

University Echahid Hamma Lakhdar El Oued
Faculty of Exact Sciences - Department of Computer Science -

Level: Semester 6, Licence Computer Science .

TP01 – SEMI-STRUCTURED DATA Jan 2025

Project

We would like to describe the students of El Oued University (an arbitrary number of students), using an XML document. Each student is identified by its registration number (**RegistrationNumber**) and should be specified with the following data:

- **FirstName**: text value (required).
- **FamilyName**: text value (required).
- **Age**: an integer value between 1 and 150 (required).
- **Address**: described below (not mandatory)
- **Level**: one of the following values: 1L, 2L, 3L, 1M, 2M (required)
- **speciality**: one of the following values: ComputerScience, Physics, Chemistry, Mathematics (required).
- **Average**: a Real value between 0.00 and 20.00, its default value is 0.00 (required).

An **address** is composed of four sub elements:

- **Number**: an integer value from 0 to 999.
- **City**: text value.
- **PostalCode**: five digits from the list {0,1,2,3,4,5,6,7,8,9}, starting with Wilaya code (2 digits), followed by sequence number.

The **registration numbers** of students must be presented as attributes in the XML documents.

Required Tasks:

- 1- Show a sample of XML document reflecting this description.
- 2- Propose a DTD for this project.
- 3- Propose a precise XML schema of El Oued University student documents.