Webprogramming

LIX018P05

Assignment 1

Exploiting JavaScript DOM.

Possible points	: 10
Grade weight	: 10%
Assignment type	: Individual
Submission	: Brightspace
Components	: ● Practical
	● Theoretical

Note: If something in the assignment is not clear or you want some more help with the different questions, ask the teaching assistant during the tutorials!

1. Get your setup ready

Before you start you are going to create a set up for the following weeks. To get your setup ready, perform the following subtasks. Please use the detailed instructions given in the slides.

1. Setup your virtualized Apache server. Use MAMP or XAMPP.
   a. In the `htdocs` folder, create the following file structure.

File Structure

   ```
   /WP23/
      -- /assignment_1/
      -- /assignment_2/
      -- /assignment_3/
   ```

   b. To check that you properly set up your virtual server, place the following file inside your `WP23` folder. Open it in your browser through `http://localhost/WP23/wp23-check.php`. You should *not* see the PHP code, but a formatted week schedule. *Note:* If you use a different port than `80`, add a colon and the port number behind `localhost`.

wp23-check.php

   ```php
   <?php

   $wp_list = Array(
   'Week 1' => 'Assignment 1',
   'Week 2' => 'Assignment 1',
   'Week 3' => 'Assignment 2',
   'Week 4' => 'Assignment 2',
   'Week 5' => 'Assignment 3',
   'Week 6' => 'Assignment 3',
   'Week 7' => 'Final Project');
   foreach ($wp_list as $week => $content){
           echo sprintf("%7s | %15s<br>", $week, $content);

   }

   ?>
   ```

> **Important!** Before you configure PHPStorm, complete the
> *GitHub and JetBrains Registration* checklist on Brightspace.

2. Install PHPStorm and configure it.
   a. Open the `WP23` folder you just created.
   b. Share your project in a *private* repository on your GitHub account.
   c. Go to the `Settings` of your repository on [GitHub](#).
   d. Under `Collaborators`, add `stijneikelboom` and `kornevenema`.
   e. Go back to PHPStorm. Make your first commit and push it.
   f. Create a plain text file and name it:
      `s1234567_wp23_assigment1.txt`. Make sure you use your own student number. Put the URL of your GitHub Repository into the text file and save it.

2. Get the assignment files

Make sure you get the assignment files. Do *not* save these files in the `htdocs` folder! Use another folder instead. You could for example use your Documents or Downloads folder. The HTTPS URL to clone the repository is:

`https://github.com/stijneikelboom/WP23.git`

3. Create your main.js file

Create a new JavaScript file and name it `main.js`. Place it in the right folder. Include the file at the right location in both `index.html` and `second.html`.

4. Your first JS code

Now it's time to code. Use JavaScript to manipulate the DOM according to the following requirements.

1. Change the titles of the webpages. Keep in mind how the title is represented in the DOM when you think about a solution.
   a. `index.html` : Webprogramming (LIX018P05) - Index
   b. `second.html` : Webprogramming (LIX018P05) - Second
2. Add a new `<article>` to the main column of the `index.html` page. The new article should also contain a heading and paragraph.
3. Change the `href` attribute of the `<a>` element inside the third `<li>` element inside the `<div>` with `id="links"`. The link should be:
   `https://google.com`.

4. Add an attribute to the `<a>` from the previous step. The attribute should force the link to open in a new window/tab.
5. Select all elements with the class `nav-item`. Change the text color of these element to `red`.
6. Create a JavaScript object. Fill it with the data on the schedule that can be seen in the PHP array inside `wp23-check.php`. Use properties to represent the data. Make sure the different items of the array are printed onto the `index.html` page. *Note:* There is no need to execute the PHP code. Just represent the same data inside your JS code.
7. Add a sidebar to `second.html`. Use the following procedure:
    a. Change the class of the main column (`div` element) from `col-md-12` into `col-md-8`.
    b. Add a new `div` element (column) with the size: `col-md-4`.
    c. Add a heading to the newly created column: Sidebar.

Make sure you create function(s) in which you wrap your code. Also add the right `EventListener` which calls the functions you created after the page has loaded.

5. Submit your work
Submit the assignment using the following method.

Save your work
1. Make sure you zip your `WP23` folder containing all project files.
2. Rename the ZIP file to `s1234567_wp23_assignment1.zip`.
   Use your own student number.

Commit your work
Commit and push all project files to your GitHub repository using PHPStorm.

Upload your work
Go to the appropriate Brightspace Assignment and upload the following files:
- `s1234567_wp23_assignment1.zip`
- `s1234567_wp23_assignment1.txt`
   Containing the HTTPS and SSH URLs of your GitHub Repository.

6. Theoretical questions

Answer the following theoretical questions on Brightspace!

6.1. Despite that you were not yet introduced to the PHP language, what is the best description of what happens in the code of `wp23-check.php`?
a) A list of weeks is made and filled.
b) A comparison is made between lengths of weeks and activities.
c) A list of weeks and associated activities is made and printed to the page.
d) A list of weeks is combined with a list of activities.

6.2. Which command did you use to get the assignment files **for the first time**?
a) `git clone`
b) `git push`
c) `git commit`
d) `git pull`
e) `git add`
f) `git init`

6.3. Which command should you use to get the assignment files **from now on**?
a) `git clone`
b) `git push`
c) `git commit`
d) `git pull`
e) `git add`
f) `git init`

6.4. Which of the following are not used in objects?
a) Methods
b) Events
c) Groups

6.5. What do properties describe?
a) Characteristics of objects.
b) Things that happen to objects.
c) The number of items in an object.

6.6. Which object represents a web page?
a) `page` object
b) `document` object
c) `url` object

6.7. Which symbol is used to multiply two values together?
a) `x`
b) `X`
c) `*`

6.8. Which of the following assigns a number to a variable?
a) `var quantity = '3';`
b) `var quantity = 3;`
c) `quantity == 3;`

6.9. How do you get the value yellow from this array?
color = ['pink', 'yellow', 'green'];
a) `color[0]`
b) `color[1]`
c) `color[2]`

6.10. What is the name of the dot between an object and property or method? E.g. hotel.name
a) Arithmetic operator.
b) Assignment operator.
c) Member operator.

6.11. Which of the following changes an object's `name` property?
a) `hotel.name = Park;`
b) `hotel.name = 'Park';`
c) `hotel:name = 'Park';`

6.12. What is the String object a part of?
a) Browser Object Model.
b) Document Object Model.
c) JavaScript's built-in objects.

6.13. Which of the following is true?
a) `3 !== 'three';`
b) `3 === 'three';`
c) `5 < 3;`

6.14. If `i` was 3, what would `i` be after this statement `i++;`
a) 3
b) 4
c) 5

6.15. If a statement is not `true`, what keyword lets you offer an alternative code block?
a) `else;`
b) `switch;`
c) `or;`

6.16. Which of these selects an element using the value of its `id` attribute?
a) `getElementsById()`
b) `getElementById()`
c) `getEelementByTagName()`

6.17. When a DOM query returns more than one element, what is returned?
a) `NodeSet`
b) `Array`
c) `NodeList`

6.18. Which of the following just retrieves the text form inside an element?
a) `innerHTML`
b) `textContent`
c) `nodeText`