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# Architecture Documentation Wiki

*Release 0.0.*

Mar 13, 2018



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## Usage and Installation

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This project aims to implement human-like hearing skills. This with the use of the eight Microphones from the Matrix Creator board.



# CHAPTER 1

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## Status

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Stable functionality:

- Audio stream from the 8 Mics through ROS
- Recieving Audio stream in python
- Azimutal angle localization of one Audio source, with low resolution
- Publishing the angles onto a rostopic

In development:

- Recognition of several xylophone key tones
- Localization with higher resolution





## 2.1 Installation

We use catkin to build our tools. So make sure that you have a working catkin workspace.

### 2.1.1 Prerequisites & Dependencies

The `roboy_communication_cognition` package. It can be found in the `roboy_communication` repository ([https://github.com/Roboy/roboy\\_communication](https://github.com/Roboy/roboy_communication)). Best practice is to store the repository in the source folder of your catkin workspace.

`libgstreamer1.0-0`, `libgstreamer1.0-dev`, `libgstreamer-plugins-base1.0-0`, `libgstreamer-plugins-base1.0-dev`, `gstreamer1.0-plugins-ugly` & `gstreamer1.0-plugins-good`, `fftw3`, `libgflags-dev` To have them installed, you need to simply do `sudo apt install <package_name>`

In addition `doa_estimation` is just build and executable on a Raspberry Pi, since it uses it's Libraries and the current version just works with a Matrix Creator and a Pi.

### 2.1.2 Using command line

Clone the audio repository into the source folder of your catkin workspace. `git clone https://github.com/Roboy/roboy_audio /path/to/catkin_workspace/src/roboy_audio`

Navigate to your catkin workspace. `cd /path/to/catkin_workspace`

Make the packages. The available packages are: `doa_estimation`, `roboy_audio_stream` `catkin_make --pkg <package_name>`

Have fun with `roslaunch`. Start the direction of arrival estimation `roslaunch doa_estimation matrix_doa.launch`

Capture and stream audio from the default audio source `roslaunch roboy_audio_stream capture.launch`

Capture and stream audio from the 8 Matrix Creator microphones `roslaunch roboy_audio_stream capture_matrix_mics.launch`

Start the stream receiver template node `roslaunch roboy_audio_stream receive_py.launch`

### 2.1.3 Using IDE (Clion)

Clone the audio repository. `git clone https://github.com/Roboy/roboy_audio`

Now open the CMakeLists.txt from the package that you want to edit.

## 2.2 Getting started

### 2.2.1 How does it work?

You can roslaunch or rosrn every node that is currently released. But you will need a sound source from which the algorithms can get needed data. For that you can either use a Matrix Creator and run the rosnodes on it or try to change the rostopic names inside of the code and use it for your own sources.

### 2.2.2 How to extend it?

You can create new rosnodes, by adding new catkin packages to the root folder (roboy\_audio). You can find a Tutorial for creating catkin packages on the ROS Tutorial side (<http://wiki.ros.org/ROS/Tutorials/CreatingPackage>).

## 2.3 API

namespace conf

### Variables

```
string conf.on_rtd = 'True'
list conf.extensions = [ 'sphinx.ext.autodoc', 'sphinx.ext.doctest', 'sphinx.ext.intersphinx', 'sphinx.ext.todo', 'sphinx.e
list conf.templates_path = ['_templates']
string conf.source_suffix = '.rst'
string conf.master_doc = 'index'
string conf.project = u'Architecture Documentation Wiki'
string conf.copyright = u'2016, Raphael Dürscheid, based on Template by Dr. Peter'
string conf.author = u'Raphael Dürscheid, based on Template by Dr. Peter'
string conf.version = u'0.0.'
string conf.release = u'0.0.'
dictionary conf.breathe_projects = { project: "doxyxml/" }
breathe_default_project = project
string conf.language = 'en'
```

```

list conf.exclude_patterns = []
string conf.pygments_style = 'sphinx'
bool conf.todo_include_todos = True
string conf.html_theme = "sphinx_rtd_theme"
list conf.html_theme_path = [sphinx_rtd_theme.get_html_theme_path()]
list conf.html_static_path = ['_static']
string conf.htmlhelp_basename = 'ArchitectureDocumentationWikidoc'

    # The font size ('10pt', '11pt' or '12pt'). ## 'pointsize': '10pt', # Additional stuff for the LaTeX preamble.
    ## 'preamble': '', # Latex figure (float) alignment ## 'figure_align': 'htbp', }}

list conf.man_pages = [ (master_doc, 'architecturedocumentationwiki', u'Architecture Documentation Wiki Documentat
list conf.texinfo_documents = [ (master_doc, 'ArchitectureDocumentationWiki', u'Architecture Documentation Wik
dictionary conf.intersphinx_mapping = { 'https://docs.python.org/': None}
string conf.SUFFIX = source_suffix
bool conf.using_rtd_theme = False
html_style = None
dictionary conf.html_theme_options = {}
string conf.websupport2_base_url = 'https://readthedocs.org/websupport'
string conf.websupport2_static_url = 'https://media.readthedocs.org/static/'
dictionary conf.context
html_context = context

```

*file* about-arc42.rst.txt

## Variables

arc42]

About the Template for documentation of software and system architecture By Dr Gernot  
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*file index.rst.txt*

## Variables

Architecture Documentation Wiki documentation master file

Architecture Documentation Wiki documentation master created by sphinx quickstart on F

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*file 6\_API.rst.txt*

*file 6\_API.rst.txt*

*file 0\_installation.rst.txt*

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*file 1\_getting\_started.rst.txt*

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*file 1\_getting\_started.rst.txt*

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*file* **doctools.js**

## Functions

```
if(!jQuery. browser)
if(activeElementType! activeElementType! == 'TEXTAREA'&&activeElementType!= 'INPUT'&
document ready(function(){Documentation.init();} function(){Documentation.init();})
```

## Variables

```
$u = _.noConflict()
    select a different prefix for underscore

jQuery urldecode = function(x) { return decodeURIComponent(x).replace(/\+/g, ' '); }
    make the code below compatible with browsers without an installed firebug like debugger if (!win-
    dow.console || !console.firebug) { var names = ["log", "debug", "info", "warn", "error", "assert", "dir",
    "dirxml", "group", "groupEnd", "time", "timeEnd", "count", "trace", "profile", "profileEnd"]; win-
    dow.console = {}; for (var i = 0; i < names.length; ++i) window.console[names[i]] = function() {}; }

    small helper function to urldecode strings

jQuery urlencode = encodeURIComponent
    small helper function to urlencode strings

jQuery getQueryParameters = function(s) { if (typeof s === 'undefined') s = document.location.search; var parts = s.substr(1).split('&');
    This function returns the parsed url parameters of the current request.

    Multiple values per key are supported, it will always return arrays of strings for the value parts.

jQuery fn highlightText
    highlight a given string on a jquery object by wrapping it in span elements with the given class name.

var Documentation
    Small JavaScript module for the documentation.

var initOnKeyListeners
    _ = Documentation.getText
```

*file* **doctools.js**

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## Functions

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Small JavaScript module for the documentation.

### **var initOnKeyListeners**

`_` = Documentation.getText

file `jquery-3.1.0.js`

## **Functions**

```
if(typeof module ==="object"&&typeof module.exports==="object")
```

```
function DOMEval (code code, doc doc)
```

```
jQuery extend({expando:"jQuery"+(version+Math.random()).replace(/D/g,""), isReady:true
```

```
jQuery each("Boolean Number String Function Array Date RegExp Object Error Symbol".sp
```

```
function isArrayLike (obj obj)
```

```
function winnow(elements elements, qualifier qualifier, not not)
```

```
function sibling (cur cur, dir dir)
```

```
jQuery each({parent:function(elem){var parent=elem.parentNode;return parent &&parent.n
```

```
function createOptions (options options)
```

```
function Identity (v v)
```

```
function Thrower (ex ex)
```

```
function adoptValue (value value, resolve resolve, reject reject)
```

```
function completed ()
```

```
if(document. readyState ==="complete"|| (document.readyState!=="loading"&&!document.do
```

```
window addEventListener("load" "load", completed completed)
```

```
function Data ()
```

```
function dataAttr (elem elem, key key, data data)
```

```
function adjustCSS (elem elem, prop prop, valueParts valueParts, tween tween)
```

```
function getDefaultDisplay (elem elem)
```

```
function showHide (elements elements, show show)
```

```
function getAll (context context, tag tag)
```

```
function setGlobalEval (elems elems, refElements refElements)
```

```
function buildFragment (elems elems, context context, scripts scripts, selection selection, ignored ig-  
nored)
```

```
input setAttribute("type" "type", "radio" "radio")
```

```
container appendChild (input input)
```

```
function returnTrue ()
```

```
function returnFalse ()
function safeActiveElement ()
function on (elem elem, types types, selector selector, data data, fn fn, one one)
jQuery each ({altKey:true, bubbles:true, cancelable:true, changedTouches:true, ctrlKey:
function manipulationTarget (elem elem, content content)
function disableScript (elem elem)
function restoreScript (elem elem)
function cloneCopyEvent (src src, dest dest)
function fixInput (src src, dest dest)
function domManip (collection collection, args args, callback callback, ignored ignored)
function remove (elem elem, selector selector, keepData keepData)
function if (!div. style)
div cloneNode (true true)
jQuery extend (support support, {pixelPosition:function () {computeStyleTests ();return pi
function curCSS (elem elem, name name, computed computed)
function addGetHookIf (conditionFn conditionFn, hookFn hookFn)
function vendorPropName (name name)
function setPositiveNumber (elem elem, value value, subtract subtract)
function augmentWidthOrHeight (elem elem, name name, extra extra, isBorderBox isBorderBox,
    styles styles)
function getWidthOrHeight (elem elem, name name, extra extra)
jQuery each (function (i, name) {jQuery.cssHooks [name] = {get:function (elem, computed, extr
function Tween (elem elem, options options, prop prop, end end, easing easing)
function raf ()
function createFxNow ()
function genFx (type type, includeWidth includeWidth)
function createTween (value value, prop prop, animation animation)
function defaultPrefilter (elem elem, props props, opts opts)
function propFilter (props props, specialEasing specialEasing)
function Animation (elem elem, properties properties, options options)
jQuery each (jQuery.expr.match.bool.source. match /w+/g, function (i, name) {var getter = at
if (!support. optSelected)
function getClass (elem elem)
jQuery extend (jQuery. event, {trigger:function (event, data, elem, onlyHandlers) {var i,
function buildParams (prefix prefix, obj obj, traditional traditional, add add)
function addToPrefiltersOrTransports (structure structure)
```



```

function inspectPrefiltersOrTransports (structure structure, options options, originalOptions
                                originalOptions, jqXHR jqXHR)

function ajaxExtend (target target, src src)

function ajaxHandleResponses (s s, jqXHR jqXHR, responses responses)

function ajaxConvert (s s, response response, jqXHR jqXHR, isSuccess isSuccess)

jQuery ajaxTransport (function (options) {var callback, errorCallback; if (support.cors || xhr)
jQuery ajaxPrefilter (function (s) {if (s.crossDomain) {s.contents.script=false;}} function
jQuery ajaxSetup ({accepts: {script: "text/javascript, application/javascript, "+ "application/javascript"},
jQuery ajaxPrefilter ("script" "script", function (s) {if (s.cache===undefined) {s.cache=false;}}
jQuery ajaxTransport ("script" "script", function (s) {if (s.crossDomain) {var script, calll
function getWindow (elem elem)
    Gets a window from an element.

if (! noGlobal)

```

## Variables

```

function global
    jQuery JavaScript Library v3.1.0 https://jquery.com/
    Includes Sizzle.js https://sizzlejs.com/
    Copyright jQuery Foundation and other contributors Released under the MIT license https://jquery.org/
    license
    Date: 2016-07-07T21:44Z
    "use strict"]

else = { factory( global )

function window == "undefined" ? window : this
    "use strict"]

var arr = []

var document = window.document

var getProto = Object.getPrototypeOf

var slice = arr.slice

var concat = arr.concat

var push = arr.push

var indexOf = arr.indexOf

var class2type = {}

var toString = class2type.toString

var hasOwn = class2type.hasOwnProperty

var fnToString = hasOwn.toString

var ObjectFunctionString = fnToString.call( Object )

var support = {}

```

```
var version = "3.1.0"

    return new jQuery.fn.init( selector, context ); }

var rtrim = /^[^\uFEFF\xA0]+|[\s\uFEFF\xA0]+$/g

var rmsPrefix = /^-ms-/

var rdashAlpha = /-([a-z])/g

var fcamelCase = function( all, letter ) { return letter.toUpperCase(); }

jQuery fn

jQuery fn extend

var Sizzle

jQuery find = Sizzle

jQuery expr = Sizzle.selectors

jQuery uniqueSort = jQuery.unique = Sizzle.uniqueSort

jQuery text = Sizzle.getText

jQuery isXMLDoc = Sizzle.isXML

jQuery contains = Sizzle.contains

jQuery escapeSelector = Sizzle.escape
    while ( ( elem = elem[ dir ] ) && elem.nodeType !== 9 ) { if ( elem.nodeType === 1 ) { if ( truncate &&
    jQuery( elem ).is( until ) ) { break; } matched.push( elem ); } } return matched; }
    for ( ; n; n = n.nextSibling ) { if ( n.nodeType === 1 && n !== elem ) { matched.push( n ); } } return
    matched; }

var rneedsContext = jQuery.expr.match.needsContext

var rsingleTag = ( /^<([a-z][^\/\0>:\x20\t\r\n\f]*)[\x20\t\r\n\f]*\/?>(?:<\1>|)$/i )

var risSimple = /^.[^:#\[\.,]*$/
    if ( not ) { expr = ":not(" + expr + ")"; } return elems.length === 1 && elem.nodeType === 1 ?
    jQuery.find.matchesSelector( elem, expr ) ? [ elem ] : [] : jQuery.find.matches( expr, jQuery.grep( el-
    ems, function( elem ) { return elem.nodeType === 1; } ) ); }

root jQuery = jQuery( document )

var rquickExpr = /^(?:\s*(<[\w\W]+>)[^>]*|#[\w-]+)$/

var init

Tween prototype init prototype = jQuery.fn

var rparentsprev = /^(?:parents|prev(?:UntilAll))/

var guaranteedUnique = { children: true, contents: true, next: true, prev: true }

var rnotwhite = ( /\S+/g )

jQuery Callbacks

var errorNames = /^(Eval|Internal|Range|Reference|Syntax|Type|URI)Error$/

    if ( window.console && window.console.warn && error && errorNames.test( error.name ) ) { win-
    dow.console.warn( "jQuery.Deferred exception: " + error.message, error.stack, stack ); } }

jQuery readyException = function( error ) { window.setTimeout( function() { throw error; } ); }

var readyList = jQuery.Deferred()
```

```

readyList.then( fn ) .catch( function( error ) { jQuery.readyException( error ); } ); return this; })
jQuery ready then = readyList.then
var access
    return owner.nodeType === 1 || owner.nodeType === 9 || !( +owner.nodeType ); })
Data uid = 1
var dataPriv = new Data()
var dataUser = new Data()
var rbrace = /^(?!\{[\w\W]*\}|\{[\w\W]*\})$/
var rmultiDash = /[A-Z]/g
var pnum = ( /[+-]?(?:\d*\.|)\d+(?:[eE][+-]?[d+l])/ ).source
var rcssNum = new RegExp( "^(?:(+)=)(" + pnum + ")([a-z%]*)$", "i" )
var cssExpand = [ "Top", "Right", "Bottom", "Left" ]
    elem = el || elem; return elem.style.display === "none" || elem.style.display === "" && jQuery.contains(
    elem.ownerDocument, elem ) && jQuery.css( elem, "display" ) === "none"; })
    for ( name in options ) { old[ name ] = elem.style[ name ]; elem.style[ name ] = options[ name ]; } ret =
    callback.apply( elem, args || [] ); for ( name in options ) { elem.style[ name ] = old[ name ]; } return ret; })
var defaultDisplayMap = {}
var rcheckableType = ( /^(?:checkbox|radio)$/i )
var rtagName = ( /<([a-z][^\/>]*\s*)(\s|\/)/i )
var rscriptType = ( /^$|\/(?:java|ecma)script/i )
    option: [ 1, "<select multiple='multiple'>", "</select>" ], thead: [ 1, "<table>", "</table>" ], col: [ 2,
    "<table><colgroup>", "</colgroup></table>" ], tr: [ 2, "<table><tbody>", "</tbody></table>" ], td: [ 3,
    "<table><tbody><tr>", "</tr></tbody></table>" ], _default: [ 0, "", "" ] } }
wrapMap optgroup = wrapMap.option
wrapMap tbody = wrapMap.tfoot = wrapMap.colgroup = wrapMap.caption = wrapMap.thead
wrapMap th = wrapMap.td
var rhtml = /<|&#?[\w+
support checkClone = div.cloneNode( true ).cloneNode( true ).lastChild.checked
div innerHTML = "<textarea>x</textarea>"
support noCloneChecked = !!div.cloneNode( true ).lastChild.defaultValue
var documentElement = document.documentElement
var rkeyEvent = /^key/
var rmouseEvent = /^(?:mouse|pointer|contextmenu|drag|drop)|click/
var rtypenamespaces = /^(.*)?(?:\.|\.+)/
jQuery event
    if ( elem.removeEventListener ) { elem.removeEventListener( type, handle ); } }
jQuery Event
var rxhtmlTag = /<(?!(area|br|col|embed|hr|img|input|link|meta|param))(?!(a-z|A-Z|_)+\s|\/>)/gi
    rchecked = /checked\s*(?:[^=]|=\s*.checked.)/i, rscriptTypeMasked = /true\/(.*)/, rcleanScript =
    /\s*<!(?:\[CDATA|]|)|(?:(?!\s|\/>)>\s*$/g]

