

```
C:\Users\Archie\Documents\Dropbox\Gibb\Semester 2\133 - Webapplikation realisieren\taschenrechner\rechner.js    Dienstag, 26. Februar 2013 07:55

"use strict"
var COOKIE_NAME = 'calc-result'
var LOAD_TIME = new Date()
/* Cookie Firefox (via Firefox Cookies view):
  Name: calc-result
  Content: 0.037391194276
  Host:
  Path:
  /C:/Users/Archie/Documents/Dropbox/Gibb/Semester%202/133%20-%20Webapplikation%20realisieren/taschenrechner/
  Send For: Any type of connection
  Expires: Samstag, 8. Februar 2014 16:13:14

Cookie Internet Explorer
Location according to Windows Explorer:
C:\Users\Archie\AppData\Local\Microsoft\Windows\Temporary Internet Files\Taschrenrechner/
Location according to TextEditor:
C:\Users\Archie\AppData\Roaming\Microsoft\Windows\Cookies\UIWZH03N.txt
Inhalt:
calc-result
0.037391194276
```

```
~~local~~C:/Users/Archie/Documents/Dropbox/Gibb/Semester%202/133%20-%20Webapplikation%20realisieren/taschenrechner/
1088
1265827584
30353346
3543310627
30279920
*

*/
//Cookie functions taken from (and then modified): http://www.w3schools.com/js/js_cookies.asp
```

```
function setCookie(cookie_name,value,daysUntilExpire)
{
    var expireDate=new Date();
    expireDate.setDate(expireDate.getDate() + daysUntilExpire);
    var c_value=encodeURIComponent(value) + ((daysUntilExpire===null) ? "" : "; expires="+
    expireDate.toUTCString());
    document.cookie=cookie_name + "=" + c_value;
}
```

```
function getCookie(cookie_name)
{
    var i, key_value, cookies = document.cookie.split(";");
    for (i = 0; i < cookies.length; i++) {
        key_value = cookies[i].split("=");
        if (key_value[0].trim() === cookie_name) return decodeURIComponent(key_value[1])
    }
}
```

```
function loadResult()
{
    var result=getCookie(COOKIE_NAME);
    if (result!=null && result!="")
    {
```

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```
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    setValue(result)
}

//We update the clock and the time-passed display 5 times a second
setInterval(function() {
    window.document.Rechner.Date.value = new Date().toLocaleString()
    // Subtracking 3600*1000ms = 1 Hour because of GMT offset (I guess....)
    window.document.Rechner.Visited.value = new Date(new Date() - LOAD_TIME*3600*1000).
    toTimeString().slice(0,8)
}, 200)
}

function saveResult()
{
    result=getValue()
    if (result!=null && result!="")
    {
        setCookie(COOKIE_NAME,result,365);
    }
}

//End Cookie Functions
//Save and load the cookie onunload respectively onload
window.onbeforeunload = saveResult
window.onload = loadResult

//Firefox: 100% Trigger this event
//Chromium: No backspace/delete (and other special keys I guess)
//IE: Like Chrome or sometimes "No Keypress event ..." (The reason is unkown to me)
window.onkeypress=handleKeyPressEvent

//Firefox: 100% Trigger this event
//Chromium/IE: Backspace/delete (etc) also trigger this event
//Backspace always goes back one page except if there is no history.
window.onkeyup=handleKeyUp
```

```
function setValue(value) {
    window.document.Rechner.Display.value = value
}
```

```
function getValue() {
    return window.document.Rechner.Display.value
}
```

```
function setError(error) {
    setValue(error.message+"!"+ getValue())
}
```

```
function validate(input) {
    return /^[0-9-+*\/.()]+$/.test(input)
}
```

```
function calculateResult() {
    var x = 0
    if (validate(getValue())) {
        try {
            //If there is a syntax error (e.g. 2**4 or 2+2 ...)
            x = eval(getValue())
        }
```

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```
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        setValue(round(x))
    } catch (e) {
        // Tell the user it is a syntax error
        setError(e)
    }
} else {
    setValue('')
}
}

function round(num) {
    return Number((num).toFixed(12))
}

function add (chr) {
    setValue(getValue() + chr)
}

function handleKeyPressEvent(e) {

    if (e.target.name !== "Display")
    {
        if (e.charCode >= 40 ) //40 = '('
        {
            add(String.fromCharCode(e.charCode))
        }
    }
}

function handleKeyUp(e) {
    //console.log(e.target)
    if (e.target.name !== "Display")
    {
        //For Firefox, this could be in handleKeyPressEvent
        switch(e.keyCode) {
            case 8: //'backspace'
                setValue(getValue().slice(0,-1))
                break
            case 13: // enter
                calculateResult()
                break
            case 46: // delete
                setValue(getValue().slice(1))
                break
        }
    }
}

function degreeToRadian(num) {
    return Math.PI/180 * num
}

function specials (func) {
    var x = 0
    try { //If there is an error (e.g. 2**4 or 2+2 ...)
        if (validate(x)) {
            x = eval(getValue())
            if (func === "sqrt") {
```

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```
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                setValue(round(Math.sqrt(x)))
            }
            if (func === "pow") {
                setValue(round(x * x))
            }
            if (func === "ln") {
                setValue(round(Math.log(x)))
            }
            if (func === "sin") {
                setValue(round(Math.sin(degreeToRadian(x))))
            }
            if (func === "cos") {
                setValue(round(Math.cos(degreeToRadian(x))))
            }
            if (func === "tan") {
                setValue(round(Math.tan(degreeToRadian(x))))
            }
            if (func === "2^x") {
                setValue(round(Math.pow(2,x)))
            }
        } else {
            setValue(0)
        }
    } catch (e) {
        // Tell the user it is an error
        setError(e)
    }
}

}
```

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