

JavaScript (book: JS Definitive Guide)

JS References

Cara mudah belajar JS

- Core Ref
- Client-Side Ref → browser environment
- Pay attention to argument, method
- Practice as long its needed → relatif dgn kreativitas masing-masing

Simple ex

```
/**
 * date info
 */
ddate1 = new Date();
//document.write(ddate1+"<br>");
ddate2 = ddate1.getFullYear()+" "+ddate1.getMonth()+" "+ddate1.getDate();
document.write("Hari ini "+ddate2+"<br>");

//misal 21 Maret libur
libur = new Date(2012,2,21);
libur2 = libur.getFullYear()+" "+libur.getMonth()+" "+libur.getDate();
if (ddate2==libur2){
document.write("Libur Nasional<br>");
}
```

Hari ini 2012 2 21
Libur Nasional

```

/**
 * date info
 */
ddate1 = new Date();
//document.write(ddate1+"<br>");
ddate2 = ddate1.getFullYear()+" "+ddate1.getMonth()+" "+ddate1.getDate();
document.write("<h3>Hari ini <font color='red'>" + ddate2 + "</font></h3><br>");

//misal 21 Maret libur
libur = new Date(2012,2,21);
libur2 = libur.getFullYear()+" "+libur.getMonth()+" "+libur.getDate();
if (ddate2==libur2){
document.write("<h3><font color='green'>Libur Nasional</h3><br>");
}

```

Hari ini 2012 2 21

Libur Nasional

```

/**
 * date info
 */
ddate1 = new Date();
//document.write(ddate1+"<br>");
ddate2 = ddate1.getFullYear()+" "+ddate1.getMonth()+" "+ddate1.getDate();
document.write("Hari ini "+ddate2+"<br>");

//libur dalam array
var hari_libur = [
    [new Date(2012,2,21), "Libur hari rabu"],
    [new Date(2012,2,22), "Libur hari Kamis"]
];

for (i=0;i<hari_libur.length;i++)
{
    var tgl_libur = hari_libur[i];
    for (j=0;j<tgl_libur.length;j++){
        var tgl = tgl_libur[j];
    }
    var liburan = tgl.getFullYear()+" "+tgl.getMonth()+" "+tgl.getDate()
    if (ddate2==liburan){
        document.write("Hari ini libur Nasional,"+tgl_libur[1]+"<br>");
    }
}

```

```

Hari ini 2012 2 21
Hari ini libur Nasional,Libur hari rabu

```

```
<head>
<script type="text/javascript">
function upCase() {
var x=document.getElementById("fname").value
document.getElementById("fname").value=x.toUpperCase()
}
</script>
<style>
.class1{background-color: orange;}
</style>
</head>
<body>
Input name:
<input type="text" id="fname" onblur="upCase()" class="class1">
</body>
```

Input name: DEWI

Ex

```
<head>
  <style>
    .class1{background-color: orange;}
  </style>
</head>
<body>
<script type="text/javascript">
  todaynow = new Date(); //get day and time
  document.write("<p> <font class='class1'>" + todaynow + "</font></p>");
  t = "am";
  h = todaynow.getHours(); //date function
  if (h > 12) {
    h -= 12;
    t = "pm"
  }
  else if (h == 0) {
    h = 12;
  }
  document.write("<p> <font class='class1'>" + h + ":" +
    todaynow.getMinutes() + ":" +
    todaynow.getSeconds() + " " +
    t + "</font></p>");
</script>

</body>
```

Tue Mar 22 2011 05:27:23 GMT+0700 (WIT)

5:27:23 am

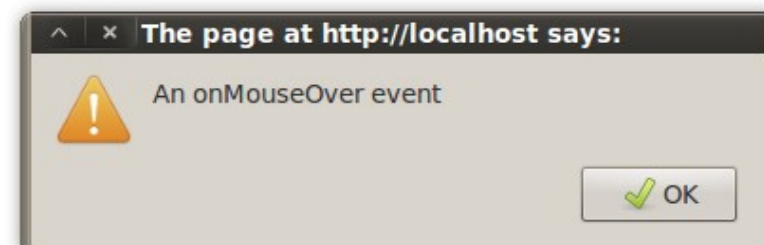
```
<head>
<script type="text/javascript">
function val() {
//
}
</script>
<style>
.class1{background-color: orange;}
</style>
</head>
<body>
<form onsubmit="return val()" name="form1" action="on.html">
Input name:|
<input type="text" id="fname" class="class1"><br>
<button type="submit" name="sub">send</button>
</form>
</body>
```