```

```

var rmargin = ( /^margin/ )

var rnumnonpx = new RegExp( "(" + pnum + ")(?!px)[a-z%]+$", "i" )
    var view = elem.ownerDocument.defaultView; if ( !view || !view.opener ) { view = window; } return
    view.getComputedStyle( elem ); }}



rdisplayswap = /^(none|table(?!-c[ea]).+)/

var cssShow = { position: "absolute", visibility: "hidden", display: "block" }

var cssNormalTransform = { letterSpacing: "0", fontWeight: "400" }

var cssPrefixes = [ "Webkit", "Moz", "ms" ]

var emptyStyle = document.createElement( "div" ).style

jQuery cssHooks marginLeft = addGetHookIf( support.reliableMarginLeft, function( elem, computed ) { if ( computed

jQuery Tween = Tween

Tween propHooks

Tween propHooks scrollTop = Tween.propHooks.scrollTop = { set: function( tween ) { if ( tween.elem.nodeType && tw

jQuery easing = { linear: function( p ) { return p; }, swing: function( p ) { return 0.5 - Math.cos( p * Math.PI ) / 2; }, _default:

jQuery fx = Tween.prototype.init

jQuery fx step = {}

var fxNow

var timerId

var rfxTypes = /^(?:toggle|show|hide)$/

var rrun = /queueHooks$/

jQuery Animation

jQuery speed

jQuery timers = []

    fxNow = jQuery.now(); for ( ; i < timers.length; i++ ) { timer = timers[ i ]; if ( !timer() && timers[ i ] ===
    timer ) { timers.splice( i--, 1 ); } } if ( !timers.length ) { jQuery.fx.stop(); } fxNow = undefined; }}

jQuery fx timer = function( timer ) { jQuery.timers.push( timer ); if ( timer() ) { jQuery.fx.start(); } else { jQuery.timers.po

jQuery fx interval = 13

jQuery fx start = function() { if ( !timerId ) { timerId = window.requestAnimationFrame ? window.requestAnimationFrame

    timerId = null; }}

    _default: 400 }}

    return this.queue( type, function( next, hooks ) { var timeout = window.setTimeout( next, time ); hooks.stop
    = function() { window.clearTimeout( timeout ); }; } ); }}

input type = "checkbox"

support checkOn = input.value !== ""


```

```

support optSelected = opt.selected
input = document.createElement( "input" )
input value = "t"
support radioValue = input.value === "t"
    jQuery.removeAttr( elem, name ); } else { elem.setAttribute( name, name ); } return name; } }}
var attrHandle = jQuery.expr.attrHandle
var rfocusable = /^(?:input|select|textare|button)$/i
var rclickable = /^(?:a|area)$/i
var rclass = /\s+/g
var rreturn = /\r/g
var rspaces = /\s+/g
var rfocusMorph = /^(?:focusin|focus|focusout|blur)$/
support focusin = "onfocusin" in window
var location = window.location
var nonce = jQuery.now()
var rquery = ( /\?/ )
    try { xml = ( new window.DOMParser() ).parseFromString( data, "text/xml" ); } catch ( e ) { xml =
    undefined; } if ( !xml || xml.getElementsByTagName( "parsererror" ).length ) { jQuery.error( "Invalid
    XML: " + data ); } return xml; }}
var rbracket = /\[/
var rCRLF = /\r\n/g
var rsubmitterTypes = /^(?:submit|button|image|reset|file)$/i
var rsubmittable = /^(?:input|select|textare|keygen)/i
jQuery param
var r20 = /%20/g
var rhash = /#.*$/
var rts = /(?:&|_)=^&*/
var rheaders = /^(.*?):[ \t]*([^\r\n]*)$/mg
var rlocalProtocol = /^(?:about|ap|app-storage|.+-extension|file|res|widget):$/
var rnoContent = /^(?:GET|HEAD)$/
    preFilters = {}
var transports = {}
var allTypes = "*/*".concat( "*" )
var originAnchor = document.createElement( "a" )
support originAnchor href = location.href
    type: "GET", dataType: "script", cache: true, async: false, global: false, "throws": true } ); }}
jQuery expr pseudos hidden = function( elem ) { return !jQuery.expr.pseudos.visible( elem ); }
jQuery expr pseudos visible = function( elem ) { return !( elem.offsetWidth || elem.offsetHeight || elem.getClientRece

```

```
jQuery ajaxSettings xhr = function() { try { return new window.XMLHttpRequest(); } catch ( e ) {} }
  0: 200, 1223: 204 ]]

var xhrSupported = jQuery.ajaxSettings.xhr()

support cors = !!xhrSupported && ( "withCredentials" in xhrSupported )

support ajax = xhrSupported = !!xhrSupported

var oldCallbacks = []

var rjsonp = /(=)\?(?=&|\$)\?\?/

support createHTMLDocument = ( function() { var body = document.implementation.createHTMLDocument( "" ).body; bod

jQuery parseHTML

jQuery fn load
  Load a url into a page.

jQuery expr pseudos animated = function( elem ) { return jQuery.grep( jQuery.timers, function( fn ) { return elem ===

jQuery offset

jQuery parseJSON = JSON.parse

var __jQuery = window.jQuery

var _ = window.$
  if ( deep && window.jQuery === jQuery ) { window.jQuery = _jQuery; } return jQuery; }}

file jquery-3.1.0.js
```

## Functions

```
if (typeof module === "object" && typeof module.exports === "object")

function DOMEval (code code, doc doc)

jQuery extend({expando: "jQuery" + (version + Math.random()).replace(/D/g, ""), isReady: true

jQuery each("Boolean Number String Function Array Date RegExp Object Error Symbol".sp

function isArrayLike (obj obj)

function winnow(elements elements, qualifier qualifier, not not)

function sibling (cur cur, dir dir)

jQuery each({parent: function (elem) {var parent = elem.parentNode; return parent && parent.n

function createOptions (options options)

function Identity (v v)

function Thrower (ex ex)

function adoptValue (value value, resolve resolve, reject reject)

function completed ()

if (document.readyState === "complete" || (document.readyState !== "loading" && !document.do

window addEventListener("load" "load", completed completed)

function Data ()

function dataAttr (elem elem, key key, data data)
```

```

function adjustCSS (elem elem, prop prop, valueParts valueParts, tween tween)
function getDefaultDisplay (elem elem)
function showHide (elements elements, show show)
function getAll (context context, tag tag)
function setGlobalEval (elems elems, refElements refElements)
function buildFragment (elems elems, context context, scripts scripts, selection selection, ignored ignored)
function input setAttribute("type" "type", "radio" "radio")
div appendChild (input input)
function returnTrue ()
function returnFalse ()
function safeActiveElement ()
function on (elem elem, types types, selector selector, data data, fn fn, one one)
jQuery each ({altKey:true, bubbles:true, cancelable:true, changedTouches:true, ctrlKey:
function manipulationTarget (elem elem, content content)
function disableScript (elem elem)
function restoreScript (elem elem)
function cloneCopyEvent (src src, dest dest)
function fixInput (src src, dest dest)
function domManip (collection collection, args args, callback callback, ignored ignored)
function remove (elem elem, selector selector, keepData keepData)
function if (!div. style)
div cloneNode (true true)
jQuery extend (support support, {pixelPosition:function () {computeStyleTests (); return pi
function curCSS (elem elem, name name, computed computed)
function addGetHookIf (conditionFn conditionFn, hookFn hookFn)
function vendorPropName (name name)
function setPositiveNumber (elem elem, value value, subtract subtract)
function augmentWidthOrHeight (elem elem, name name, extra extra, isBorderBox isBorderBox,
styles styles)
function getWidthOrHeight (elem elem, name name, extra extra)
jQuery each (function (i, name) { jQuery.cssHooks [name] = {get : function (elem, computed, extr
function Tween (elem elem, options options, prop prop, end end, easing easing)
function raf ()
function createFxNow ()
function genFx (type type, includeWidth includeWidth)
function createTween (value value, prop prop, animation animation)

```

```
function defaultPrefilter (elem elem, props props, opts opts)
function propFilter (props props, specialEasing specialEasing)
function Animation (elem elem, properties properties, options options)
jQuery each (jQuery.expr.match.bool.source. match/w+/g, function(i, name){var getter=at
if (!support. optSelected)
function getClass (elem elem)
jQuery extend (jQuery. event, {trigger:function(event, data, elem, onlyHandlers){var i,
function buildParams (prefix prefix, obj obj, traditional traditional, add add)
function addToPrefiltersOrTransports (structure structure)
function inspectPrefiltersOrTransports (structure structure, options options, originalOptions
                                originalOptions, jqXHR jqXHR)
function ajaxExtend (target target, src src)
function ajaxHandleResponses (s s, jqXHR jqXHR, responses responses)
function ajaxConvert (s s, response response, jqXHR jqXHR, isSuccess isSuccess)
jQuery ajaxTransport (function(options){var callback, errorCallback;if(support.cors||xhr
jQuery ajaxPrefilter (function(s){if(s.crossDomain){s.contents.script=false;}} function
jQuery ajaxSetup ({accepts:{script:"text/javascript, application/javascript, "+"applica
jQuery ajaxPrefilter ("script" "script", function(s){if(s.cache===undefined){s.cache=fa
jQuery ajaxTransport ("script" "script", function(s){if(s.crossDomain){var script, calll
function getWindow (elem elem)
    Gets a window from an element.
if (! noGlobal)
```

## Variables

```
function global
    jQuery JavaScript Library v3.1.0 https://jquery.com/
    Includes Sizzle.js https://sizzlejs.com/
    Copyright jQuery Foundation and other contributors Released under the MIT license https://jquery.org/
    license
    Date: 2016-07-07T21:44Z
    "use strict"]
else = { factory( global )
function window == "undefined" ? window : this
    "use strict"]
var arr = []
var document = window.document
var getProto = Object.getPrototypeOf
var slice = arr.slice
```



```

var concat = arr.concat
var push = arr.push
var indexOf = arr.indexOf
var class2type = {}
var toString = class2type.toString
var hasOwn = class2type.hasOwnProperty
var fnToString = hasOwn.toString
var ObjectFunctionString = fnToString.call( Object )
var support = {}
var version = "3.1.0"

    return new jQuery.fn.init( selector, context ); }]
var rtrim = /^[^\uFEFF\xA0]+|[\s\uFEFF\xA0]+$/g
var rmsPrefix = /^-ms-/
var rdashAlpha = /-([a-z])/g
var fcamelCase = function( all, letter ) { return letter.toUpperCase(); }
jQuery fn
jQuery extend
var Sizzle
jQuery find = Sizzle
jQuery expr["."] = Sizzle.selectors
jQuery uniqueSort = jQuery.unique = Sizzle.uniqueSort
jQuery text = Sizzle.getText
jQuery isXMLDoc = Sizzle.isXML
jQuery contains = Sizzle.contains
jQuery escapeSelector = Sizzle.escape
    while ( ( elem = elem[ dir ] ) && elem.nodeType !== 9 ) { if ( elem.nodeType === 1 ) { if ( truncate &&
    jQuery( elem ).is( until ) ) { break; } matched.push( elem ); } } return matched; }]
    for ( ; n = n.nextSibling ) { if ( n.nodeType === 1 && n !== elem ) { matched.push( n ); } } return
    matched; }]
var rneedsContext = jQuery.expr.match.needsContext
var rsingleTag = ( /^<([a-z][^\/\0>:\x20\t\r\n\f]*)[\x20\t\r\n\f]*\/?>(?:<\1>|)$/i )
var risSimple = /^.[^:#\[\.,]*$/
    if ( not ) { expr = ".not(" + expr + ")"; } return elems.length === 1 && elem.nodeType === 1 ?
    jQuery.find.matchesSelector( elem, expr ) ? [ elem ] : [] : jQuery.find.matches( expr, jQuery.grep( el-
    ems, function( elem ) { return elem.nodeType === 1; } ) ); }]

root jQuery = jQuery( document )
var rquickExpr = /^(?:\s*(<[\w\W]+>)[^>]*|#[\w-]+)$/
var init

```

```

Tween prototype init prototype = jQuery.fn
var rparentsprev = /^(?:parents|prev(?:Until|All))/
var guaranteedUnique = { children: true, contents: true, next: true, prev: true }
var rnotwhite = ( /\S+/g )
jQuery Callbacks
var errorNames = /^(Eval|Internal|Range|Reference|Syntax|Type|URI)Error$/
    if ( window.console && window.console.warn && error && errorNames.test( error.name ) ) { win-
        dow.console.warn( "jQuery.Deferred exception: " + error.message, error.stack, stack ); } }
jQuery readyException = function( error ) { window.setTimeout( function() { throw error; } ); }
var readyList = jQuery.Deferred()
    readyList.then( fn ).catch( function( error ) { jQuery.readyException( error ); } ); return this; }
jQuery ready then = readyList.then
var access
    return owner.nodeType === 1 || owner.nodeType === 9 || !( +owner.nodeType ); }
Data uid = 1
var dataPriv = new Data()
var dataUser = new Data()
var rbrace = /^(?:\{[\w\W]*\}|\[[\w\W]*\])$/
var rmultiDash = /[A-Z]/g
var pnum = ( /[+-]?(?:\d*\.|)\d+(?:[eE][+-]?\d+|)/ ).source
var rcssNum = new RegExp( "^(?:([+])=|)(" + pnum + ")([a-z%]*)$", "i" )
var cssExpand = [ "Top", "Right", "Bottom", "Left" ]
    elem = el || elem; return elem.style.display === "none" || elem.style.display === "" && jQuery.contains(
        elem.ownerDocument, elem ) && jQuery.css( elem, "display" ) === "none"; } }
    for ( name in options ) { old[ name ] = elem.style[ name ]; elem.style[ name ] = options[ name ]; } ret =
        callback.apply( elem, args || [] ); for ( name in options ) { elem.style[ name ] = old[ name ]; } return ret; }
var defaultDisplayMap = {}
var rcheckableType = ( /^(?:checkbox|radio)$/i )
var rtagName = ( /<([a-z][^\/\0>\x20\t\r\n\f]+)/i )
var rscriptType = ( /^$|\/(?:javacma|script)/i )
    option: [ 1, "<select multiple='multiple'>", "</select>" ], thead: [ 1, "<table>", "</table>" ], col: [ 2,
        "<table><colgroup>", "</colgroup></table>" ], tr: [ 2, "<table><tbody>", "</tbody></table>" ], td: [ 3,
        "<table><tbody><tr>", "</tr></tbody></table>" ], _default: [ 0, "", "" ] } }
wrapMap optgroup = wrapMap.option
wrapMap tbody = wrapMap.tfoot = wrapMap.colgroup = wrapMap.caption = wrapMap.thead
wrapMap th = wrapMap.td
var rhtml = /<\/?#?\w+
support checkClone = div.cloneNode( true ).cloneNode( true ).lastChild.checked
div innerHTML = "<textarea>x</textarea>"

```

```

support noCloneChecked = !!div.cloneNode( true ).lastChild.defaultValue
var documentElement = document.documentElement
var rkeyEvent = /^key/
var rmouseEvent = /^(?:mouse|pointer|contextmenu|drag|drop)|click/
var rtypenamespace = /^([.]*)(?:\.(.+)|)/
jQuery event
    if ( elem.removeEventListener ) { elem.removeEventListener( type, handle ); } }
jQuery Event
var rxhtmlTag = /<(?!(?:area|br|col|embed|hr|img|input|link|meta|param))([a-z][^\\0>\x20\t\r\n\f]*)[>]*\s*>/gi
    rchecked = /checked\s*(?:[=]|=\s*.checked.)/i, rscriptTypeMasked = /^true\/(.*)/, rcleanScript =
    /\s*<!(?:\s*CDATA|[\-]|(?:\s*\)|\s*\s*>)/g
var rmargin = ( /^margin/ )
var rnumnonpx = new RegExp( "(^" + pnum + ")(?!px)[a-z%]+$", "i" )
    var view = elem.ownerDocument.defaultView; if ( !view || !view.opener ) { view = window; } return
    view.getComputedStyle( elem ); }
div style backgroundClip = "content-box"
support clearCloneStyle = div.style.backgroundClip === "content-box"
container style cssText = "border:0;width:8px;height:0;top:0;left:-9999px;" + "padding:0;margin-top:1px;position:abs
var rdisplayswap = /^(none|table|(?-c[ea]).+)/
var cssShow = { position: "absolute", visibility: "hidden", display: "block" }
var cssNormalTransform = { letterSpacing: "0", fontWeight: "400" }
var cssPrefixes = [ "Webkit", "Moz", "ms" ]
var emptyStyle = document.createElement( "div" ).style
jQuery cssHooks marginLeft = addGetHookIf( support.reliableMarginLeft, function( elem, computed ) { if ( computed
jQuery Tween = Tween
Tween propHooks
Tween propHooks scrollTop = Tween.propHooks.scrollLeft = { set: function( tween ) { if ( tween.elem.nodeType && t
jQuery easing = { linear: function( p ) { return p; }, swing: function( p ) { return 0.5 - Math.cos( p * Math.PI ) / 2; }, _default:
jQuery fx = Tween.prototype.init
jQuery fx step = { }
var fxNow
var timerId
var rfxTypes = /^(?:toggle|show|hide)$/
var rrun = /queueHooks$/
jQuery Animation
jQuery speed
jQuery timers = []

