Dave Stewart:
Developing tools for Flash with xJSFl

What is JSFL?

File Edit View Insert Modify Text Commands Control Debug Window Help

XJSFL DEMO

TIMELINE ACTIONS OUTPUT COMPILER ERRORS

actions

IK Armature

E:\02 - Current Jobs\xJSFL\1 - Documents\Presentation\images\ui\designer setup.fla

designer setup.fla

Scene 1

100%

PROPERTIES XJSFL - SNIPPETS (V2) LIBRARY HISTORY

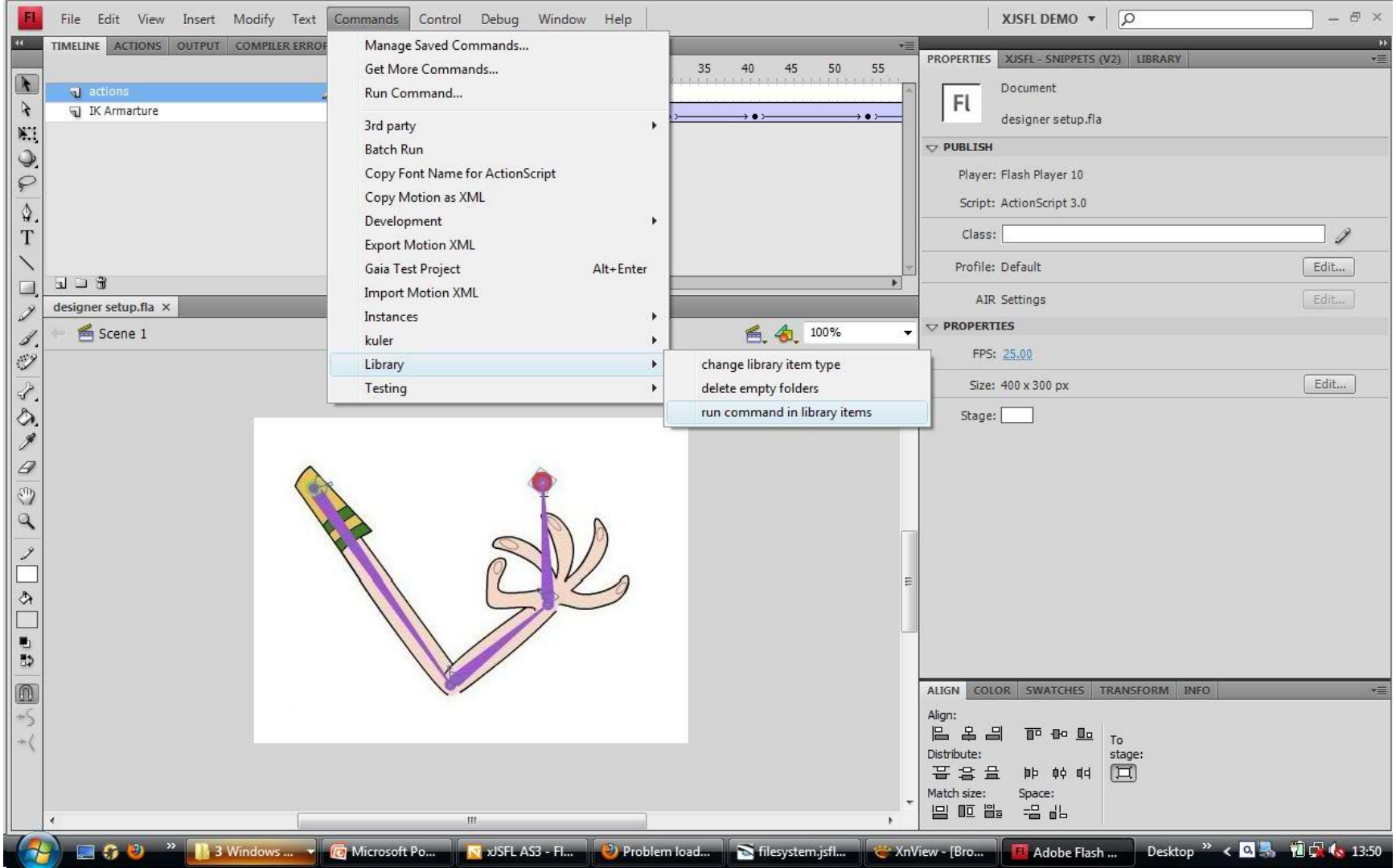
```
fl.getDocumentDOM().group();
fl.getDocumentDOM().moveSelectionBy({x:178, y:24.6});
fl.getDocumentDOM().moveSelectionBy({x:75.6, y:-50.4});
fl.getDocumentDOM().scaleSelection(1.59, 0.74, 'top left');
fl.getDocumentDOM().scaleSelection(1.02, 1, 'top left');
fl.getDocumentDOM().selectNone();
fl.getDocumentDOM().selectNone();
fl.getDocumentDOM().mouseClick({x:366.2, y:314.3}, false, true);
fl.getDocumentDOM().duplicateSelection(); fl.getDocumentDOM().moveSelec
fl.getDocumentDOM().scaleSelection(1.12, 2.19, 'bottom right');
fl.getDocumentDOM().scaleSelection(0.16, 0.97, 'top left');
fl.getDocumentDOM().scaleSelection(1, 1.04, 'bottom center');
fl.getDocumentDOM().mouseClick({x:141.8, y:330.7}, false, true);
fl.getDocumentDOM().selectNone();
fl.getDocumentDOM().mouseClick({x:458.2, y:487}, false, true);
fl.getDocumentDOM().duplicateSelection(); fl.getDocumentDOM().moveSelec
fl.getDocumentDOM().scaleSelection(3.17, 0.61, 'top left');
fl.getDocumentDOM().moveSelectionBy({x:-17.6, y:27.8});
fl.getDocumentDOM().mouseClick({x:131.8, y:349.6}, false, true);
fl.getDocumentDOM().mouseClick({x:174.7, y:306.7}, false, true);
fl.getDocumentDOM().selectNone();
fl.getDocumentDOM().selectNone();
fl.getDocumentDOM().exitEditMode();
fl.getDocumentDOM().selectNone();
(Select Layers)
fl.getDocumentDOM().getTimeline().addNewLayer();
(Select Layers)
fl.getDocumentDOM().getTimeline().setSelectedFrames([]);
(Select Frames)
fl.getDocumentDOM().getTimeline().setSelectedFrames([]);
fl.getDocumentDOM().getTimeline().setLayerProperty('name', 'screenshot');
(Select Layers)
```

