

Web Engineering - Assignment 1.

Team: papa

Members:

Ilia Tugushi (itugushi@uni-koblenz.de)

KandhasamyRajasekaran (kandhasamy@uni-koblenz.de)

Oana Dumitrasc (odumitrasc@uni-koblenz.de)

Tara Morovatdar (tmorovatdar@uni-koblenz.de)

- 1) Klips application :
 - a) Interactive
 - b) Transactional
 - c) Portal oriented
- 2) Difference between DOM parsing and SAX parser
 - a) Browser parses xml and creates a DOM, which is a tree structure. SAX parser does create anything.
 - b) DOM is readable and writeable therefore a node can be added and deleted, on the other hand SAX is just readable making it impossible to add nodes.
 - c) DOM acts on the document as a whole whereas SAX works on each individual xml element
 - d) DOM has a formal specification whereas SAX does not have one.
 - e) SAX parses the xml only once and state independent whereas DOM process is state dependent and parses the xml multiple times
- 3) SAX events
 - a) XML Element Start with name 'note' and attribute 'id' equal to '1.0'
 - b) XML Element Start with name 'to'
 - c) XML Text Node with data equal 'John'
 - d) XML Element End with name 'to'
 - e) XML Element Start with name 'from'
 - f) XML Text Node with data equal 'Jenny'
 - g) XML Element End with name 'from'
 - h) XML Element Start with name 'heading'
 - i) XML Text Node with data equal 'Reminder'
 - j) XML Element End with name 'heading'
 - k) XML Element Start with name 'body'
 - l) XML Text Node with data equal 'Don't '
 - m) XML Element Start with name 'b'
 - n) XML Text Node with data equal 'forget'
 - o) XML Element End with name 'b'
 - p) XML Text Node with data equal ' our meeting!'
 - q) XML Element End with name 'body'
 - r) XML Element End with name 'note'

4) DTD schema for the given question

```
<?xml version="1.0"?>
<!DOCTYPE student [
<!ELEMENT student (personal, education, courses)>
<!ATTLIST student matriculationId ID #REQUIRED>
<!ELEMENT personal (name, family, birthday, address)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT family (#PCDATA)>
<!ELEMENT birthday (day, month, year)>
<!ELEMENT day (#PCDATA)>
<!ELEMENT month (#PCDATA)>
<!ELEMENT year (#PCDATA)>
<!ELEMENT address (street, number, code, city)>
<!ELEMENT street (#PCDATA)>
<!ELEMENT number (#PCDATA)>
<!ELEMENT code (#PCDATA)>
<!ELEMENT city (#PCDATA)>
<!ELEMENT education (semester, field?)>
<!ELEMENT semester (#PCDATA)>
<!ELEMENT field (#PCDATA)>
<!ELEMENT courses (course*)>
<!ELEMENT course (name, time, room)>
<!ATTLIST course courseId ID #REQUIRED>
<!ELEMENT name (#PCDATA)>
<!ELEMENT time (#PCDATA)>
<!ELEMENT room (#PCDATA)>
]>
```