

Web Fundamentals

Exercise 4 – Javascript

Introduction

- Language executed by web browser
- Object oriented programming language
- Syntax similar to C, C++
- No variable types

Including JavaScript

■ Connect HTML and JS?

- script tag anywhere in HTML
 - `<script type="text/javascript">`
 `document.write("<p>Some text</p>");`
 `</script>`
- External file (HTML head)
 - `<script type="text/javascript" src="js.js"></script>`

Executing JavaScript

- Executes when `<script>` tag is interpreted in HTML
- We can follow the execution in the console
- Print data using objects:
 - `document.write("...");`
 - `console.log("...");`

Executing JavaScript

■ Delayed execution using events

- Event is a HTML attribute
- Value of the attribute is JS code that should be executed, when event triggers
- Usually we call a function, to keep code simple
- `onClick`, `onLoad`, `onBlur`, `onFocus`, `onChange`, `onSubmit`, `onMouseOver`....

Syntax

- We define variables with keyword **var**
- Control statements, blocks, comments are the same as C++ (if, for, while, switch, {}, //)
- We can define own functions
 - `function msg (a,b)`
- We can work with objects (OOP)

Objects

- Object is a special variable, that holds properties and methods
- We can access it through . operator
 - `object.methodName(parameter1,parameter2)`
 - `objekt.propertyName`
- Methods are called, while properties can be read or changed
- We can create custom objects or use existing objects

Important basic objects

- document

- window

- nizi

- match, replace, split, substr, indexOf, concat, charat, ...

- polja

- array[index], pop(), push(), length

- math

- konstante, funkcije

- regexp

- test(), exec(),...

- date

Document

- Enables access to DOM tree; Allows us to access and manipulate the content of HTML
- By it we get to HTMLElement objects
- Important methods:
 - getElementById, getElementsByName, ...
 - write

HTMLElement

- Holds important properties, representing HTML attributes
 - Common properties for every tag
 - Extra properties for specific tags
- Common properties:
 - id, className, innerHTML, style, title, size
- Extra properties for specific tags

Window

- Object, that represents the browsers window
- Holds information about window size, browsing history, ...
- Functions for interacting with user by pop up windows. Also allows us to manipulate the window (position, size, focus,...)
- Common functions:
 - alert, confirm, prompt, open, print, ...
 - Location (href,replace,hostname,pathname,protocol)

Global functions

- Useful global properties and functions:
 - infinity, NaN, undefined (lastnosti)
 - parseInt(), isNaN, eval(), escape(), ... (funkcije)