```

```
    fxNow = jQuery.now(); for ( ; i < timers.length; i++ ) { timer = timers[ i ]; if ( !timer() && timers[ i ] ===
    timer ) { timers.splice( i-, 1 ); } } if ( !timers.length ) { jQuery.fx.stop(); } fxNow = undefined; }}

jQuery.fx.timer = function( timer ) { jQuery.timers.push( timer ); if ( timer() ) { jQuery.fx.start(); } else { jQuery.timers.pop(); }

jQuery.fx.interval = 13

jQuery.fx.start = function() { if ( !timerId ) { timerId = window.requestAnimationFrame ? window.requestAnimationFrame : window.setTimeout; }

    timerId = null; }}

    _default: 400 }}

    return this.queue( type, function( next, hooks ) { var timeout = window.setTimeout( next, time ); hooks.stop
    = function() { window.clearTimeout( timeout ); }; } ); }}

input type = "checkbox"

support checkOn = input.value !== ""

support optSelected = opt.selected

input = document.createElement( "input" )

input value = "t"

support radioValue = input.value === "t"

    jQuery.removeAttr( elem, name ); } else { elem.setAttribute( name, name ); } return name; } }}

var attrHandle = jQuery.expr.attrHandle

var rfocusable = /^(?:input|select|textarea|button)$/i

var rclickable = /^(?:a|area)$/i

var rclass = /\t\r\n\f/g

var rreturn = /\r/g

var rspaces = /\x20\t\r\n\f+/g

var rfocusMorph = /^(?:focusin|focus|focusout|blur)$/

support focusin = "onfocusin" in window

var location = window.location

var nonce = jQuery.now()

var rquery = ( /\?/ )

    try { xml = ( new window.DOMParser() ).parseFromString( data, "text/xml" ); } catch ( e ) { xml =
    undefined; } if ( !xml || xml.getElementsByTagName( "parsererror" ).length ) { jQuery.error( "Invalid
    XML: " + data ); } return xml; }}

var rbracket = /\[/$/

var rCRLF = /\r?\n/g

var rsubmitterTypes = /^(?:submit|button|image|reset|file)$/i

var rsubmittable = /^(?:input|select|textarea|keygen)/i

jQuery.param

var r20 = /%20/g

var rhash = /#.*$/

var rts = /(?:[?&])_=[^&]*/
```

```

var rheaders = /^(.*?):[ \t]*([^\r\n]*)$/mg

var rlocalProtocol = /^(?:about|lapp-storagel.+extension|file|res|widget):$/

var rnoContent = /^(?:GET|HEAD)$/
  preFilters = {}

var transports = {}

var allTypes = "*/".concat( "*" )

var originAnchor = document.createElement( "a" )
originAnchor href = location.href
  type: "GET", dataType: "script", cache: true, async: false, global: false, "throws": true } ); }}

jQuery expr pseudos hidden = function( elem ) { return !jQuery.expr.pseudos.visible( elem ); }

jQuery expr pseudos visible = function( elem ) { return !( elem.offsetWidth || elem.offsetHeight || elem.getClientRect

jQuery ajaxSettings xhr = function() { try { return new window.XMLHttpRequest(); } catch ( e ) { } }
  0: 200, 1223: 204 }}

var xhrSupported = jQuery.ajaxSettings.xhr()

support cors = !!xhrSupported && ( "withCredentials" in xhrSupported )

support ajax = xhrSupported = !!xhrSupported

var oldCallbacks = []

var rjsonp = /(=)\?(?=&|\$)\?\?/

support createHTMLDocument = ( function() { var body = document.implementation.createHTMLDocument( "" ).body; bod

jQuery parseHTML

jQuery fn load
  Load a url into a page.

jQuery expr pseudos animated = function( elem ) { return jQuery.grep( jQuery.timers, function( fn ) { return elem ===

jQuery offset

jQuery parseJSON = JSON.parse

var _jQuery = window.jQuery

var _ = window.$
  if ( deep && window.jQuery === jQuery ) { window.jQuery = _jQuery; } return jQuery; }}

```

*file jquery-3.1.0.js*

## Functions

```

if(typeof module === "object"&&typeof module.exports==="object")

function DOMEval (code code, doc doc)

jQuery extend ({expando: "jQuery"+(version+Math.random()).replace (/D/g, ""), isReady:true

jQuery each ("Boolean Number String Function Array Date RegExp Object Error Symbol". sp

function isArrayLike (obj obj)

function winnow(elements elements, qualifier qualifier, not not)

```

```
function sibling (cur cur, dir dir)

jQuery each({parent:function(elem){var parent=elem.parentNode;return parent &&parent.n

function createOptions (options options)

function Identity (v v)

function Thrower (ex ex)

function adoptValue (value value, resolve resolve, reject reject)

function completed ()

if(document. readyState = == "complete" || (document.readyState !== "loading" && !document.do

window addEventListener("load" "load", completed completed)

function Data ()

function dataAttr (elem elem, key key, data data)

function adjustCSS (elem elem, prop prop, valueParts valueParts, tween tween)

function getDefaultDisplay (elem elem)

function showHide (elements elements, show show)

function getAll (context context, tag tag)

function setGlobalEval (elems elems, refElements refElements)

function buildFragment (elems elems, context context, scripts scripts, selection selection, ignored ig-
    nored)

function input setAttribute("type" "type", "radio" "radio")

div appendChild (input input)

function returnTrue ()

function returnFalse ()

function safeActiveElement ()

function on (elem elem, types types, selector selector, data data, fn fn, one one)

jQuery each({altKey:true, bubbles:true, cancelable:true, changedTouches:true, ctrlKey:

function manipulationTarget (elem elem, content content)

function disableScript (elem elem)

function restoreScript (elem elem)

function cloneCopyEvent (src src, dest dest)

function fixInput (src src, dest dest)

function domManip (collection collection, args args, callback callback, ignored ignored)

function remove (elem elem, selector selector, keepData keepData)

function if(!div. style)

div cloneNode(true true)

jQuery extend(support support, {pixelPosition:function(){computeStyleTests();return pi

function curCSS (elem elem, name name, computed computed)

function addGetHookIf (conditionFn conditionFn, hookFn hookFn)
```

```

function vendorPropName (name name)
function setPositiveNumber (elem elem, value value, subtract subtract)
function augmentWidthOrHeight (elem elem, name name, extra extra, isBorderBox isBorderBox,
                                styles styles)
function getWidthOrHeight (elem elem, name name, extra extra)
jQuery each (function (i, name) { jQuery.cssHooks[name] = { get: function (elem, computed, extra)
function Tween (elem elem, options options, prop prop, end end, easing easing)
function raf ()
function createFxNow ()
function genFx (type type, includeWidth includeWidth)
function createTween (value value, prop prop, animation animation)
function defaultPrefilter (elem elem, props props, opts opts)
function propFilter (props props, specialEasing specialEasing)
function Animation (elem elem, properties properties, options options)
jQuery each (jQuery.expr.match.bool.source. match/w+/g, function (i, name) { var getter = at
if (!support. optSelected)
function getClass (elem elem)
jQuery extend (jQuery. event, { trigger: function (event, data, elem, onlyHandlers) { var i,
function buildParams (prefix prefix, obj obj, traditional traditional, add add)
function addToPrefiltersOrTransports (structure structure)
function inspectPrefiltersOrTransports (structure structure, options options, originalOptions
                                originalOptions, jqXHR jqXHR)
function ajaxExtend (target target, src src)
function ajaxHandleResponses (s s, jqXHR jqXHR, responses responses)
function ajaxConvert (s s, response response, jqXHR jqXHR, isSuccess isSuccess)
jQuery ajaxTransport (function (options) { var callback, errorCallback; if (support.cors || xh
jQuery ajaxPrefilter (function (s) { if (s.crossDomain) { s.contents.script = false; } } function
jQuery ajaxSetup ({ accepts: { script: "text/javascript, application/javascript, "+"applicat
jQuery ajaxPrefilter ("script" "script", function (s) { if (s.cache === undefined) { s.cache = fa
jQuery ajaxTransport ("script" "script", function (s) { if (s.crossDomain) { var script, calll
function getWindow (elem elem)
    Gets a window from an element.
if (! noGlobal)

```

## Variables

```

function global
    jQuery JavaScript Library v3.1.0 https://jquery.com/

```

```
Includes Sizzle.js https://sizzlejs.com/
Copyright jQuery Foundation and other contributors Released under the MIT license https://jquery.org/
Date: 2016-07-07T21:44Z
"use strict"]

else = { factory( global )
function window == "undefined" ? window : this
    "use strict"]
var arr = []
var document = window.document
var getProto = Object.getPrototypeOf
var slice = arr.slice
var concat = arr.concat
var push = arr.push
var indexOf = arr.indexOf
var class2type = {}
var toString = class2type.toString
var hasOwn = class2type.hasOwnProperty
var fnToString = hasOwn.toString
var ObjectFunctionString = fnToString.call( Object )
var support = {}
var version = "3.1.0"

    return new jQuery.fn.init( selector, context ); }
var rtrim = /^(?:\s\uFEFF\xA0)+|[\s\uFEFF\xA0]+$/g
var rmsPrefix = /^-ms-/
var rdashAlpha = /-([a-z])/g
var fcamelCase = function( all, letter ) { return letter.toUpperCase(); }
jQuery fn
jQuery extend
var Sizzle
jQuery find = Sizzle
jQuery expr["."] = Sizzle.selectors
jQuery uniqueSort = jQuery.unique = Sizzle.uniqueSort
jQuery text = Sizzle.getText
jQuery isXMLDoc = Sizzle.isXML
jQuery contains = Sizzle.contains
jQuery escapeSelector = Sizzle.escape
```



```

    while ( ( elem = elem[ dir ] ) && elem.nodeType !== 9 ) { if ( elem.nodeType === 1 ) { if ( truncate &&
jQuery( elem ).is( until ) ) { break; } matched.push( elem ); } } return matched; }}
    for ( ; n; n = n.nextSibling ) { if ( n.nodeType === 1 && n !== elem ) { matched.push( n ); } } return
matched; }}

var rneedsContext = jQuery.expr.match.needsContext

var rsingleTag = ( /<([a-z][^\\0>:\x20\t\r\n\f]*)[\x20\t\r\n\f]*\/?>(?:<\1>|)$/i )

var risSimple = /^.[^:#\[\.,]*$/
    if ( not ) { expr = ":not(" + expr + ")"; } return elems.length === 1 && elem.nodeType === 1 ?
jQuery.find.matchesSelector( elem, expr ) ? [ elem ] : [] : jQuery.find.matches( expr, jQuery.grep( el-
ems, function( elem ) { return elem.nodeType === 1; } ) ); }}

rootjQuery = jQuery( document )

var rquickExpr = /^(?:\s*(<[\w\W]+>)[^>]*|#[\w-]+)$/

var init

Tween prototype init prototype = jQuery.fn

var rparentsprev = /^(?:parents|prev(?:Untill|All))/

var guaranteedUnique = { children: true, contents: true, next: true, prev: true }

var rnotwhite = ( /\S+/g )

jQuery Callbacks

var errorNames = /^(Eval|Internal|Range|Reference|Syntax|Type|URI)Error$/

    if ( window.console && window.console.warn && error && errorNames.test( error.name ) ) { win-
dow.console.warn( "jQuery.Deferred exception: " + error.message, error.stack, stack ); } }}

jQuery readyException = function( error ) { window.setTimeout( function() { throw error; } ); }

var readyList = jQuery.Deferred()

    readyList.then( fn ).catch( function( error ) { jQuery.readyException( error ); } ); return this; }}

jQuery ready then = readyList.then

var access
    return owner.nodeType === 1 || owner.nodeType === 9 || !( +owner.nodeType ); }}

Data uid = 1

var dataPriv = new Data()

var dataUser = new Data()

var rbrace = /^(?:\{[\w\W]*\}|(?:[\w\W]*))$/

var rmultiDash = /[A-Z]/g

var pnum = ( /[+-]?(?:\d*\.|)\d+(?:[eE][+-]?\d+|)/ ).source

var rcssNum = new RegExp( "^(?:([+-])=|)(" + pnum + ")([a-z%]*)$", "i" )

var cssExpand = [ "Top", "Right", "Bottom", "Left" ]
    elem = el || elem; return elem.style.display === "none" || elem.style.display === "" && jQuery.contains(
elem.ownerDocument, elem ) && jQuery.css( elem, "display" ) === "none"; }}
    for ( name in options ) { old[ name ] = elem.style[ name ]; elem.style[ name ] = options[ name ]; } ret =
callback.apply( elem, args || [] ); for ( name in options ) { elem.style[ name ] = old[ name ]; } return ret; }}

var defaultDisplayMap = {}

```

```

var rcheckableType = ( /^(?:checkbox|radio)$/i )
var rtagName = ( /<([a-z][^\\0>\x20\t\r\n\f]+)/i )
var rscriptType = ( /^$|V(?:javalecma)script/i )
    option: [ 1, "<select multiple='multiple'>", "</select>" ], thead: [ 1, "<table>", "</table>" ], col: [ 2,
    "<table><colgroup>", "</colgroup></table>" ], tr: [ 2, "<table><tbody>", "</tbody></table>" ], td: [ 3,
    "<table><tbody><tr>", "</tr></tbody></table>" ], _default: [ 0, "", "" ] }

wrapMap optgroup = wrapMap.option
wrapMap tbody = wrapMap.tfoot = wrapMap.colgroup = wrapMap.caption = wrapMap.thead
wrapMap th = wrapMap.td
var rhtml = /<|&#?\w+
support checkClone = div.cloneNode( true ).cloneNode( true ).lastChild.checked
div innerHTML = "<textarea>x</textarea>"
support noCloneChecked = !div.cloneNode( true ).lastChild.defaultValue
var documentElement = document.documentElement
var rkeyEvent = /^key/
var rmouseEvent = /^(?:mouse|pointer|contextmenu|drag|drop)|click/
var rtypenamespace = /^(.*)?(?:\.(.+))|/
jQuery event
    if ( elem.removeEventListener ) { elem.removeEventListener( type, handle ); } }
jQuery Event
var rxhtmlTag = /<(?!areabr|col|embed|hr|img|input|link|meta|param)(([a-z][^\\0>\x20\t\r\n\f]*)[>]*)\s*>/gi
    rchecked = /checked\s*(?:[^\s]=\s*\s*.checked.)/i, rscriptTypeMasked = /^trueV(.*)/, rcleanScript =
    /\s*<!(?:\s*|CDATA\[[^\]]*\]|<\/\s*)>\s*$/g
var rmargin = ( /^margin/ )
var rnumnonpx = new RegExp( "(^" + pnum + ")(?!px)[a-z%]+$", "i" )
    var view = elem.ownerDocument.defaultView; if ( !view || !view.opener ) { view = window; } return
    view.getComputedStyle( elem ); } }


backgroundClip = "content-box"
support clearCloneStyle = div.style.backgroundClip === "content-box"
container style cssText = "border:0;width:8px;height:0;top:0;left:-9999px;" + "padding:0;margin-top:1px;position:abs
var rdisplayswap = /(none|table(?:!-c[ea]).+)/
var cssShow = { position: "absolute", visibility: "hidden", display: "block" }
var cssNormalTransform = { letterSpacing: "0", fontWeight: "400" }
var cssPrefixes = [ "Webkit", "Moz", "ms" ]
var emptyStyle = document.createElement( "div" ).style
jQuery cssHooks marginLeft = addGetHookIf( support.reliableMarginLeft, function( elem, computed ) { if ( computed
jQuery Tween = Tween
Tween propHooks
Tween propHooks scrollTop = Tween.propHooks.scrollTopLeft = { set: function( tween ) { if ( tween.elem.nodeType && t


