Laboratory 11
Distributed database systems and NoSQL database systems

It is expected that you do Homework 11 before implementation of the tasks included in Laboratory 11.

This laboratory consists of 2 tasks.

Task 1 Implementation of distributed database system

Download and unzip a file scripts11.zip. Connect to your database account on any of the available Oracle database servers and execute a script `dbcreate.sql` to create a sample database. A script `dbdrop.sql` drops a sample database.

Assume, that we would like to move all information about the employees from WA, Vic, and Tas to another database site located on another Win 7 system in a database lab. By "all information" we mean that entire structure of the sample database must be replicated on another Win 7 system in a database lab and the appropriate subset of the original database must be copied to another database site. All information copied to a new database site must be removed from the original database site.

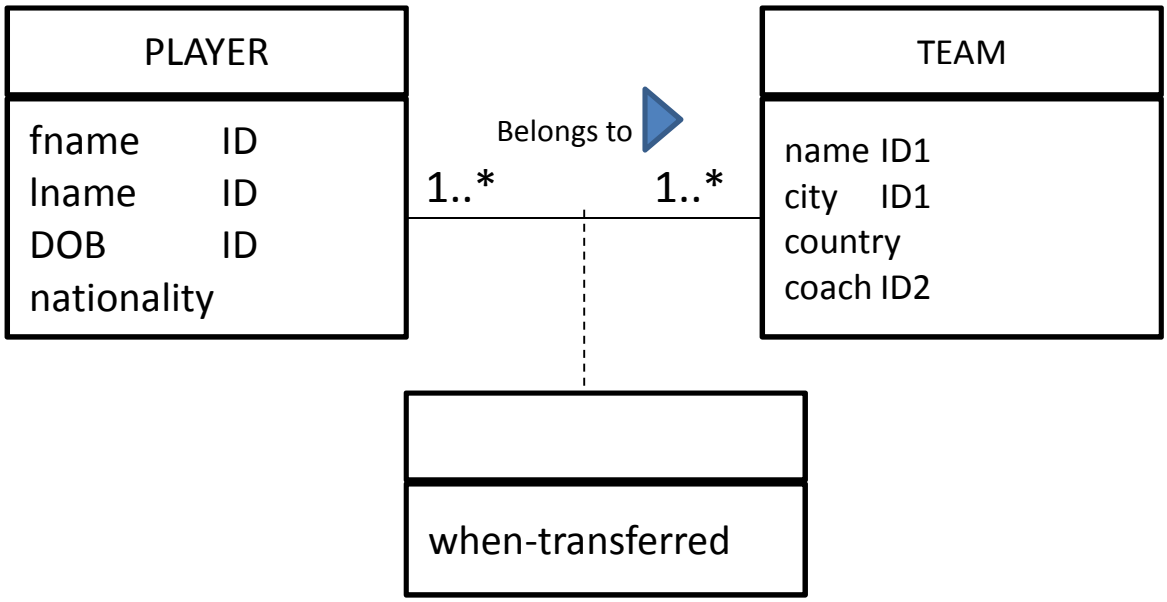
To make this task more interesting :) assume, that you are not allowed to use a script dbcreate.sql to re-create the relational tables and its contents on another Win7 system in a database lab.

Create SQL script `task1.sql` that performs the actions described above. Execute a script task1.sql with SQL*Plus option ECHO set to ON and save a report from the execution in a file `task1.lst`. Put a SQL*Plus statement SET ECHO ON in the first line of the script. A file `task1.lst` will be submitted at the end of laboratory class.

Hint: *You must create a database link first.*

Task 2 Implementation of Key/Value database system

Consider a conceptual schema given below.



It represents a domain of players and teams. A player belongs to one team and team consists of many players. We would like to represent all teams a player belonged to in the past together with the transfer dates. This is why an association Belongs-to is *many-to-many* and it is descried by a link attribute when-transferred.

Implement a sample Key/Value database that contains information about the player, belong to which team, at a given date. The values of attributes are up to you.

Implement an application `LoadDB.java` that inserts sample data into the Key/Value database. Assume that we have to store information about at least two teams, at least two players for each team, at least two players had been transferred to the teams.

Implement an application `FindTeam.java` that finds the name and the total number of the players in the team.

Implement an application `Transfer.java` that transfers a plyer from one team to another team.

Submission

Zip the files `task1.lst, LoadDB.java, FindTeam.java, Transfer.java` obtained as the solutions of tasks 1 and 2 into a file `solutions11.zip` and submit the file through Moodle. A submission procedure is the following.

(1) Connect to Moodle.
(2) Navigate to a folder `SUBMISSIONS`→`LABORATORY SUBMISSIONS`.
(3) Click at `LABORATORY 11, Submit your solutions here` link.
(4) Click at `Add Attachments` button.
(5) Navigate to a location where a file `solutions11.zip` has been saved.
(6) Select the file and click at `Open` button.
(7) Click at `Submit` button.
(8) Click at `OK` button to return to `Home Page`.

End of laboratory 11