

Exercise 2.1 HTML

- a) Create an HTML page using a text editor. Use [2] as a reference. Complement your HTML page with:
 - a HEAD section containing
 - paragraphs, inline text attributes, heading, blocks, pre-formatted text, listsUse the Lorem Ipsum-Generator [3] to create bigger text areas.
- b) Modify your first HTML page so that they contain errors. Do the same with an arbitrary HTML page.
How does your Browser display this page? Which section of the HTML page do you have to modify in order to produce an error message?

Exercise 2.2 Tables

- a) Create a table on one of your html pages
 - i. With column headers
 - ii. With a caption
 - iii. Try to use a table for positioning text on your page.
What are the advantages/disadvantages of this approach?

Exercise 2.3 What's new in HTML5?

Read <http://diveintohtml5.info> or any other Internet resource to answer the following questions:

- a) What is new in HTML5? Provide examples.
- b) What is/are the advantage(s) of the new HTML5 features compared to XHTML?
- c) How is HTML5 currently be supported by browsers?
- d) What could be a problem with HTML5 browser support wrt. to the realisation of new HTML5 features?

Exercise 2.4 CSS3

- a) What is new in CSS3? Provide examples.
- b) Find example applications of CSS3. What are their benefits compared to implementations using prior standards?

Exercise 2.5 Your Web Site (Requirements)

In this exercise you're laying the basic work for all lab work to come in this course.

- a) Form groups of 2-3 persons and agree on a common type of Web site you would like to create jointly. This may be, for example, a Web site for booking hotels, for information exchange on a particular hobby, etc.
- b) Collect your requirements and create and mark the requirements you would like to realise in the context of the lab work. (also consider c) for this exercise)
Describe the requirements as detailed so that you would be able to hand the over to a third person not being involved in defining the requirements ("outsourcing").
Subdivide your requirements into technical and non-technical requirements and try to be as precise as possible.
- c) Is there a standard for describing Web sites? Search the Internet for examples (e.g., www.rentacoder.com, www.my-hammer.de, www.getafreelancer.com, ...).
- d) [HOMEWORK] Search for a formal modelling technique for Web sites and be able to give a short presentation in front of the course.

Exercise 2.6 HTML Links

- a) Integrate absolute and relative links to one of your HTML sites.
- b) Search the Web which sorts of HTML link management exist as well for local and for remote usage and give a short presentation.

Exercise 2.7 Your Web Site (Structure + Layout)

- a) A Web application can be displayed as a tree structure ("wire frame"). A connection between two nodes means that there exists a link between two Web sites.
Create a structure for your Web site.
- b) Create a static design for your Web site.
Create contents by means of graphics, static HTML files or another method of design favoured by you.

Exercise 2.8 Graphics

- a) Install the application "The Gimp" or another graphic software of your choice and create one/multiple raster graphics for your Web site (e.g., menu buttons, Web Banner, ...)

Save the graphics created to different graphics formats and compare their file size.

- b) Create an image with a transparent and with a solid background.
Hint: Use the Gimp feature "Extras..."
- c) Include the graphics created to your HTML pages. Use different attributes, e.g., height, width, etc. (see [2]).
- d) Use Gimp to create an animated GIF and include this to your HTML pages.
First create a graphics having multiple layers. Each of the layers represent a different step within the animation.
Hint: Use the feature "Ebene duplizieren" to create new layers.
- e) Use graphic software of your choice to separate RGB and CMYK color channels.

Exercise 2.9 Image Maps

- a) Take an image of your choice and apply an image map to it.
Create at least 4 clickable regions on it and try out different shapes.
- b) Read [6, 7]. What would you prefer, imagemaps or SVG? Provide arguments for your choice.

Online Resources

- [1] ACID2-Test (tinyurl.com/s5ecp)
- [2] www.w3schools.com
- [3] Lorem Ipsum Generator (www.lipsum.com)
- [4] Gimp-Benutzerhandbuch (in German, <http://docs.gimp.org/de/index.html>)
- [5] ACID3-Test (<http://acid3.acidtests.org/>)
- [6] Using SVG as an Alternative To Imagemaps.
<http://thenewcode.com/696/Using-SVG-as-an-Alternative-To-Imagemaps>
- [7] Responsive Image Maps. <https://pvse.com/blogeintrag/items/responsive-image-map.html>