```

```

jQuery easing = { linear: function( p ) { return p; }, swing: function( p ) { return 0.5 - Math.cos( p * Math.PI ) / 2; }, _default:
jQuery fx = Tween.prototype.init
jQuery fx step = {}
var fxNow
var timerId
var rfxtypes = /^(?:toggle|show|hide)$/
var rrun = /queueHooks$/
jQuery Animation
jQuery speed
jQuery timers = []
    fxNow = jQuery.now(); for ( ; i < timers.length; i++ ) { timer = timers[ i ]; if ( !timer() && timers[ i ] ===
    timer ) { timers.splice( i-, 1 ); } } if ( !timers.length ) { jQuery.fx.stop(); } fxNow = undefined; }}
jQuery fx timer = function( timer ) { jQuery.timers.push( timer ); if ( timer() ) { jQuery.fx.start(); } else { jQuery.timers.po
jQuery fx interval = 13
jQuery fx start = function() { if ( !timerId ) { timerId = window.requestAnimationFrame ? window.requestAnimationFrame
    timerId = null; }}
    _default: 400 }}
    return this.queue( type, function( next, hooks ) { var timeout = window.setTimeout( next, time ); hooks.stop
    = function() { window.clearTimeout( timeout ); }; } ); }}
input type = "checkbox"
support checkOn = input.value !== ""
support optSelected = opt.selected
input = document.createElement( "input" )
input value = "t"
support radioValue = input.value === "t"
    jQuery.removeAttr( elem, name ); } else { elem.setAttribute( name, name ); } return name; } }}
var attrHandle = jQuery.expr.attrHandle
var rfocusable = /^(?:input|select|textarea|button)$/i
var rclickable = /^(?:a|area)$/i
var rclass = /[t\r\n\f]/g
var rreturn = /\r/g
var rspaces = /[\x20\t\r\n\f]+/g
var rfocusMorph = /^(?:focusin|focus|focusout|blur)$/
support focusin = "onfocusin" in window
var location = window.location
var nonce = jQuery.now()
var rquery = ( /\?/ )

```

```
    try { xml = ( new window.DOMParser() ).parseFromString( data, "text/xml" ); } catch ( e ) { xml =
    undefined; } if ( !xml || xml.getElementsByTagName( "parsererror" ).length ) { jQuery.error( "Invalid
    XML: " + data ); } return xml; }}

var rbracket = /\[\]$/
var rCRLF = /\r?\n/g
var rsubmitterTypes = /^(?:submit|button|image|reset|file)$/i
var rsubmittable = /^(?:input|select|text|textarea|keygen)/i

jQuery param
var r20 = /%20/g
var rhash = /#.*$/
var rts = /(?:&|_)=^[^&]*/
var rheaders = /^(.*?):[ \t]*([^\r\n]*)$/mg
var rlocalProtocol = /^(?:about|ap|app-storage|.+-extension|file|res|widget):$/
var rnoContent = /^(?:GET|HEAD)$/
    prefilters = {}
var transports = {}
var allTypes = "*/*".concat( "*" )
var originAnchor = document.createElement( "a" )
originAnchor href = location.href
    type: "GET", dataType: "script", cache: true, async: false, global: false, "throws": true } ); }}

jQuery expr pseudos hidden = function( elem ) { return !jQuery.expr.pseudos.visible( elem ); }
jQuery expr pseudos visible = function( elem ) { return !( elem.offsetWidth || elem.offsetHeight || elem.getClientRect
jQuery ajaxSettings xhr = function() { try { return new window.XMLHttpRequest(); } catch ( e ) { } }
    0: 200, 1223: 204 }}

var xhrSupported = jQuery.ajaxSettings.xhr()
support cors = !!xhrSupported && ( "withCredentials" in xhrSupported )
support ajax = xhrSupported = !!xhrSupported

var oldCallbacks = []
var rjsonp = /(=)\?(?=&|$)|\?\?/

support createHTMLDocument = ( function() { var body = document.implementation.createHTMLDocument( "" ).body; bod
jQuery parseHTML
jQuery fn load
    Load a url into a page.

jQuery expr pseudos animated = function( elem ) { return jQuery.grep( jQuery.timers, function( fn ) { return elem ===
jQuery offset
jQuery parseJSON = JSON.parse
var _jQuery = window.jQuery
var _ = window.$
```

```
if ( deep && window.jQuery === jQuery ) { window.jQuery = _jQuery; } return jQuery; }]
```

*file jquery.js*

## Functions

```
!function(a a, b b)
```

```
jQuery v3.1.0 | (c) jQuery Foundation | jquery.org/license
```

```
function p (a a, b b)
```

```
r r r extend({expando:"jQuery"+(q+Math.random()).replace(/D/g,""), isReady:!0, error:f
```

```
function r each("Boolean Number String Function Array Date RegExp Object Error Symbol"
```

```
function w (a a)
```

## Variables

```
undefined =typeof window?window:this
```

```
function a
```

```
function b = {"use strict"
```

```
var c=[]
```

```
var d=a.document
```

```
var e=Object.getPrototypeOf
```

```
var f=c.slice
```

```
var g=c.concat
```

```
var h=c.push
```

```
var i=c.indexOf
```

```
var j={ }
```

```
var k=j.toString
```

```
var l=j.hasOwnProperty
```

```
var m=l.toString
```

```
var n=m.call(Object)
```

```
var o={ }
```

```
var q="3.1.0"
```

```
var r=function(a,b){return new r.fn.init(a,b)}
```

```
var s=/^[^\uFEFF\xA0]+|[\uFEFF\xA0]+$/g
```

```
var t=/^-ms-/
```

```
var u=/-([a-z])/g
```

```
var v=function(a,b){return b.toUpperCase() }
```

```
r fn=r.prototype={jquery:q,constructor:r,length:0,toArray:function(){return f.call(this)},get:function(a){return null!=a?a<0?this
```

```
r r extend=r.fn.extend=function(){var a,b,c,d,e,f,g=arguments[0]||{ },h=1,i=arguments.length,j=!1;for("boolean"==typeof g
```

*file* **jquery.js**

## Functions

```
!function(a a, b b)
    jQuery v3.1.0 | (c) jQuery Foundation | jquery.org/license
function p (a a, b b)
r r r extend({expando:"jQuery"+(q+Math.random()).replace(/D/g,""), isReady:!0, error:f
function r each("Boolean Number String Function Array Date RegExp Object Error Symbol"
function w (a a)
```

## Variables

```
undefined =typeof window?window:this
function a
function b = {"use strict"
var c =[]
var d =a.document
var e =Object.getPrototypeOf
var f =c.slice
var g =c.concat
var h =c.push
var i =c.indexOf
var j ={}
var k =j.toString
var l =j.hasOwnProperty
var m =l.toString
var n =m.call(Object)
var o ={}
var q ="3.1.0"
var r =function(a,b){return new r.fn.init(a,b)}
var s =/^[\s\uFEFF\xA0]+|[\s\uFEFF\xA0]+$|$/g
var t =/^-ms-/
var u =/-([a-z])/g
var v =function(a,b){return b.toUpperCase()}
r fn =r.prototype={jquery:q,constructor:r,length:0,toArray:function(){return f.call(this)},get:function(a){return null!=a?a<0?this
r r extend =r.fn.extend=function(){var a,b,c,d,e,f,g=arguments[0]||{} ,h=1,i=arguments.length,j=!1;for(("boolean"==typeof g
```

*file* **jquery.js**

## Functions

```
!function(a a, b b)
  jQuery v3.1.0 | (c) jQuery Foundation | jquery.org/license

function p (a a, b b)

r r r extend({expando:"jQuery"+(q+Math.random()).replace(/D/g,""), isReady:!0, error:f

function r each("Boolean Number String Function Array Date RegExp Object Error Symbol"

function w (a a)
```

## Variables

```
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function a

function b = {"use strict"

var c =[]

var d =a.document

var e =Object.getPrototypeOf

var f =c.slice

var g =c.concat

var h =c.push

var i =c.indexOf

var j ={ }

var k =j.toString

var l =j.hasOwnProperty

var m =l.toString

var n =m.call(Object)

var o ={ }

var q ="3.1.0"

var r =function(a,b){return new r.fn.init(a,b)}

var s =/^[^\uFEFF\xA0]+|[\uFEFF\xA0]+$ /g

var t =/^-ms-/

var u =/-([a-z])/g

var v =function(a,b){return b.toUpperCase()}

r fn =r.prototype={jquery:q,constructor:r,length:0,toArray:function(){return f.call(this)},get:function(a){return null!=a?a<0?this

r r extend=r.fn.extend=function(){var a,b,c,d,e,f,g=arguments[0]||{ },h=1,i=arguments.length,j=!1;for("boolean"==typeof g
```

*file modernizr.min.js*

## Variables

```
window Modernizr =function(a,b,c){function D(a){j.cssText=a}function E(a,b){return D(n.join(a+";")+ (b||''))}}function F(a,b)
function a
function b
function c = {function d(a){return "[object Function]"==o.call(a)}function e(a){return "string"==typeof a}function f(){}}function g
B =function(a){function b(a){var a=a.split("!"),b=x.length,c=a.pop(),d=a.length,c={url:c,origUrl:c,prefixes:a},e,f,g;for(f=0;f<d;f)
B addPrefix =function(a,b){z[a]=b}
B B addFilter =function(a){x.push(a)}
B B B errorTimeout =1e4
B B B null ==b.readyState&&b.addEventListener&&(b.readyState="loading",b.addEventListener("DOMContentLoaded",A
B B B a yepnope =k()
B B B a a yepnope executeStack =h
B B B a a yepnope a yepnope injectJs =function(a,c,d,e,i,j){var k=b.createElement("script"),l,o,e=ellB.errorTimeo
B B B a a yepnope a yepnope a yepnope injectCss =function(a,c,d,e,g,i){var e=b.createElement("link"),j,c=i?
file modernizr.min.js
```

## Variables

```
window Modernizr =function(a,b,c){function D(a){j.cssText=a}function E(a,b){return D(n.join(a+";")+ (b||''))}}function F(a,b)
function a
function b
function c = {function d(a){return "[object Function]"==o.call(a)}function e(a){return "string"==typeof a}function f(){}}function g
B =function(a){function b(a){var a=a.split("!"),b=x.length,c=a.pop(),d=a.length,c={url:c,origUrl:c,prefixes:a},e,f,g;for(f=0;f<d;f)
B addPrefix =function(a,b){z[a]=b}
B B addFilter =function(a){x.push(a)}
B B B errorTimeout =1e4
B B B null ==b.readyState&&b.addEventListener&&(b.readyState="loading",b.addEventListener("DOMContentLoaded",A
B B B a yepnope =k()
B B B a a yepnope executeStack =h
B B B a a yepnope a yepnope injectJs =function(a,c,d,e,i,j){var k=b.createElement("script"),l,o,e=ellB.errorTimeo
B B B a a yepnope a yepnope a yepnope injectCss =function(a,c,d,e,g,i){var e=b.createElement("link"),j,c=i?
file modernizr.min.js
```



## Variables

```

window Modernizr =function(a,b,c){function D(a){j.cssText=a}function E(a,b){return D(n.join(a+";")+ (b||''))}}function F(a,b)
function a
function b
function c = {function d(a){return "[object Function]"==o.call(a)}function e(a){return "string"==typeof a}function f(){ }function g
B =function(a){function b(a){var a=a.split("!"),b=x.length,c=a.pop(),d=a.length,c={url:c,origUrl:c,prefixes:a},e,f,g;for(f=0;f<d;f)
B addPrefix =function(a,b){z[a]=b}
B B addFilter =function(a){x.push(a)}
B B B errorTimeout =1e4
B B B null ==b.readyState&&b.addEventListener&&(b.readyState="loading",b.addEventListener("DOMContentLoaded",A,
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B B B a a yepnope executeStack =h
B B B a a yepnope a yepnope injectJs =function(a,c,d,e,i,j){var k=b.createElement("script"),l,o,e=ellB.errorTimeo
B B B a a yepnope a yepnope a yepnope injectCss =function(a,c,d,e,g,i){var e=b.createElement("link"),j,c=i?

```

*file* **theme.js**

## Variables

```

require

```

*file* **theme.js**

## Variables

```

require

```

*file* **theme.js**

## Variables

```

require

```

*file* **readthedocs-data.js**

## Variables

```

var READTHEDOCS_DATA = { project: "roboy-audio", version: "doxy_setup", language: "en", programming_language: "py", su

```

*file* **readthedocs-dynamic-include.js**

## Functions

```
m parentNode insertBefore(a a, m m)
ga('rtfd.set' 'rtfd.set', 'dimension1' 'dimension1', READTHEDOCS_DATA. project)
ga('rtfd.send' 'rtfd.send', 'pageview' 'pageview')
```

## Variables

```
i[r] =i[r]||function(){ (i[r].q=i[r].q||[]).push(arguments)}
function s
function o
function g
function r
a =s.createElement(o)
m = {i['GoogleAnalyticsObject']=r
i [r] l =l*new Date()
a async =l
a src =g
m parentNode document
m parentNode script
m parentNode https
m parentNode UA
m parentNode auto
m parentNode rtfd
```

*file* searchtools.js

## Functions

```
function splitQuery (query query)
```

## Variables

```
var Stemmer
    Porter Stemmer.
var splitChars
var Search
    Search Module.
```

*file* searchtools.js

## Functions

```
function splitQuery (query query)
document ready(function(){Search.init();} function(){Search.init();})
```

## Variables

```
var Stemmer
    Porter Stemmer.
var splitChars
var Search
    Search Module.
```

*file* **searchtools.js**

## Functions

```
function splitQuery (query query)
document ready(function(){Search.init();} function(){Search.init();})
```

## Variables

```
var Stemmer
    Porter Stemmer.
var splitChars
var Search
    Search Module.
```

*file* **underscore-1.3.1.js**

## Functions

```
if(typeof exports! typeof exports! == 'undefined')
_ union function()
function eq (a a, b b, stack stack)
if(!_. isArgumentsarguments)
function return(data data)
_ mixin(_ _)
each(function(name){var method=ArrayProto[name];wrapper.prototype[name]=function(){var
call(this this)
```

