1. Create an XML representation of this exercise sheet! You should model (among other things you would like):

(a) name of the course,
(b) date of the exercise session, and
(c) each exercise task, annotated by a time measure which describes how much time you expect to need to solve each exercise.

There is no single solution. This exercise is based as a warm-up for XML syntax only!

2. Take the simple XML document 'bank.xml' from the exercises web page. Write an XML Schema for 'bank.xml' satisfying the following requirements:

(a) There are two account types: checking and savings accounts
(b) The account id is unique in accounts
(c) The customer id is unique in customers
(d) c_id refers to customers and ac_id refers to accounts
(e) The account balance must be greater than -5000
(f) Use inheritance for checking and savings accounts by deriving from a common account type
3. MathML is a markup language for mathematics. It has two sublanguages, one for specifying the presentation of formulas and another one for representing the content or logical structure of formulas. In this lab, we will only care about the presentation language.

Your task is to write markup for presenting the following formula:

\[(x^{n+1} + 3xy) \cdot x\]

A quick introduction on MathML can be found here:
http://www.xmlmind.com/tutorials/MathML/index.html

A more detailed guide can be found here:
http://danielscully.co.uk/web/articles/mathml/

4. Find one way to make sure that your MathML document is indeed valid (you might want to use the validation service at http://validator.w3.org/).

5. Convert juicer.dtd (can be found on the exercise web page) into an equivalent XML schema.