**Vývoj internetových aplikací  
Development of Internet Applications  
TEST**

**LOGIN: NGU0120**

**NAME AND SURNAME: THANH TUAN NGUYEN**

**TEST NUMBER: 3**

Instructions:

* **Total time is 20 minutes, including overhead required for sending, etc.**
* **Answer the individual questions directly in the document**
* **Leave revision tracking on!**
* **Send the completed document to** [**michal.radecky@vsb.cz**](mailto:michal.radecky@vsb.cz)

Assignment:

Fill in / answer only one test! The test you must process corresponds to the table below! When submitting an assignment other than the one specified below, it will be automatically evaluated as zero points!

**Find the largest digit in your login and use it to assign the test.**  
E.g. login abc0075 – max number in login is 7, so the test 1 need to be answered

|  |  |
| --- | --- |
| **Largets digit from login** | **Test number to process** |
| **3, 5, 7** | 1 |
| **4, 6, 9** | 2 |
| **1, 2, 8** | 3 |

**TEST 1**

1. How does the HTTP request head look like (what includes)?
2. Write CSS code for: setting the gray color and bold font for link element with class „mylink“ (everywhere on webpage). Specified style is applied only in case of mouse cursor is over the link.:
3. Write JavaScript code (or HTML code, you can use pure JS or jQuery) for: setting the content of DIV element with ID „info“ to value „Clicked“ after click on specified link element.
4. What does the topic „DOM“ mean (in domain of web pages) and what is the purpose?
5. Write XPath query for selecting **only the content** of all elements with name „option“:

<?xml version="1.0" encoding="utf-8"?>  
<survey>  
 <question>How many hours do you spend at your computer?</question>  
 <options>  
 <option votes='12'>12-15 hours</option>  
 <option votes='5'>15-20 hours</option>  
 <option votes='15'>20-24 hours</option>  
 <option votes='10'>My computer does not work </option>  
 </options>  
</survey>

**TEST 2**

1. How does the HTTP response head look like (what includes, specify status codes)?
2. Write CSS code for: setting the red border around the image (without own ID) that is located inside the element P. The paragraph has assigned class „par1“:
3. Write JavaScript code (or HTML code, you can use pure JS or jQuery) for: changing the content (SRC) of the image during the time when mouse cursor is over a given image. It means: original image file menu1.png will be changed by menu1-on.png when mouse cursor start the hovering. When cursor leaves the image, the original image will set back again.
4. List and describe min. 5 new capabilities of HTML 5 form input element configuration (types of input element)
5. Write XPath query for selecting all texts included within all elements (contents of all elements):

<?xml version="1.0" encoding="utf-8"?>  
<survey>  
 <question>How many hours do you spend at your computer?</question>  
 <options>  
 <option votes='12'>12-15 hours</option>  
 <option votes='5'>15-20 hours</option>  
 <option votes='15'>20-24 hours</option>  
 <option votes='10'>My computer does not work </option>  
 </options>  
</survey>

**TEST 3**

1. Describe the difference between GET and POST methods defined by HTTP protocol.

* Both GET and POST method is used to transfer data from client to server in HTTP protocol but Main difference between POST and GET method is that GET carries request parameter appended in URL string while POST carries request parameter in message body which makes it more secure way of transferring data from client to server in http protocol.

1. Write CSS specification for setting the styling of link (a) with assigned class "button". The link have to have rectangular shape, gray background and black font color. During the time when mouse cursor will be over the link, the font color will be white and background of the button will be black. The text will not be underlined in any time.

a.button{

width: 200px;

height: 100px;

border: 1px solid #gray;

background: gray;

font-size: 20px;

margin: 10px;

}

a.button:hover{

background:black

color: #white;

}

1. Write JavaScript code (or HTML code, pure JavaScript or JQuery can be used) that will offer following feature. The DIV element with assigned id "counter" contains the number. This number will be increased all time when cursor will be over this DIV. The increasing of the number i+1 will performed only 1 time per second. If the mouse cursor will be in hover state for 8 seconds, the number should increased from 1 to 9.
2. Write and describe min. 5 new HTML elements which are offered by HTML 5 specification.

* 5 elements is:
  + <video>
  + <audio>
  + <canvas>
  + Other new elements, such as <section>, <article>, <header> and <nav>, are designed to enrich the semantic content of the document.
  + APIs and the Document Object Model (DOM) are not too late thinking, but are fundamental parts of the HTML5 specification. HTML5 also specifies some of the handling required for invalid documents so that syntax errors will be handled consistently by all suitable browsers and other user agents.

1. Write XPath query for selecting element "option" that is third in the order:

<?xml version="1.0" encoding="utf-8"?>  
<survey>  
 <question>How many hours do you spend at your computer?</question>  
 <options>  
 <option votes='12'>12-15 hours</option>  
 <option votes='5'>15-20 hours</option>  
 <option votes='15'>20-24 hours</option>  
 <option votes='10'>My computer does not work </option>  
 </options>  
</survey>

* /survey
* /survey/question
* /survey/options
* /survey/options//option[1]
* /survey/options//option[2]
* /survey/options//option[3]

/survey/options//option[4]