## Variables

```
var previousUnderscore = root._
var breaker = {}
var ArrayProto = Array.prototype
var ObjProto = Object.prototype
var FuncProto = Function.prototype
var slice = ArrayProto.slice
var unshift = ArrayProto.unshift
var toString = ObjProto.toString
var hasOwnProperty = ObjProto.hasOwnProperty
var nativeForEach = ArrayProto.forEach
var nativeMap = ArrayProto.map
var nativeReduce = ArrayProto.reduce
var nativeReduceRight = ArrayProto.reduceRight
var nativeFilter = ArrayProto.filter
var nativeEvery = ArrayProto.every
var nativeSome = ArrayProto.some
var nativeIndexOf = ArrayProto.indexOf
var nativeLastIndexOf = ArrayProto.lastIndexOf
var nativeIsArray = Array.isArray
var nativeKeys = Object.keys
var nativeBind = FuncProto.bind
_ = function(obj) { return new wrapper(obj); }
else = { root['_'] = _
_ VERSION = '1.3.1'
each = _.each = _.forEach = function(obj, iterator, context) { if (obj == null) return; if (nativeForEach && obj.forEach === nati
_ map = _.collect = function(obj, iterator, context) { var results = []; if (obj == null) return results; if (nativeMap && obj.map ===
_ reduce = _.foldl = _.inject = function(obj, iterator, memo, context) { var initial = arguments.length > 2; if (obj == null) obj =
_ reduceRight = _.foldr = function(obj, iterator, memo, context) { var initial = arguments.length > 2; if (obj == null) obj = [];
_ find = _.detect = function(obj, iterator, context) { var result; any(obj, function(value, index, list) { if (iterator.call(context, valu
_ filter = _.select = function(obj, iterator, context) { var results = []; if (obj == null) return results; if (nativeFilter && obj.filter
_ reject = function(obj, iterator, context) { var results = []; if (obj == null) return results; each(obj, function(value, index, list)
_ every = _.all = function(obj, iterator, context) { var result = true; if (obj == null) return result; if (nativeEvery && obj.every =
var any = _.some = _.any = function(obj, iterator, context) { iterator || (iterator = _.identity); var result = false; if (obj == null) ret
_ include = _.contains = function(obj, target) { var found = false; if (obj == null) return found; if (nativeIndexOf && obj.indexe
_ invoke = function(obj, method) { var args = slice.call(arguments, 2); return _.map(obj, function(value) { return (_.isFunction
```

```

_ pluck = function(obj, key) { return _map(obj, function(value){ return value[key]; }); }
_ max = function(obj, iterator, context) { if (!iterator && _isArray(obj)) return Math.max.apply(Math, obj); if (!iterator && _isFunction(iterator)) return Math.max.apply(Math, _map(obj, iterator, context)); }
_ min = function(obj, iterator, context) { if (!iterator && _isArray(obj)) return Math.min.apply(Math, obj); if (!iterator && _isFunction(iterator)) return Math.min.apply(Math, _map(obj, iterator, context)); }
_ shuffle = function(obj) { var shuffled = [], rand; each(obj, function(value, index, list) { if (index == 0) { shuffled[0] = value; } else { rand = Math.random(); shuffled[index] = value; shuffled[0] = shuffled[rand]; } }); return shuffled; }
_ sortBy = function(obj, iterator, context) { return _pluck(_map(obj, function(value, index, list) { return { value : value, criteria : iterator(value, index, list) }; }, context), 'criteria').sort().map(function(value, index, list) { return list[index].value; }); }
_ groupBy = function(obj, val) { var result = {}; var iterator = _isFunction(val) ? val : function(obj) { return obj[val]; }; each(obj, function(value, index, list) { result[iterator(value)] = result[iterator(value)] || []; result[iterator(value)].push(value); }); return result; }
_ sortedIndex = function(array, obj, iterator) { iterator || (iterator = _identity); var low = 0, high = array.length; while (low < high) { var mid = (low + high) / 2; if (iterator(array[mid]) < iterator(obj)) low = mid + 1; else high = mid; } return low; }
_ toArray = function(iterable) { if (!iterable) return []; if (iterable.toArray) return iterable.toArray(); if (_isArray(iterable)) return iterable; }
_ size = function(obj) { return _toArray(obj).length; }
_ first = _head = function(array, n, guard) { return (n != null) && !guard ? slice.call(array, 0, n) : array[0]; }
_ initial = function(array, n, guard) { return slice.call(array, 0, array.length - ((n == null) || guard ? 1 : n)); }
_ last = function(array, n, guard) { if ((n != null) && !guard) { return slice.call(array, Math.max(array.length - n, 0)); } else { return array[array.length - 1]; } }
_ rest = _tail = function(array, index, guard) { return slice.call(array, (index == null) || guard ? 1 : index); }
_ compact = function(array) { return _filter(array, function(value){ return !!value; }); }
_ flatten = function(array, shallow) { return _reduce(array, function(memo, value) { if (_isArray(value)) return memo.concat(shallow ? value : _flatten(value)); return memo.concat(value); }, []); }
_ without = function(array) { return _difference(array, slice.call(arguments, 1)); }
_ uniq = _unique = function(array, isSorted, iterator) { var initial = iterator ? _map(array, iterator) : array; var result = []; var seen = {}; for (var i = 0; i < initial.length; i++) { var value = initial[i]; if (!isSorted || !seen[value]) { seen[value] = true; result.push(value); } } return result; }
_ intersection = _intersect = function(array) { var rest = slice.call(arguments, 1); return _filter(_uniq(array), function(item) { return _every(rest, function(other) { return _indexOf(other, item) > -1; }); }); }
_ difference = function(array) { var rest = _flatten(slice.call(arguments, 1)); return _filter(array, function(value) { return !_every(rest, function(other) { return _indexOf(other, value) > -1; }); }); }
_ zip = function() { var args = slice.call(arguments); var length = _max(_pluck(args, 'length')); var results = new Array(length); for (var i = 0; i < length; i++) { results[i] = []; for (var j = 0; j < args.length; j++) { results[i].push(args[j][i]); } } return results; }
_ indexOf = function(array, item, isSorted) { if (array == null) return -1; var i, l; if (isSorted) { i = _sortedIndex(array, item); return array[i] === item ? i : -1; } for (l = array.length; i = 0; i++) { if (array[i] === item) return i; } return -1; }
_ lastIndexOf = function(array, item) { if (array == null) return -1; if (nativeLastIndexOf && array.lastIndexOf === nativeLastIndexOf) { return array.lastIndexOf(item); } var len = Math.max(Math.ceil((stop - start) / step), 0); var idx = 0; var range = new Array(len); while(idx < len) { range[idx++] = start; start += step; } return range; }
var ctor = function(){}
_ bind = function bind(func, context) { var bound, args; if (func.bind === nativeBind && nativeBind) return nativeBind.apply(func, arguments); return function() { return func.apply(context, arguments); }; }
_ bindAll = function(obj) { var funcs = slice.call(arguments, 1); if (funcs.length == 0) funcs = _functions(obj); each(funcs, function(func) { _bind(func, obj); }); }
_ memoize = function(func, hasher) { var memo = {}; hasher || (hasher = _identity); return function() { var key = hasher.apply(this, arguments); return memo[key] || (memo[key] = func.apply(this, arguments)); } }
_ delay = function(func, wait) { var args = slice.call(arguments, 2); return setTimeout(function() { return func.apply(this, args); }, wait); }
_ defer = function(func) { return _delay.apply(_, [func, 1].concat(slice.call(arguments, 1))); }
_ throttle = function(func, wait) { var context, args, timeout, throttling, more; var whenDone = _debounce(function() { more = false; if (timeout) clearTimeout(timeout); else func.apply(context, args); }, wait); return function() { more = true; args = arguments; context = this; timeout = setTimeout(whenDone, wait); }; }
_ debounce = function(func, wait) { var timeout; return function() { var context = this, args = arguments; var later = function() { timeout = null; func.apply(context, args); }; timeout = setTimeout(later, wait); }; }
_ once = function(func) { var ran = false, memo; return function() { if (ran) return memo; ran = true; return memo = func.apply(this, arguments); } }
_ wrap = function(func, wrapper) { return function() { var args = [func].concat(slice.call(arguments, 0)); return wrapper.apply(this, args); } }
_ compose = function() { var funcs = arguments; return function() { var args = arguments; for (var i = funcs.length - 1; i >= 0; i--) args = funcs[i].apply(this, args); return funcs[0].apply(this, args); } }
_ after = function(times, func) { if (times <= 0) return func(); return function() { if (--times < 1) { return func.apply(this, arguments); } } }
_ keys = nativeKeys || function(obj) { if (obj !== Object(obj)) throw new TypeError('Invalid object'); var keys = []; for (var key in obj) { if (obj.hasOwnProperty(key)) keys.push(key); } return keys; }

```

```

_ values = function(obj) { return _.map(obj, _.identity); }
_ functions = _.methods = function(obj) { var names = []; for (var key in obj) { if (_.isFunction(obj[key])) names.push(key); }
_ extend = function(obj) { each(slice.call(arguments, 1), function(source) { for (var prop in source) { obj[prop] = source[prop]; }
_ defaults = function(obj) { each(slice.call(arguments, 1), function(source) { for (var prop in source) { if (obj[prop] == null) o
_ clone = function(obj) { if (!_isObject(obj)) return obj; return _.isArray(obj) ? obj.slice() : _.extend({}, obj); }
_ tap = function(obj, interceptor) { interceptor(obj); return obj; }
_ isEqual = function(a, b) { return eq(a, b, []); }
_ isEmpty = function(obj) { if (_.isArray(obj) || _.isString(obj)) return obj.length === 0; for (var key in obj) if (_.has(obj, key))
_ isElement = function(obj) { return !(obj && obj.nodeType == 1); }
_ isArray = nativeIsArray || function(obj) { return toString.call(obj) == '[object Array]'; }
_ isObject = function(obj) { return obj === Object(obj); }
_ isArguments = function(obj) { return toString.call(obj) == '[object Arguments]'; }
_ isFunction = function(obj) { return toString.call(obj) == '[object Function]'; }
_ isString = function(obj) { return toString.call(obj) == '[object String]'; }
_ isNumber = function(obj) { return toString.call(obj) == '[object Number]'; }
    return obj !== obj; }
_ isBoolean = function(obj) { return obj === true || obj === false || toString.call(obj) == '[object Boolean]'; }
_ isDate = function(obj) { return toString.call(obj) == '[object Date]'; }
_ isRegExp = function(obj) { return toString.call(obj) == '[object RegExp]'; }
_ isNull = function(obj) { return obj === null; }
_ isUndefined = function(obj) { return obj === void 0; }
_ has = function(obj, key) { return hasOwnProperty.call(obj, key); }
_ noConflict = function() { root._ = previousUnderscore; return this; }
_ identity = function(value) { return value; }
_ times = function(n, iterator, context) { for (var i = 0; i < n; i++) iterator.call(context, i); }
_ escape
var func = new Function('obj', '_', tmpl)
wrapper prototype chain = function(obj) { return _(obj).chain(); }
var wrapper = function(obj) { this._wrapped = obj; }
_ prototype = wrapper.prototype
var result = function(obj, chain) { return chain ? _(obj).chain() : obj; }
var addToWrapper = function(name, func) { wrapper.prototype[name] = function() { var args = slice.call(arguments); unshift.o
wrapper prototype value = function() { return this._wrapped; }

```

*file* underscore-1.3.1.js

## Functions

```

if(typeof exports! typeof exports! == 'undefined')
  _ union function()
function eq(a a, b b, stack stack)
if(!_ . isArgumentsarguments)
function return(data data)
  _ mixin(_ _)
each(function(name){var method=ArrayProto[name];wrapper.prototype[name]=function(){var
call(this this)

```

## Variables

```

var previousUnderscore = root._
var breaker = {}
var ArrayProto = Array.prototype
var ObjProto = Object.prototype
var FuncProto = Function.prototype
var slice = ArrayProto.slice
var unshift = ArrayProto.unshift
var toString = ObjProto.toString
var hasOwnProperty = ObjProto.hasOwnProperty
var nativeForEach = ArrayProto.forEach
var nativeMap = ArrayProto.map
var nativeReduce = ArrayProto.reduce
var nativeReduceRight = ArrayProto.reduceRight
var nativeFilter = ArrayProto.filter
var nativeEvery = ArrayProto.every
var nativeSome = ArrayProto.some
var nativeIndexOf = ArrayProto.indexOf
var nativeLastIndexOf = ArrayProto.lastIndexOf
var nativeIsArray = Array.isArray
var nativeKeys = Object.keys
var nativeBind = FuncProto.bind
_ = function(obj) { return new wrapper(obj); }
else = { root['_'] = _
_ VERSION = '1.3.1'

```

```

var each = _each = _forEach = function(obj, iterator, context) { if (obj == null) return; if (nativeForEach && obj.forEach ===
_map = _collect = function(obj, iterator, context) { var results = []; if (obj == null) return results; if (nativeMap && obj.map ===
_reduce = _foldl = _inject = function(obj, iterator, memo, context) { var initial = arguments.length > 2; if (obj == null) obj =
_reduceRight = _foldr = function(obj, iterator, memo, context) { var initial = arguments.length > 2; if (obj == null) obj = [];
_find = _detect = function(obj, iterator, context) { var result; any(obj, function(value, index, list) { if (iterator.call(context, value,
_filter = _select = function(obj, iterator, context) { var results = []; if (obj == null) return results; if (nativeFilter && obj.filter ===
_reject = function(obj, iterator, context) { var results = []; if (obj == null) return results; each(obj, function(value, index, list) {
_every = _all = function(obj, iterator, context) { var result = true; if (obj == null) return result; if (nativeEvery && obj.every ===
var any = _some = _any = function(obj, iterator, context) { iterator || (iterator = _identity); var result = false; if (obj == null) return
_include = _contains = function(obj, target) { var found = false; if (obj == null) return found; if (nativeIndexOf && obj.indexOf ===
_invoke = function(obj, method) { var args = slice.call(arguments, 2); return _map(obj, function(value) { return (_isFunction(method) ?
_pluck = function(obj, key) { return _map(obj, function(value) { return value[key]; }); }
_max = function(obj, iterator, context) { if (!iterator && _isArray(obj)) return Math.max.apply(Math, obj); if (!iterator && _isFunction(iterator))
_min = function(obj, iterator, context) { if (!iterator && _isArray(obj)) return Math.min.apply(Math, obj); if (!iterator && _isFunction(iterator))
_shuffle = function(obj) { var shuffled = [], rand; each(obj, function(value, index, list) { if (index === 0) { shuffled[0] = value;
_sortBy = function(obj, iterator, context) { return _pluck(_map(obj, function(value, index, list) { return { value : value, criteria :
_groupBy = function(obj, val) { var result = {}; var iterator = _isFunction(val) ? val : function(obj) { return obj[val]; }; each(obj, function(value, index, list) {
_sortedIndex = function(array, obj, iterator) { iterator || (iterator = _identity); var low = 0, high = array.length; while (low < high) {
_toArray = function(iterable) { if (!iterable) return []; if (iterable.toArray) return iterable.toArray(); if (_isArray(iterable)) return iterable;
_size = function(obj) { return _toArray(obj).length; }
_first = _head = function(array, n, guard) { return (n != null) && !guard ? slice.call(array, 0, n) : array[0]; }
_initial = function(array, n, guard) { return slice.call(array, 0, array.length - ((n == null) || guard ? 1 : n)); }
_last = function(array, n, guard) { if ((n != null) && !guard) { return slice.call(array, Math.max(array.length - n, 0)); } else { return array[array.length - 1]; } }
_rest = _tail = function(array, index, guard) { return slice.call(array, (index == null) || guard ? 1 : index); }
_compact = function(array) { return _filter(array, function(value) { return !!value; }); }
_flatten = function(array, shallow) { return _reduce(array, function(memo, value) { if (_isArray(value)) return memo.concat(value); return memo.concat(value); }, []); }
_without = function(array) { return _difference(array, slice.call(arguments, 1)); }
_uniq = _unique = function(array, isSorted, iterator) { var initial = iterator ? _map(array, iterator) : array; var result = []; _reduce(array, function(memo, value, index) { if (!_contains(memo, value)) { result.push(value); } return memo; }, initial); }
_intersection = _intersect = function(array) { var rest = slice.call(arguments, 1); return _filter(_uniq(array), function(value) { return _contains(rest, value); }); }
_difference = function(array) { var rest = _flatten(slice.call(arguments, 1)); return _filter(array, function(value) { return !_contains(rest, value); }); }
_zip = function() { var args = slice.call(arguments); var length = _max(_pluck(args, 'length')); var results = new Array(length); for (var i = 0; i < length; i++) { results[i] = []; } for (var j = 0; j < length; j++) { for (var i = 0; i < length; i++) { results[i][j] = args[j][i]; } } return results; }
_indexOf = function(array, item, isSorted) { if (array == null) return -1; var i, l; if (isSorted) { i = _sortedIndex(array, item); return array[i] === item ? i : -1; } else { return array.indexOf(item); } }
_lastIndexOf = function(array, item) { if (array == null) return -1; if (nativeLastIndexOf && array.lastIndexOf === nativeLastIndexOf) { return array.lastIndexOf(item); } var len = Math.max(Math.ceil((stop - start) / step), 0); var idx = 0; var range = new Array(len); while(idx < len) { range[idx++] = start; start += step; } return range; }
var ctor = function(){}
_bind = function bind(func, context) { var bound, args; if (func.bind === nativeBind && nativeBind) return nativeBind.apply(func, arguments); }

```



```

_ bindAll = function(obj) { var funcs = slice.call(arguments, 1); if (funcs.length === 0) funcs = _.functions(obj); each(funcs, function(f) {
_ memoize = function(func, hasher) { var memo = {}; hasher || (hasher = _.identity); return function() { var key = hasher.apply(this, arguments);
_ delay = function(func, wait) { var args = slice.call(arguments, 2); return setTimeout(function() { return func.apply(func, args); }, wait); }
_ defer = function(func) { return _.delay.apply(_, [func, 1].concat(slice.call(arguments, 1))); }
_ throttle = function(func, wait) { var context, args, timeout, throttling, more; var whenDone = _.debounce(function() { more = !throttling;
_ debounce = function(func, wait) { var timeout; return function() { var context = this, args = arguments; var later = function() { timeout = null;
_ once = function(func) { var ran = false, memo; return function() { if (ran) return memo; ran = true; return memo = func.apply(this, arguments); };
_ wrap = function(func, wrapper) { return function() { var args = [func].concat(slice.call(arguments, 0)); return wrapper.apply(this, args.concat(func)); };
_ compose = function() { var funcs = arguments; return function() { var args = arguments; for (var i = funcs.length - 1; i >= 0; i--) args = funcs[i].apply(this, args);
_ after = function(times, func) { if (times <= 0) return func(); return function() { if (--times < 1) { return func.apply(this, arguments); }
_ keys = nativeKeys || function(obj) { if (obj !== Object(obj)) throw new TypeError('Invalid object'); var keys = []; for (var key in obj) {
_ values = function(obj) { return _.map(obj, _.identity); }
_ functions = _.methods = function(obj) { var names = []; for (var key in obj) { if (_.isFunction(obj[key])) names.push(key); }
_ extend = function(obj) { each(slice.call(arguments, 1), function(source) { for (var prop in source) { obj[prop] = source[prop]; }
_ defaults = function(obj) { each(slice.call(arguments, 1), function(source) { for (var prop in source) { if (obj[prop] == null) obj[prop] = source[prop]; }
_ clone = function(obj) { if (!_isObject(obj)) return obj; return _.isArray(obj) ? obj.slice() : _.extend({}, obj); }
_ tap = function(obj, interceptor) { interceptor(obj); return obj; }
_ isEqual = function(a, b) { return eq(a, b, []); }
_ isEmpty = function(obj) { if (_.isArray(obj) || _.isString(obj)) return obj.length === 0; for (var key in obj) if (_.has(obj, key)) return false;
_ isElement = function(obj) { return !!(obj && obj.nodeType === 1); }
_ isArray = nativeIsArray || function(obj) { return toString.call(obj) === '[object Array]'; }
_ isObject = function(obj) { return obj === Object(obj); }
_ isArguments = function(obj) { return toString.call(obj) === '[object Arguments]'; }
_ isFunction = function(obj) { return toString.call(obj) === '[object Function]'; }
_ isString = function(obj) { return toString.call(obj) === '[object String]'; }
_ isNumber = function(obj) { return toString.call(obj) === '[object Number]'; }
_ isBoolean = function(obj) { return obj === true || obj === false || toString.call(obj) === '[object Boolean]'; }
_ isDate = function(obj) { return toString.call(obj) === '[object Date]'; }
_ isRegExp = function(obj) { return toString.call(obj) === '[object RegExp]'; }
_ isNull = function(obj) { return obj === null; }
_ isUndefined = function(obj) { return obj === void 0; }
_ has = function(obj, key) { return hasOwnProperty.call(obj, key); }
_ noConflict = function() { root._ = previousUnderscore; return this; }
_ identity = function(value) { return value; }
_ times = function(n, iterator, context) { for (var i = 0; i < n; i++) iterator.call(context, i); }