Input name: Sumami

send

```
<head>
<script type="text/javascript">
</script>
  <style>
    .class1{background-color: orange;}
    .class2{background-color: yellow;}
  </style>
</head>
<body>
  <a href="http://www.w3schools.com"
onmouseover="alert('An onMouseOver event');return false">
    <font class="class1" size="7">Click Me!</font>
  </a>
</body>
```

Click Me!



```
<body>
<script type="text/javascript">
    todaynow = new Date(); // date and time today
    newYear = new Date(2012,0,1); //get defin date at 12 am
    s = Math.round((todaynow-newYear)/1000); // pembulatan
    d = Math.floor(s / 86400); //measure
    s -= d*86400;
    h = Math.floor(s / 3600);
    s -= h*3600;
    m = Math.floor(s / 60);
    s -= m*60;
    document.write(d + " days, " +
        h + " hours, " +
        m + " minutes, and " +
        s + " seconds."); //rest or distance to new ye
</script>
```

-285 days, 5 hours, 32 minutes, and 51 seconds... to 2012 New Year

```
</head>
<script language="JavaScript">
function msg(){
var now = new Date();
var s = now.getSeconds(); // or minutes
var Quote = [ //array msg
    "Tahukah anda Newton di masa kecilnya dianggap idiot oleh gurunya dia dididik khusus oleh ibunya sendiri",
    "Einstein awalnya hanya seorang pekerja rendahan di bidang elektronik yang gemar menulis di majalah sains",
    "Ibnu Sina atau dikenal juga dengan nama Avisenna biasa belajar hanya berteman air putih untuk menghilangkan kantuknya"
];
var i = Quote.length;
document.write(Quote[s % i]);
setTimeout("msg()",1000); //to make a simple loop
}
</script>
<body>
<script>msg();</script>
```

```

//penanggalan jawa
|
todaynow = new Date();
day = todaynow.getDay();
date = todaynow.getDate();
month = todaynow.getMonth();
year = todaynow.getFullYear();
var dday;var mmonth;
var pasaran = ["Pahing","Pon","Wage","Kliwon","Legi"];

switch(day){
case 0:dday = "Sunday";break;case 1:dday = "Monday";break;
case 2:dday = "Tuesday";break;case 3:dday = "Wednesday";break;
case 4:dday = "Thursday";break;case 5:dday = "Friday";break;
case 6:dday = "Saturday";
}

switch(month){
case 0:mmonth = "January";break;case 1:mmonth = "February";break;
case 2:mmonth = "March";break;case 3:mmonth = "April";break;
case 4:mmonth = "May";break;case 5:mmonth = "June";break;
case 6:mmonth = "July";break;case 7:mmonth = "August";break;
case 8:mmonth = "September";break;case 9:mmonth = "October";break;
case 10:mmonth = "November";break;case 11:mmonth = "December";
}

var pasar;var i;
idate = new Date(2010,3,4);
s = Math.round((todaynow-idate)/1000);
d = Math.floor(s / 86400);
i = d % 5;

document.write(dday+" "+pasaran[i]+", "+mmonth+" "+date+" "+year);

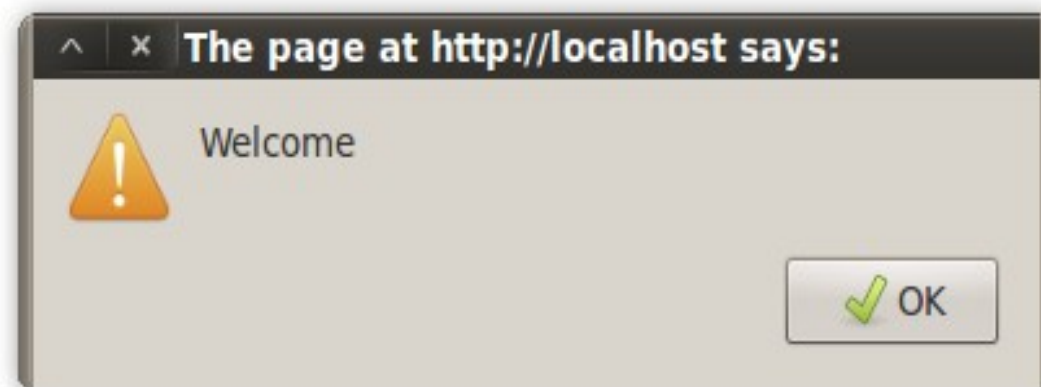
```

