

Javascript by Example

Go to <http://www.wiscons.com/ecc-crluncover/> to find the following programs.

Load 1. index7.html - view source

- **notice structure**
 - <head>**
 - includes javascript**
 - script includes code executed immediately as well as code in functions (not executed until called). Notice code executed immediately does not make any reference to html elements that may have not yet been loaded.**
 - <body>**
 - includes an onLoad event**
 - includes a div for picture**
 - includes a div for "answer"**
 - includes 16 divs, each with an onMouseDown event**
- **Lets go back to the code that's executed immediately and walk-through**
 - Determine browser type**
 - set up mousemove event handler depending on browser type**
 - declare (and initialize global variables)**
- **That's it! Javascript is done! nothing more happens UNTIL a handled event occurs.**
- **Lets assume the first event is the onLoad event**
 - **the onLoad event handler (setup) is called.**
 - **sets 16 elements of "used" array to zero.**
 - **sets up 16 elements of "pairs" array to 8 numbers. Each number shows up in two places.**
 - **process 16 divs.**
 - insert image**

**calculate each position in terms of row (0..3) and column (0..3)
calculate and place each div at correct pixel position
set width and height as a function of browser-type.**

- **That's it! Javascript is done! nothing more happens UNTIL a handled event occurs.**
- **Lets assume next event is mousemove**
 - **Depending on browser, one of the two handlers is called. Each one set global Xpos & Ypos and calls the same routine (genMoveHandler)**
 - **genMoveHandler calculates an x (row) and y (column) and determines which of the 16 divs the mouse is over**
 - **then, as long as we have moved from one div to another, and as long as we are in mode 1, the image is flipped.**
 - **Notice that if an old image was already flipped, we flip it back.**
- **That's it! Javascript is done! nothing more happens UNTIL a handled event occurs.**
- **Lets assume next event is a mousedown**
 - **clicked(j) is called where j is the div number**
 - **if we're in mode 1 (i.e. flipping as we hover) clicked() just changes the mode to 2 and remembers the image number we clicked upon. If we're in mode 2, clicked() checks to see if the image we clicked has a matching pair with the image remembered. If so, hide both images. Whether the correct image is selected or not the mode is set back to 1. Note FF works differently than IE when a wrong image is selected.**
- **That's it! Javascript is done! nothing more happens UNTIL a handled event occurs.**

load 2 index8.html - view source

- **This is the same as above except clicked() keeps count of how many correct matches have been made. When the correct count is 8 we are done.**

load 3 index9.html - view source

- ***This is the same as above except***
 - A) we added a new mode 3.***
 - B) genMoveHandler has an argument to include at beginning of status line***
- ***Changed clicked() so it zero's fadeCnt and calls fader() if a matching pair has been selected.***
- ***fader says GREAT if game over (never executed), if not over it checks if we're done fading, if not done it moves the first image up and the second image down. Then it sets a Timeout to call itself in one tenth of a second. 2 seconds later, when we're done fading, fader sets mode back to 1 and it hides the two images and it checks to see if it should say GREAT.***

load 4 index10.html - view source

- ***This is the same as above except fading has limits and it'll terminate before 2 seconds is up if it can.***

load 5 index11.html - view source

- ***This is the same as above except***
 - a) fader removes the superfluous test of corCnt.***
 - b) clicked() calculates four random velocities for the celebration movement***
 - c) fader() uses the individual velocities for the movement***

load 6 index12.html - view source

- ***This is the same as above except***
 - a) finally fixed FF operation where incorrect second selection did not show new selection***
 - b) images are shown for 3 seconds at startup***

c) celebrations go in opposite direction

load 7 index13.html - view source

- ***This is the same as above except its "harder" to play since it doesn't show image when hovering***
 - ***This is done by 1st moving the actual flipping of images out of genMoveHandler into a function called flipimages(i).***
 - ***Then NOT calling flipimage from genMoveHandler() but instead calling it upon image being clicked***
 - ***flipimage is also called in clicked() during mode==2 if the second image is incorrect***

load 8 index14.html - view source

- ***This is the same as above except a form is added to page allowing the pre-start timing to be controlled and to allow "harder" to be turned on & off***

load 9 index15.html - view source

- ***This is the same as above except 16 divs no longer specify an onMouseDown event handler. Instead, there is a MouseDown handler for the entire page.***

load 10 index16.html - view source

- ***This is the early pages (before celebration movements) except you can use the keyboard as well as the mouse.***