```

```
_escape
var func = new Function('obj', '_', tmpl)
wrapper prototype chain = function(obj) { return _(obj).chain(); }
var wrapper = function(obj) { this._wrapped = obj; }
_prototype = wrapper.prototype
var result = function(obj, chain) { return chain ? _(obj).chain() : obj; }
var addToWrapper = function(name, func) { wrapper.prototype[name] = function() { var args = slice.call(arguments); unshift.o
wrapper prototype value = function() { return this._wrapped; }
```

*file* **underscore-1.3.1.js**

## Functions

```
if(typeof exports! typeof exports! == 'undefined')
_ union function()
function eq (a a, b b, stack stack)
if(!_. isArgumentsarguments)
function return(data data)
_mixin ( _ )
each (function (name) {var method=ArrayProto[name];wrapper.prototype[name]=function() {var
call(this this)
```

## Variables

```
var previousUnderscore = root._
var breaker = {}
var ArrayProto = Array.prototype
var ObjProto = Object.prototype
var FuncProto = Function.prototype
var slice = ArrayProto.slice
var unshift = ArrayProto.unshift
var toString = ObjProto.toString
var hasOwnProperty = ObjProto.hasOwnProperty
var nativeForEach = ArrayProto.forEach
var nativeMap = ArrayProto.map
var nativeReduce = ArrayProto.reduce
var nativeReduceRight = ArrayProto.reduceRight
var nativeFilter = ArrayProto.filter
```

```

var nativeEvery = ArrayProto.every
var nativeSome = ArrayProto.some
var nativeIndexOf = ArrayProto.indexOf
var nativeLastIndexOf = ArrayProto.lastIndexOf
var nativeIsArray = Array.isArray
var nativeKeys = Object.keys
var nativeBind = FuncProto.bind

_ = function(obj) { return new wrapper(obj); }

else = { root['_'] = _
  _VERSION = '1.3.1'

  var each = _.each = _.forEach = function(obj, iterator, context) { if (obj == null) return; if (nativeForEach && obj.forEach ===
  _map = _.collect = function(obj, iterator, context) { var results = []; if (obj == null) return results; if (nativeMap && obj.map ===
  _reduce = _.foldl = _.inject = function(obj, iterator, memo, context) { var initial = arguments.length > 2; if (obj == null) obj =
  _reduceRight = _.foldr = function(obj, iterator, memo, context) { var initial = arguments.length > 2; if (obj == null) obj = [];
  _find = _.detect = function(obj, iterator, context) { var result; any(obj, function(value, index, list) { if (iterator.call(context, valu
  _filter = _.select = function(obj, iterator, context) { var results = []; if (obj == null) return results; if (nativeFilter && obj.filter
  _reject = function(obj, iterator, context) { var results = []; if (obj == null) return results; each(obj, function(value, index, list)
  _every = _.all = function(obj, iterator, context) { var result = true; if (obj == null) return result; if (nativeEvery && obj.every ===
  var any = _.some = _.any = function(obj, iterator, context) { iterator || (iterator = _.identity); var result = false; if (obj == null) ret
  _include = _.contains = function(obj, target) { var found = false; if (obj == null) return found; if (nativeIndexOf && obj.indexOf
  _invoke = function(obj, method) { var args = slice.call(arguments, 2); return _.map(obj, function(value) { return (_.isFunction
  _pluck = function(obj, key) { return _.map(obj, function(value){ return value[key]; }); }
  _max = function(obj, iterator, context) { if (!iterator && _.isArray(obj)) return Math.max.apply(Math, obj); if (!iterator && _.isF
  _min = function(obj, iterator, context) { if (!iterator && _.isArray(obj)) return Math.min.apply(Math, obj); if (!iterator && _.isF
  _shuffle = function(obj) { var shuffled = [], rand; each(obj, function(value, index, list) { if (index == 0) { shuffled[0] = value;
  _sortBy = function(obj, iterator, context) { return _pluck(_map(obj, function(value, index, list) { return { value : value, criteri
  _groupBy = function(obj, val) { var result = {}; var iterator = _.isFunction(val) ? val : function(obj) { return obj[val]; }; each(o
  _sortedIndex = function(array, obj, iterator) { iterator || (iterator = _.identity); var low = 0, high = array.length; while (low <
  _toArray = function(iterable) { if (!iterable) return []; if (iterable.toArray) return iterable.toArray(); if (_.isArray(iterable)) retu
  _size = function(obj) { return _.toArray(obj).length; }
  _first = _.head = function(array, n, guard) { return (n != null) && !guard ? slice.call(array, 0, n) : array[0]; }
  _initial = function(array, n, guard) { return slice.call(array, 0, array.length - ((n == null) || guard ? 1 : n)); }
  _last = function(array, n, guard) { if ((n != null) && !guard) { return slice.call(array, Math.max(array.length - n, 0)); } else { re
  _rest = _.tail = function(array, index, guard) { return slice.call(array, (index == null) || guard ? 1 : index); }
  _compact = function(array) { return _.filter(array, function(value){ return !!value; }); }
  _flatten = function(array, shallow) { return _.reduce(array, function(memo, value) { if (_.isArray(value)) return memo.concat

```

```

_ without = function(array) { return _.difference(array, slice.call(arguments, 1)); }

_ uniq = _.unique = function(array, isSorted, iterator) { var initial = iterator ? _.map(array, iterator) : array; var result = []; _.red

_ intersection = _.intersect = function(array) { var rest = slice.call(arguments, 1); return _.filter(_.uniq(array), function(item

_ difference = function(array) { var rest = _.flatten(slice.call(arguments, 1)); return _.filter(array, function(value){ return !_.i

_ zip = function() { var args = slice.call(arguments); var length = _.max(_.pluck(args, 'length')); var results = new Array(length

_ indexOf = function(array, item, isSorted) { if (array == null) return -1; var i, l; if (isSorted) { i = _.sortedIndex(array, item); r

_ lastIndexOf = function(array, item) { if (array == null) return -1; if (nativeLastIndexOf && array.lastIndexOf === nativeLa
    var len = Math.max(Math.ceil((stop - start) / step), 0); var idx = 0; var range = new Array(len); while(idx
    < len) { range[idx++] = start; start += step; } return range; }

var ctor = function(){ }

_ bind = function bind(func, context) { var bound, args; if (func.bind === nativeBind && nativeBind) return nativeBind.apply(f

_ bindAll = function(obj) { var funcs = slice.call(arguments, 1); if (funcs.length === 0) funcs = _.functions(obj); each(funcs, fun

_ memoize = function(func, hasher) { var memo = {}; hasher || (hasher = _.identity); return function() { var key = hasher.apply(

_ delay = function(func, wait) { var args = slice.call(arguments, 2); return setTimeout(function(){ return func.apply(func, args);

_ defer = function(func) { return _.delay.apply(_, [func, 1].concat(slice.call(arguments, 1))); }

_ throttle = function(func, wait) { var context, args, timeout, throttling, more; var whenDone = _.debounce(function(){ more

_ debounce = function(func, wait) { var timeout; return function() { var context = this, args = arguments; var later = function()

_ once = function(func) { var ran = false, memo; return function() { if (ran) return memo; ran = true; return memo = func.apply(

_ wrap = function(func, wrapper) { return function() { var args = [func].concat(slice.call(arguments, 0)); return wrapper.apply(th

_ compose = function() { var funcs = arguments; return function() { var args = arguments; for (var i = funcs.length - 1; i >= 0; i-

_ after = function(times, func) { if (times <= 0) return func(); return function() { if (--times < 1) { return func.apply(this, argum

_ keys = nativeKeys || function(obj) { if (obj !== Object(obj)) throw new TypeError('Invalid object'); var keys = []; for (var key

_ values = function(obj) { return _.map(obj, _.identity); }

_ functions = _.methods = function(obj) { var names = []; for (var key in obj) { if (_.isFunction(obj[key])) names.push(key);

_ extend = function(obj) { each(slice.call(arguments, 1), function(source) { for (var prop in source) { obj[prop] = source[prop];

_ defaults = function(obj) { each(slice.call(arguments, 1), function(source) { for (var prop in source) { if (obj[prop] == null) o

_ clone = function(obj) { if (!_.isObject(obj)) return obj; return _.isArray(obj) ? obj.slice() : _.extend({ }, obj); }

_ tap = function(obj, interceptor) { interceptor(obj); return obj; }

_ isEqual = function(a, b) { return eq(a, b, []); }

_ isEmpty = function(obj) { if (_.isArray(obj) || _.isString(obj)) return obj.length === 0; for (var key in obj) if (_.has(obj, key))

_ isElement = function(obj) { return !(obj && obj.nodeType == 1); }

_ isArray = nativeIsArray || function(obj) { return toString.call(obj) == '[object Array]'; }

_ isObject = function(obj) { return obj === Object(obj); }

_ isArguments = function(obj) { return toString.call(obj) == '[object Arguments]'; }

_ isFunction = function(obj) { return toString.call(obj) == '[object Function]'; }

_ isString = function(obj) { return toString.call(obj) == '[object String]'; }

_ isNumber = function(obj) { return toString.call(obj) == '[object Number]'; }

```

```

    return obj !== obj; }]

_ isBoolean = function(obj) { return obj === true || obj === false || toString.call(obj) == '[object Boolean]'; }

_ isDate = function(obj) { return toString.call(obj) == '[object Date]'; }

_ isRegExp = function(obj) { return toString.call(obj) == '[object RegExp]'; }

_ isNull = function(obj) { return obj === null; }

_ isUndefined = function(obj) { return obj === void 0; }

_ has = function(obj, key) { return hasOwnProperty.call(obj, key); }

_ noConflict = function() { root._ = previousUnderscore; return this; }

_ identity = function(value) { return value; }

_ times = function(n, iterator, context) { for (var i = 0; i < n; i++) iterator.call(context, i); }

_ escape

var func = new Function('obj', '_', 'tpl')

wrapper prototype chain = function(obj) { return _(obj).chain(); }

var wrapper = function(obj) { this._wrapped = obj; }

_ prototype = wrapper.prototype

var result = function(obj, chain) { return chain ? _(obj).chain() : obj; }

var addToWrapper = function(name, func) { wrapper.prototype[name] = function() { var args = slice.call(arguments); unshift.o

wrapper prototype value = function() { return this._wrapped; }

```

*file underscore.js*

## Functions

```

function if(typeof exports! typeof exports! == "undefined")
if(!b. isArgumentsarguments)

```

## Variables

```

else r _ =b
b VERSION = "1.3.1"

var j =b.each= b.forEach=function(a,c,d){if(a!=null)if(w&&a.forEach===w)a.forEach(c,d);else if(a.length===+a.length)for(var
b map =b.collect=function(a,c,b){var e=[];if(a==null)return e;if(x&&a.map===x)return a.map(c,b);j(a,function(a,g,h){e[e.length
b reduce =b.foldl=b.inject=function(a,c,d,e){var f=arguments.length>2;a== null&&(a=[]);if(y&&a.reduce===y)return e&&(c=
b reduceRight =b.foldr=function(a,c,d,e){var f=arguments.length>2;a==null&&(a=[]);if(z&&a.reduceRight===z)return e&&(c=
b find =b.detect= function(a,c,b){var e;E(a,function(a,g,h){if(c.call(b,a,g,h))return e=a,true});return e}
b filter =b.select=function(a,c,b){var e=[];if(a==null)return e;if(A&&a.filter===A)return a.filter(c,b);j(a,function(a,g,h){c.cal
b reject =function(a,c,b){var e=[];if(a==null)return e;j(a,function(a,g,h){c.call(b,a,g,h)||e[e.length]=a});return e}
b every =b.all=function(a,c,b){var e=true;if(a==null)return e;if(B&&a.every===B)return a.every(c,b);j(a,function(a,g,h){if(!(e=

```

```

var E = b.some = b.any = function(a, c, d) { c || (c = b.identity); var e = false; if (a == null) return e; if (C && a.some === C) return a.some(c, d); j(a, c, d);
b include = b.contains = function(a, c) { var b = false; if (a == null) return b; return p && a.indexOf === p ? a.indexOf(c) != -1 : b = E(a, function(a, c, d) { return b || a === c; });
b invoke = function(a, c) { var d = i.call(arguments, 2); return b.map(a, function(a) { return (b.isFunction(c) ? c : a[c]).apply(a, d); })
b pluck = function(a, c) { return b.map(a, function(a) { return a[c]; })
b max = function(a, c, d) { if (!c && b.isArray(a)) return Math.max.apply(Math, a); if (!c && b.isEmpty(a)) return Infinity; var e = { compute: function(a, c, d) { return b.max(a, c, d); } };
b min = function(a, c, d) { if (!c && b.isArray(a)) return Math.min.apply(Math, a); if (!c && b.isEmpty(a)) return Infinity; var e = { compute: function(a, c, d) { return b.min(a, c, d); } };
b shuffle = function(a) { var b = [], d; j(a, function(a, f) { f == 0 ? b[0] = a : (d = Math.floor(Math.random() * (f + 1)), b[f] = b[d], b[d] = a); }); return b;
b sortBy = function(a, c, d) { return b.pluck(b.map(a, function(a, b, g) { return { value: a, criteria: c.call(d, a, b, g); } })).sort(function(a, b) { return a.criteria - b.criteria; });
b groupBy = function(a, c) { var d = { }, e = b.isFunction(c) ? c : function(a) { return a[c]; }; j(a, function(a, b) { var c = e(a, b); (d[c] || (d[c] = [])).push(b); });
b sortedIndex = function(a, c, d) { d || (d = b.identity); for (var e = 0, f = a.length; e < f; ) { var g = e + f >> 1; d[a[g]] < d(c) ? e = g + 1 : f = g; } return e;
b toArray = function(a) { return !a ? [] : a.toArray ? a.toArray() : b.isArray(a) ? i.call(a, function(a) { return b.isArguments(a) ? i.call(a, function(a) { return a.value; }); }) : a.values(a);
b size = function(a) { return b.toArray(a).length;
b first = b.head = function(a, b, d) { return b != null && !d ? i.call(a, 0, b) : a[0];
b initial = function(a, b, d) { return i.call(a, 0, a.length - (b == null ? 1 : b));
b last = function(a, b, d) { return b != null && !d ? i.call(a, Math.max(a.length - b, 0)) : a[a.length - 1];
b rest = b.tail = function(a, b, d) { return i.call(a, b == null ? 1 : b);
b compact = function(a) { return b.filter(a, function(a) { return !!a; });
b flatten = function(a, c) { return b.reduce(a, function(a, e) { if (b.isArray(e)) return a.concat(c ? e : b.flatten(e)); a[a.length] = e; return a; }, []);
b without = function(a) { return b.difference(a, i.call(arguments, 1));
b uniq = b.unique = function(a, c, d) { var d = d ? b.map(a, d) : a, e = []; b.reduce(d, function(d, g, h) { if (0 == h || (c === true ? b.last(d) != g : !b.include(d, g))) e.push(g); }, []); return e;
b union = function() { return b.uniq(b.flatten(arguments, true));
b intersection = b.intersect = function(a) { var c = i.call(arguments, 1); return b.filter(b.uniq(a), function(a) { return b.every(c, function(c, a) { return b.include(a, c); }); });
b difference = function(a) { var c = b.flatten(i.call(arguments, 1)); return b.filter(a, function(a) { return !b.include(c, a); });
b zip = function() { for (var a = i.call(arguments), c = b.max(b.pluck(a, "length")), d = Array(c), e = 0; e < c; e++) d[e] = b.pluck(a, "" + e); return d;
b indexOf = function(a, c, d) { if (a == null) return -1; var e; if (d) return d = b.sortedIndex(a, c), a[d] === c ? d - 1 : (p && a.indexOf === p) ? a.indexOf(c) : -1;
b lastIndexOf = function(a, b) { if (a == null) return -1; if (D && a.lastIndexOf === D) return a.lastIndexOf(b); for (var d = a.length; d--;) if (a[d] === b) return d;
b range = function(a, b, d) { arguments.length <= 1 && (b = a || 0, a = 0); for (var d = arguments[2] || 1, e = Math.max(Math.ceil((b - a) / d), 0), f = 0; f <= e; f++) {
var F = function() { }
b bind = function(a, c) { var d, e; if (a.bind === s && s) return s.apply(a, i.call(arguments, 1)); if (!b.isFunction(a)) throw new TypeError("bind() must be called on a function");
b bindAll = function(a) { var c = i.call(arguments, 1); c.length == 0 && (c = b.functions(a)); j(c, function(c) { a[c] = b.bind(a[c], a); }); return a;
b memoize = function(a, c) { var d = { }; c || (c = b.identity); return function() { var e = c.apply(this, arguments); return b.has(d, e) ? d[e] : d[e] = e;
b delay = function(a, b) { var d = i.call(arguments, 2); return setTimeout(function() { return a.apply(a, d); }, b);
b defer = function(a) { return b.delay.apply(b, [a, 1].concat(i.call(arguments, 1)));
b throttle = function(a, c) { var d, e, f, g, h, i = b.debounce(function() { h = g = false; }, c); return function() { d = this; e = arguments; var b; f || (b = f = i.call(d, e));
b debounce = function(a, b) { var d; return function() { var e = this, f = arguments; clearTimeout(d); d = setTimeout(function() { d = null; a.apply(e, f); }, b);
b once = function(a) { var b = false, d; return function() { if (b) return d; b = true; return d = a.apply(this, arguments); } }

