit	total_budget_profit	diff
▶	259543	258760	783

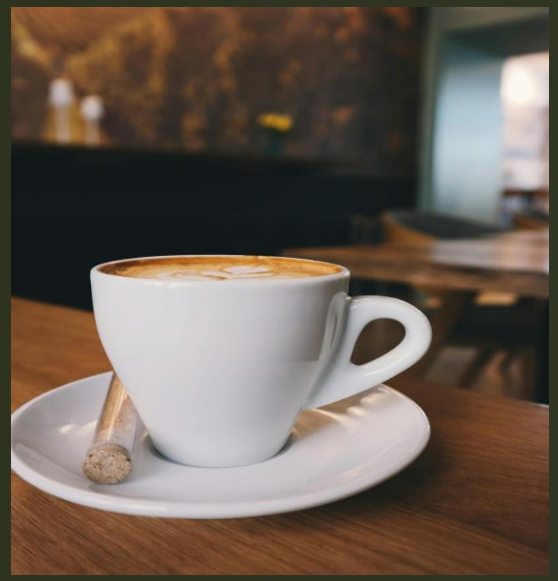
COGS vs Budget COGS



```
select sum(cogs) as cogs,sum(budget_cogs) as budget_cogs,
sum(budget_cogs)- sum(cogs) as diff from facttable;
```

cogs	budget_cogs	diff
358672	317880	-40792

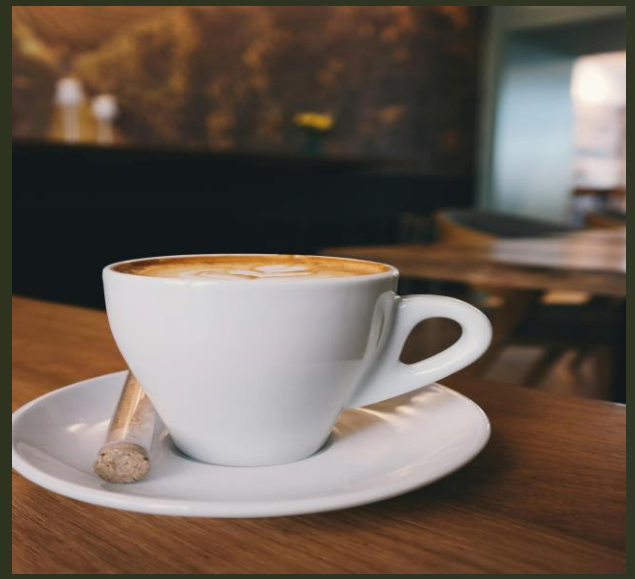
Top 5 states sales



```sql
select l.state,sum(f.sales) as total_sales
from facttable f join location l
on f.Area_code = l.Area_code
group by l.state
order by total_sales desc limit 5;
```

state	total_sales
California	96892
New York	70852
Illinois	69883
Nevada	60159
Iowa	54750

Bottom 5 states sales



```
select l.state,sum(f.sales) as sales from facttable f join location l
on f.area_code = l.area_code
group by l.state
order by sales asc limit 5;
```

Result Grid | Filter Rows:

state	sales
New Hampshire	14887
New Mexico	15892
Louisiana	23161
Missouri	24647
Connecticut	25429

Top 5 products type

```sql
select p.product_type,sum(f.sales) as total_sales
from facttable f join product p
on f.productId=p.productId
group by product_type
order by total_sales desc;
```

Result Grid | Filter Rows:

product_type	total_sales
Espresso	222996
Coffee	216828
Herbal Tea	207214
Tea	172773

