

4. Trees

The data of the highest trees of Hungary are collected in public lists for more than ten years. Besides the species and the geographical coordinates of the trees many other data are collected as well. File *treeso.txt* contains some of the recorded data of the trees and *countyso.txt* contains the names of the counties required to determine their geographical position.

1. Create a new database named *oldtrees*. Import the supplied files, file *treeso.txt* as table ***tree*** and *countyso.txt* as table ***county*** into the database. The files are UTF-8 encoded text files tagged by tabs, their first line contains the field names. Add a unique key *id* to table ***tree***. During creation set the suitable types and keys.

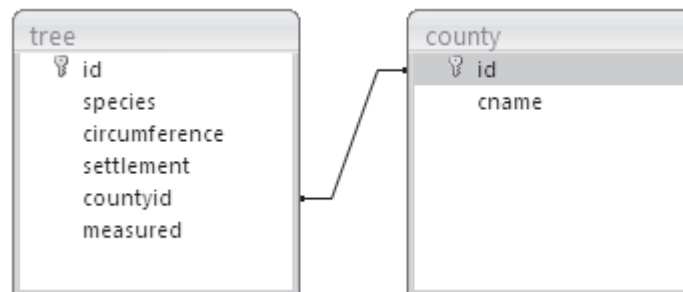
Table:

tree (*id, species, circumference, settlement, countyid, measured*)

<i>id</i>	the identifier of the tree (autonumber), this is the key
<i>species</i>	the tree species (text)
<i>circumference</i>	the circumference of the tree trunk in centimetres (number)
<i>settlement</i>	the name of the settlement where the tree is located (text)
<i>countyid</i>	the identifier of the county of the settlement (number)
<i>measured</i>	the year when the data of the tree were measured (number)

county (*id, cname*)

<i>id</i>	the identifier of the county (number), this is the key
<i>cname</i>	the name of the county (text)



In the solution of the following exercise parts save the queries and the report with the names given in brackets. In the queries pay attention to displaying only the required fields and do not display other fields.

2. Create a query that displays the species of the trees whose circumference is greater than 9 metres in alphabetical order and their circumference in metres. (***2thick***)
3. Use a query to display the species, the circumference and the year of the measurement of the tree with the greatest circumference. (***3fat***)
4. Create a query that gives the number of trees recorded for each settlement. Display the list in descending order according to the number of trees together with the name of the settlement. In the case of equal numbers the settlements should appear in alphabetical order in the list. (***4numberoftrees***)

5. The amount of forests and the number of large trees changes from county to county. Use a query to list the number of trees for which data are available for each county. (*5percounty*)
6. Yew (called “tiszafa” in the database) is an evergreen species that is protected in Hungary. Use a query to collect the species of the trees that are located in a settlement that also has a yew based on our database. Do not display the name of yew in the list but display every other species once. (*6yew*)
7. Create a report that displays the settlements where the large specimens of the different chestnut species (called “gesztenye” in the database) that occur in Hungary are located. The report should contain the name of the settlements, the species and circumference of the trees grouped by settlements, within that by circumference in ascending order. Create the report with a query that contains the suitable fields or a temporary table. (*7chestnut*)

20 marks