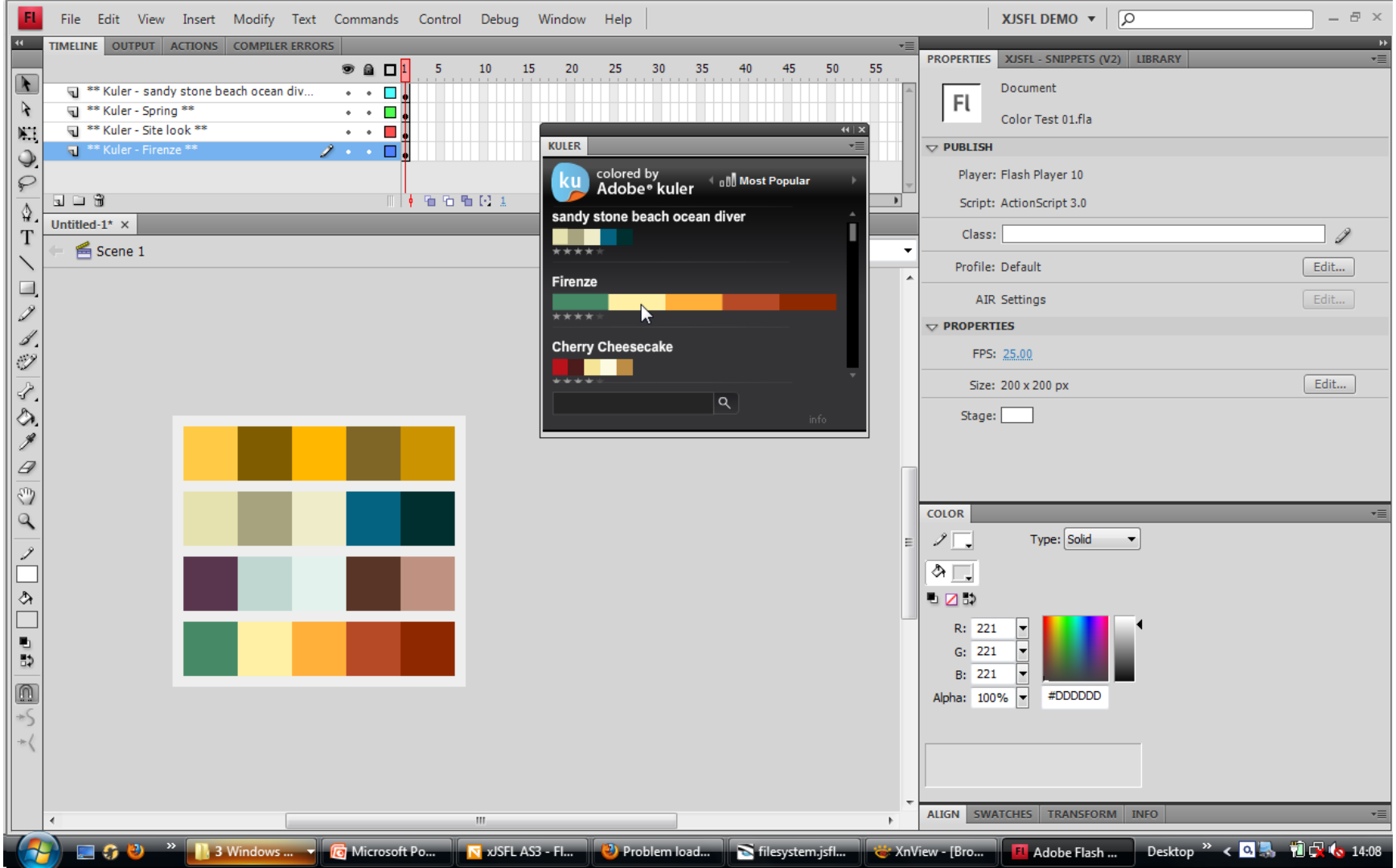
Replay

COLOR

ALIGN SWATCHES TRANSFORM INFO

3 Windows ... Microsoft Po... xJSFL AS3 - Fl... Problem load... filesystem.jsfl... XnView - [Bro... Adobe Flash ... Desktop 14:13


