HW 5
Gabe Wallon

1. Show a list of Customer Name, Gender, Sales Person's Name and Sales Person's City for all
-- products sold on September 2015, whose Sales Price is more than 20 and Quantity sold is
more
-- than 8
select c.customername, c.gender, s.salespersonname, s.city
    from
        fact_productsales f,
        dim_customer c,
        dim_date d,
        dim_salesperson s
    where
        f.customerid = c.customerid
        and f.salesdatekey = d.datekey
        and f.salespersonid = s.salespersonid
        and d.month = 9
        and d.year = 2015
        and f.salesprice > 20
        and f.quantity > 8;

customername	gender	salespersonname	city
Linda Ronstadt	F	Tom Petty	Boulder
Elon Musk	M	Jacob Leis	Lafayette

2. Display the store name, city name, and product name, for products costing less than $50, sold in Boulder CO,
-- in March of 2017.
select s.storename, s.city, p.productname
        from
                fact_productsales f,
                dim_date d,
                dim_store s,
                dim_product p
        where
                f.salesdatekey = d.datekey
                and f.storeid = s.storeid
                and f.productid = p.productkey
                and d.month = 3
                and d.year = 2017
                and f.productcost < 50
                and s.city = 'Boulder';

storename	city	productname
ValueMart Boulder	Boulder	Wheat Flour 1kg
ValueMart Boulder	Boulder	Jasmine Rice 5kg
ValueMart Boulder	Boulder	SunFlower Oil 1 ltr

3. Display the top two sales people of 2017, ranked by total revenue.
select s.salespersonname, sum(f.quantity*f.salesprice) as 'Total Revenue'
    from
        fact_productsales f,
        dim_date d,
        dim_salesperson s
    where
        f.salesdatekey = d.datekey
        and f.salespersonid = s.salespersonid
        and d.year = 2017
    group by
        s.salespersonid
    order by sum(f.quantity*f.salesprice) desc
    limit 2;

salespersonname	Total Revenue
Julian Brand	2588.00
Jasmin Farah	1158.00

4. Display the customer responsible for the most total revenue in 2017.
select c.customername, sum(f.quantity*f.salesprice) as 'Customer Total Revenue'
    from
        fact_productsales f,
        dim_date d,
        dim_customer c
    where
        f.salesdatekey = d.datekey
        and f.customerid = c.customerid
        and d.year = 2017
    group by
        c.customername
    order by sum(f.quantity*f.salesprice) asc
    limit 1;

customername	Customer Total Revenue
Melinda Gates	437.50

5. Display the total dollar amount of products sold at each store between 2010 and 2017.
select s.storename, sum(f.salesprice) as 'Total Sales Price'
       from
              fact_productsales f,
              dim_date d,
              dim_store s
       where
              f.salesdatekey = d.datekey
              and f.storeid = s.storeid
              and d.year between 2010 and 2017
       group by s.storename;

storename	Total Sales Price
ValueMart Boulder	7961.00
ValueMart Lyons	1759.50
ValueMart Berthoud	1554.00

6. Display the total profits each store incurred from Jasmin Rice sales in the year 2010.
select s.storename, p.productname, sum((f.quantity*f.salesprice) - (f.quantity*f.productcost))
as 'Total Profits'
       from
              fact_productsales f,
              dim_date d,
              dim_store s,
              dim_product p
       where
              f.salesdatekey = d.datekey
              and f.storeid = s.storeid
              and f.productid = p.productkey
              and d.year = 2010
              and p.productname like '%Jasmine Rice%'
       group by
              s.storename, p.productname;

storename	productname	Total Profits
ValueMart Boulder	Jasmine Rice 5kg	50.00
ValueMart Lyons	Jasmine Rice 5kg	19.00
ValueMart Berthoud	Jasmine Rice 5kg	18.00