Wednesday Wage, March 21 2012

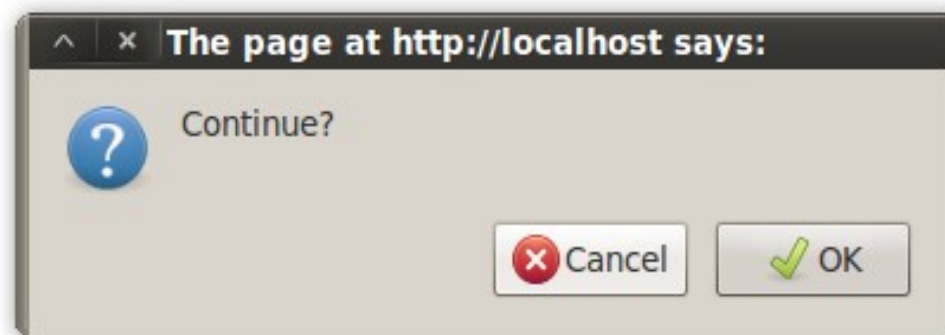
JavaScript Popup Boxes

- Alert box
 - User will have to click "OK" to proceed
 - `alert("sometext")`
- Confirm box
 - User will have to click either "OK" or "Cancel" to proceed
 - `confirm("sometext")`
- Prompt box
 - User will have to click either "OK" or "Cancel" to proceed after entering an input value
 - `prompt("sometext","defaultvalue")`

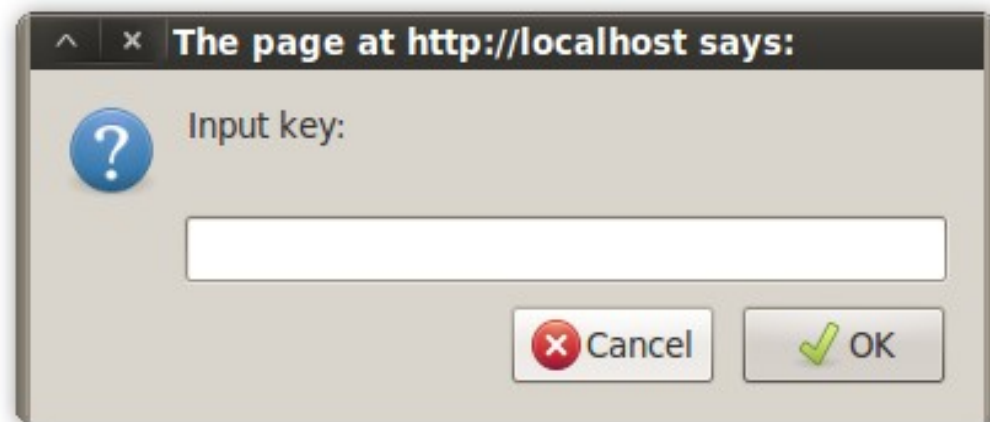
```
<head>
  <script type="text/javascript">
    function display() {
      alert("Welcome")
    }
  </script>
</head>
<body onload="display()">
```



```
<head>
  <script type="text/javascript">
    function display() {
      confirm("Continue?")
    }
  </script>
</head>
<body onload="display()">
```



```
<head>
  <script type="text/javascript">
    function display() {
      prompt("Input key:")
    }
  </script>
</head>
<body onload="display()">
```



Event Driven

- HTML contain an embedded graphical user interfaces (GUI), so client side Js uses the event driven programming model
- A kind of **interactivity client side Js**, dynamic
- **Event handler**
- Few of them: onclick, onmousedown, onmouseup, etc...

```
<INPUT type="checkbox" name="option" value="choice1" onclick="choice1=this.checked;">
```

Choice 1

- Every element on a web page has certain events which can trigger invocation of event handlers
- Attributes are inserted into HTML tags to define events and event handlers
- Examples of events
 - A mouse click
 - A web page or an image loading
 - Mousing over a hot spot on the web page
 - Selecting an input box in an HTML form
 - Submitting an HTML form
 - A keystroke