```

```

b wrap =function(a,b){return function(){var d=[a].concat(i.call(arguments,0));return b.apply(this,d)}}
b compose =function(){var a=arguments;return function(){for(var b=arguments,d=a.length-1;d>=0;d--)b=[a[d].apply(this,b)];return b}}
b after =function(a,b){return a<=0?b():function(){if(-a<1)return b.apply(this,arguments)}}
b keys =Jlfunction(a){if(a!==Object(a))throw new TypeError("Invalid object");var c=[],d;for(d in a)b.has(a,d)&&(c[c.length]=d)}
b values =function(a){return b.map(a,b.identity)}
b functions =b.methods=function(a){var c=[],d;for(d in a)b.isFunction(a[d])&&c.push(d);return c.sort()}
b extend =function(a){j(i.call(arguments,1),function(b){for(var d in b)a[d]=b[d]});return a}
b defaults =function(a){j(i.call(arguments, 1),function(b){for(var d in b)a[d]==null&&(a[d]=b[d])});return a}
b clone =function(a){return!b.isObject(a)?a:b.isArray(a)?a.slice():b.extend({},a)}
b tap =function(a,b){b(a);return a}
b isEqual =function(a,b){return q(a,b,[]) }
b isEmpty =function(a){if(b.isArray(a)||b.isString(a))return a.length===0;for(var c in a)if(b.has(a,c))return false;return true}
b isElement =function(a){return!(a&& a.nodeType==1)}
b isArray =ollfunction(a){return l.call(a)=="[object Array]"}
b isObject =function(a){return a===Object(a)}
b isArguments =function(a){return l.call(a)=="[object Arguments]"}
b isFunction =function(a){return l.call(a)=="[object Function]"}
b isString =function(a){return l.call(a)=="[object String]"}
b isNumber =function(a){return l.call(a)=="[object Number]"}
b isNaN =function(a){return a!==a}
b isBoolean =function(a){return a===true||a===false||l.call(a)=="[object Boolean]"}
b isDate =function(a){return l.call(a)=="[object Date]"}
b isRegExp =function(a){return l.call(a)=="[object RegExp]"}
b isNull =function(a){return a===null}
b isUndefined =function(a){return a===void 0}
b has =function(a,b){return l.call(a,b)}
b noConflict =function(){r._=G;return this}
b identity =function(a){return a}
b times =function(a,b,d){for(var e=0;e<a;e++)b.call(d,e)}

```

*file* **underscore.js**

## Functions

```

function if(typeof exports! typeof exports! = "undefined")
if(!b. isArgumentsarguments)

```



## Variables

```
else r _ =b
```

```
b VERSION ="1.3.1"
```

```
var j =b.each= b.forEach=function(a,c,d){if(a!=null)if(w&&a.forEach===w)a.forEach(c,d);else if(a.length===+a.length)for(var
```

```
b map =b.collect=function(a,c,b){var e=[];if(a==null)return e;if(x&&a.map===x)return a.map(c,b);j(a,function(a,g,h){e[e.length
```

```
b reduce =b.foldl=b.inject=function(a,c,d,e){var f=arguments.length>2;a== null&&(a=[]);if(y&&a.reduce===y)return e&&(c=
```

```
b reduceRight =b.foldr=function(a,c,d,e){var f=arguments.length>2;a==null&&(a=[]);if(z&&a.reduceRight===z)return e&&
```

```
b find =b.detect= function(a,c,b){var e;E(a,function(a,g,h){if(c.call(b,a,g,h))return e=a,true});return e}
```

```
b filter =b.select=function(a,c,b){var e=[];if(a==null)return e;if(A&&a.filter===A)return a.filter(c,b);j(a,function(a,g,h){c.cal
```

```
b reject =function(a,c,b){var e=[];if(a==null)return e;j(a,function(a,g,h){c.call(b,a,g,h)||e[e.length]=a});return e}
```

```
b every =b.all=function(a,c,b){var e=true;if(a==null)return e;if(B&&a.every===B)return a.every(c,b);j(a,function(a,g,h){if(!(e=
```

```
var E =b.some=b.any=function(a,c,d){cll(c=b.identity);var e=false;if(a==null)return e;if(C&&a.some===C)return a.some(c,d);j(a
```

```
b include =b.contains=function(a,c){var b=false;if(a==null)return b;return p&&a.indexOf===p?a.indexOf(c)!=-1:b=E(a,funct
```

```
b invoke =function(a,c){var d=i.call(arguments,2);return b.map(a,function(a){return(b.isFunction(c)?lla:a[c]).apply(a,d)})}
```

```
b pluck = function(a,c){return b.map(a,function(a){return a[c]})}
```

```
b max =function(a,c,d){if(!c&&b.isArray(a))return Math.max.apply(Math,a);if(!c&&b.isEmpty(a))return-Infinity;var e={compute
```

```
b min =function(a,c,d){if(!c&&b.isArray(a))return Math.min.apply(Math,a);if(!c&&b.isEmpty(a))return Infinity;var e={compute
```

```
b shuffle =function(a){var b=[];d;j(a,function(a,f){f==0?b[0]=a:(d=Math.floor(Math.random()*(f+1)),b[f]=b[d],b[d]=a));return
```

```
b sortBy =function(a,c,d){return b.pluck(b.map(a,function(a,b,g){return{value:a,criteria:c.call(d,a,b,g)}})).sort(function(a,b){va
```

```
b groupBy =function(a,c){var d={},e=b.isFunction(c)?c:function(a){return a[c]};j(a,function(a,b){var c=e(a,b);(d[c]||(d[c]=[])).
```

```
b sortedIndex =function(a, c,d){dll(d=b.identity);for(var e=0,f=a.length;e<f;){var g=e+f>>1;d[a[g]]<d(c)?e=g+1:f=g}return e}
```

```
b toArray =function(a){return!a?[]:a.toArray?a.toArray():b.isArray(a)?i.call(a):b.isArguments(a)?i.call(a):b.values(a)}
```

```
b size =function(a){return b.toArray(a).length}
```

```
b first =b.head=function(a,b,d){return b!=null&&!d?i.call(a,0,b):a[0]}
```

```
b initial =function(a,b,d){return i.call(a,0,a.length-(b==null?1:b))}
```

```
b last =function(a,b,d){return b!=null&&!d?i.call(a,Math.max(a.length-b,0)):a[a.length-1]}
```

```
b rest = b.tail=function(a,b,d){return i.call(a,b==null?1:b)}
```

```
b compact =function(a){return b.filter(a,function(a){return!!a})}
```

```
b flatten =function(a,c){return b.reduce(a,function(a,e){if(b.isArray(e))return a.concat(c?e:b.flatten(e));a[a.length]=e;return a
```

```
b without =function(a){return b.difference(a,i.call(arguments,1))}
```

```
b uniq =b.unique=function(a,c,d){var d=d?b.map(a,d):a,e=[];b.reduce(d,function(d,g,h){if(0==h||c===true?b.last(d)!=g:!b.inclu
```

```
b union =function(){return b.uniq(b.flatten(arguments,true))}
```

```
b intersection =b.intersect=function(a){var c=i.call(arguments,1);return b.filter(b.uniq(a),function(a){return b.every(c,funct
```

```
b difference =function(a){var c=b.flatten(i.call(arguments,1));return b.filter(a,function(a){return!b.include(c,a)})}
```

```
b zip =function(){for(var a=i.call(arguments),c=b.max(b.pluck(a,"length")),d=Array(c),e=0;e<c;e++)d[e]=b.pluck(a,""+e);return
```

```
b indexOf =function(a,c, d){if(a==null)return-1;var e;if(d)return d=b.sortedIndex(a,c),a[d]===c?-1;if(p&&a.indexOf===p)re
```



```

b lastIndexOf =function(a,b){ if(a===null)return -1;if(D&&a.lastIndexOf===D)return a.lastIndexOf(b);for(var d=a.length;d--;)
b range =function(a,b,d){ arguments.length<=1 &&(b=all0,a=0);for(var d=arguments[2]||1,e=Math.max(Math.ceil((b-a)/d),0),f=
var F =function(){ }
b bind =function(a,c){ var d,e;if(a.bind===s&&s)return s.apply(a,i.call(arguments,1));if(!b.isFunction(a))throw new TypeError;
b bindAll =function(a){ var c=i.call(arguments,1);c.length==0&&(c=b.functions(a));j(c,function(c){ a[c]=b.bind(a[c],a) });return
b memoize =function(a, c){ var d={ };cl(c=b.identity);return function(){ var e=c.apply(this,arguments);return b.has(d,e)?d[e]:d[e]
b delay =function(a,b){ var d=i.call(arguments,2);return setTimeout(function(){ return a.apply(a,d) },b) }
b defer =function(a){ return b.delay.apply(b,[a,1].concat(i.call(arguments,1))) }
b throttle =function(a,c){ var d,e,f,g,h,i=b.debounce(function(){ h=g=false },c);return function(){ d=this;e=arguments;var b;fl(
b debounce =function(a,b){ var d;return function(){ var e=this,f=arguments;clearTimeout(d);d=setTimeout(function(){ d=null;a.
b once =function(a){ var b=false,d;return function(){ if(b)return d;b=true;return d=a.apply(this,arguments) } }
b wrap =function(a,b){ return function(){ var d=[a].concat(i.call(arguments,0));return b.apply(this,d) } }
b compose =function(){ var a=arguments;return function(){ for(var b=arguments,d=a.length-1;d>=0;d--)b=[a[d].apply(this,b)];re
b after =function(a,b){ return a<=0?b():function(){ if(-a<1)return b.apply(this,arguments) } }
b keys =Jllfunction(a){ if(a!==Object(a))throw new TypeError("Invalid object");var c=[],d;for(d in a)b.has(a,d)&&(c[c.length]=d)
b values =function(a){ return b.map(a,b.identity) }
b functions =b.methods=function(a){ var c=[],d;for(d in a)b.isFunction(a[d])&&c.push(d);return c.sort() }
b extend =function(a){ j(i.call(arguments,1),function(b){ for(var d in b)a[d]=b[d] });return a }
b defaults =function(a){ j(i.call(arguments, 1),function(b){ for(var d in b)a[d]==null&&(a[d]=b[d]) });return a }
b clone =function(a){ return !b.isObject(a)?a:b.isArray(a)?a.slice():b.extend({ },a) }
b tap =function(a,b){ b(a);return a }
b isEqual =function(a,b){ return q(a,b,[]) }
b isEmpty =function(a){ if(b.isArray(a)||b.isString(a))return a.length===0;for(var c in a)if(b.has(a,c))return false;return true }
b isElement =function(a){ return !(a&&a.nodeType==1) }
b isArray =ollfunction(a){ return l.call(a)== "[object Array]" }
b isObject =function(a){ return a===Object(a) }
b isArguments =function(a){ return l.call(a)== "[object Arguments]" }
b isFunction =function(a){ return l.call(a)== "[object Function]" }
b isString =function(a){ return l.call(a)== "[object String]" }
b isNumber =function(a){ return l.call(a)== "[object Number]" }
b isNaN =function(a){ return a!==a }
b isBoolean =function(a){ return a===true||a===false||l.call(a)== "[object Boolean]" }
b isDate =function(a){ return l.call(a)== "[object Date]" }
b isRegExp =function(a){ return l.call(a)== "[object RegExp]" }
b isNull =function(a){ return a===null }
b isUndefined =function(a){ return a===void 0 }

```

```
b has =function(a,b){return I.call(a,b)}  
b noConflict =function(){r._=G;return this}  
b identity =function(a){return a}  
b times =function(a,b,d){for(var e=0;e<a;e++)b.call(d,e)}
```

*file* **underscore.js**

## Functions

```
function if(typeof exports! typeof exports! = "undefined")  
if(!b. isArgumentsarguments)
```

## Variables

```
else r _ =b  
b VERSION ="1.3.1"  
var j =b.each = b.forEach =function(a,c,d){if(a!=null)if(w&&a.forEach===w)a.forEach(c,d);else if(a.length===+a.length)for(var e in a){b map =b.collect =function(a,c,b){var e =[];if(a==null)return e;if(x&&a.map===x)return a.map(c,b);j(a,function(a,g,h){e[e.length++] =a;return c.call(b,a,g,h)});return e;  
b reduce =b.foldl =b.inject =function(a,c,d,e){var f =arguments.length>2;a== null&&(a=[]);if(y&&a.reduce===y)return e&&(c==null)?e:c;  
b reduceRight =b.foldr =function(a,c,d,e){var f =arguments.length>2;a==null&&(a=[]);if(z&&a.reduceRight===z)return e&&(c==null)?e:c;  
b find =b.detect = function(a,c,b){var e;E(a,function(a,g,h){if(c.call(b,a,g,h))return e=a,true});return e;  
b filter =b.select =function(a,c,b){var e =[];if(a==null)return e;if(A&&a.filter===A)return a.filter(c,b);j(a,function(a,g,h){c.call(b,a,g,h)&&e.push(a)});  
b reject =function(a,c,b){var e =[];if(a==null)return e;j(a,function(a,g,h){c.call(b,a,g,h)!&&e.push(a)});  
b every =b.all =function(a,c,b){var e =true;if(a==null)return e;if(B&&a.every===B)return a.every(c,b);j(a,function(a,g,h){if(!(c.call(b,a,g,h))){e =false;  
var E =b.some =b.any =function(a,c,d){cll(c=b.identity);var e =false;if(a==null)return e;if(C&&a.some===C)return a.some(c,d);j(a,function(a,g,h){if(c.call(b,a,g,h))  
b include =b.contains =function(a,c){var b =false;if(a==null)return b;return p&&a.indexOf===p?a.indexOf(c)!=-1:b=E(a,function(a,g,h){if(c===a){b =true;  
b invoke =function(a,c){var d =i.call(arguments,2);return b.map(a,function(a){return(b.isFunction(c)?clla:a[c]).apply(a,d)});  
b pluck = function(a,c){return b.map(a,function(a){return a[c]});  
b max =function(a,c,d){if(!c&&b.isArray(a))return Math.max.apply(Math,a);if(!c&&b.isEmpty(a))return -Infinity;var e ={};  
b min =function(a,c,d){if(!c&&b.isArray(a))return Math.min.apply(Math,a);if(!c&&b.isEmpty(a))return Infinity;var e ={};  
b shuffle =function(a){var b =[],d;j(a,function(a,f){f==0?b[0]=a:(d =Math.floor(Math.random()*(f+1)),b[f]=b[d],b[d]=a)});  
b sortBy =function(a,c,d){return b.pluck(b.map(a,function(a,b,g){return{value:a,criteria:c.call(d,a,b,g)} })).sort(function(a,b){var c =c.call(d,a,b);  
b groupBy =function(a,c){var d ={};e =b.isFunction(c)?c:function(a){return a[c]};j(a,function(a,b){var c =e(a,b);(d[c]||(d[c] =[])).push(b);  
b sortedIndex =function(a, c,d){dll(d =b.identity);for(var e =0,f =a.length;e <f;) {var g =e +f >> 1;d(a[g] <d(c)?e =g +1:f =g);  
b toArray =function(a){return !a?[]:a.toArray?a.toArray():b.isArray(a)?i.call(a):b.isArguments(a)?i.call(a):b.values(a)};  
b size =function(a){return b.toArray(a).length}  
b first =b.head =function(a,b,d){return b!=null&&!d?i.call(a,0,b):a[0]}  
b initial =function(a,b,d){return i.call(a,0,a.length-(b==null||d?1:b))}
```

```

b last =function(a,b,d){return b!=null&&!d?i.call(a,Math.max(a.length-b,0)):a[a.length-1]}
b rest = b.tail=function(a,b,d){return i.call(a,b==null||d?1:b)}
b compact =function(a){return b.filter(a,function(a){return!!a})}
b flatten =function(a,c){return b.reduce(a,function(a,e){if(b.isArray(e))return a.concat(c?e:b.flatten(e));a[a.length]=e;return a})}
b without =function(a){return b.difference(a,i.call(arguments,1))}
b uniq =b.unique=function(a,c,d){var d=d?b.map(a,d):a,e=[];b.reduce(d,function(d,g,h){if(0===h||c===true?b.last(d)!=g:!b.inclu
b union =function(){return b.uniq(b.flatten(arguments,true))}
b intersection =b.intersect=function(a){var c=i.call(arguments,1);return b.filter(b.uniq(a),function(a){return b.every(c,function(c,f){return b.include(c,f)}})}
b difference =function(a){var c=b.flatten(i.call(arguments,1));return b.filter(a,function(a){return!b.include(c,a)})}
b zip =function(){for(var a=i.call(arguments),c=b.max(b.pluck(a,"length")),d=Array(c),e=0;e<c;e++)d[e]=b.pluck(a,""+e);return d}
b indexOf =function(a,c,d){if(a==null)return-1;var e;if(d)return d=b.sortedIndex(a,c),a[d]===c?d:-1;if(p&&a.indexOf===p)return a.indexOf(a,c,d);for(var d=a.length;d-->0;)if(a[d]===c)return d;return-1}
b lastIndexOf =function(a,b){if(a==null)return-1;if(D&&a.lastIndexOf===D)return a.lastIndexOf(b);for(var d=a.length;d-->0;)if(a[d]===b)return d;return-1}
b range =function(a,b,d){arguments.length<=1&&(b=a||0,a=0);for(var d=arguments[2]||1,e=Math.max(Math.ceil((b-a)/d),0),f=0;f<e;f++){var F =function(){}}
b bind =function(a,c){var d,e;if(a.bind===s&&s)return s.apply(a,i.call(arguments,1));if(!b.isFunction(a))throw new TypeError("bind() can only be applied to functions");var f=i.call(arguments,1);return function(){var g=this;return a.apply(g,f.concat(i.call(arguments,1)))}}
b bindAll =function(a){var c=i.call(arguments,1);c.length==0&&(c=b.functions(a));j(c,function(c){a[c]=b.bind(a[c],a)});return a}
b memoize =function(a,c){var d={};c||c=b.identity;return function(){var e=c.apply(this,arguments);return b.has(d,e)?d[e]:d[e]=a.apply(this,arguments)}}
b delay =function(a,b){var d=i.call(arguments,2);return setTimeout(function(){return a.apply(a,d)},b)}
b defer =function(a){return b.delay.apply(b,[a,1].concat(i.call(arguments,1)))}
b throttle =function(a,c){var d,e,f,g,h,i=b.debounce(function(){h=g=false},c);return function(){d=this;e=arguments;var b;f||f=i.apply(d,e);return b}}
b debounce =function(a,b){var d;return function(){var e=this,f=arguments;clearTimeout(d);d=setTimeout(function(){d=null;a.apply(e,f)}),d}}
b once =function(a){var b=false,d;return function(){if(b)return d;b=true;return d=a.apply(this,arguments)}}
b wrap =function(a,b){return function(){var d=[a].concat(i.call(arguments,0));return b.apply(this,d)}}
b compose =function(){var a=arguments;return function(){for(var b=arguments,d=a.length-1;d>=0;d--)b=[a[d].apply(this,b)];return b[0]}}
b after =function(a,b){return a<=0?b():function(){if(-a<1)return b.apply(this,arguments)}}
b keys =J||function(a){if(a!==Object(a))throw new TypeError("Invalid object");var c=[],d;for(d in a)b.has(a,d)&&(c[c.length]=d)}
b values =function(a){return b.map(a,b.identity)}
b functions =b.methods=function(a){var c=[],d;for(d in a)b.isFunction(a[d])&&c.push(d);return c.sort()}
b extend =function(a){j(i.call(arguments,1),function(b){for(var d in b)a[d]=b[d]});return a}
b defaults =function(a){j(i.call(arguments,1),function(b){for(var d in b)a[d]==null&&(a[d]=b[d])});return a}
b clone =function(a){return!b.isObject(a)?a:b.isArray(a)?a.slice():b.extend({},a)}
b tap =function(a,b){b(a);return a}
b isEqual =function(a,b){return q(a,b,[]) }
b isEmpty =function(a){if(b.isArray(a)||b.isString(a))return a.length===0;for(var c in a)if(b.has(a,c))return false;return true}
b isElement =function(a){return!!(a&&a.nodeType==1)}
b isArray =o||function(a){return l.call(a)=="[object Array]"}

