Project Assignment (Part II)

The following relational model is a slightly modified and simplified version of the database schema that you modelled in Part I of the project:

patient(<u>patient_id</u>, name, birthday, address)

doctor(<u>doctor_id</u>, name, specialty)

appointment(<u>patient_id, doctor_id, date</u>, office)
    patient_id: FK(patient)
    doctor_id: FK(doctor)

request(<u>request_number</u>, patient_id, doctor_id, date)
    patient_id, doctor_id, date: FK(appointment)

equipment(<u>manufacturer, serial_number</u>, model)

study(<u>request_number, description</u>, date, doctor_id, manufacturer, serial_number)
    request_number: FK(request)
    doctor_id: FK(doctor)
    manufacturer, serial_number: FK(equipment)

series(<u>series_id</u>, name, base_url, request_number, description)
    request_number, description: FK(study)

element(<u>series_id, elem_index</u>)
    series_id: FK(series)

region(<u>series_id, elem_index, x1,y1,x2,y2</u>)
    series_id, index: FK(element)

In Part II of the project, your mission is to create the database schema and to implement some relevant queries for the health care centre.

Expected Results

In this assignment, you are expected to provide the following results:

1. For the relational model above, write the SQL instructions to create the database in our database server (i.e. MySQL on db.ist.utl.pt). You should choose the most appropriate SQL data types for each column.
2. Write a query to retrieve the name of the doctor that performed more studies containing as "X-ray" in the description, and that were performed in the last 7 seven days with an equipment from manufacturer "Philips".
3. Write a trigger to prevent the same doctor from performing any study that he/she requested. Additionally, the date of a study must be posterior to the date of the appointment that requested the study.
4. Write a function that, given two series A and B, returns true if any region of the elements of A overlaps with any region of the elements of B, and false otherwise.

Submission Notes

The deadline for submission is Wednesday, November 9, 2016, until 23:59 (Fénix time). You should submit it sometime before to prevent any hiccups.

The project report should be submitted to Fénix as a single PDF file. Please check that the file is readable with a standard program, such as Adobe Reader.

The document cover page should mention the names, student numbers, and group number of its authors.

The report should have three separate sections, one for each of the expected results described above.