29. JavaScript Cookies

A cookie is often used to identify a user.

29.1. What is a Cookie?

A cookie is a variable that is stored on the visitor's computer. Each time the same computer requests a page with a browser, it will send the cookie too. With JavaScript, you can both create and retrieve cookie values.

Examples of cookies:

- Name cookie - The first time a visitor arrives to your web page, he or she must fill in her/his name. The name is then stored in a cookie. Next time the visitor arrives at your page, he or she could get a welcome message like "Welcome John Doe!" The name is retrieved from the stored cookie
- Date cookie - The first time a visitor arrives to your web page, the current date is stored in a cookie. Next time the visitor arrives at your page, he or she could get a message like "Your last visit was on Tuesday August 11, 2005!" The date is retrieved from the stored cookie

29.2. Create and Store a Cookie

In this example we will create a cookie that stores the name of a visitor. The first time a visitor arrives to the web page, he or she will be asked to fill in her/his name. The name is then stored in a cookie. The next time the visitor arrives at the same page, he or she will get welcome message.

First, we create a function that stores the name of the visitor in a cookie variable:

```
function setCookie(c_name,value,exdays)
{
var exdate=new Date();
exdate.setDate(exdate.getDate() + exdays);
var c_value=escape(value) + ((exdays==null) ? "" :
"; expires="+exdate.toUTCString());
document.cookie=c_name + "=" + c_value;
}
```

The parameters of the function above hold the name of the cookie, the value of the cookie, and the number of days until the cookie expires.

In the function above we first convert the number of days to a valid date, then we add the number of days until the cookie should expire. After that we store the cookie name, cookie value and the expiration date in the document.cookie object.

29.3. Get a Cookie Value

Then, we create another function that returns the value of a specified cookie:

```
function getCookie(c_name)
{
var c_value = document.cookie;
var c_start = c_value.indexOf(" " + c_name + "=");
if (c_start == -1)
  {
  c_start = c_value.indexOf(c_name + "=");
  }
if (c_start == -1)
  {
  c_value = null;
  }
else
  {
  c_start = c_value.indexOf("=", c_start) + 1;
  var c_end = c_value.indexOf(";", c_start);
  if (c_end == -1)
  {
c_end = c_value.length;
}
c_value = unescape(c_value.substring(c_start,c_end));
}
return c_value;
}
```

The code above uses the indexOf() method to search for a cookie name inside the document's cookie string.

The first indexOf() method will return the position where the cookie is found. The " " + and +"=" is added so that the method don't find names or values *containing* the name.

If the method returns -1, the cookie may still exist at the very beginning of the cookie string. To eliminate this, another search is added, this time without the " " +.

29.4. Check a Cookie Value

Last, we create the function that displays a welcome message if the cookie is set, and if the cookie is not set it will display a prompt box, asking for the name of the user, and stores the username cookie for 365 days, by calling the setCookie function:

```
function checkCookie()
{
var username=getCookie("username");
```

```
    if (username!=null && username!="")
    {
    alert("Welcome again " + username);
    }
  else
    {
    username=prompt("Please enter your name:","");
    if (username!=null && username!="")
      {
      setCookie("username",username,365);
      }
    }
  }
```

All together now:

Example

```
  <!DOCTYPE html>
  <html>
  <head>
  <script>
  function getCookie(c_name)
  {
  var c_value = document.cookie;
  var c_start = c_value.indexOf(" " + c_name + "=");
  if (c_start == -1)
  {
  c_start = c_value.indexOf(c_name + "=");
  }
  if (c_start == -1)
  {
  c_value = null;
  }
  else
  {
  c_start = c_value.indexOf("=", c_start) + 1;
  var c_end = c_value.indexOf(";", c_start);
  if (c_end == -1)
  {
  c_end = c_value.length;
  }
  c_value =
  unescape(c_value.substring(c_start,c_end));
  }
```

```
return c_value;
}

function setCookie(c_name,value,exdays)
{
var exdate=new Date();
exdate.setDate(exdate.getDate() + exdays);
var c_value=escape(value) + ((exdays==null) ? "" :
"; expires="+exdate.toUTCString());
document.cookie=c_name + "=" + c_value;
}

function checkCookie()
{
var username=getCookie("username");
if (username!=null && username!="")
  {
  alert("Welcome again " + username);
  }
else
  {
  username=prompt("Please enter your name:","");
  if (username!=null && username!="")
    {
    setCookie("username",username,365);
    }
  }
}
</script>
</head>
<body onload="checkCookie()">
</body>
</html>
```

The example above runs the checkCookie() function when the page loads.