

Web Engineering Spring Term 2017

Exercise 2

So far, so good. You are quite happy with the first prototype! However, you plan to develop a couple of extensions to learn new technologies and to make your web site even more attractive. The new goal is to exploit new features of HTML5 and CSS3.

Note: The goal of the second series of exercises is to deepen your knowledge of state-of-the-art web technologies. This is the description of the first part of Exercise 2 which is a continuation of your work from Exercise 1. If you have not solved Exercise 1 yet, you need to solve at least Exercise 1.1 or you will not be able to complete the current exercise.

Exercise 2.1

HTML5

Since you now know how HTML5 tags can be useful, you decided to take advantage from these and modify your current solution. In this step you are expected to use semantic tag in the entire page of your web site.

Animated Menu items Using CSS

In the next step, to make your website more attractive you want to animate the Menu items using CSS3. To this end, please consider the following requirements:

- Whenever the mouse hovers an item,
 - The overlay resizes to a full height (e.g. 100%) and at the same time moves up to cover the entire item with a transformation animation. The overlay background colour (i.e., black) changes to a gradient background colour (red [#FF6464] to black [#000000]) with different transparencies (from completely solid at the top to completely transparent at the bottom). Note: the background and overlay of each menu item are curved.
 - At the same time, the item title moves from the bottom-left to the middle of the item (centred vertically and horizontally) with a 360 degrees rotation and transformation animation.
 - Whenever the mouse leaves an item, the item rolls back to its initial design with a transformation animation on at least one sub-item (e.g., background, title).

Popup window using CSS3

In a further step, you want to create a popup window (see Fig. 1) **using HTML and CSS** that shows more information about the selected items when clicking on the title. The expected popup window should fulfill the following requirements.

- The popup window should be shown in the middle of the page, displaying relevant information about the *selected* item: the corresponding picture and some text-content. Please note that we will not provide the content, you should come up with some text for each item.
- The area outside the popup window should be covered with a semi-transparent black colour background. This should prevent selection of the content outside of the popup, while still allowing to view the content behind the popup window (see Fig. 2).
- It should have a close button that allows users to close the popup window.
- Opening and closing the popup window *should not* change the position of the viewport

Hint: To solve this part of the exercise, you might want to have a look at the `:target` pseudo-class¹.

You should add some content for each menu item popup window. The content should not be random text and they should generally make sense.

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.

This is the first part of Exercise 2. Second part of Exercise 2 will be presented on the 23th of March 2017. **The final team solution for Exercise 2 will need to be presented during the exercise session on the 30th of March 2017.** 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 maximum number of points may differ between parts and thus reflect their respective weights. For Exercises 2.1, the set of requirements are specified as follows:

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

- HTML5 semantic tags for the entire page.
- CSS3 animations on all the menu items.
- A popup window showing relevant information for each selected menu item.

Please note that the above list *is not* a complete set of *requirements*. To successfully complete the exercise, you should read the entire exercise description. For questions and/or doubts please contact one of the assistants.

Note that JavaScript and any kind of CSS Framework are not allowed. You should only use HTML and CSS for your solution. Moreover, using images to display smooth transitions between two or more specified colours is forbidden. CSS3 properties can be used for such effects and your animated solution.

Furthermore, a recorded video of the possible solution is available on our website².