File Edit View Insert Modify Text Commands Control Debug Window Help
XJSFL DEMO
TIMELINE ACTIONS OUTPUT COMPILER ERROR
actions
IK Armature
Manage Saved Commands...
Get More Commands...
Run Command...
3rd party
Batch Run
Copy Font Name for ActionScript
Copy Motion as XML
Development
Export Motion XML
Gaia Test Project Alt+Enter
Import Motion XML
Instances
kuler
Library
Testing
change library item type
delete empty folders
run command in library items
designer setup.fla
Scene 1
100%
PROPERTIES XJSFL - SNIPPETS (V2) LIBRARY
Document
designer setup.fla
PUBLISH
Player: Flash Player 10
Script: ActionScript 3.0
Class:
Profile: Default Edit...
AIR Settings Edit...
PROPERTIES
FPS: 25.00
Size: 400 x 300 px Edit...
Stage:
ALIGN COLOR SWATCHES TRANSFORM INFO
Align:
Distribute:
Match size:
Space:
To stage:
3 Windows ...
Microsoft Po...
xJSFL AS3 - Fl...
Problem load...
filesystem.jsfl...
XnView - [Bro...
Adobe Flash ...
Desktop
13:50


File Edit View Insert Modify Text Commands Control Debug Window Help
XJSFL DEMO
TIMELINE OUTPUT ACTIONS COMPILER ERRORS
** Kuler - sandy stone beach ocean div...
** Kuler - Spring **
** Kuler - Site look **
** Kuler - Firenze **
Untitled-1*
Scene 1
KULER
colored by Adobe kuler
Most Popular
sandy stone beach ocean diver
Firenze
Cherry Cheesecake
info
PROPERTIES XJSFL - SNIPPETS (V2) LIBRARY
Document
Color Test 01.fla
PUBLISH
Player: Flash Player 10
Script: ActionScript 3.0
Class:
Profile: Default
Edit...
AIR Settings
Edit...
PROPERTIES
FPS: 25.00
Size: 200 x 200 px
Edit...
Stage:
COLOR
Type: Solid
R: 221
G: 221
B: 221
Alpha: 100%
#DDDDDD
ALIGN SWATCHES TRANSFORM INFO
3 Windows ...
Microsoft Po...
xJSFL AS3 - Fl...
Problem load...
filesystem.jsfl...
XnView - [Bro...
Adobe Flash ...
Desktop
14:08

Why have you not heard of it?

```
fl.getDocumentDOM().getTimeline().
.layers[i].frames[f].property = blah
```

So, what is xJSFl ?

xJSFl is a new programming framework written in JSFL & AS3 that makes it easy to write new tools for Flash

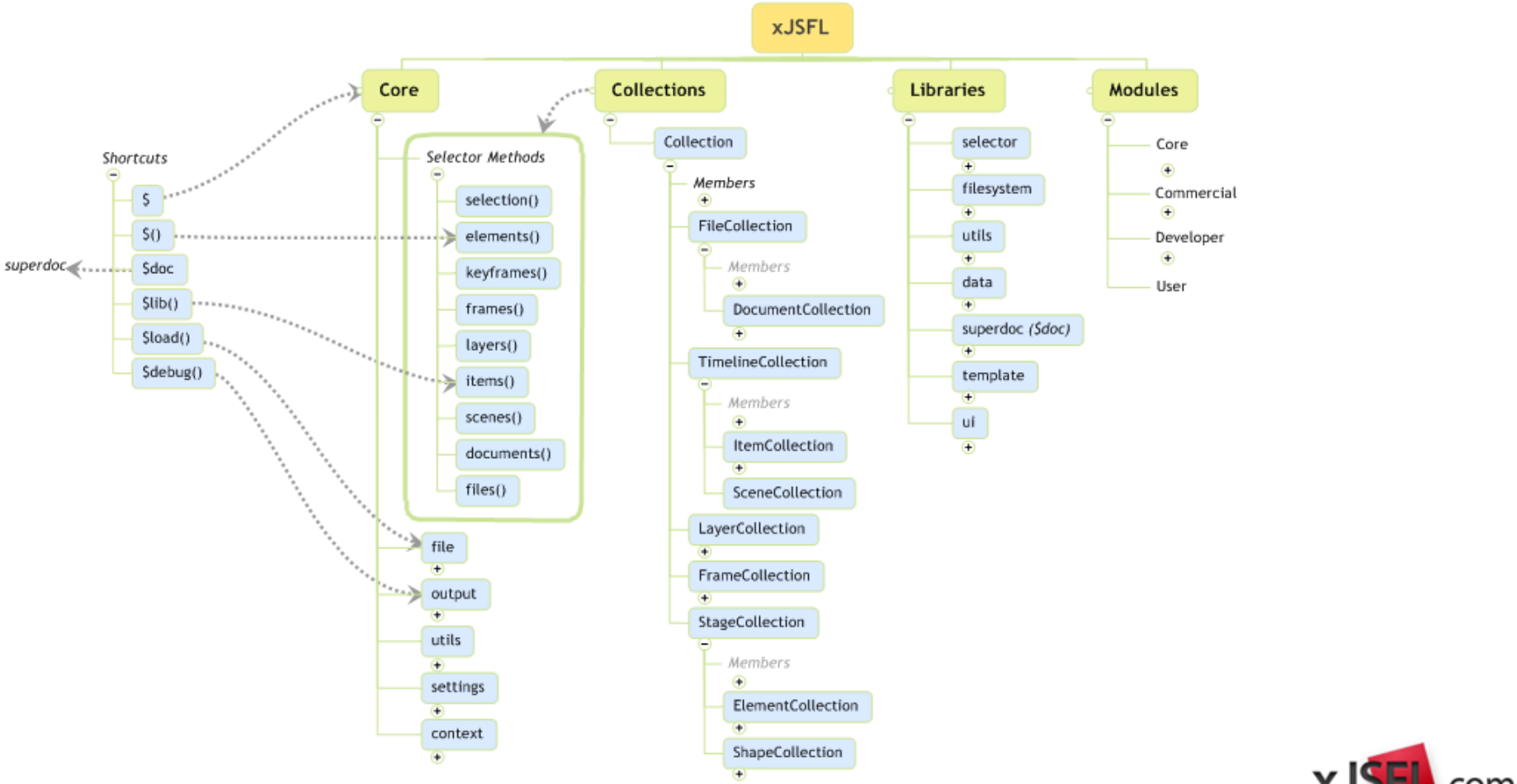
(syntax)

