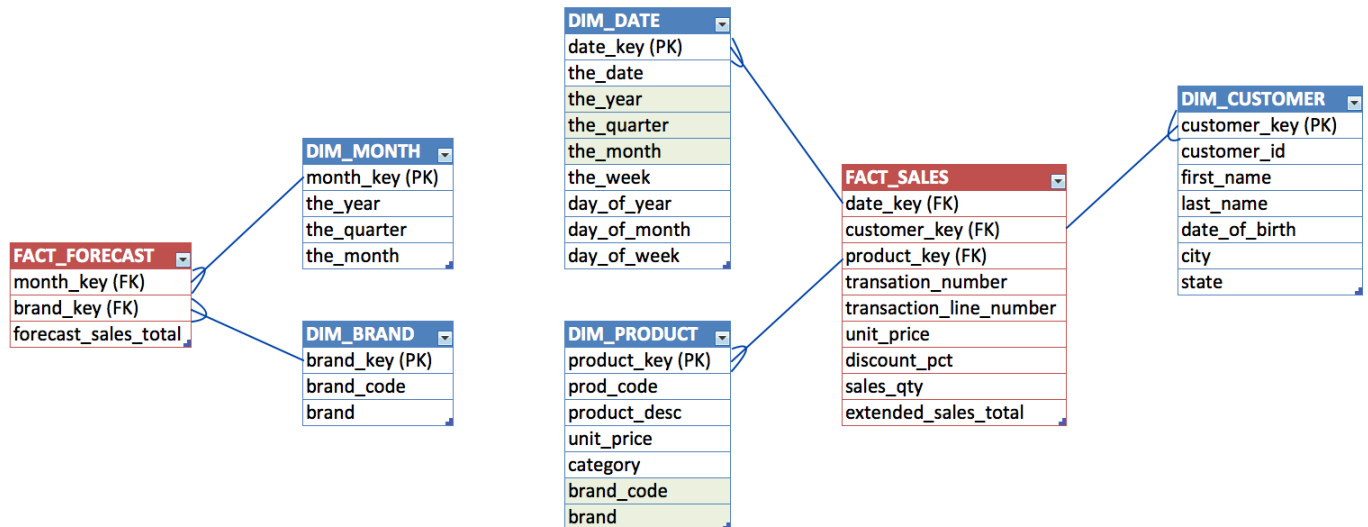In particular, I'd like to bring your attention to the following paragraph:

> ... **drilling down has nothing to do with descending a predetermined hierarchy**. In fact, once you understand this concept, you see that **you can drill down using any attribute drawn from any dimension**!

Here are some examples of drilling down and drilling across we covered during the class:


```
--- Drilling down examples
SELECT d.the_year, d.the_month, p.category,
ROUND(SUM(f.extended_sales_total),2) AS act_sales_by_brand_month
  FROM fact_sales f, dim_date d, dim_product p, dim_customer c
 WHERE f.date_key = d.date_key
   AND f.product_key = p.product_key
   AND f.customer_key = c.customer_key
 GROUP BY d.the_year, d.the_month, p.category;

SELECT c.state, d.the_month, p.brand,
ROUND(SUM(f.extended_sales_total),2) AS act_sales_by_brand_month
  FROM fact_sales f, dim_date d, dim_product p, dim_customer c
 WHERE f.date_key = d.date_key
   AND f.product_key = p.product_key
   AND f.customer_key = c.customer_key
 GROUP BY c.state, d.the_month, p.brand;


--- Drilling accross example
SELECT fcst.*, act.act_sales_by_brand_month
   FROM
         (
         SELECT m.the_year, m.the_month, b.brand,
ROUND(SUM(f.forecast_sales_total),2) ASfcst_sales_by_brand_month
```

```sql
                FROM fact_forecast f, dim_month m, dim_brand b
            WHERE f.month_key = m.month_key
              AND f.brand_key = b.brand_key
            GROUP BY m.the_year, m.the_month, b.brand
        ) fcst
  LEFT OUTER JOIN
        (
            SELECT d.the_year, d.the_month, p.brand,
ROUND(SUM(f.extended_sales_total),2) AS act_sales_by_brand_month
              FROM fact_sales f, dim_date d, dim_product p,
dim_customer c
            WHERE f.date_key = d.date_key
              AND f.product_key = p.product_key
              AND f.customer_key = c.customer_key
            GROUP BY d.the_year, d.the_month, p.brand
        ) act
     ON fcst.the_year = act.the_year
    AND fcst.the_month = act.the_month
    AND fcst.brand = act.brand;
```