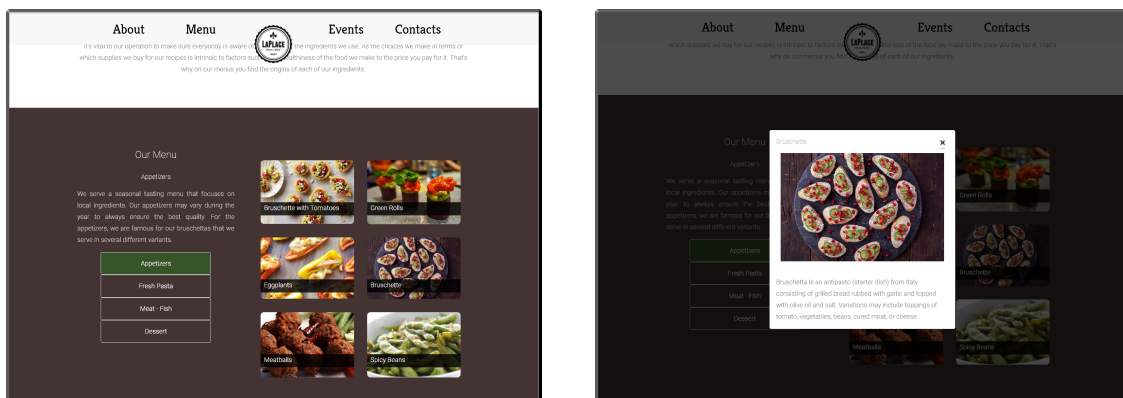


Figure 1: Popup window – (left) closed, (right) opened

¹http://www.w3schools.com/cssref/sel_target.asp

²<https://globis.ethz.ch/files/2017/03/Ex2.1-Video.zip>

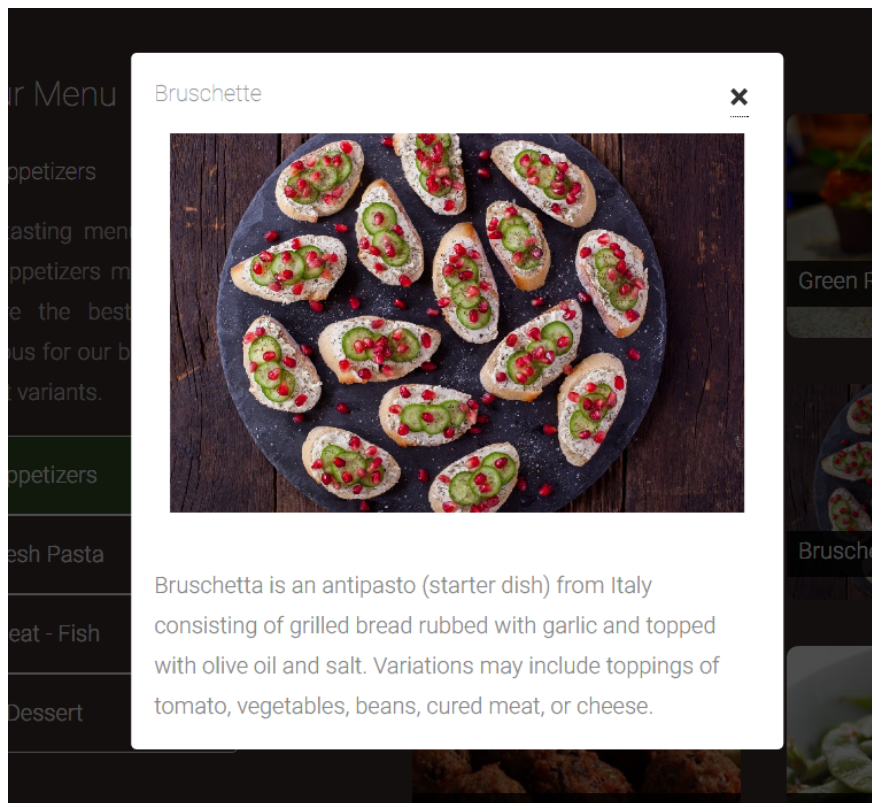


Figure 2: Popup window layout

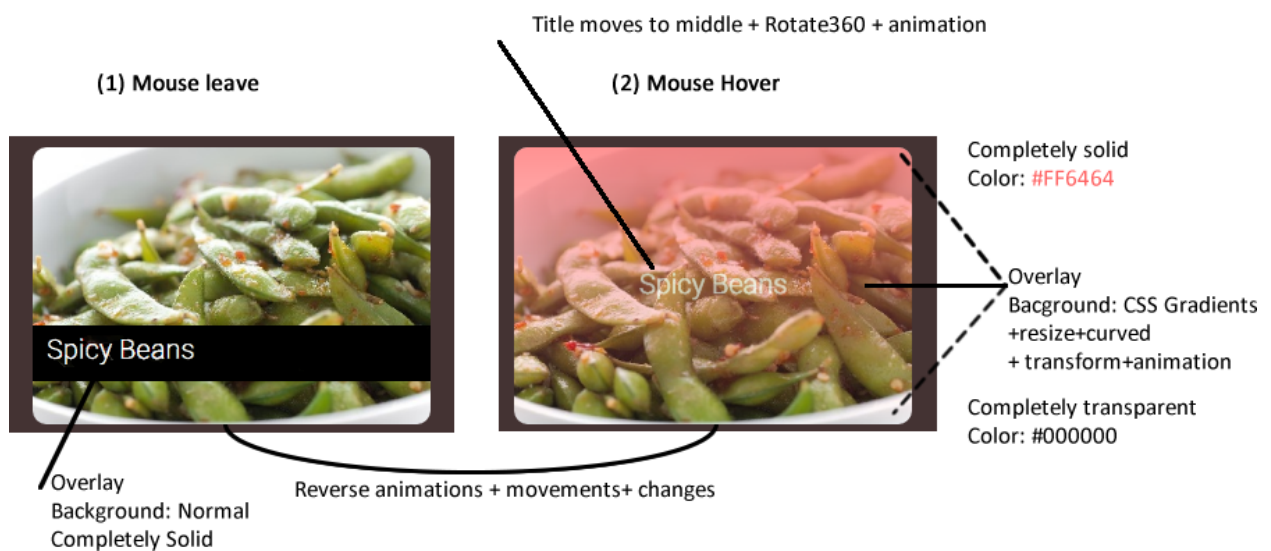


Figure 3: Animated menu items with mouse hover/leave events