JavaScript in WordPress Core: Past, Present and Future

Lightning talk edition!

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@ROUNDEARTH

PART I: Past WordPress JavaScript

Why JavaScript?

Key history events:

Language Breakdown

Language	Code Lines	Comment Lines	Comment Ratio	Blank Lines	Total Lines	Total Percentage
PHP	259,431	137,699	34.7%	60,834	457,964	59.7%
JavaScript	133,640	36,693	21.5%	30,068	200,401	26.1%
CSS	58,476	3,347	5.4%	10,857	72,680	9.5%
HTML	29,661	147	0.5%	3,608	33,416	4.4%

VERSION 1.0 JANUARY, 2004

312 LINES OF JAVASCRIPT

https://htmlpreview.github.io/?https://github.com/adamsilverstein/db-wp/blob/master/slides.html

WordPress

Post Edit Categories Links Users Options Templates My Profile View site Logout (adr

Create New Post

Title

Hello World!

Post

Quicktags: /str /em ~~/del~~ /ins link img ul ol li b-quote pre more n-page Dict. Close Tags

Categories

General

PingBack the URLs in this post ?

Save as Draft Save as Private **Publish** Advanced Editing »

TrackBack an URL : (Separate multiple URLs with spaces.)

VERSION 2.0 DECEMBER, 2005

1,115 LINES OF JAVASCRIPT

TinyMCE added in version 2.0 in Dec. 2005

Write Post

Title

Post

Path:

Save and Continue Editing | Save | Publish

Discussion +

Password-Protect Post +

Post slug +

Categories +

Post Status +

Post Timestamp: +

Post author: +

Upload

File: Browse... No file selected.

Title:

Description:

Upload

Optional Excerpt +

Trackbacks +

Custom Fields +

WordPress bookmarklet

Right click on the following link and choose "Add to favorites" to create a posting shortcut.

Press It - wp20

WordPress

Documentation — Support Forums

2.0 — 0.09 seconds

Wp-ajax added in version 2.1 in May 2017

wp21 (View site »)

Howdy, admin. [Sign Out, My Profile]

Dashboard | Write | Manage | **Comments** | Blogroll | Presentation | Plugins | Users | Options

Comments | Awaiting Moderation (0)

Comments

Show Comments That Contain...

Search (Searches within comment text, e-mail, URL, and IP address.)

View Mode | Mass Edit Mode

1. **Mr WordPress** | wordpress.org | IP:

   Hi, this is a comment.
   To delete a comment, just log in and view the post's comments. There you will have the option to edit or delete them.

   May 24, 4:39 PM — [Edit | Delete | Unapprove | Spam | View Post]

WordPress

Documentation — Support Forums

2.1 — 0.11 seconds

VERSION 2.2 MAY, 2007

2,478 LINES OF JAVASCRIPT

jQuery in version 2.2 in May 2007

jQuery

VERSION 2.5 MARCH, 2008

3,458 LINES OF JAVASCRIPT

JavaScript all over in 2.5-3.3

2.5: *comment.js, common.js, editor.js, forms.js, link.js, media-upload.js, page.js, password-strength-meter.js, post.js, postbox.js, slug.js, tags.js, widgets.js, thickbox.js, wp-ajax-response.js, wp-lists.js.*

2.6: *gallery.js, theme-preview.js, word-count.js, wp-gears.js*

2.7: *dashboard.js, farbtastic.js, inline-edit-post.js, inline-edit-tax.js, plugin-install.js, comment-reply.js, hoverIntent.js*

2,8: *media.js, user-profile.js, utils.js, swfobject.js*

2.9: *image-edit.js, set-post-thumbnail.js, jquery.imgareaselect.js, json2.js*

3.0: *custom-background.js, nav-menu.js, wp-list-revisions.js*

3.1: *list-table.js, akismet.js, admin-bar.js, l10n.js, theme.js*

3.2: *wp-fullscreen.js*

3.3: *wp-pointer.js, wplink.js*

3.4: *customize-controls.js, customize-preview.js*

VERSION 3.5 DECEMBER, 2012

15,507 LINES OF JAVASCRIPT

New Password:

••••••••

If you would like to change the password type a new one. Otherwise leave this blank.

••••••••

Type your new password again.

Password Strength:

Bad

Hint: Use upper and lower case characters, numbers and symbols like !"?$%^&(in your password.