```

```
b isObject =function(a){return a===Object(a)}  
b isArguments =function(a){return I.call(a)=="[object Arguments]"}  
b isFunction =function(a){return I.call(a)=="[object Function]"}  
b isString =function(a){return I.call(a)=="[object String]"}  
b isNumber =function(a){return I.call(a)=="[object Number]"}  
b isNaN =function(a){return a!==a}  
b isBoolean =function(a){return a===true||a===false||I.call(a)=="[object Boolean]"}  
b isDate =function(a){return I.call(a)=="[object Date]"}  
b isRegExp =function(a){return I.call(a)=="[object RegExp]"}  
b isNull =function(a){return a===null}  
b isUndefined =function(a){return a===void 0}  
b has =function(a,b){return I.call(a,b)}  
b noConflict =function(){r._=G;return this}  
b identity =function(a){return a}  
b times =function(a,b,d){for(var e=0;e<a;e++)b.call(d,e)}
```

*file* **websupport.js**

## Functions

function **init** ()

function **initEvents** ()

function **setComparator** ()

Set comp, which is a comparator function used for sorting and inserting comments into the list.

function **initComparator** ()

Create a comp function.

If the user has preferences stored in the sortBy cookie, use those, otherwise use the default.

function **show** (id *id*)

Show a comment div.

function **hide** (id *id*)

Hide a comment div.

function **getComments** (id *id*)

Perform an ajax request to get comments for a node and insert the comments into the comments tree.

function **addComment** (form *form*)

Add a comment via ajax and insert the comment into the comment tree.

function **appendComments** (comments *comments*, ul *ul*)

Recursively append comments to the main comment list and children lists, creating the comment tree.

function **insertComment** (*comment* *comment*)

After adding a new comment, it must be inserted in the correct location in the comment tree.

function **acceptComment** (id *id*)

```

function deleteComment (id id)
function showProposal (id id)
function hideProposal (id id)
function showProposeChange (id id)
function hideProposeChange (id id)
function toggleCommentMarkupBox (id id)
function handleReSort (link link)
    Handle when the user clicks on a sort by link.
function handleVote (link link)
    Function to process a vote when a user clicks an arrow.
function openReply (id id)
    Open a reply form used to reply to an existing comment.
function closeReply (id id)
    Close the reply form opened with openReply.
function sortComments (comments comments)
    Recursively sort a tree of comments using the comp comparator.
function getChildren (ul ul, recursive recursive)
    Get the children comments from a ul.

    If recursive is true, recursively include childrens' children.
function createCommentDiv (comment comment)
    Create a div to display a comment in.

function renderTemplate(template template, context context)
    A simple template renderer.

    Placeholders such as <id%> are replaced by context['id'] with items being escaped. Placeholders such as
    <#id#> are not escaped.
function showError (message message)
    Flash an error message briefly.

if(typeof COMMENT_OPTIONS! typeof COMMENT_OPTIONS! = "undefined")
document ready(function(){init();} function(){init();})

```

## Variables

```

function fn autogrow resize = function(textarea) { var lineHeight = parseInt($(textarea).css('line-height'), 10); var li
jQuery
fn comment
    Add a link the user uses to open the comments popup.
var opts = { processVoteURL: '/_process_vote', addCommentURL: '/_add_comment', getCommentsURL: '/_get_comments',
var popupTemplate = `<div class="sphinx-comments" id="sc<%id%>">\<p class="sort-options">\ Sort by:\<a href="#" cl
var<b> ** strong**</b><code> code</code> code blocks
</a><a href="#" id="hc<%id%> class ="hide-propose-change">\ Propose a change &#9663

```

```
</a></p><textarea name="proposal" id="pt<%id%>" cols="80" spellcheck="false"></textarea> <input type=
```

```
var commentTemplate = '\<div id="cd<%id%>" class="sphinx-comment<%css_class%>">\<div class="vote">\<div class=
```

```
var replyTemplate = '\<li>\<div class="reply-div" id="rd<%id%>">\<form id="rf<%id%>">\<textarea name="comment"
```

*file* **websupport.js**

## Functions

```
function init ()
```

```
function initEvents ()
```

```
function setComparator ( )
```

Set `comp`, which is a comparator function used for sorting and inserting comments into the list.

```
function initComparator ()
```

Create a comp function.

If the user has preferences stored in the sortBy cookie, use those, otherwise use the default.

```
function show (id id)
```

Show a comment div.

```
function hide (id id)
```

Hide a comment div.

```
function getComments (id id)
```

Perform an ajax request to get comments for a node and insert the comments into the comments tree.

```
function addComment (form, form)
```

Add a comment via ajax and insert the comment into the comment tree.

```
function appendComments (comments comments, ul ul)
```

Recursively append comments to the main comment list and children lists, creating the comment tree.

```
function insertComment (comment comment)
```

After adding a new comment, it must be inserted in the correct location in the comment tree.

```
function acceptComment (id id)
```

```
function deleteComment (id id)
```

```
function showProposal (id id)
```

```
function hideProposal (id id)
```

```
function showProposeChange (id id)
```

```
function hideProposeChange (id id)
```

```
function toggleCommentMarkupBox (id id)
```

```
function handleReSort (link link)
```

Handle when the user clicks on a sort by link.

```
function handleVote (link link)
```

Function to process a vote when a user clicks an arrow.

```
function openReply (id id)
```

Open a reply form used to reply to an existing comment.

```
function closeReply (id id)
```

Close the reply form opened with `openReply`.

```
function sortComments (comments comments)
    Recursively sort a tree of comments using the comp comparator.

function getChildren (ul ul, recursive recursive)
    Get the children comments from a ul.

    If recursive is true, recursively include childrens' children.

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    Create a div to display a comment in.

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    A simple template renderer.

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    <#id#> are not escaped.

function showError (message message)
    Flash an error message briefly.

if(typeof COMMENT_OPTIONS! typeof COMMENT_OPTIONS! = "undefined")
document ready(function(){init();} function(){init();})
```

## Variables

```
function fn autogrow resize = function(textarea) { var lineHeight = parseInt($(textarea).css('line-height'), 10); var li
jQuery
fn comment
    Add a link the user uses to open the comments popup.

var opts = { processVoteURL: '/_process_vote', addCommentURL: '/_add_comment', getCommentsURL: '/_get_comments',
var popupTemplate = '\ <div class="sphinx-comments" id="sc<%id%>">\ <p class="sort-options">\ Sort by:\ <a href="#" cl
var<b> ** strong**</b><code> code</code> code blocks
</a><a href="#" id="hc<%id%> class ="hide-propose-change">\ Propose a change &#9663
</a></p><textarea name="proposal" id="pt<%id%> cols ="80"\ spellcheck="false"></textarea>\ <input type=
var commentTemplate = '\ <div id="cd<%id%>" class="sphinx-comment<%css_class%>">\ <div class="vote">\ <div class=
var replyTemplate = '\ <li>\ <div class="reply-div" id="rd<%id%>">\ <form id="rf<%id%>">\ <textarea name="comment'
```

*file* **websupport.js**

## Functions

```
function init ()

function initEvents ()

function setComparator ()
    Set comp, which is a comparator function used for sorting and inserting comments into the list.

function initComparator ()
    Create a comp function.

    If the user has preferences stored in the sortBy cookie, use those, otherwise use the default.
```

```
function show (id id)
    Show a comment div.

function hide (id id)
    Hide a comment div.

function getComments (id id)
    Perform an ajax request to get comments for a node and insert the comments into the comments tree.

function addComment (form form)
    Add a comment via ajax and insert the comment into the comment tree.

function appendComments (comments comments, ul ul)
    Recursively append comments to the main comment list and children lists, creating the comment tree.

function insertComment (comment comment)
    After adding a new comment, it must be inserted in the correct location in the comment tree.

function acceptComment (id id)

function deleteComment (id id)

function showProposal (id id)

function hideProposal (id id)

function showProposeChange (id id)

function hideProposeChange (id id)

function toggleCommentMarkupBox (id id)

function handleReSort (link link)
    Handle when the user clicks on a sort by link.

function handleVote (link link)
    Function to process a vote when a user clicks an arrow.

function openReply (id id)
    Open a reply form used to reply to an existing comment.

function closeReply (id id)
    Close the reply form opened with openReply.

function sortComments (comments comments)
    Recursively sort a tree of comments using the comp comparator.

function getChildren (ul ul, recursive recursive)
    Get the children comments from a ul.

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function createCommentDiv (comment comment)
    Create a div to display a comment in.

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    Placeholders such as <id%> are replaced by context['id'] with items being escaped. Placeholders such as
    <#id#> are not escaped.

function showError (message message)
    Flash an error message briefly.

if (typeof COMMENT_OPTIONS! typeof COMMENT_OPTIONS! = "undefined")
```



```
document ready(function(){init();} function(){init();})
```

## Variables

```
function fn autogrow resize = function(textarea) { var lineHeight = parseInt($(textarea).css('line-height'), 10); var li
```

```
jQuery
```

```
fn comment
```

Add a link the user uses to open the comments popup.

```
var opts = { processVoteURL: '/_process_vote', addCommentURL: '/_add_comment', getCommentsURL: '/_get_comments',
```

```
var popupTemplate = '\ <div class="sphinx-comments" id="sc<%id%>">\ <p class="sort-options">\ Sort by:\ <a href="#" cl
```

```
var<b> ** strong**</b><code> code</code> code blocks
```

```
</a><a href="#" id="hc<%id%> class ="hide-propose-change">\ Propose a change &#9663
```

```
</a></p><textarea name="proposal" id="pt<%id%> cols ="80"\ spellcheck="false"></textarea>\ <input type=
```

```
var commentTemplate = '\ <div id="cd<%id%>" class="sphinx-comment<%css_class%>">\ <div class="vote">\ <div class=
```

```
var replyTemplate = '\ <li>\ <div class="reply-div" id="rd<%id%>">\ <form id="rf<%id%>">\ <textarea name="comment"
```

file `searchindex.js`

file `conf.py`

file `requirements.txt`

file `README.md`

page `md__home_docs_checkouts_readthedocs.org_user_builds_robby-audio_checkouts_doxy_setup_RE`

*What is it?*

This repository contains the audio related skills for the humanoid robot Roboy (robby.org).

*How does it work?*

It process the microphone data from Matrix Creator (www.matrix.one) in two different ways. It wether reads the data directly out of the board related FPGA and processes it. Or it streams the data onto a ROS topic, from which on other modules can submit to this topic and process it further.

Most of the things (direct processing, streaming) run in C++. But there is also a template for receiving the stream in Python.

*How to run it?*

Will be defined in the future.

*How to extend it?*

Write cool stuff and add it to the repo.

dir `_build`

dir `_build/localmedia/_static`

dir `_build/json/_static`

dir `_build/html/_static`

dir `_build/html`

dir `_build/localmedia/_static/js`

`dir _build/json/_static/js`

`dir _build/html/_static/js`

`dir _build/json`

`dir _build/localmedia`

## 2.4 About arc42

arc42, the Template for documentation of software and system architecture.

By Dr. Gernot Starke, Dr. Peter Hruschka and contributors.

Template Revision: 6.5 EN (based on asciidoc), Juni 2014

© We acknowledge that this document uses material from the arc 42 architecture template, <http://www.arc42.de>. Created by Dr. Peter Hruschka & Dr. Gernot Starke. For additional contributors see <http://arc42.de/sonstiges/contributors.html>

### Note

This version of the template contains some help and explanations. It is used for familiarization with arc42 and the understanding of the concepts. For documentation of your own system you use better the *plain* version.

## 2.5 Literature and references

**Starke-2014** Gernot Starke: Effektive Softwarearchitekturen - Ein praktischer Leitfaden. Carl Hanser Verlag, 6, Auflage 2014.

**Starke-Hruschka-2011** Gernot Starke und Peter Hruschka: Softwarearchitektur kompakt. Springer Akademischer Verlag, 2. Auflage 2011.

**Zörner-2013** Softwarearchitekturen dokumentieren und kommunizieren, Carl Hanser Verlag, 2012

## 2.6 Examples

- [HTML Sanity Checker](#)
- [DocChess](#) (german)
- [Gradle](#) (german)
- [MaMa CRM](#) (german)
- [Financial Data Migration](#) (german)

## 2.7 Acknowledgements and collaborations

arc42 originally envisioned by Dr. Peter Hruschka and Dr. Gernot Starke.

**Sources** We maintain arc42 in *asciidoc* format at the moment, hosted in [GitHub](#) under the aim42-Organisation.

**Issues** We maintain a list of [open topics and bugs](#).

We are looking forward to your corrections and clarifications! Please fork the repository mentioned over this lines and send us a *pull request*!

### 2.7.1 Collaborators

We are very thankful and acknowledge the support and help provided by all active and former collaborators, uncountable (anonymous) advisors, bug finders and users of this method.

#### Currently active

- Gernot Starke
- Stefan Zörner
- Markus Schärtel
- Ralf D. Müller
- Peter Hruschka
- Jürgen Krey

#### Former collaborators

(in alphabetical order)

- Anne Aloysius
- Matthias Bohlen
- Karl Eilebrecht
- Manfred Ferken
- Phillip Ghadir
- Carsten Klein
- Prof. Arne Koschel
- Axel Scheithauer



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