Communication

Introduction

❖ Using the Communication API we can communicate between separated windows, tabs and iframes.

The PostMessage API

❖ Calling the `postMessage` on the object that represents the other window will send the message to that other window.

The PostMessage API

The second argument specifies the origin the otherWindow must be for the event to be dispatched. It can be either a literal string "*" (which means no preference) or a URI. When the event is dispatched the scheme, the hostname and the port of the other window must match the ones of the otherWindow. Otherwise, the event will not be dispatched.

```
otherWindow.postMessage(message, targetOrigin);
```

This is the string data we want to send over to the other window.

This is the reference to the other window. It can be a reference obtained using the contentWindow property of an iframe element, the object returned by window.open, or the object we get when referring the window.frames array either using a name or a numeric index.

Event Listener

❖ The other window/tab/iframe should add an event listener for getting the message.

This is the function we want to register.

```
window.addEventListener("message", receiveMessage, false);
```

This is a string representing the specific event type to listen to.

Specifying whether the event handling method will function as a capture meaning that all events of this type will be dispatched to the registered handling method before been dispatched to other handler beneath the specified handing method.

Event Listener

❖ The event listener method receives an argument that includes the `data`, the `origin` and the `source` properties.

❖ The `data` is the received message, the `origin` describes the window/tab/iframe from which the message was received and the `source` refers to the window object that sent the message.

Sample

```
<input type="text" id="msg"/>
<button id="send">Send</button>
<script>
document.getElementById("send").addEventListener("click",send_msg,true);
function send_msg()
{
    var text=document.getElementById("msg").value;
    document.getElementById("inner").
        contentWindow.postMessage(text,"http://www.abelski.com/inner.html");
}
</script>
<h2>the iframe</h2>
<iframe id="inner" src="inner.html"></iframe>
```

Sample

```
<br>message data:<div id="received_msg"></div>
<br>message origin:<div id="src"></div>
<script>
function handlingMsg(e)
{
    document.getElementById('src').innerHTML = e.origin;
    if(e.origin == "http://www.abelski.com/*")
    {
        document.getElementById('received_msg').innerHTML = e.data;
    }
}
addEventListener("message",handlingMsg,true);
document.getElementById('received_msg').innerHTML="...";
document.getElementById('src').innerHTML="...";
</script>
```

inner.html

Sample