

Exercise – 6
XML and Semantic Web Technologies – SoSe 2012
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Q1: Create an XML document for which following XPath expressions return the values given in right column.

count(//file)	3
count(//directory)	3
count(/directory)	0
count(/root)	1
count(node()/directory)	2
count(//@*)	14
count(//*)	10
count(//linkS)	2
count(//linkC)	1
count(//@name)	7
string(/)	“
//@name	{„root“, „verzeichnis1“, „file1“, „dir1“, „verzeichnis2“, „file1“, „file2“}
boolean(//directory/@name)	true
boolean(//linkS/@name)	false
node-name(//file/parent::node())	<dieser Xpath gibt einen Fehler!>
node-name(//linkC/parent::node())	„root“

Q2.

Develop an XML application for a flight company. The data must be expressed in XML, so as to ensure compatibility with other flight companies.

An international flight company operates flights between several airports. A passenger has a name, an address and a passport number. When a passenger books a ticket, the flight company registers a credit card number. A flight has an id, number of seats, and a date. Each airport is characterised by its name, code, and tax value in dollars. Create an application which is able to retrieve all reservations on a given date, the passengers flying through a certain airport on a given date

- 2.1. Build an XML document containing some sample data corresponding to the text.
- 2.2. How can you stop a user of the document from adding data entities which do not correspond to the requirements? (such as the types of pasta served at his favorite restaurant around the corner). Should you apply restrictions?
- 2.3. Model the XML Schema type of the following entities (do not consider booking yet):
 - a) Passenger
 - b) Flight
 - c) Airport