University of Glasgow Dip / MSc Information Technology Foundations : Information Management

Tutorial Week 4 Dynamic Web Sites and Databases

Tutors Notes

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Style and Accessibility

1. Why is the use of XHTML important for providing accessible information systems?

XHTML is well structured. Because of the regularity of the hierarchy and the restriction of formatting information to the *style* attribute, programs can make many kinds of use of the content, reformatting as required, including to screen readers and so on. Because it is in XML, any more general program components written for XML are automatically available.

2. What are the three aspects of a web page element that can be used to determine its style when using a style sheet and how can they be combined?

element type (selector is just the name)

class (selector is . followed by the class attribute value

id (selector is # followed by the id attribute value

The most usual combination is (type name).(class attribute value) which selects the members of that class of that type.

3. A web site has the same layout for every page. It has a banner at the top, a table of contents made up as an unordered list down the left hand side and content on the right. In the content, some paragraphs are left aligned while some are centred. How would you organise the pages and a style sheet to keep consistency across the site?

```
<div id="banner">
                                            #banner {background-colour: grey}
   heading, logo, etc. in here
                                            #toc {width: 20%; float: left }
                                            #content { float: right; width 75%
</div>
<div id="toc">
                                            .left {text-align: left }
   <h3>Site Contents</h3>
                                            .centred {text-align: center
   <ul.>
   <a href="homepage.html">Home</a>
   </div>
<div id="content">
   <h2>Heading of this Page</h2>
   The first paragraph
   The second paragraph
   A centred paragraph
```

</div>

4. Give some XHTML techniques for support accessibility?

Use of the alt and title attributes, relative sizes, etc. - see slides 210 and 214-5

5. What features of web sites do you find most problematic?

Your answer goes here.

Dynamic Web Sites

- 6. What are client-side-scripting and server-side-scripting and what kinds of task can they accomplish?
 - Client side scripts are small program fragments embedded in HTML and passed to the browser where they are executed. They may create content dynamically e.g. changing adverts and are used for tasks such as form checking.

Server side scripts are small programs embedded in HTML that are executed on the server. They can do things like process forms, update a database, send e-mail, etc.

7. What kinds of data do client-side and server-side scripts have available to them?

Client side scripts can access any data sent by the server such as cookies and the session ID, information about the page – e.g. forms, etc. – and the information held by the browser, history, favourites and so on.

Server side scripts can access any data sent by the browser - e.g. form data and the session ID, database data and the session and context data.

8. Describe two structures which allow server side programs to generate XHTML.

Either by placing scripts in the HTML or by using the print statement in a program.

9. An E-commerce site has a page in which you can select an item to show more details and another to create an order. Both of these pages use a form for the user to provide the required information. Give an informal description of the actions taken by the server-side programs which process the forms.

Show Item Details

- 1. Get the item number from the form through the Request Object.
- 2. Make up a query selecting the details of that item from the database.
- 3. Send the query to the database and get back the details.
- 4. Merge the details with an HTML template and send it back to the browser through the response object.

Accept an Order

- 1. Get the order details from the form through the Request Object.
- 2. Make up an update sending the details of that order to the database.
- 3. Send the update to the database and check for success.
- 4. Return a success or failure message back to the browser through the response object.
- 10. Give an informal account of how a program interacts with a database.
 - 1. make connnection
 - 2. build up query as string
 - 3. send query
 - 4. if this is a request for data, results come back as a list of records and you can iterate through them
 - if this is a request to update the database, the database returns success or failure, usually by stating the number of records which have been changed