Last edited by admin on May 3
2017 at 6:47 pm
Word count: 31

Related

Customizer added in version 3.4 in June 2012

Live Theme Previews

Try on New Themes

Gone are the days of rushing to update your header, background, and the like as soon as you activate a new theme. You can now customize these options **before** activating a new theme. Note: this feature is available for installed themes only.

Customize Current Theme

Satisfy your curiosity and try on a fresh coat of paint — you can also use the live preview mode to customize your current theme. Look for the Customize link on the Themes screen.

Close

Saved

You are previewing

Twenty Eleven

Site Title & Tagline

Colors

Layout

Header Image

Background Image

Static Front Page

Collapse

WordPress 3.4

Just another WordPress site

Search

Home Sample Page

Test Post

Posted on May 11, 2017

Search

RECENT POSTS

- Test Post
- Test

Media manager in version 3.5, Dec 2012

Beautiful Interface

Adding media has been streamlined with an all-new experience, making it a breeze to upload files and place them into your posts.

Picturesque Galleries

Creating image galleries is faster with drag and drop reordering, inline caption editing, and simplified controls for layout.

WordPress Test | 6 | New | View Post | Howdy, admin

Dashboard
Posts
All Posts
Add New
Categories
Tags
Media
Pages
Comments
Appearance
Plugins
Users
Tools
Settings
Collapse menu

WordPress 4.7.5 is available! Please update now.

Screen Options | Help

Edit Post

Add New

Hello world!

Permalink: http://wp35.localhost/?p=1 Change Permalinks View Post

Add Media

Visual | Text

Paragraph

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Optime, inquam. Videsne, ut haec concinant? Rhetorice igitur, inquam, nos mavis quam dialectice disputare? Aliter enim explicari, quod quaeritur, non potest. Erit enim mecum, si tecum erit. Eadem nunc mea adversum te oratio est. Duo Reges: constructio interrete. Iam id ipsum absurdum, maximum malum neglegi.

Path: p

Word count: 53 Last edited by admin on July 9, 2014 at 2:57 am

Revisions

Publish

Preview Changes

Status: **Published** Edit

Visibility: **Public** Edit

Published on: **Jun 28, 2014 @ 15:59** Edit

Move to Trash Update

Format

- Standard
- Aside
- Image
- Link
- Quote
- Status

Categories

All Categories | Most Used

Uncategorized

Revisions browser and wp.Backbone added in version 3.6 in Aug. 2013

Help

Compare Revisions of "Hello WordCamp!"

← Return to editor

Compare any two revisions

Previous

Next

Current Revision by **adam s**
1 min ago (1 Jun @ 02:35)

Restore This Revision

Title

Hello WordCamp!

Hello WordCamp!

Content

<h2>This is my post...</h2>

I'm going to make some updates to this document. So we can brose thru the revisions!

More...

Sed dicit necessitatibus in, id posse nominati eos. Ea vel dictas facilisi adipiscing, verear phaedrum sed ei, omnes oblique sanctus mea ex. Iudico pertinacia constituam cu eos. Te vel fugit libris, libris nemore no pri, graece oportere sea ea. Amet omnium epicuri cum te, sonet dignissim abhorreant pro ea, mei petentium constituam ad. Suscipit gloriatur necessitatibus has et.

<h2>This is my post...</h2>

I'm going to make some updates to this document. So we can brose thru the revisions!

And see what changed...

Sed dicit necessitatibus in, id posse nominati eos. Ea vel dictas facilisi adipiscing, verear phaedrum sed ei, omnes oblique sanctus mea ex. Iudico pertinacia constituam cu eos. Te vel fugit libris, libris nemore no pri, graece oportere sea ea. Amet omnium epicuri cum te, sonet dignissim abhorreant pro ea, mei petentium constituam ad. Suscipit gloriatur necessitatibus has et.

Installed theme browser added in version 3.8

developwordpress 1 0 + New Howdy, adam s

Help

- Dashboard
- Posts
- Media
- Pages
- Comments
- Appearance
  - Themes
  - Customize
  - Widgets
  - Menus
  - Header
  - Editor
- Plugins
- Users
- Tools
- Settings
- Gutenberg
- Media Guide
- Collapse menu

Themes 8

Add New

Search installed themes...