7. Display Total Revenue from 'ValueMart Boulder' Store for each Quarter during 2016, sort
-- your result by Quarter in chronological order. Display Quarter as well as Total Revenue
select d.quarter, sum(f.salesprice*f.quantity) as 'Total Revenue'
      from
              fact_productsales f,
              dim_date d,
              dim_store s
      where
              f.salesdatekey = d.datekey
              and f.storeid = s.storeid
              and s.storename = 'ValueMart Boulder'
              and d.year = 2016
      group by d.quarter
      order by d.quarter asc;

quarter	Total Revenue
1	1622.50
2	1144.50
3	2259.50
4	1492.50

8. Display Customer Name and Total Sales Price for all items purchased by customers Melinda
-- Gates and Harrison Ford
select c.customername, sum(f.salesprice) as 'Total Sales Price'
      from
              fact_productsales f,
              dim_customer c
      where
              f.customerid = c.customerid
              and c.customername in ('Melinda Gates', 'Harrison Ford')
      group by c.customername;

customername	Total Sales Price
Harrison Ford	2234.00
Melinda Gates	1717.00

9. Display Store Name, Sales Price and Quantity for all items sold in March 12th 2017.
select s.storename, f.salesprice, f.quantity
      from
             fact_productsales f,
             dim_date d,
             dim_store s
      where
             f.salesdatekey = d.datekey
             and f.storeid = s.storeid
             and d.date = '2017-03-12';

storename	salesprice	quantity
ValueMart Boulder	43.50	9
ValueMart Boulder	24.00	3
ValueMart Boulder	6.50	8

10. Display Sales Person's Name and Total Revenue for the best performing Sales Person, i.e.,
-- the Sales Person with the HIGHEST Total Revenue.
select s.salespersonname, sum(f.salesprice*f.quantity) as 'Total Revenue'
      from
             fact_productsales f,
             dim_date d,
             dim_salesperson s
      where
             f.salesdatekey = d.datekey
             and f.salespersonid = s.salespersonid
      group by s.salespersonname
      order by sum(f.salesprice*f.quantity) desc
      limit 1;

salespersonname	Total Revenue
Julian Brand	21164.50

11. Display the Top 3 Product Name by their HIGHEST Total Profit. Display product name as
-- well as total profit
select p.productname, sum((f.quantity*f.salesprice) - (f.quantity*f.productcost)) as TotalProfit
  from
    fact_productsales f,
    dim_product p
  where
    f.productid = p.productkey
  group by p.productname
  order by TotalProfit desc
  limit 3;

productname	TotalProfit
SunFlower Oil 1 ltr	686.50
Jasmine Rice 5kg	664.50
Tide Laundry Detergent 1kg case	584.00

12. Display Year, MonthName and Total Revenue for the 1st 3 months (i.e. January, February
-- and March) of 2017
select d.year, d.monthname, sum(f.salesprice*f.quantity) as 'Total Revenue'
  from
    fact_productsales f,
     dim_date d
  where
    f.salesdatekey = d.datekey
    and d.year = 2017
    and d.month between 1 and 3
  group by d.year, d.monthname;

year	monthname	Total Revenue
2017	January	1417.50
2017	February	1595.50
2017	March	1954.00

13. Display Product Name, average product cost and average sales price for the products sold
-- in 2017. Show averages rounded to 2 decimal places.
```
select p.productname,
        round(avg(f.productcost),2) as 'Average Product Cost',
        round(avg(f.salesprice),2) as 'Average Sales Price'
        from
                fact_productsales f,
                dim_date d,
                dim_product p
        where
                f.salesdatekey = d.datekey
                and f.productid = p.productkey
                and d.year = 2017
        group by p.productname;
```

productname	Average Product Cost	Average Sales Price
Wheat Flour 1kg	5.50	6.50
Jasmine Rice 5kg	22.50	24.00
SunFlower Oil 1 ltr	42.00	43.50
Dawn Dish Soap, case	18.00	20.00
Tide Laundry Detergent 1kg case	135.00	139.00

14. Display Customer Name, average sales price and average quantity for all items purchased
-- by customer Melinda Gates. Show averages rounded to 2 decimal places
```
select c.customername,
        round(sum(f.salesprice)/count(*),2) as 'Average Sales Price',
        round(sum(f.quantity)/count(*),2) as 'Average Quantity'
        from
                fact_productsales f,
                dim_customer c
        where
                f.customerid = c.customerid
                and c.customername = 'Melinda Gates';
```

customername	Average Sales Price	Average Quantity
Melinda Gates	26.02	4.98

15. Display Store Name, Maximum sales price and Minimum sales price for store located in
-- 'Boulder' city. Show MIN / MAX rounded to 2 decimal places

```
select s.storename,
        round(max(f.salesprice),2) as 'Max. sales price',
        round(min(f.salesprice),2) as 'Min. sales price'
        from
                fact_productsales f,
                dim_store s
        where
                f.storeid = s.storeid
                and s.city = 'Boulder'
        group by s.storename;
```

storename	Max. sales price	Min. sales price
ValueMart Boulder	139.00	6.50