Lab exercises for theme 2:

In this exercise we would like you to use the model created in theme 1 to answer the queries that follow below. Make sure you read the entire sheet, in particular exercise 3, for useful hints before you start! For questions d-f you can assume there are no cycles in the data.

a) Which are the experts of area X?
b) Is X a subarea of Y? (In one step)
c) Does expert X recommend any experts with knowledge in area Y?
d) Do any of the experts X recommends, recommend an expert with expertise in Y?
e) Same as previous but follow the known links in as many steps as needed.
f) Are there any experts recommending an expert not within the expertise area they are listed in? (Only required for +.)

Exercises

1. Write the above queries in SQL and run it on your relational data.
2. Write the above queries in XQuery and run it on your XML data.
3. Are there any of the above queries that could not be expressed in the above languages?
4. Which of the query languages do you find most easy to use?
5. Any particular query or kind of data that is easier to express in any of the above languages?
6. Export selected parts of your relational database as XML. Try to make the exported data as close to your XML model as possible.
7. Export selected parts of your XML data as HTML using XSLT.
8. Did you find these exports methods easy to use? Why or why not?

Make a report with your queries, results and answers to the above questions. For some of the queries the format of the answer partly up to your choice. It is important that you motivate your choices.

To pass on the assignment you need to solve exercise 1-5 for queries a-e.

For + you need to construct queries for f) and solve exercise 6-8.