

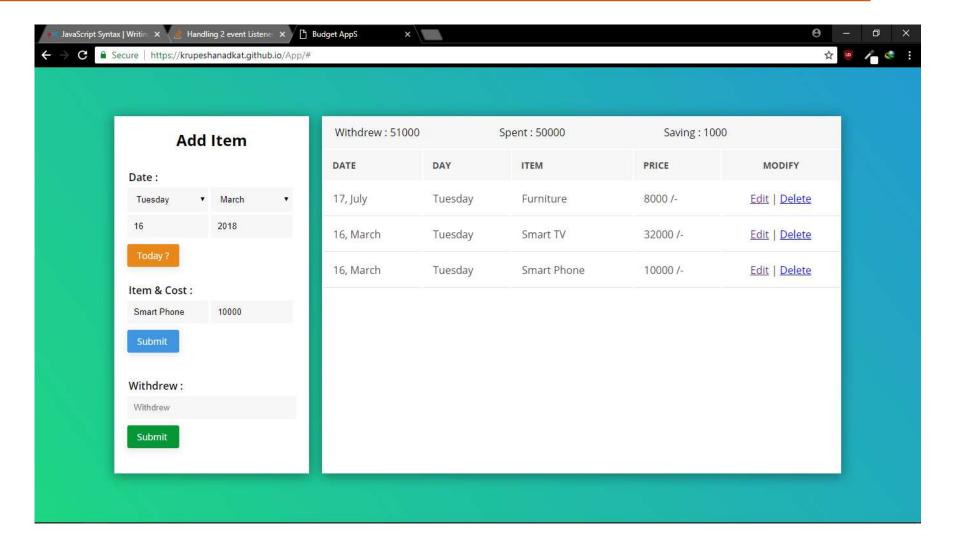
WEB TECHNOLOGIES

JavaScript - Basics

Vinay Joshi

Department of Computer Science and Engineering

Introduction to JavaScript





JavaScript - Basics Introduction to JavaScript



- Client Side Scripting Language
- Originally, LiveScript in NetScape Browser
- JavaScript programs are run by an interpreter that comes bundled with the user's web browser
- Now the language has evolved with additional Server Side Scripting capabilities (like in Node.JS)

JavaScript - Basics JavaScript Code



```
JavaScript can be embedded into documents by using the SCRIPT tag
```

It can also included from a external script file as follows:

```
<script type="text/javascript" src="myscript.js">
```

Comments in JavaScript

-Single line comment : //

-Multiline comments : /* ... */

JavaScript - Basics JavaScript Code - Debugging



Debugging JavaScript Errors

- When you're learning or using JavaScript, it's important to be able to track typing or other coding errors.

Browser	How to access JavaScript error messages		
	Select Safari → Preferences → Advanced → "Show Developer menu in menu bar." You may prefer to use the		
Apple Safari	Firebug Lite JavaScript module, which many people find easier to use.		
Google Chrome	Press Ctrl-Shift-J on a PC, or Command-Shift-J on a Mac.		
Mozilla Firefox	Press Ctrl-Shift-J on a PC, or Command-Shift-J on a Mac.		
Microsoft Internet Explorer & Edge	Press F12 to call up the DevTools Console.		
Opera	Select Tools → Advanced → Error Console.		

JavaScript Code – Using Semicolon



- JavaScript generally automatically inserts semicolons at the end of line

$$x += 10 => x += 10;$$

- However, when you wish to place more than one statement on a line, you must separate them with semicolons, like this:

$$x += 10; y -= 5; z = 0$$

- When a statement spans across multiple lines, JavaScript will not raise error if the next line has a valid symbol/literal/token

return a

+ b

JavaScript Code – Variable Declaration



- variable name starts with a-z, A-Z, \$, or _
- then a-z, A-Z, 0-9, \$, _
- Variable names are case-sensitive.

Count and count are two different variables

- Variable can be declared using
 - let (block scope)
 - var (function or global scope)
 - const (block scope)
 - use without declaring (global scope)

Keyword	Scope	Can be reassigned	Can be redeclared
var	Function	Yes	Yes
let	block	Yes	No
const	block	No	No

JavaScript - Basics JavaScript Code - Datatypes



- JS is loosely typed or dynamic typed
- Primitive Datatypes
 - number
 - string
 - boolean
 - null
 - undefined
- Non-Primitive Datatypes (used with new keyword)
 - Object

- Number

- Date

- String

Array

Boolean

JavaScript Code – Operators and Constructs



JavaScript has most of the operators we're used to from C/Java

- Arithmetic (+, -, *, /, %)
- Assignment (=, +=, -=, *=/=, %=, ++, --)
- Logical (&&, ||, !)
- Comparison (<, >, <=, >=, ==,!=,!==)

Note: + also does concatenation if one of the operands is string

- Constructs: if, else, while, for, switch, case



THANK YOU

Vinay Joshi

Department of Computer Science and Engineering

vinayj@pes.edu

+91 80 2672 6622