Event

- onabort - Loading of an image is interrupted
- onblur - An element loses focus
- onchange - The content of a field changes
- onclick - Mouse clicks an object
- ondblclick - Mouse double-clicks an object
- onerror - An error occurs when loading a document or an image
- onfocus - An element gets focus
- onkeydown - A keyboard key is pressed

- onkeypress - A keyboard key is pressed or held down
- onkeyup - A keyboard key is released
- onload - A page or an image is finished loading
- onmousedown - A mouse button is pressed
- onmousemove - The mouse is moved
- onmouseout - The mouse is moved off an element
- onmouseover - The mouse is moved over an element
- onmouseup - A mouse button is released

- **onreset** - The reset button is clicked
- **onresize** - A window or frame is resized
- **onselect** - Text is selected
- **onsubmit** - The submit button is clicked
- **onunload** - The user exits the page

onload & onUnload

- The onload and onUnload events are triggered when the user enters or leaves the page
- The onload event is often used to check the visitor's browser type and browser version, and load the proper version of the web page based on the information
- Both the onload and onUnload events are also often used to deal with cookies that should be set when a user enters or leaves a page
- Its event on "Body" object

onFocus, onBlur, onChange

- The onFocus, onBlur and onChange events are often used in combination with validation of form fields.
- Example: The checkEmail() function will be called whenever the user changes the content of the field:

```
<input type="text" size="30" id="email"  
onchange="checkEmail()">;
```

- The onSubmit event is used to validate all form fields before submitting it.
- Example: The checkForm() function will be called when the user clicks the submit button in the form. If the field values are not accepted, the submit should be canceled. The function checkForm() returns either true or false. If it returns true the form will be submitted, otherwise the submit will be cancelled.

- onMouseOver and onMouseOut are often used to create "animated" buttons.
- Below is an example of an onMouseOver event. An alert box appears when an onMouseOver event is detected:

```
<a href="http://www.w3schools.com"  
onmouseover="alert('An onMouseOver  
event');return false"> </a>
```

Object

- 3 different ways
 - Create a direct instance of an object by using built-in constructor for the Object class
 - Create a template (Constructor) first and then create an instance of an object from it
 - Create object instance as Hash Literal

Creating a Direct Instance of a JavaScript Object

- By invoking the built-in constructor for the Object class
 - `personObj=new Object(); // Initially empty`
- Add properties to it
 - `personObj.firstname="John";`
`personObj.age=50;`
- Add an anonymous function to the personObj
 - `personObj.Age=function()`
`{alert("This age is " + this.age);}`
`//You can call then tellYourage function as`
`following`
`personObj.Age();`

- Add a pre-defined function

```
function Age(){  
    alert("The age is" + this.age);  
}  
personObj.Age=Age;
```

- Note that the following two lines of code are doing completely different things

```
// Set property with a function  
personObj.Age=Age;  
  
// Set property with returned value of the  
function  
personObj.Age=Age();
```

Creating a template of a JavaScript Object

- The template defines the structure of a JavaScript object in the form of a function
- You can think of the template as a constructor

```
function  
    Person(firstname,lastname,age,eyecolor) {  
    this.firstname=firstname;  
    this.lastname=lastname;  
    this.age=age;  
    this.Age=function(){  
        alert("This age is " + this.age);  
    }  
}
```

- Once you have the template, you can create new instances of the object

```
myFather=new  
    Person("John","Doe",50,"blue");  
myMother=new  
    Person("Sally","Rally",48,"green");
```

- You can add new properties and functions to new objects

```
myFather.newField = "some data";  
myFather.myfunction = function() {  
    alert(this["fullName"] + " is " + this.age);  
}
```

Creating JavaScript Object as a Hash Literal

- Create personObj JavaScript object

```
var personObj = {  
  firstname: "John",  
  lastname: "Doe",  
  age: 50,  
  tellYourage: function () {  
    alert("The age is " + this.age );  
  }  
  tellSomething: function(something) {  
    alert(something);  
  }  
}
```

- Its composite datatypes, aggregate multiple values into single unit
- Unordered collection of properties
- `var none = {} //empty`

```
var dot = {x:1,y:7};
```

```
var Jono = {  
  "name":"Jono",  
  "age":"17",  
  "occupation":"student",  
  "phone":"62 55555",  
  "email":"jono@jono.com",  
};
```