Databases and information management

Lab 1

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Install a database engine (MariaDB will be used in the examples, yet any relational database is suitable) and download `Northwind` database from here. Try to import the data to the DBMS.

Note that the tasks do not have to be solved in order.

1. Find a way to select all the tables in the database.
2. Count the number of records in `products` table.
3. Check all the properties of table `customers`, including the list of column, their type, key types and default values.
4. For each order print out a pair of customer and the employee responsible for that order.
5. Find all orders shipped from the *USA*.
6. Find all the products that have *hot* in their name.
7. Connect all the ordered product names with their orders.
8. Find all the employees responsible for orders that were not shipped yet.
9. Select all the products valued between *6000* and *28000* per unit.
10. Select those companies from `suppliers` that are represented by their owner.
11. Print out all the customers that did not order any product from category number *3*.
12. Print out all the customers that ordered only *Condiments*.
13. Select all the orders made between March and July 1996.

14. Calculate the age of each of the employees. The result should contain only their name, last name and age.

15. Print out all the orders handled by *Robert King* and *Laura Callahan*.

16. For each order print out a pair of customer and the employee responsible for that order. Put the name of the employee in place of the ID.

17. Print out all the unique orders.

18. Print out all the names of products ordered alphabetically.

19. For each customer count the number of thier orders.

20. For each supplier that has one, print out their homepage.

21. Find all the products sold in bottles. Order them from the highest `UnitPrice`.

22. Find an employee that was hired at the youngest age.

23. For each country find the number of suppliers located in it.

24. Find the average `UnitPrice` of all the *Condiments*.

25. List all the pairs of territories that come from the same region. Print out both territories and the name of the region (**Note:** If (X, Y, A) is selected, the result should not include (Y, X, A)).

26. For all the orders calculate their total value, include discounts if applicable.

27. Find the product with the second lowest `UnitPrice`.

28. Order the employees according to the number of orders that were not shipped yet that they are responsible for.

29. Enter a new customer into the `customers` table, do not create any orders for them.

30. Add `Age` column (as a last one) to the `employees` table. Set it, initially, to the proper value.

31. For each employee that was born after October 1, increase their age by 1.

32. Remove the `BirthDate` column from the `employees` table.

33. Delete from the `products` table all the items that are *0* in stock.