Foundations of Information Management  
WS 16/17  

Exercise 12

Exercise 1 (Repetition: SQL Queries). Consider the following schema about online shops:

```
shop: SID, name, address  
product: PID, description, type  
inventory: shop, product, quantity, price  
customer: CID, name, city, age  
order: OID, customer, shop, date  
ordered_goods: order, product, quantity
```

SID, PID, CID and OID are unique identifiers for the respective objects/persons and form the primary keys in the respective relations. They are referenced by the attributes shop, product, customer and order as foreign keys.

Formulate the following questions as SQL queries:

a) Where can you buy a TV?
b) How many different TVs are available?
c) Which shops allow to choose between more than 10 different TVs?
d) Who ordered an iPhone 7 (and nothing else)?
e) What is the amazon price of an iPhone 7?
f) What is the cheapest price for an iPhone 7?
g) Which online shop has the most orders? Which has the most customers?
h) How many products does each shop have in its stockroom? Which shops have more than 10,000?
i) List for each order with more than 5 different products the total number of ordered goods (and the total price).
j) List the average customer age for each city.
k) Which shops have currently DVDs in stock, which don’t?
l) Which shops haven’t sold any DVD yet?
m) Which shops sell products of all types?