(file handling)

$(':elements').do().cool().stuff('yay!');

No more fl.getDocumentDOM() !

xJSFL.com


xJSFL
Core
Collections
Libraries
Modules
Shortcuts
$
$()
$doc
$lib()
$load()
$debug()
superdoc
Selector Methods
selection()
elements()
keyframes()
frames()
layers()
items()
scenes()
documents()
files()
file
output
utils
settings
context
Collection
Members
FileCollection
Members
DocumentCollection
TimelineCollection
Members
ItemCollection
SceneCollection
LayerCollection
FrameCollection
StageCollection
Members
ElementCollection
ShapeCollection
selector
filesystem
utils
data
superdoc ($doc)
template
ui
Core
Commercial
Developer
User

- xJSFL
  - modules
    - Console
    - Developer Tools
    - Narrator
    - Snippets
  - system
    - assets
    - data
    - jsfl
    - templates
  - user
    - assets
    - data
    - jsfl
    - templates

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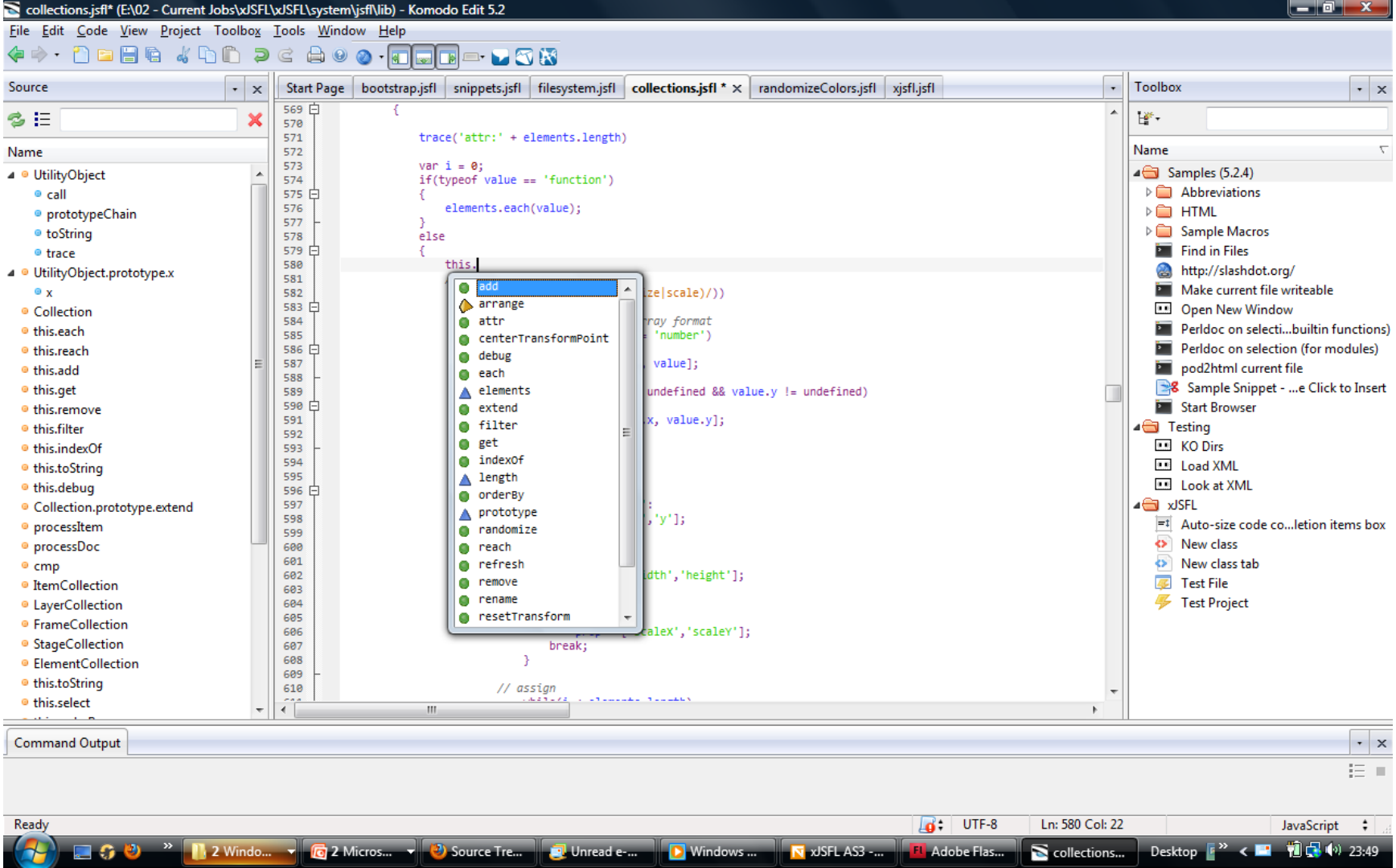
File IO

