



# Seminar 1, HTML and CSS

## Internet Applications, ID1354

### 1 Goal

- Learn HTML and CSS.
- Learn basic heuristics for user interface design.
- Learn responsive web design.
- Learn techniques for web accessibility.

### 2 Grading

The grading is as follows:

**0 points** The mandatory tasks are accepted and you have passed the seminar.

**1 point** The mandatory tasks and one higher grade task are accepted. You have passed the seminar and have also gained one point to improve the final course grade, see course plan for details on final grade.

**2 points** The mandatory tasks and both higher grade tasks are accepted. You have passed the seminar and have also gained two points to improve the final course grade, see course plan for details on final grade.

To pass the LAB1 sub course you must pass all four seminars. If you fail this seminar you have to report it again at the end of the course, at the fifth seminar. You can also report higher grade tasks at the fifth seminar.

### 3 Auto-Generated Code and Copying

**All HTML and CSS code must be well designed and you must be able to explain and motivate every single part.**

However, you are allowed to use any web development tool, you do not have to write HTML and CSS by hand. You are also allowed to copy HTML and CSS from any web site. In particular, you are encouraged to get inspiration from (or use) free design templates.

## 4 The Tasty Recipes Web Site

You will create a web site for a recipe company named *Tasty Recipes*. The web site has an index page, a calendar page and a number of recipe pages, see Figure 1. Do not be confused by all arrows in the figure, the result is simply that it is always possible to navigate to any other page, preferably with the help of a menu. You can find examples of CSS menus at [http://www.w3schools.com/css/css\\_navbar.asp](http://www.w3schools.com/css/css_navbar.asp)

All pages must have similar layout. This applies to fonts, colors, mouse hovering, links, icons, images and all other properties of the pages. You must explicitly choose page layout; font size, family and style; foreground and background color;

### Swedish Meatballs Recipe



Swedish Meatballs Recipe photo by Taste of Home

Prep: 30 min. Bake: 1 hour Yield: 8-10 Servings

#### Ingredients

- 4 eggs
- 1 cup milk
- 8 slices white bread, torn
- 2 pounds ground beef
- 1/4 cup finely chopped onion
- 4 teaspoons baking powder
- 1 to 2 teaspoons salt
- 1 teaspoon pepper
- 2 tablespoons shortening
- 2 cans (10-3/4 ounces each) condensed cream of chicken soup, undiluted
- 2 cans (10-3/4 ounces each) condensed cream of mushroom soup, undiluted
- 1 can (12 ounces) evaporated milk
- Minced fresh parsley

#### Directions

- In a large bowl, beat eggs and milk. Add bread; mix gently and let stand for 5 minutes. Add beef, onion, baking powder, salt and pepper; mix well (mixture will be soft). Shape into 1-in. balls.
- In a large skillet, brown meatballs, a few at a time, in shortening. Place in an ungreased 3-qt. baking dish. In a bowl, stir soups and milk until smooth; pour over meatballs. Bake, uncovered, at 350° for 1 hour. Sprinkle with parsley. **Yield:** 8-10 servings.

#### Nutritional Facts

1 serving (1 each) equals 399 calories, 23 g fat (9 g saturated fat), 164 mg cholesterol, 1,065 mg sodium, 20 g carbohydrate, 1 g fiber, 27 g protein.

Figure 2: A possible recipe page layout. User comments are omitted due to lack of space. They might be added at the bottom of the recipe pages.

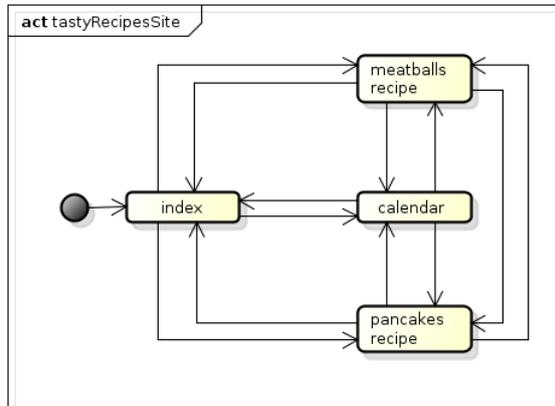


Figure 1: Page flow in the *Tasty Recipes* web site.

mouse hovering and link behavior. None of these properties may have the default value just because it is the default. Below follows a detailed description of each page.

