JavaScript

What is JavaScript?

- It is a **scripting language**
  - …so it is interpreted
- Purpose – to add interactivity to HTML pages
- It can be
  - embedded in HTML page
  - or in external file
- JavaScript is supported by all major browsers
- Has nothing to do with JAVA

- Development name "*Mocha*"
- First shipped:
  - in beta releases of Netscape Navigator 2.0 in September 1995
  - name "LiveScript"
- Named "JavaScript" in December 4
  - Because of joint release with Sun

History (2)

- **ECMAScript**
- **1997 ECMA-262 Edition 1**
- **1998 ECMA-262 Edition 2**
- **1999 ECMA-262 Edition 3**

- ECMA – European Computer Manufacturers Association

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JavaScript can…

- Change HTML contents – **Data**
  - document.write("<h1>" + name + "</h1>")
- Change CSS contents – **Style**
  - document.body.style.<>="…"
- Contact the server
  - Ajax

- React to events
  - onMouseClick
  - onLoad
  - …

How it works?

- **JS virtual machine is created then HTML page loads (re-loads)**
  - all variables has their values
  - all processes are working

What can a JavaScript Do?

- Examples
  - JavaScript can be used to validate data before sending it to server

  - …

- **Ajax** - asynchronous JavaScript and XML

Example

```
<html>
 <body>
  <script type="text/javascript">
  <!--
      document.write("Hello World!")
  // -->
  </script>
 </body>
</html>
```

Where to put JavaScript

- External

- Head section

- Body section

- Unlimited number of scripts can be placed in body and head section

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Variables

- Are case sensitive
- Must begin with a letter or the underscore
- Declare:
    - var <name> = *<value>*
    - <name> = *<value>*
- Assign
    - var lecture = "Internet technologies"
    - lecture = "Internet technologies"

Functions

- Defining

  function <name> (*<argument1>*,*<argument2>*,…)

  {

    <statements>

    [return <statement>]

  }

- Calling

  <name> (*<argument1>*,*<argument2>*,…)

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```
function manoFunkcija (a,b,c,d) {

    a = b + 2*c;

    return a;

}

-----------------------------------------

document.write(manoFunkcija(1,2,3,'labas'));
```

Notice!

- JavaScript is Case Sensitive
  - variables, functions, objects
- Break up a Code Line
  - You can break up a code line **within a text string** with a backslash:

document.write("Hello \

World!")

document.write \

("Hello World!")

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Notice!

- Insert special characters (like " ' ; &) with the backslash

  document.write ("You \& I sing \"Happy Birthday\"."

- Comments

  - // …
  - /* … */

JavaScript objects

- Array
- Boolean
- Date
- Math
- String
- RegExp

JS Array

myCars = new Array("Saab","Volvo","BMW");

myCars[0]="Opel";

document.write(myCars[1]);

JQuery

- http://jquery.com/

- JQuery User Interface
  - http://jqueryui.com/

jQuery example

- $("p.neat").addClass("ohmy").show("slow");

```
$("p").mouseover(
  function () {
    $(this).css("color","red");
  }
);
```

Debuging

- Žiauriai sunku buvo anksčiau... ☹
- Dabar:
  - Firefox Add-on "FireBug" ☺
  - Chrome
  - IE ?

JavaScript dialects

- ECMAScript
- JavaScript
  - Netscape, Mozilla
- JScript
  - Microsoft
- ActionScrip
  - Macromedia

HTML DOM

- Document

- Window
- Navigator
- Screen
- History
- Location

document.write('labas');

document.getElementById('a11').style.color = 'black';

Kas vyks šiandien per pratybas?

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