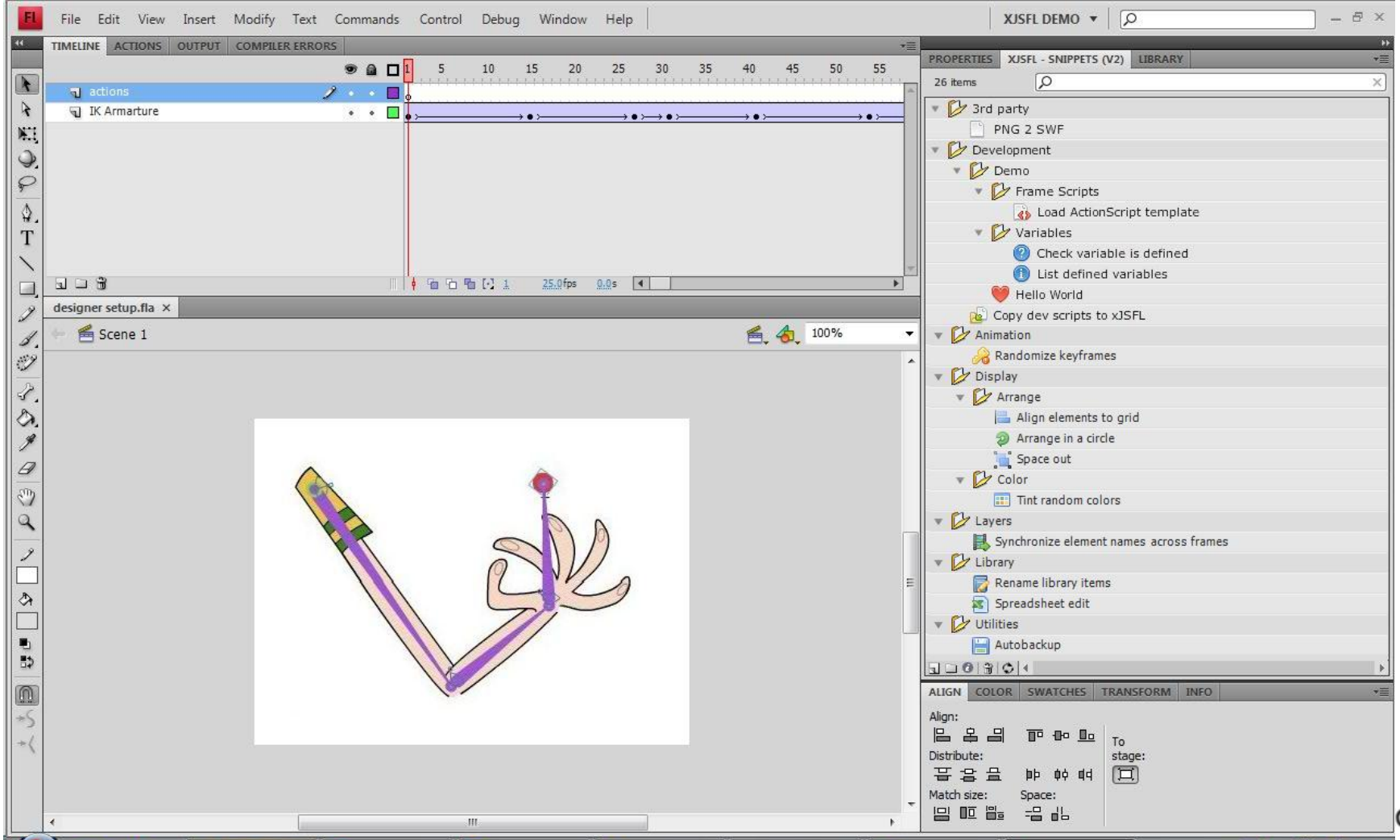
JSFL Communication

Application Logic

Visual Layout

Utilities


collections.jsfl* (E:\02 - Current Jobs\xJSFL\xJSFL\system\jsfl\lib) - Komodo Edit 5.2
File Edit Code View Project Toolbox Tools Window Help
Source
Name
UtilityObject
call
prototypeChain
toString
trace
UtilityObject.prototype.x
x
Collection
this.each
this.reach
this.add
this.get
this.remove
this.filter
this.indexOf
this.toString
this.debug
Collection.prototype.extend
processItem
processDoc
cmp
ItemCollection
LayerCollection
FrameCollection
StageCollection
ElementCollection
this.toString
this.select
Start Page
bootstrap.jsfl
snippets.jsfl
filesystem.jsfl
collections.jsfl *
randomizeColors.jsfl
xjsfl.jsfl
trace('attr:' + elements.length)
var i = 0;
if(typeof value == 'function')
elements.each(value);
else
this.
add
arrange
attr
centerTransformPoint
debug
each
elements
extend
filter
get
indexOf
length
orderBy
prototype
randomize
reach
refresh
remove
rename
resetTransform
break;
// assign
Toolbox
Samples (5.2.4)
Abbreviations
HTML
Sample Macros
Find in Files
http://slashdot.org/
Make current file writeable
Open New Window
Perldoc on selecti...builtin functions)
Perldoc on selection (for modules)
pod2html current file
Sample Snippet - ...e Click to Insert
Start Browser
Testing
KO Dirs
Load XML
Look at XML
xJSFL
Auto-size code co...letion items box
New class
New class tab
