

Exercise Sheet No. 9 - Database
Energy Informatics
Winter 2016
Submission deadline: 13.02.2016, at 09:15

Exercise 1: (XML from Database, 5 pts)

The goal of this exercise is to simulate a real scenario for using the *power_consumption* database. To solve this exercise refer to the corresponding code in the lecture slides and check the following developer's Guide: http://docs.oracle.com/cd/E11882_01/appdev.112/e23094/xdb13gen.htm#ADXDB1600.

Assume you want to send a yearly power consumption report for each household. To realize this task we will employ XML. Give the SQL code that generates for a given householdid¹ a list of XML elements where each element corresponds to a reading and includes the information as in the example:

```
<?xml version="1.0"?>
<Readings>
  <Reading ID="286507721" date="2015-01-15" fuel="electricity">
    <city>Kehl</city>
    <building>11297663</building>
    <value>417</value>
  </Reading>
  <Reading ID="286507723" date="2015-02-15" fuel="electricity">
    <city>Kehl</city>
    <building>11297663</building>
    <value>127</value>
  </Reading>
  <Reading ID="286507725" date="2015-03-15" fuel="electricity">
    <city>Kehl</city>
    <building>11297663</building>
    <value>386</value>
  </Reading>
  .
  .
  .
</Readings>
</xml>
```

Exercise 2: (XML-tree, XPath, 5 pts)

Consider the XML document shown in the previous exercise.

- Draw the corresponding XML-tree and show the node id's
- Give the XPath that returns a list of all values from the XML document

¹The given XML document corresponds to the householdid = 11521156