

Lab-2 Solutions

1. Sales total w.r.t. Categories by store by day

```
Select p.category,  
s.name as store_name,  
t.day_of_week,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  
join dbo.product p  
on sf.product_key = p.product_key  
  
join dbo.time t  
on sf.time_key = t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
  group by  
p.category,s.name,t.day_of_week  
  order by sum(sf.dollar_sales)  
  desc
```

	category	store_name	day_of_week	total_sales
1	Food	Store No. 3	Saturday	6280.22
2	Food	Store No. 18	Monday	5964.6
3	Food	Store No. 7	Tuesday	5725.48
4	Food	Store No. 7	Sunday	5284.59
5	Food	Store No. 5	Saturday	5203.03
6	Food	Store No. 12	Sunday	5106.2
7	Food	Store No. 16	Saturday	4974.96
8	Food	Store No. 2	Friday	4819.31
9	Food	Store No. 8	Thursday	4814.67
10	Food	Store No. 8	Tuesday	4765.91
11	Food	Store No. 6	Sunday	4738.72
12	Food	Store No. 11	Wednesday	4718.23
13	Food	Store No. 11	Tuesday	4718.04
14	Food	Store No. 10	Friday	4679.97
15	Food	Store No. 3	Tuesday	4655.79
16	Food	Store No. 18	Thursday	4632.26

2. Sales Total by store by day

```
Select s.name as store_name, t.day_of_week,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  join dbo.time t on  
sf.time_key = t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
  
group by s.name,t.day_of_week  
  
order by sum(sf.dollar_sales) desc
```

	store_name	day_of_week	total_sales
1	Store No. 5	Saturday	7778.11
2	Store No. 18	Monday	7585.87
3	Store No. 7	Tuesday	7547.24
4	Store No. 3	Saturday	7445.53
5	Store No. 12	Saturday	7115.82
6	Store No. 2	Friday	6927.67
7	Store No. 8	Saturday	6923.94
8	Store No. 7	Sunday	6857.47
9	Store No. 11	Monday	6821.41
10	Store No. 11	Tuesday	6588.54
11	Store No. 10	Friday	6568.97
12	Store No. 16	Saturday	6563.76
13	Store No. 12	Tuesday	6557.45
14	Store No. 9	Sunday	6549.92
15	Store No. 8	Tuesday	6506.8
16	Store No. 6	Sunday	6499.31

3. Sales Total of district by product by day

```
Select s.sales_district as district,  
p.full_description as product_name,  
t.day_of_week,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  
join dbo.product  
p  
on sf.product_key = p.product_key  
  
join dbo.time t  
on sf.time_key =  
t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
  
group by s.sales_district,p.full_description,t.day_of_week  
  
order by sum(sf.dollar_sales) desc
```

	district	product_name	day_of_week	total_sales
1	Fulton	Chicken Dinner 18 oz	Saturday	1144.08
2	Hamilton	Buffalo Jerky 6.7 oz	Wednesday	1054.28
3	Dade	Buffalo Jerky 6.7 oz	Monday	1052.15
4	Allegheny	Buffalo Jerky 6.7 oz	Tuesday	1006.04
5	Denver	Turkey Dinner 18 oz	Thursday	973.37
6	Hamilton	Lasagna 13.5 oz	Saturday	923
7	Allegheny	Lasagna 13.5 oz	Sunday	916.89
8	Dade	Turkey Dinner 18 oz	Sunday	912.19
9	Davidson	Beef Stew 13.5 oz	Wednesday	867.24
10	Fulton	Buffalo Jerky 6.7 oz	Thursday	861.1
11	DC	Beef Stew 13.5 oz	Friday	850.84

4. Sales total for a month by product by store

```
Select Datename(month,t.date) as month_name,  
p.full_description as product_name,  
s.name as Store_name,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  join dbo.product  
p  
on sf.product_key = p.product_key  
  join dbo.time t  
on sf.time_key = t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
  
where Datename(month,t.date) = 'December'  
  
group by Datename(month,t.date),p.full_description,s.name  
  
order by sum(sf.dollar_sales) desc
```

	month_name	product_name	Store_name	total_sales
1	December	Buffalo Jerky 6.7 oz	Store No. 11	2006.03
2	December	Turkey Dinner 18 oz	Store No. 3	1906
3	December	Beef Stew 13.5 oz	Store No. 20	1443.49
4	December	Lasagna 13.5 oz	Store No. 6	1409.65
5	December	Chicken Dinner 18 oz	Store No. 5	1369.66
6	December	Chicken Dinner 18 oz	Store No. 12	1276.99
7	December	Chicken Dinner 18 oz	Store No. 14	1249.9
8	December	Turkey Dinner 18 oz	Store No. 17	1210.75
9	December	Buffalo Jerky 4.5 oz	Store No. 20	1125.34
10	December	Chicken Dinner 18 oz	Store No. 18	1121
11	December	Buffalo Jerky 6.7 oz	Store No. 9	1083.82

