

Web Engineering Spring Term 2016

Exercise 2

You are nearly there! However, you have now planned a couple of extensions to make your website even more attractive. Furthermore, you aim to build an ambient menu that promotes user's awareness by providing non-intrusive information about the visiting frequency of the page sections using JavaScript and jQuery.

This is the description of the second, and final, part of the Exercise 2.

Exercise 2.1

Please refer to the description provided last week for the details of the first part of Exercise 2.

Exercise 2.2

Animation on visible DOM elements in the current viewport

In this step, you want to make your website more attractive by animating the DOM elements (once) if part of them is in the **current viewport**. It means that, when the page loads, the element(s) in the current viewport will be animated (e.g. appear in the page). Moreover, when scrolling the page, new element(s) come into the viewport then using a trigger they get animated as well.

Your solution should trigger at least one animation on one element for each of the sections (i.e. Home, Blog, etc.). You are free to choose the elements and the type of animation(s) that you would like to apply on them.

Ambient Menu

In a further step, to increase the user's awareness on the sections where the user visits, you want to build a dynamic ambient menu which the size of each menu item (e.g. Portfolio) be proportional to the visiting user frequency of the corresponding section. To build such a menu, first, update your implemented menu using new icons¹ as shown in figure 1. Then, calculate the size of each menu item image based on the visiting frequency of the associated sections using the following formula.

$$Size = \frac{SF}{MF} \times (Img_{max} - Img_{min}) + Img_{min} \quad (1)$$

where SF is the visiting frequency of an associated section, MF is the visiting frequency of the most visited section, and Img_{min} and Img_{max} are the minimum and maximum sizes that an image can have, respectively.

Figure 2 illustrates the ambient menu variation under two different visiting frequency of the sections. To count a visiting frequency for each section this definition can be considered: when **the scroll position is in line with the corresponding section and the scroll does not move at least for two seconds (2000ms)**.

Please note that the Img_{min} and Img_{max} are fixed numbers (e.g. 30, 70) and you are free to choose their values according to your design.

Workmode and Grading. All exercises in the Web Engineering course are designed for teams of 3 students. Every member has to contribute to the team solution, and the assistants may ask about the role of each member and who contributed what.

¹<https://globis.ethz.ch/exercise-2-2-icons/>

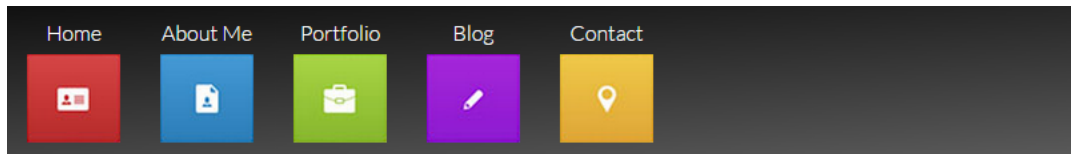


Figure 1: New menu mockup

This is the second part of the exercise 2. **The final team solution for all parts of the exercise 2 will need to be presented during the exercise session on 7th of April 2016.** You do not need to hand in the source code, but the assistants may ask questions about how you implemented some of the features when you demo it in the exercise session. **We will use the following grading scheme.**

Grading Scheme For each part of the graded exercises, we provide a set of requirements which are going to be assessed separately. For each set of requirements, your group can get a certain amount of points. If you fulfill the requirements only partially or fail to answer corresponding questions during the presentation, points will be deducted. No or wrong solutions get zero points

The number of requirements may differ between the parts and thus reflect their respective weights. For Exercises 2.1 and 2.2, the set of requirements are specified as follows:

Summary of Requirements - Part 1 (Max. points: 3)

- Please refer to 2.1 Exercise Description

Summary of Requirements - Part 2 (Max. points: 4)

- Animation on visible DOM elements in the current viewport
- An ambient menu that promotes awareness about the visited sections

Note: You should only use JavaScript/jQuery and CSS for your solution. JQuery plugins are not allowed (part 2). Furthermore, a recorded video of a possible solution is available on our website ².

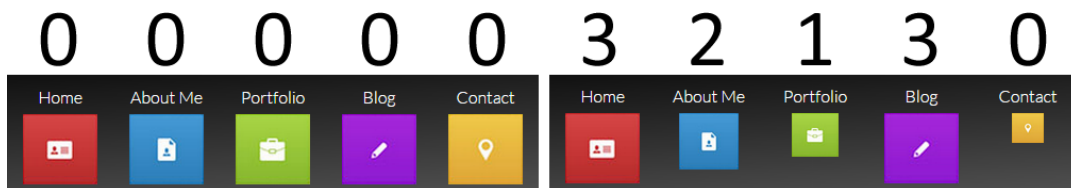


Figure 2: Ambient menu variations – (left) equal size of menu items “no visit on the page sections”; (right) different size of menu items based on the visiting frequency of the sections

²<https://globis.ethz.ch/files/2016/03/Exercise2.2.zip>