Exercise 4

4.1 Web-Based Document Management Systems

Assume that you are the administrator of a web-site of a larger organisation. Web-pages can be created and edited by multiple users. A standard layout should be used for all web-pages on the site. The web-site does not only contain standard HTML but also other files such as images, PDF files, ZIP archives, etc.

1. What kind of functionality needs to be offered by a document management system that supports the administration of this site?
2. Which classes of document management systems are required for this application?
3. To what degree would XML be helpful in this application?

4.2 DTD for XML Document

Define a DTD for the following XML document:

```
<contract>
  <delivery>
    <supplier> B </supplier> delivers to <recipient> A </recipient> <quantity> 100 </quantity> <unit> pairs </unit> of <product> shoes </product> of code <productcode> MM-48-1112 </productcode> until <date> 10/03/2001 </date>
  </delivery>
  <payment>
    <payer> A </payer> has to pay to <recipient> B </recipient> <amount> 2300 </amount> <currency> GBP </currency> within a <term> month </term> after delivery
  </payment>
</contract>
```

What are the limitations of DTDs, especially in the context of contract and message management in electronic commerce?

4.3 RDF for Self-Contained Document Objects

Describe the header of the self-contained document object of exercise 2.3 (all documents of this lecture) in RDF.