

Web applications development

CAA2

General comments

Please provide all information that you find necessary in your answers.
Assignments can only be assessed by the information contained in them.

This assignment is an individual work. It will not be evaluated if parts of it are copied (from any source) or are too similar to other students' assignments.

Delivery format

Three files (compressed into a ZIP):

- PDF or OpenOffice document with the answers
- XML and DTD files for Exercise 1
- HTML file for Exercise 3 (and CSS if needed)

Exercise 1 (30%)

We have been commissioned with the creation of a web service to provide access to a large music database. When we pass to this service a unique identifier of an artist, it should return an XML file containing information about the artist, along with all of artist's albums and information about them, including the list of songs for each album.

Information about each element is defined below (fields marked with * must always be included in the XML):

- Artist: Name*, Biography, Description
- Album: Title*, Year, Label*, Genres, URL of the cover*
- Song: Title*, Length* (MM:SS format), Audio clip URL

With these requirements:

1. Create an XML instance based on these requirements.
2. Create a DTD that defines the grammar of this XML.

Note: The content of the XML is not important (you can make up the data), but the structure must be capable of conveying the required information.

Exercise 2 (20%)

Answer the following questions:

1. What would be the appropriate HTML tag to mark the definition of a dictionary entry?
2. And to indicate a combination of keys on the user manual of a program?
3. Which tags would you use to create a glossary of technical terms?. Write a small example with 2 terms.
4. Write the code needed to create a local link in an HTML page (both the link and the destination).

Exercise 3 (40%)

Create an HTML file containing the following elements:

- Heading <HEAD>
- A link to your name that allows the user to send an email to your

address.

- Links to external resources (e.g. links to pages in other domains).
- A numbered list of items (in Roman numerals).
- Different text styles.
- A picture (with hyperlink).
- A button that shows your name when pressed.
- An underscored external link.
- An HTML form with the following elements:
 - A dropdown List
 - A text field on which the cursor is automatically placed when the page finishes loading
 - A multiple selection list with 6 items, on which only one element can be selected at a time. When the page loads, the third item is selected by default
 - A text area with default content which is deleted when clicking on it
 - A submit button, where the button is an image
 - A button that resets the form
- A table as follows:

<i>Title1</i>				<i>Title2</i>	<i>Title3</i>	<i>Title4</i>
4	3	2	1		<i>Italic text</i>	
						Bold text
				1	2	3

Exercise 4 (10%)

Are these statements true or false? Discuss your answer briefly:

1. HTML was created in 1996.
2. XML was created for a single purpose.
3. XHTML is the result of transforming XML using XSLT.
4. `<input></input>` and `<input/>` are equivalent XML syntaxes.
5. An XML's grammar is defined by its DTD.
6. XML is a metalanguage which is not suited for exchanging information between applications.
7. The `` tag is deprecated since HTML 4.01
8. XML Schema was created to address the shortcomings of DTD