Test File
Test Project
Command Output
Ready
UTF-8
Ln: 580 Col: 22
JavaScript
23:49


File Edit View Insert Modify Text Commands Control Debug Window Help
XJSFL DEMO
TIMELINE ACTIONS OUTPUT COMPILER ERRORS
actions
IK Armature
designer setup.fla
Scene 1
100%
PROPERTIES XJSFL - SNIPPETS (V2) LIBRARY
26 items
3rd party
PNG 2 SWF
Development
Demo
Frame Scripts
Load ActionScript template
Variables
Check variable is defined
List defined variables
Hello World
Copy dev scripts to xJSFL
Animation
Randomize keyframes
Display
Arrange
Align elements to grid
Arrange in a circle
Space out
Color
Tint random colors
Layers
Synchronize element names across frames
Library
Rename library items
Spreadsheet edit
Utilities
Autobackup
ALIGN COLOR SWATCHES TRANSFORM INFO
Align:
Distribute:
Match size:
Space:
To stage:
3 Windows ...
Microsoft Po...
xJSFL AS3 - Fl...
Problem load...
filesystem.jsfl...
XnView - [Bro...
Adobe Flash ...
Desktop
13:51

highlights

Collections do the hard work
so you don't have to

```
$lib(':bitmap').attr('smoothing', false);

$frames('1-50').randomize(1, 4, true);

$ ('text').breakApart().arrange('circle', true);
```

Files and folders are real objects

```
var str = new File('c:/some/file.jsfl').contents
```

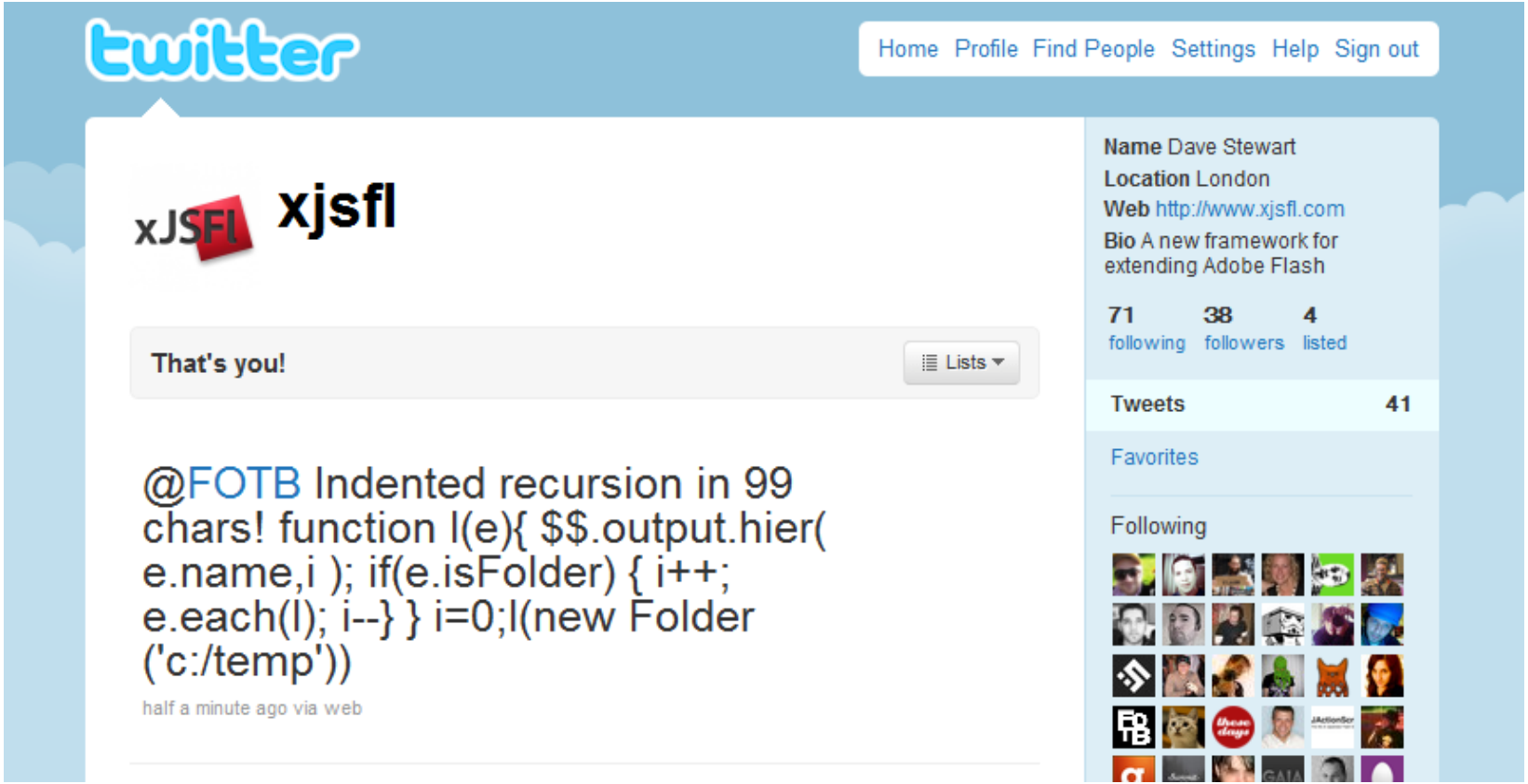
```
var path = 'c:/some/file.jsfl';
var uri = Flfile.platformPathToURI();
var str = FLfile.read(uri);
```

