UI in JavaScript

Bc. Martin Jurenka, 2013

About JS

- interpreted computer programming language
- part of web browsers
  - allow client-side scripts to interact with the user
  - control the browser
  - communicate asynchronously
  - alter displayed document content
- C syntax, Java naming convention
- design principles from Self, Scheme

About JS

- * 1995 as LiveScript, Netscape
- dynamic typing
- almost entirely object-based (associative arrays)
- run-time evaluation

JS use in web pages

- interaction with DOM (Document Object Model)
- enhancing user experience
- AJAX calls
- animations

JS Frameworks

- jQuery (jQueryUI)
- ExtJS
- YUI
- MooTools
- Prototype
- Dojo Toolkit

jQuery

- 65% of top 10k pages
- multitude of browsers supported
- fast and small
- reworked selectors from original JS

  - ```js
    var fieldNameElement = document.getElementById( "field_name");

      while (fieldNameElement.childNodes.length >=  1) {
        fieldNameElement.removeChild(fieldNameElement.firstChild);
      }
    fieldNameElement.appendChild(fieldNameElement.ownerDocument.createTextNode
    (fieldName));
    ```
  - ```js
    $("div#field_name").text(fieldName);
    ```

- lots of plugins

Ext JS

● business-grade web app development

● paid

● http://docs.sencha.com/extjs/4.2.1/#!/example

YUI
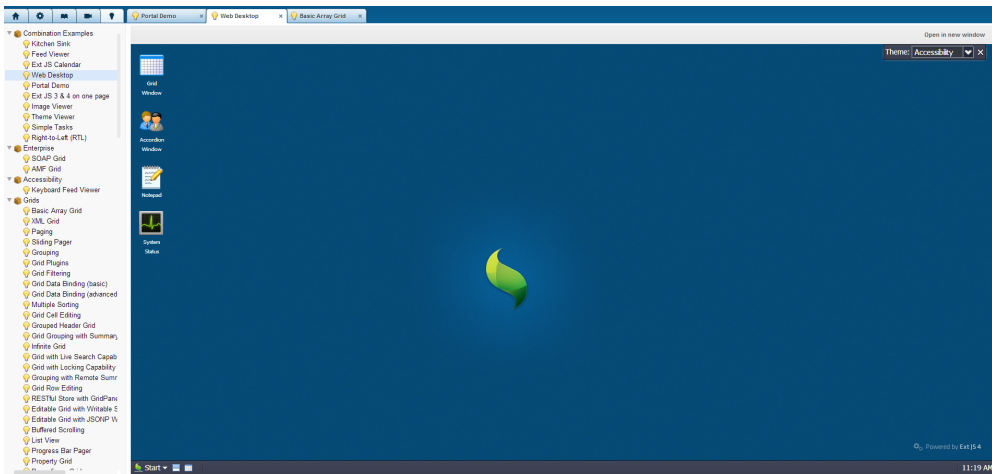
- used and developed by YAHOO

- http://yuilibrary.com/yui/docs/app/app-todo.html
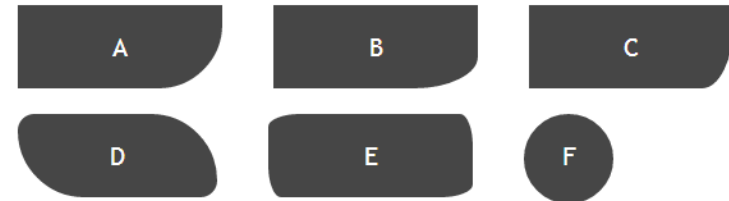
CSS3 in UI

- enhanced CSS, still in development
- Chromium has widest support
- many new features, notably rounded-border, text-shadow, :before and :after property
- more style options

jQuery UI

- set of UI interactions, effects, widgets and themes for jQuery
- draggable
- droppable
- resizable
- selectable
- sortable
- etc.

jQuery widgets

- datepicker
- tabs
- tooltip
- dialog
- autocomplete
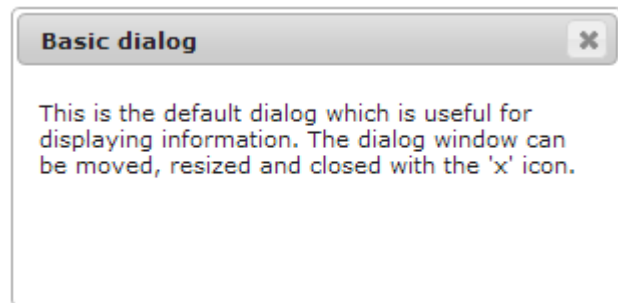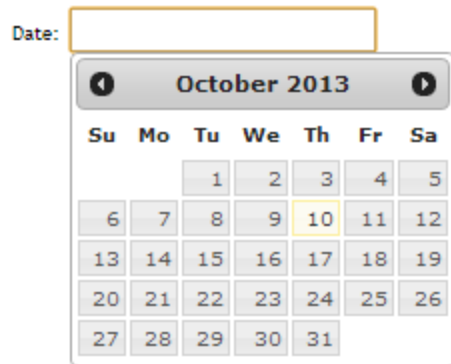
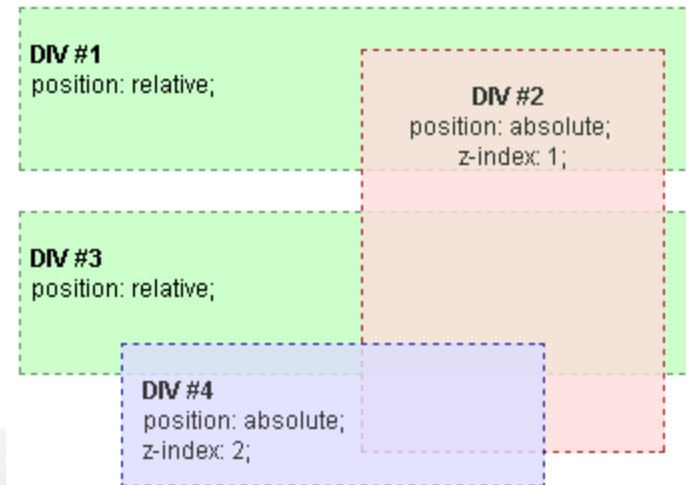# UI web elements

div

span

table

button

form

image

list - ol, ul

div, span

- most used elements in creating UI
- defines division or a section in HTML document
- groups elements to format them w/ CSS