### 4.1 Index Page

This is the front page of the web site, it shall be informative and welcoming. It shall promote the calendar page and have a link to that page.

### 4.2 Recipe Pages

There shall be one recipe page for each dish. In this first version of the site, there are only two dishes, meatballs and pancakes. A recipe page shall contain the name of the dish, an image of the prepared meal, a list of ingredients, instructions, nutritional facts and user comments. The layout might, but is not required to, look like Figure 2. You can get inspiration from any recipe site, for example <http://www.tasteofhome.com/recipes/swedish-meatballs?cpi=1&ViewAll=1> The user shall not be able to write comments, instead you shall hard code sample comments.

### 4.3 Calendar Page

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 	3	4 	5	6
7	8 	9	10	11	12	13
14	15	16 	17	18	19 	20
21	22	23	24 	25	26	27
28 	29	30	31			

Figure 3: Possible calendar page layout.

The calendar shall be a visual representation of one month, with clickable images of the month's dishes. These images shall be links to corresponding recipes. Your calendar shall have dishes two days in the month, the meatballs day and the pancake day. The calendar might, but is not required to, look like Figure 3.

## 5 Mandatory Tasks, the Tasty Recipes Web Site

Tasks 1-4 must be solved and reported at the seminar.

### Task 1

Install a web server on your computer. Be prepared to spend quite a lot of time to get the web server running.

- You do not have to write about this task in the report, the task is mentioned here only to point out that this takes time.

### Task 2

Create HTML and CSS files to implement the *Tasty Recipes* web site according to the requirements specified above, the site shall run on your local web server. All HTML and CSS files must pass the W3C validations. It is mandatory to use a CSS reset style sheet as specified in the lecture notes from lecture three. There is an example of a reset style sheet on the *Resources* page at the course web site.



- The report must show that the web site follows the requirements, that a reset CSS is used, and that all files have passed W3C validation.
- The report must include parts of HTML and CSS code, with explanation. Remember to treat the codes as figures. They shall be clearly separated from the text and have number and caption (*figurtext*). Include only small and interesting parts of the code. Do *not* include long code dumps.

### Task 3

You must consider the following five of the ten basic heuristics for user interface design mentioned in lecture one. They are explained further in the lecture notes. The report must show that all five heuristics have been considered. If some heuristics are not applicable to the web site, you must explain why this is so.

- 1. Visibility of system status.
- 2. Match between system and the real world.
- 4. Consistency and standards.
- 6. Recognition rather than recall.
- 8. Aesthetic and minimalist design.

### Task 4

All pages shall behave exactly the same way in the following browsers (and newer versions of the same browsers): Chrome 49, Internet Explorer 10, Firefox 44, Safari 9. There are online resources that test runs a site in different browsers, for example [modern.ie](http://modern.ie). Use such a resource if you are not able to install all browsers on your computer.

- The report must show that your web site is identical in the specified browsers. However, you do not have to provide screen shots of all pages in all browsers, a few sample screen shots are enough.

## 6 Optional Tasks

### Optional Task 1, Responsive Design

The web site shall change layout according to screen resolution, it shall make sense on screen sizes ranging from 320x480/480x320 to 1920x1200 pixels. It is required to use CSS media queries to make the site change layout.

- The report must show that the site has responsive design as specified above. However, you do not have to provide screen shots of all pages in all resolutions. A few sample screen shots is enough, but make sure to include some screen shot with both the largest and smallest resolution.



## Optional Task 2, Accessibility

The web site shall follow the four accessibility guidelines listed below and explained further in the lecture notes from lecture three.

1. Use text alternatives.
  2. Don't rely on color alone.
  3. Use HTML and CSS properly.
  4. Provide clear navigation mechanisms.
- The report must show that all four guidelines are followed. If some guidelines are not applicable to the web site, you must explain why this is so.