Code is almost magically small

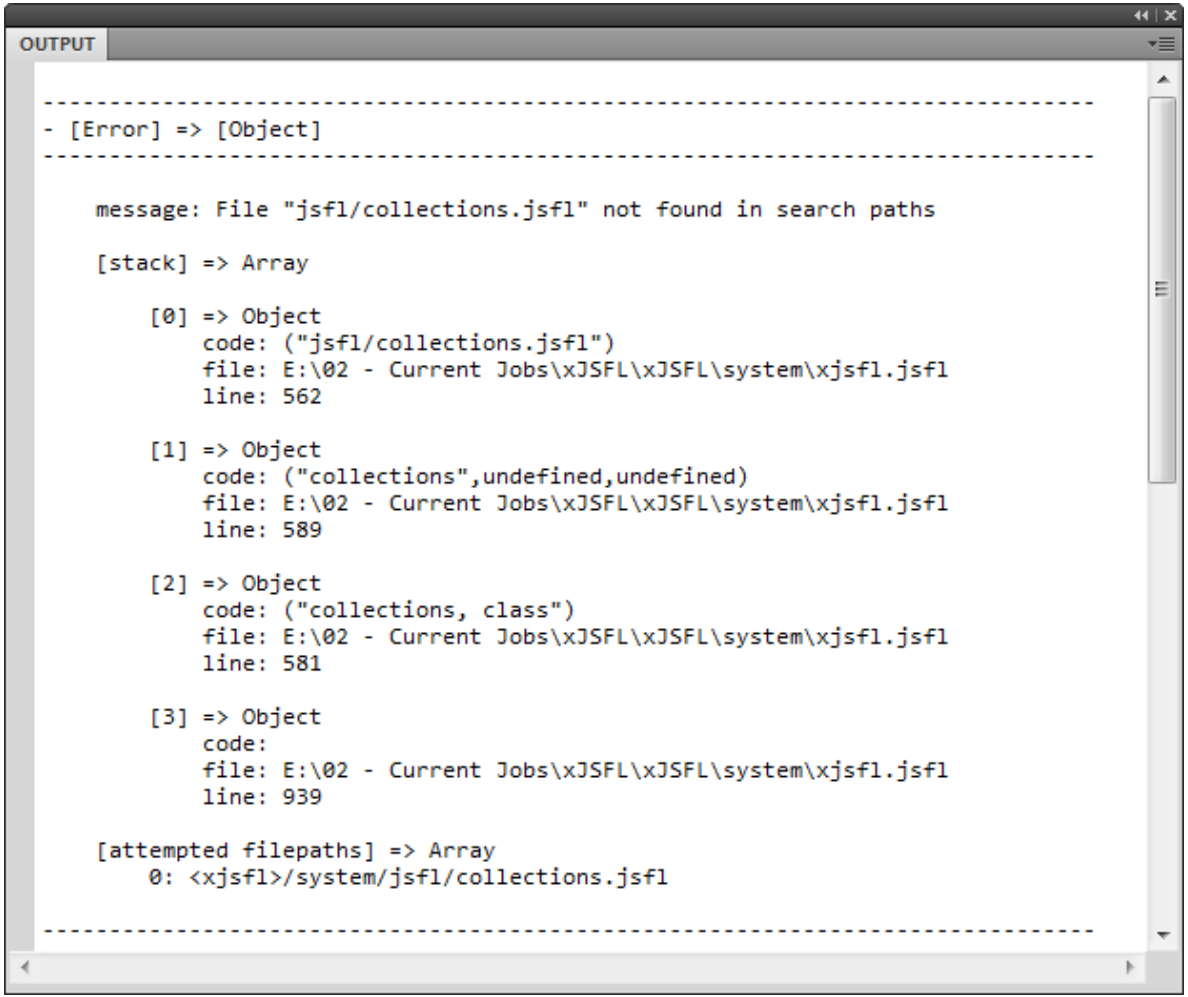
```
var n = '\t';
function list(e) {
	trace (n + '/' + e.name);
	if (e instanceof Folder) {
		n += '\t';
		e.each (list);
		n = n.substr(1);
	}
}
var f = new Folder('c:/temp');
list(f);
```