Active: Twenty Seventeen Customize

Twenty Eleven

Twenty Fifteen

Twenty Fourteen

Twenty Sixteen

Twenty Ten

New theme browser & customizer widgets in version 3.9 Apr 2014

developwordpress 1 0 + New Howdy, adam's

Dashboard
Posts
Media
Pages
Comments
Appearance
Themes
Customize
Widgets
Menus
Header
Editor
Plugins
Users
Tools
Settings
Gutenberg
Media Guide
Collapse menu

Add Themes

Upload Theme

Help

15 Featured Popular Latest Favorites Feature Filter

Search themes...

Installed

Twenty Seventeen

Indie

Coherent

fPortfolio

Boston

Newspaper X

Saved

You are customizing
developwordpress

Previewing theme
Twenty Fifteen

Change

- Site Identity
- Colors
- Header Image
- Background Image
- Menus
- Widgets
- Static Front Page
- Additional CSS

Hide Controls

developwordpress

Just another WordPress site

- Home
- Sample Page
- New post

TAGS

boat cars cats chard cheese chocolate gloat happy honey moat oat oats

RECENT POSTS

- another
- more
- test

Sample Page

This is an example page. It's different from a blog post because it will stay in one place and will show up in your site navigation (in most themes). Most people start with an About page that introduces them to potential site visitors. It might say something like this:

Lorem ipsum dolor sit amet, minim molestie argumentum est at, pri legere torquatos instructior ex. Vis id odio atomorum oportere, quem modo fabellas sit at, dicat semper est ne. Apeirian detraxit pri eu. No solum accusam has. Ius ne harum mundi clita, eu pro tation audiam.

…or something like this:

Lorem ipsum dolor sit amet, minim molestie argumentum est at, pri legere torquatos instructior ex. Vis id odio atomorum oportere, quem modo fabellas sit at, dicat semper est ne. Apeirian detraxit pri eu. No solum accusam has. Ius ne harum mundi clita, eu pro tation audiam.

As a new WordPress user, you should go to your dashboard to delete this page and create new pages for your content. Have fun!

Media grid added in version 4.0 Sep 2014

wpdev 13 0 New Howdy, admin

Dashboard
Posts
Media
Library
Add New
Pages
Comments
Appearance
Plugins
Users
Tools
Settings
Collapse menu

Help

Media Library

Add New

All media items | All dates | Bulk Select | Search media items...

Customizer menus added in version 4.3 in Aug 2015

Save & Publish
You are customizing
wpdev
Active theme
Twenty Seventeen
Change
Site Identity
Colors
Header Media
Menus
Widgets
Additional CSS
WPDEV
Home
JUNE 1, 2017 BY ADMIN
Test
Hello.
Lorem ipsum dolor sit amet, minim molestie argumentum est at, pri legere torquatos instructior ex. Vis id odio atomorum oportere, quem modo fabellas sit at, dicat semper est ne. Apeirian detraxit pri eu. No solum accusam has. Ius ne harum mundi clita, eu pro tation audiam.

Shiny Updates in 4.6

Wp-api client added in version 4.7 Dec 2017

```
wp_enqueue_script( 'wp-api' );
```

Models:

* Category
* Comment
* Media
* Page
* PageMeta
* PageRevision
* Post
* PostMeta
* PostRevision
* Schema
* Status
* Tag
* Taxonomy
* Type
* User

Collections:

* Categories
* Comments
* Media
* PageMeta
* PageRevisions
* Pages
* Posts
* Statuses
* Tags
* Taxonomies
* Types
* Users

Part II: Current WordPress JavaScript

38,191 lines of JavaScript in WordPress 4.7

Use WordPress without JavaScript (“nojs”)

sort of...

Define “works”

Major features that rely on JavaScript

Editor

Add New Post
Enter title here
Add Media
Visual
Text
Paragraph

Add an editor in PHP

wp_editor()

https://developer.wordpress.org/reference/functions/wp_editor/

New in 4.8: Add an editor in JavaScript

wp.editor.initialize()

https://make.wordpress.org/core/2017/05/20/editor-api-changes-in-4-8/

Extend the editor

```
jQuery( document ).on( 'tinymce-editor-setup', function( event, editor ) {
    editor.settings.toolbar1 += ',mybutton';

    editor.addButton( 'mybutton', {
        text: 'My button2',
        icon: false,
        onclick: function () {
            editor.insertContent("It's my button!");
        }
    });
});
```

Media Manager

WordPress Media Backbone Guide

An introduction to Backbone design patterns and reusable elements in the WordPress Media experience. Knowledge of Backbone is a soft prerequisite.

wp.Backbone.View

An extension of `Backbone.View`. All views in WordPress are built on top of this. A Subview Manager is baked in via `wp.Backbone.Subviews`.

