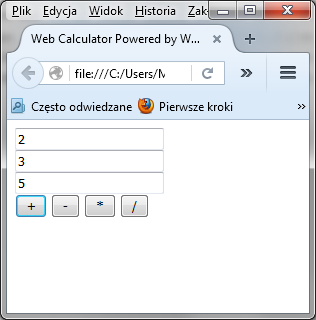
Akademia Marynarki Wojennej

|  |  |  |  |
| --- | --- | --- | --- |
| Imię i nazwisko | | Grupa | Data ćwiczenia |
| Maciej Maliszewski | | 125NCI\_A | 06.12.2015 r. |
| Tytuł ćwiczenia  **3** | **Wielowątkowość w aplikacjach WWW - Web Workers** | | |
| ***Programowanie równoległe i rozproszone***  ***dr inż.A.Zacniewski*** | | | |

Celem laboratorium było napisanie programu webowego który oblicza wybrany problem matematyczny.

Program który wykonałem jest prostym kalkulatorem ale pokazuje na czym polega idea programów typu Web Worker.



Kod programu

Main.html

<!DOCTYPE html>  
<html>  
<head>  
 <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />  
 <title>Web Calculator Powered by Web Worker | onlyWebPro.com</title>  
</head>  
<body>  
<form>  
 <input type="text" id="x" value="2" />  
 <br />  
 <input type="text" id="y" value="3" />  
 <br />  
 <input type="text" id="output" />  
 <br />  
 <input type="button" id="addButton" value="+" />  
 <input type="button" id="deductButton" value="-" />  
 <input type="button" id="multButton" value="\*" />  
 <input type="button" id="divideButton" value="/" />  
</form>  
  
<script>  
  
 /\* Check if Web Workers are supported \*/  
  
 **if** (window.Worker) {  
  
 **var** x,y,message;  
  
 /\* Create a new worker \*/  
 arithmeticWorker = **new** Worker("arithmetic.js");  
  
 /\*  
 Add a event listener to the worker, this will  
 be called when the worker posts a message.  
 \*/  
 arithmeticWorker.onmessage = **function** (event) {  
 document.getElementById("output").value = event.data;  
 };  
  
 /\* Register events for buttons \*/  
 document.getElementById("addButton").onclick = **function**() {  
 /\* Get the values to do operation on \*/  
 x = parseFloat(document.getElementById("x").value);  
 y = parseFloat(document.getElementById("y").value);  
 message = {  
 'op' : 'add',  
 'x' : x,  
 'y' : y  
 };  
  
 arithmeticWorker.postMessage(message);  
 }

document.getElementById("deductButton").onclick = **function**() {  
 /\* Get the values to do operation on \*/  
 x = parseFloat(document.getElementById("x").value);  
 y = parseFloat(document.getElementById("y").value);  
 message = {  
 'op' : 'deduct',  
 'x' : x,  
 'y' : y  
 };  
  
 arithmeticWorker.postMessage(message);  
 }  
  
 document.getElementById("multButton").onclick = **function**() {  
 /\* Get the values to do operation on \*/  
 x = parseFloat(document.getElementById("x").value);  
 y = parseFloat(document.getElementById("y").value);  
 message = {  
 'op' : 'mult',  
 'x' : x,  
 'y' : y  
 };  
 arithmeticWorker.postMessage(message);  
 }  
  
 document.getElementById("divideButton").onclick = **function**() {  
 /\* Get the values to do operation on \*/  
 x = parseFloat(document.getElementById("x").value);  
 y = parseFloat(document.getElementById("y").value);  
 message = {  
 'op' : 'divide',  
 'x' : x,  
 'y' : y  
 };  
  
 arithmeticWorker.postMessage(message);  
 }  
  
 } **else** {  
 alert("Not Supported");  
 };  
</script>  
</body>  
</html>

Arithetics.js

*/\*\*  
 \* Created by Magic on 2016-01-23.  
 \*/***function** addNumbers(x,y) {  
 **return** x + y;  
}  
  
**function** deductNumbers(x,y) {  
 **return** x - y;  
}

**function** mulNumbers(x,y) {  
 **return** x\*y;  
}  
  
**function** divideNumbers(x,y) {  
 **return** x/y;  
}  
  
**this**.onmessage = **function** (event) {  
 **var** data = event.data;  
  
 **switch**(data.op) {  
 **case** 'add':  
 postMessage(addNumbers(data.x, data.y));  
 **break**;  
 **case** 'deduct':  
 postMessage(deductNumbers(data.x, data.y));  
 **break**;  
 **case** 'mult':  
 postMessage(mulNumbers(data.x, data.y));  
 **break**;  
 **case** 'divide':  
 postMessage(divideNumbers(data.x, data.y));  
 **break**;  
 **default**:  
 postMessage("Something Wrong.");  
 }  
};