5. Sales total for a year by product by store

```
Select t.year,
p.full_description as product_name,
s.name as Store_name ,
sum(sf.dollar_sales) as total_sales from
dbo.sales_fact sf
  join dbo.product p on
sf.product_key = p.product_key
  join dbo.time t
on sf.time_key = t.time_key
  join dbo.store s on
sf.store_key = s.store_key

where t.year = '1995'

group by t.year,p.full_description,s.name

order by sum(sf.dollar_sales)desc
```

	year	product_name	Store_name	total_sales
1	1995	Turkey Dinner 18 oz	Store No. 3	2397.76
2	1995	Turkey Dinner 18 oz	Store No. 15	2138.85
3	1995	Chicken Dinner 18 oz	Store No. 12	2039.32
4	1995	Beef Stew 13.5 oz	Store No. 20	1920.32
5	1995	Turkey Dinner 18 oz	Store No. 10	1625.58
6	1995	Turkey Dinner 18 oz	Store No. 12	1575.98
7	1995	Buffalo Jerky 6.7 oz	Store No. 18	1560.52
8	1995	Buffalo Jerky 6.7 oz	Store No. 15	1537.55
9	1995	Chicken Dinner 18 oz	Store No. 14	1527.08
10	1995	Turkey Dinner 12 oz	Store No. 6	1426.58
11	1995	Lasagna 13.5 oz	Store No. 2	1403.3

6. Sales Total by year by All stores by product

```
Select t.year,  
p.full_description as product_name,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  join dbo.product p on  
sf.product_key = p.product_key  
  join dbo.time t  
on sf.time_key = t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
group by t.year,  
p.full_description  
  
order by sum(sf.dollar_sales) desc
```

	year	product_name	total_sales
1	1995	Buffalo Jerky 6.7 oz	18187.17
2	1995	Turkey Dinner 18 oz	17156.59
3	1994	Lasagna 13.5 oz	17041.49
4	1994	Buffalo Jerky 6.7 oz	16800.15
5	1994	Chicken Dinner 18 oz	16586.27
6	1994	Beef Stew 13.5 oz	15856.62
7	1995	Beef Stew 13.5 oz	15202.06
8	1994	Turkey Dinner 18 oz	15161.09
9	1995	Lasagna 13.5 oz	15049.54
10	1995	Chicken Dinner 18 oz	14814.54
11	1994	Chicken Dinner 12 oz	12347.64

7. Sales Total of category by month by district

```
Select Datename(month,t.date) as month_name,  
s.sales_district as district,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  join dbo.product  
p  
on sf.product_key = p.product_key  
  join dbo.time t  
on sf.time_key =  
t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
  
where p.category = 'Food'  
group by  
Datename(month,t.date),s.sales_district  
  
order by sum(sf.dollar_sales) desc
```

	category	month_name	district	total_sales
50	Food	October	Suffolk	7909.54
51	Food	November	DC	7759.45
52	Food	December	Jefferson	7740.99
53	Food	October	DC	7650.98
54	Food	December	Suffolk	7557.53
55	Food	October	Hamilton	7514.85
56	Food	October	Dade	7505.26...
57	Food	October	Los An...	7474
58	Food	November	St. Louis	7343.11
59	Food	November	Denver	7292.55
60	Food	October	San Fra...	7031.03

8. Sales Total of category by store by year

```
Select
s.name as Store_name,
t.year,
sum(sf.dollar_sales) as total_sales

from dbo.sales_fact sf
  join dbo.product p on
sf.product_key = p.product_key
  join dbo.time t
on sf.time_key = t.time_key
  join dbo.store s on
sf.store_key = s.store_key

where p.category = 'Food'
group by
s.name,
t.year
order by sum(sf.dollar_sales) desc
```

	Store_name	year	total_sales
1	Store No. 3	1994	17068.74
2	Store No. 11	1994	16996.92
3	Store No. 10	1994	16000.04
4	Store No. 12	1995	15647.6
5	Store No. 9	1994	14777.03
6	Store No. 8	1995	14713.72
7	Store No. 15	1995	14544.39
8	Store No. 7	1994	14504.05
9	Store No. 2	1995	14397.88
10	Store No. 3	1995	13950.59
11	Store No. 18	1995	13666.37

9. Sales Total of category by stores by month

```
Select p.category,  
Datename(month,t.date) as month_name,  
sum(sf.dollar_sales) as total_sales  
  
from dbo.sales_fact sf  
  join dbo.product  
    p  
on sf.product_key = p.product_key  
  join dbo.time t  
on sf.time_key = t.time_key  
  join dbo.store s on  
sf.store_key = s.store_key  
  
where p.category = 'Food'  
  group by p.category,  
Datename(month,t.date)  
  
order by sum(sf.dollar_sales) desc
```

	category	month_name	total_sales
1	Food	November	180957.37
2	Food	December	177860.91
3	Food	October	169942.67

10. Calculating average selling price for a given period of time.

```
select avg(sf.dollar_sales/case when sf.unit_sales = 0 then 1 else sf.unit_sales  
end) as avg_selling_price from dbo.sales_fact sf join dbo.time t on sf.time_key  
= t.time_key where t.fiscal_period = '4Q94'
```

	avg_selling_price
1	1.4450091265912