---- Fallbeispiele

Prof. Dr. Ingo Claßen

Mittwoch, 2. Juni 2021 10:38

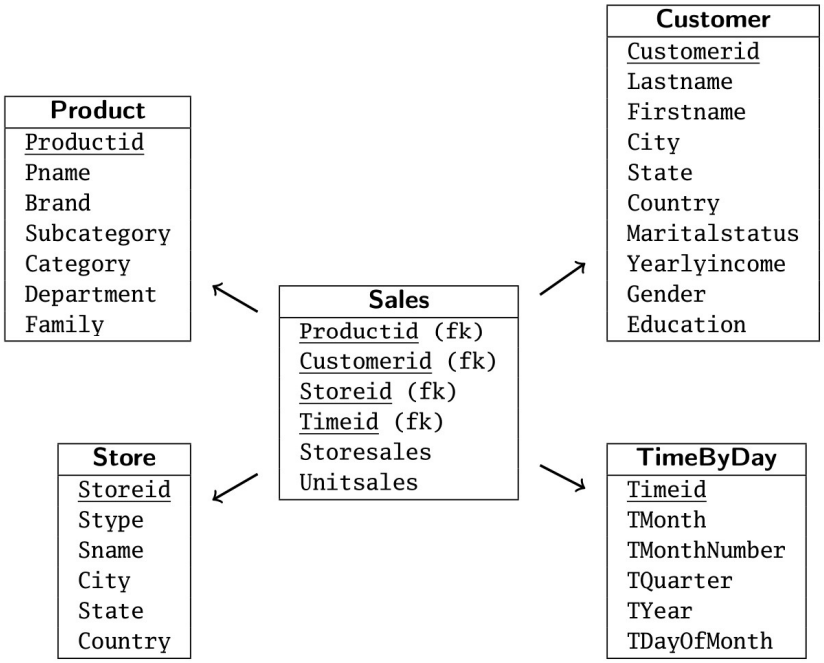
```
select 'customer' as "table", count(*) as anzahl from customer
union
select 'sales' as "table",  count(*) as anzahl from sales
union
select 'store' as "table",  count(*) as anzahl from store
union
select 'product' as "table",  count(*) as anzahl from product
union
select 'timebyday' as "table",  count(*) as anzahl from timebyday
order by anzahl;
```

	table	COUNT(*)
1	store	25
2	timebyday	730
3	product	1560
4	customer	10281
5	sales	251395

Umsatz pro Jahr und Land

Prof. Dr. Ingo Claßen

Mittwoch, 2. Juni 2021 10:23




```
select country, tyear, sum(unitsales)
from sales s
    join timebyday tbd on tbd.timeid=s.timeid
    join customer c on c.customerid=s.customerid
group by country, tyear;
```

	COUNTRY	TYEAR	SUM(UNITSALES)
1	USA	2014	266773
2	Mexico	2015	203914
3	USA	2015	259916
4	Canada	2015	46157

Eindimensionale Darstellung

Zweidimensionale Darstellung (z.B. als Pivotabelle)

	2014	2015
Canada		46157
Mexico		203914
USA	266773	259916

Analyse Produkthierarchie 1

Prof. Dr. Ingo Claßen

Mittwoch, 28. April 2021 09:32

```
select family, count(*)
from product
group by family
order by family;
```

	FAMILY	COUNT(*)
1	Drink	145
2	Food	1120
3	Non-Consumable	295

```
select department, count(*)
from product
group by department
order by department;
```

	DEPARTMENT	COUNT(*)
1	Alcoholic Beverages	40
2	Baked Goods	45
3	Baking Goods	120
4	Beverages	80
5	Breakfast Foods	20
6	Canned Foods	110
7	Canned Products	10
8	Carousel	5
9	Checkout	10
10	Dairy	100
11	Deli	70
12	Eggs	25
13	Frozen Foods	155
14	Health and Hygiene	95
15	Household	160
16	Meat	10
17	Periodicals	25
18	Produce	220
19	Seafood	10
20	Snack Foods	180
21	Snacks	40
22	Starchy Foods	30

```
select family, department, count(*)
from product
group by family, department
order by family, department;
```

	FAMILY	DEPARTMENT	COUNT(*)
1	Drink	Alcoholic Beverages	40
2	Drink	Beverages	80
3	Drink	Dairy	25
4	Food	Baked Goods	45
5	Food	Baking Goods	120
6	Food	Breakfast Foods	20
7	Food	Canned Foods	110
8	Food	Canned Products	10
9	Food	Dairy	75
10	Food	Deli	70
11	Food	Eggs	25
12	Food	Frozen Foods	155
13	Food	Meat	10
14	Food	Produce	220
15	Food	Seafood	10
16	Food	Snack Foods	180
17	Food	Snacks	40
18	Food	Starchy Foods	30
19	Non-Consumable	Carousel	5
20	Non-Consumable	Checkout	10
21	Non-Consumable	Health and Hygiene	95
22	Non-Consumable	Household	160
23	Non-Consumable	Periodicals	25

Ups, Datenfehler, keine echte Hierarchie

```
select department
from
  (select family, department
  from product
  group by family, department)
group by department
having count(*)>1;
```

	DEPARTMENT
1	Dairy

Einfluss Ausbildungsstufe auf Einkommen

```
select education,
  case
    when yearlyincome in ('$10K - $30K', '$30K - $50K', '$50K - $70K') then 'L1'
    else 'L2'
  end as annual_income, count(*)
from customer
group by
  education,
  case
    when yearlyincome in ('$10K - $30K', '$30K - $50K', '$50K - $70K') then 'L1'
    else 'L2'
  end
order by
  education,
  annual_income;
```

	EDUCATION	ANNUAL_INCOME	COUNT(*)
1	Bachelors Degree	L1	1583
2	Bachelors Degree	L2	1036
3	Graduate Degree	L1	38
4	Graduate Degree	L2	501
5	High School Degree	L1	2327
6	High School Degree	L2	712
7	Partial College	L1	847
8	Partial College	L2	143
9	Partial High School	L1	2599
10	Partial High School	L2	495

```
with p3top as (
  select productid, sum(unitsales) as sales2014
  from sales s join timebyday t on s.timeid=t.timeid
  where tyear=2014
  group by productid
  order by sum(unitsales) desc fetch first 3 rows only
)
select
  s.productid, sales2014, sum(unitsales) as sales2015,
  sum(unitsales) - sales2014 as diff
from sales s join timebyday t on s.timeid=t.timeid
  join p3top on s.productid=p3top.productid
where tyear=2015
group by s.productid, sales2014;
```

	PRODUCTID	SALES2014	SALES2015	DIFF
1	952	267	337	70
2	1452	257	282	25
3	549	258	335	77