Example

TEMPLATE MARKUP

```
<script type="text/template" id="tmpl-example-1-view-1">
        A view template.
        <div class="subview-container"></div>
</script>
<script type="text/template" id="tmpl-example-1-view-2">
        A subview template.
</script>
```

An element goes in a view where a subview will be rendered (here `.subview-container`).

`wp.template()` will find templates where `id="tmpl-{...}"`, so ID templates accordingly.

`wp.template()` expects Mustache-inspired templating tags (see #22344), so use them:

`{{{ interpolating }}}`, `{{ 'escaping' }}`, `<# execution #>`

JAVASCRIPT

```
$(document).ready( function() {
        // Create view and subview constructors.
        var ViewConstructor = wp.Backbone.View.extend({
                // assign a compiled template function.
```

Media Library

Add New

Dashboard
Posts
Media
Library
Add New
Categories
Tags
Pages
Comments
Appearance
Plugins
Users
Tools
Settings
Gutenberg
Media Guide
Collapse menu

All media items | All dates | All Categories | All Tags | Bulk Select | Search media items.

Media & Rich Text Widgets

Image: Image widget

Title:

Image widget

Edit Image | Replace Image

Video: Video Widget

Title:

Video Widget

Edit Video | Replace Video

Delete | Close

Audio: Audio Widget

Title:

Audio Widget

00:00 00:00

Edit Audio | Replace Audio

Delete | Close

Text: Updated Text Widget

Title:

Updated Text Widget

Visual | Text

Now you can add formatting, like **bold** and *italic!*

You can also add lists, with and without numbers:

- Item 1
- Item 2

Best yet, you can add links without needing to write HTML!

Customizer

Save & Publish
You are customizing
wpdev
Active theme
Twenty Seventeen
Change
Site Identity
Colors
Header Media
Menus
Widgets
Additional CSS
WPDEV
Home
Test
JUNE 1, 2017 BY ADMIN
Test
Hello.
Lorem ipsum dolor sit amet, minim molestie argumentum est at, pri legere torquatos instructior ex. Vis id odio atomorum oportere, quem modo fabellas sit at, dicat semper est ne. Apeirian detraxit pri eu. No solum accusam has. Ius ne harum mundi clita, eu pro tation audiam.
OAuth read

```
------------------------------------------------------------------------
r21591 | koopersmith | 2012-08-22 18:24:20 -0400 (Wed, 22 Aug 2012) | 2 lines

Please welcome Underscore.js and Backbone.js to core. fixes #21664.

------------------------------------------------------------------------
```

Underscore.js and Backbone.js are tools that will help us improve the quality of our JavaScript. Their consistent APIs, verbose documentation, and wide usage make them a particularly good fit for WordPress core and our community.

ortofon

PART III: Future WordPress JavaScript

Next for JavaScript in core

Exciting times!

The New Editor

Gutenberg

Prototyping since 1440.

Supporting IE 11+ in WordPress 4.8+

JavaScript widgets

JavaScript Hooks: wp.hooks

```
addAction( 'namespace.identifier', callback, priority )
addFilter( 'namespace.identifier', callback, priority )
removeAction( 'namespace.identifier' )
removeFilter( 'namespace.identifier' )
doAction( 'namespace.identifier', arg1, arg2, moreArgs, finalArg )
doingAction( 'namespace.identifier' )
didAction( 'namespace.identifier' )
hasAction( 'namespace.identifier' )
applyFilters( 'namespace.identifier', content )
```

Better date handling in JavaScript

`wp.date.format()` - Format a date.
`wp.date.date()` - Format a date in the site's timezone.
`wp.date.gmdate()` - Format a date in UTC.
`wp.date.date_i18n()` - Format a date, and translate it.

Fin!

github.com/adamsilverstein/JavaScript-in-WordPress

adam@10up • @roundearth