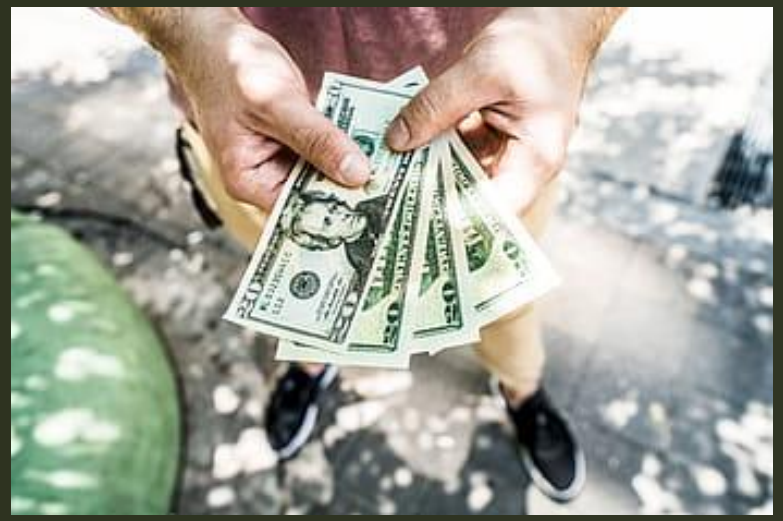
Top 3 products of every product type

```sql
with cte_ptypes as (
 select p.product_type,p.product,sum(f.sales) as sales,
 rank() over( partition by p.product_type order by sum(sales) desc) as sales_rank
 from facttable f join product p
 on f.productId = p.productId
 group by p.product_type,p.product
 )

 select * from cte_ptypes where sales_rank <=3;
```

	product_type	product	total_sales	ranked
▶	Coffee	Columbian	128311	1
	Coffee	Decaf Irish Cream	62248	2
	Coffee	Amaretto	26269	3
	Espresso	Caffe Mocha	84904	1
	Espresso	Decaf Espresso	78162	2
	Espresso	Caffe Latte	35899	3
	Herbal Tea	Lemon	95926	1
	Herbal Tea	Chamomile	75578	2
	Herbal Tea	Mint	35710	3
	Tea	Darjeeling	73151	1
	Tea	Earl Grey	66772	2
	Tea	Green Tea	32850	3

Total Expenditure

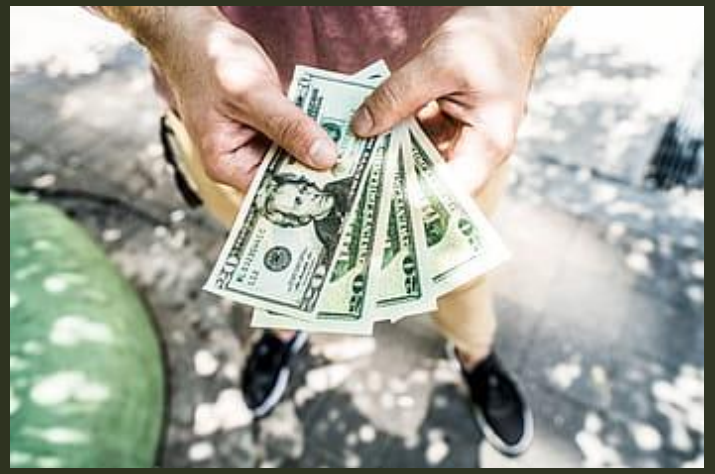


```
select sum(total_expenses) as Expenses,
sum(marketing) as marketing,
sum(inventory) as inventory from facttable;
```

Result Grid | Filter Rows:

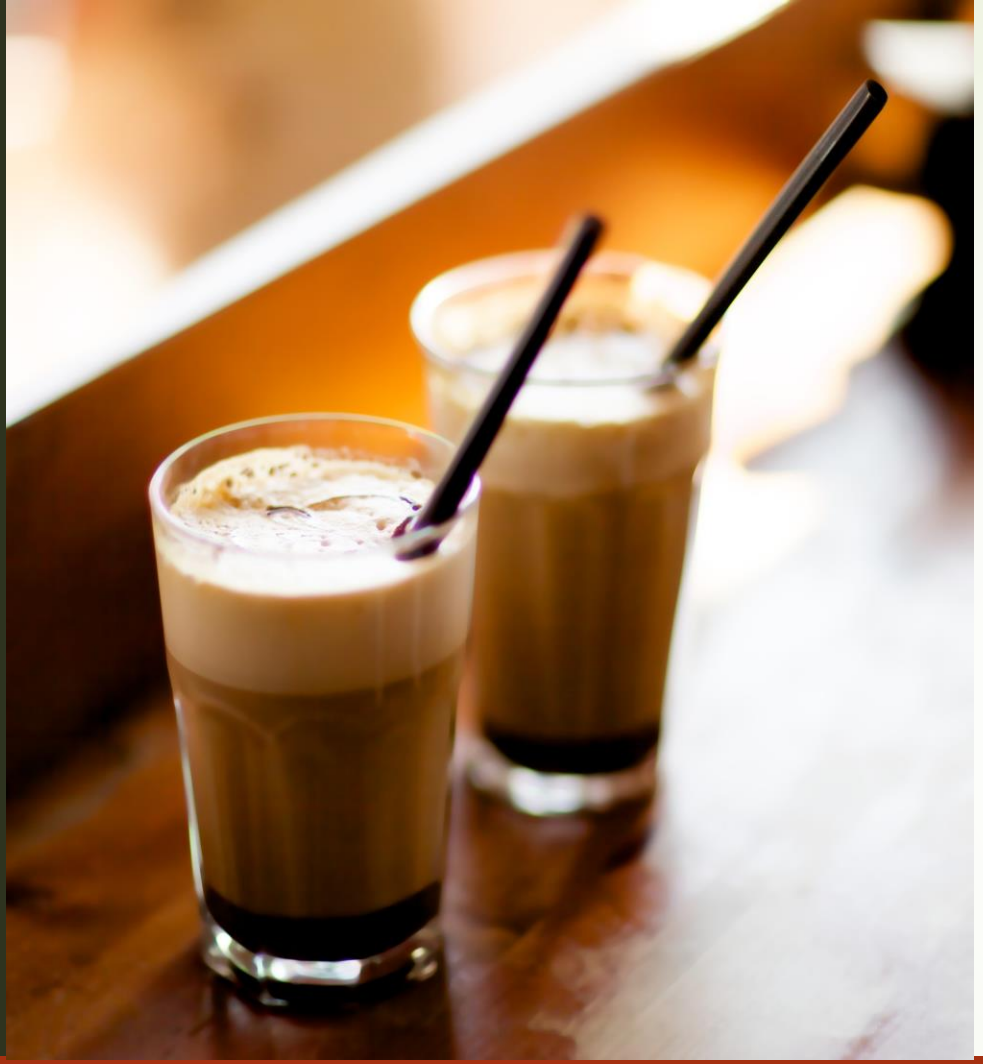
total_expense	marketing	inventory
229662	132474	3183372

Total Expenditure on different product types



```
select p.product_type,sum(f.total_expenses) as total_expense,
sum(f.marketing) as marketing,
sum(f.inventory) as inventory
from facttable f join product p on f.productId=p.productId
group by p.Product_Type
order by marketing desc,total_expense desc,inventory desc;
```

product_type	total_expense	marketing	inventory
Espresso	64603	38216	789748
Herbal Tea	57814	34154	828968
Coffee	60025	33366	803954
Tea	47220	26738	760702



Recommendation

- Focusing marketing on bottom states can improve the sales of these areas.
- Margin Is less than expected but it is still acceptable. Adjusting pricing can improve this in future.
- Inventory is too high and may get waste, try one day free coffee at limited time in less sales area for promotions and to optimize inventory.
- Reducing the inventory for tea will not affect the sales and increasing the inventory for the popular products.
- Introduce new products can aslo cover wider range of customers.
- COGS is higher than the budget so reducing it will be the best option.