DIV #1
position: relative;

DIV #2
position: absolute;
z-index: 1;

DIV #3
position: relative;

DIV #4
position: absolute;
z-index: 2;

form

- basic user data input
- validation on server side
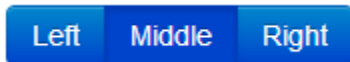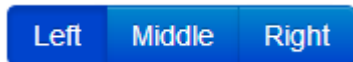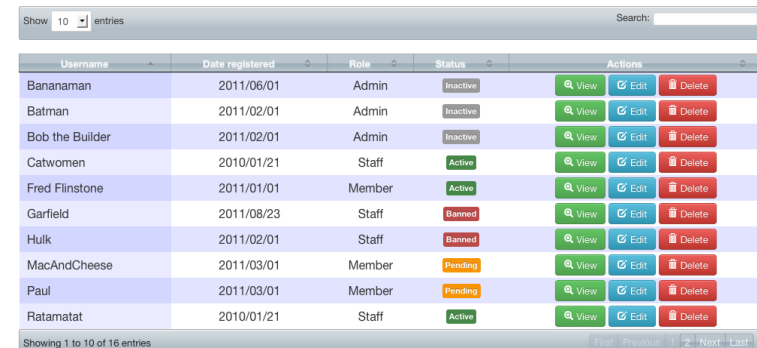- extended with JS

button

- used for submitting and resetting forms
- JS allowed to bind actions
- now indicator of action user wants to perform
- JS allows creating new control style buttons
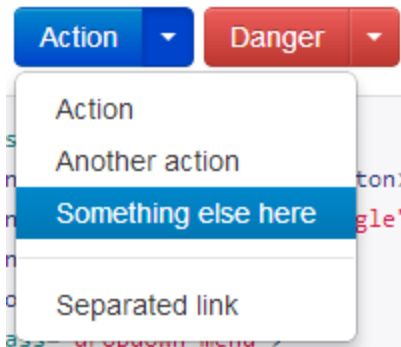
table

- used for displaying data in grid
- JS enhancement for regular table - datatables (jQuery)
- add plugins (jEditable)
- instant data manipulation
- filter, etc.

Show 10 entries				Search:	
Username	**Date registered**	**Role**	**Status**	**Actions**	
Bananaman	2011/06/01	Admin	Inactive	View Edit Delete	
Batman	2011/02/01	Admin	Inactive	View Edit Delete	
Bob the Builder	2011/02/01	Admin	Inactive	View Edit Delete	
Catwomen	2010/01/21	Staff	Active	View Edit Delete	
Fred Flinstone	2011/01/01	Member	Active	View Edit Delete	
Garfield	2011/08/23	Staff	Banned	View Edit Delete	
Hulk	2011/02/01	Staff	Banned	View Edit Delete	
MacAndCheese	2011/03/01	Member	Pending	View Edit Delete	
Paul	2011/03/01	Member	Pending	View Edit Delete	
Ratamatat	2010/01/21	Staff	Active	View Edit Delete	
Showing 1 to 10 of 16 entries				First Previous 1 2 Next Last	

lists

heavily used in UI

menus, dropdowns
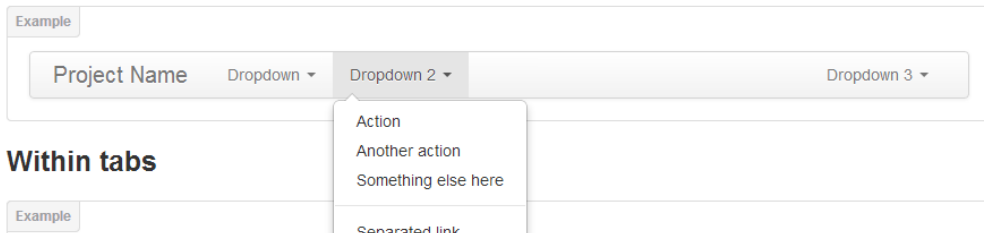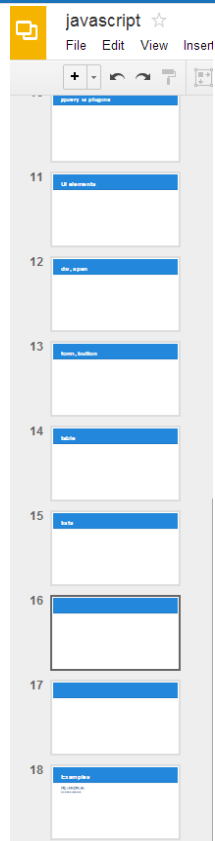
image

- special part in design
- background for buttons, divs, spans
- image maps

- http://www.kikk.be/2013/

Examples

- [SiDigital](#)
- Google docs
- Facebook
- Twitter live feed
- [GNOME3](#)

Questions

Any questions?

Thank you