-- LINK: https://en.wikibooks.org/wiki/SQL\_Exercises/The\_computer\_store

-- 1.1 Select the names of all the products in the store.

select Name from Products;

-- 1.2 Select the names and the prices of all the products in the store.

select name, price from products;

-- 1.3 Select the name of the products with a price less than or equal to $200.

select name from products where price <= 200;

-- 1.4 Select all the products with a price between $60 and $120.

select \* from products where price between 60 and 120;

select \* from products where price >= 60 and price <= 120;

-- 1.5 Select the name and price in cents (i.e., the price must be multiplied by 100).

select name, price\*100 from products;

select name, concat(price\*100, ' cents') from products;

-- 1.6 Compute the average price of all the products.

select avg(price) from products;

select sum(price)/count(price) from products;

-- 1.7 Compute the average price of all products with manufacturer code equal to 2.

select avg(price) from products where Manufacturer = 2;

-- 1.8 Compute the number of products with a price larger than or equal to $180.

select count(\*) from products where price>=180;

-- 1.9 Select the name and price of all products with a price larger than or equal to $180, and sort first by price (in descending order), and then by name (in ascending order).

select name, price from products where price>=180 order by price desc, name asc;

-- 1.10 Select all the data from the products, including all the data for each product's manufacturer.

select a.\*, b.name from products a join Manufacturers b on(a.manufacturer = b.code);

select a.\*, b.name from products a, Manufacturers b where a.manufacturer = b.code;

-- 1.11 Select the product name, price, and manufacturer name of all the products.

select a.name, a.price, b.name from products a join Manufacturers b on(a.manufacturer = b.code);

SELECT Products.Name, Price, Manufacturers.Name

FROM Products INNER JOIN Manufacturers

ON Products.Manufacturer = Manufacturers.Code;

-- 1.12 Select the average price of each manufacturer's products, showing only the manufacturer's code.

SELECT AVG(Price), Manufacturer

FROM Products

GROUP BY Manufacturer;

-- 1.13 Select the average price of each manufacturer's products, showing the manufacturer's name.

select avg(a.price), b.name

from Products a join Manufacturers b

on a.manufacturer = b.code

group by b.name;

-- 1.14 Select the names of manufacturer whose products have an average price larger than or equal to $150.

select avg(a.price), b.name

from Manufacturers b join Products a

on b.code = a.Manufacturer

group by b.name

having avg(a.price)>=150;

SELECT AVG(Price), Manufacturers.Name

FROM Products, Manufacturers

WHERE Products.Manufacturer = Manufacturers.Code

GROUP BY Manufacturers.Name

HAVING AVG(Price) >= 150;

-- 1.15 Select the name and price of the cheapest product.

select name, price from Products

where price = (

select min(price)

from products);

SELECT name,price

FROM Products

ORDER BY price ASC

LIMIT 1;

--SQL SERVER SOLUTION (T-SQL)

SELECT TOP 1 name

,price

FROM Products

ORDER BY price ASC

-- 1.16 Select the name of each manufacturer along with the name and price of its most expensive product.

select max\_price\_mapping.name as manu\_name, max\_price\_mapping.price, products\_with\_manu\_name.name as product\_name

from

(SELECT Manufacturers.Name, MAX(Price) price

FROM Products, Manufacturers

WHERE Manufacturer = Manufacturers.Code

GROUP BY Manufacturers.Name)

as max\_price\_mapping

left join

(select products.\*, manufacturers.name manu\_name

from products join manufacturers

on (products.manufacturer = manufacturers.code))

as products\_with\_manu\_name

on

(max\_price\_mapping.name = products\_with\_manu\_name.manu\_name

and

max\_price\_mapping.price = products\_with\_manu\_name.price);

-- 1.17 Add a new product: Loudspeakers, $70, manufacturer 2.

insert into Products values (11, 'Loudspeakers', 70, 2);

-- 1.18 Update the name of product 8 to "Laser Printer".

update products

set name = 'Laser Printer'

where code=8;

-- 1.19 Apply a 10% discount to all products.

update products

set price=price\*0.9;

-- 1.20 Apply a 10% discount to all products with a price larger than or equal to $120.

update products

set price = price \* 0.9

where price >= 120;