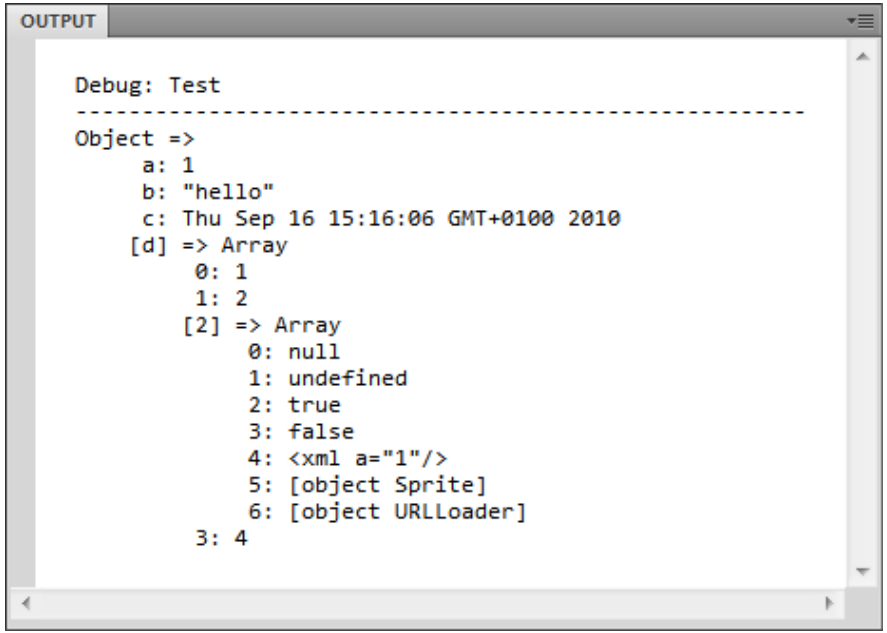
OUTPUT

```
/scripts
    /3rd party
        /List Layers.as
        /PNG 2 SWF.jsfl
    /Development
        /Copy dev scripts to xJSFL.jsfl
        /copy script files.bat
        /Demo
            /Frame Scripts
                /Load ActionScript template.jsfl
            /Hello World.jsfl
            /Variables
                /Check variable is defined.jsfl
                /List defined variables.jsfl
    /Instances
        /change item type.jsfl
        /instance name from library item.jsfl
    /Library
        /change library item type.jsfl
        /delete empty folders.jsfl
        /run command in library items.jsfl
    /Testing
        /FLfile.jsfl
        /library.jsfl
        /Make test Sprites.jsfl
        /New Snippet.jsfl
        /New Test File.jsfl
        /Something Else
            /test.jsfl
```


twitter
Home Profile Find People Settings Help Sign out
xjsfl
That's you!
Lists
@FOTB Indented recursion in 99 chars! function l(e){ $$.output.hier(e.name,i); if(e.isFolder) { i++; e.each(l); i--} } i=0;l(new Folder ('c:/temp'))
half a minute ago via web
Name Dave Stewart
Location London
Web http://www.xjsfl.com
Bio A new framework for extending Adobe Flash
71 following
38 followers
4 listed
Tweets 41
Favorites
Following

Errors and traces are actually helpful


OUTPUT
- [Error] => [Object]
message: File "jsfl/collections.jsfl" not found in search paths
[stack] => Array
[0] => Object
code: ("jsfl/collections.jsfl")
file: E:\02 - Current Jobs\xJSFL\xJSFL\system\xjsfl.jsfl
line: 562
[1] => Object
code: ("collections",undefined,undefined)
file: E:\02 - Current Jobs\xJSFL\xJSFL\system\xjsfl.jsfl
line: 589
[2] => Object
code: ("collections, class")
file: E:\02 - Current Jobs\xJSFL\xJSFL\system\xjsfl.jsfl
line: 581
[3] => Object
code:
file: E:\02 - Current Jobs\xJSFL\xJSFL\system\xjsfl.jsfl
line: 939
[attempted filepaths] => Array
0: <xjsfl>/system/jsfl/collections.jsfl


OUTPUT
Debug: Test
Object =>
a: 1
b: "hello"
c: Thu Sep 16 15:16:06 GMT+0100 2010
[d] => Array
0: 1
1: 2
[2] => Array
0: null
1: undefined
2: true
3: false
4: <xml a="1"/>
5: [object Sprite]
6: [object URLLoader]
3: 4

Supporting code lives in libraries

```
$load('filesystem', 'utils', 'etc');
```

It is fully extensible

```
function someAwesomeFunction (takes, these, params)
{
    // take a bunch of objects
    // change their colours
    // add stuff from the library
    // transform some stuff
    // etc
}
```

```
ElementCollection.extend ( { someAwesomePlugin :
someAwesomeFunction } )
```

user overrides **modules** overrides **system**

```
$().someAwesomePlugin(do, these, things);
```

So why use xJSFl ?

Developers: write JSFL as easily as you write ActionScript

Designers: awesome new tools to enhance your workflow

xJSFL.com

is currently under development and will launch in October 2010.

Sign up for a launch notification at www.xjsfl.com, follow progress on Twitter at @xjsfl, email dave@xjsfl.com , or if you're not too hungover, come talk to me face-to-face :)

xJSFl.com