

CS 575 – Topics in Database Systems, Homework 4

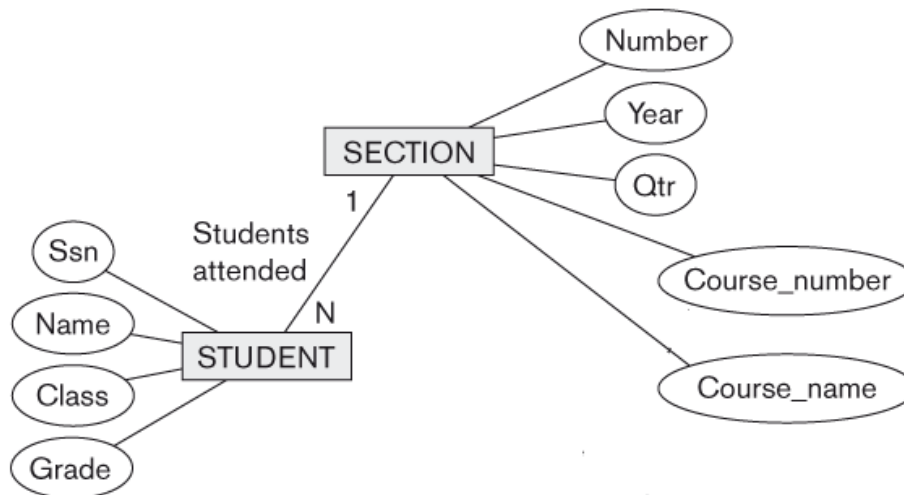
Homework is done in groups of 2-3 students. Only one submission per group is needed. Use an editor (jEdit for xml) to create the XML, DTD and JSON. No hand-written submissions will be accepted.

1. In this exercise we shall explore a simplified use case scenario for XML: storing medical information.

We are interested in storing basic information about hospitals, doctors, patients and their illness. Each hospital houses several patients. Patients may be registered with multiple hospitals (possibly for different illnesses). Each doctor is employed by a hospital, and may attend to multiple patients in the hospital. We want to store some basic information about each of the entities involved. For instance, a hospital may be characterized by an id, name, and location, a patient may have an id, date of birth, information about illnesses, hospitals attending, with joining dates, etc.

- Write a simple DTD (Healthcare.dtd) for this application.
- Create a sample XML (Healthcare.xml) document respecting your DTD, and containing information about a few hospitals, patients, and doctors.
- Write a program parse the XML and validate it against the DTD to display the information using any of your favorite programming language.

2. Consider the following ER diagram.



- Write the DTD (Sections.dtd) corresponds to the hierarchy shown in the above design.
- Consider your DTD and create a sample JSON (Sections.json) document containing information about a few sections, students and their grade.
- Write a program to parse the JSON and display the information using any of your favorite programming language.

Your final deliverable should include the following.

- Complete source code from both programs
- A Help file (explaining how to run your program)
- Upload everything in a zip file by the due date.