

Trainer Preparation

Suggested schedule (1-1.5 hr)

- Introduction to User Scripts and Gadgets (10 min)
- Recipes for development (10 min)
- Let the fun begin! (20 min)
- Deploying or enabling Gadgets (10 min)
- Hands-on activity (10-30 min)

Trainer notes

- Delete this slide when you've completed the preparation.

User Scripts and Gadgets Workshop

Wikimania Hackathon
Stockholm 2019



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Agenda

- Introduction to User Scripts and Gadgets
- Recipes for development
- Let the fun begin!
- Deploying or enabling Gadgets
- Hands-on activity



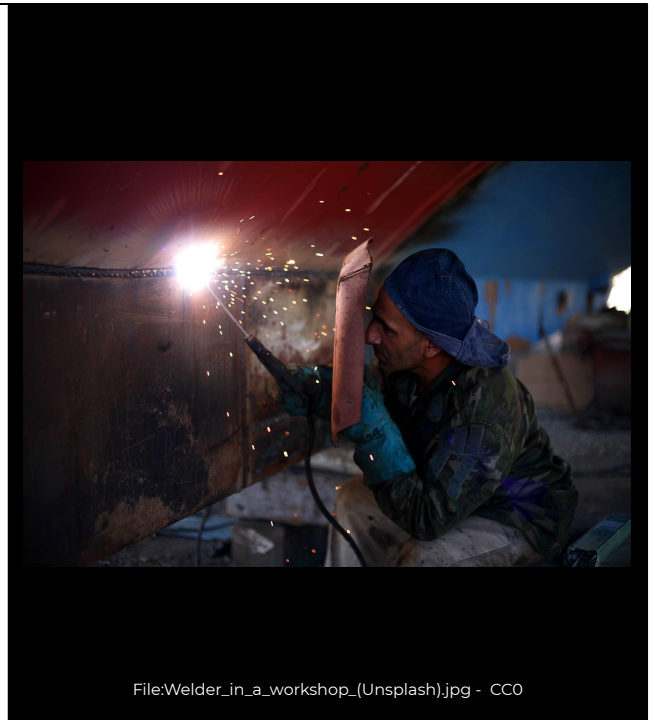
Introduction to User Scripts and Gadgets



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User Scripts

- Javascript
- Personalized user experience of the MediaWiki software
- Code lives on the wiki
- Code can be injected from the client side on MediaWiki via user preferences



File:Welder_in_a_workshop_(Unsplash).jpg - CC0

Trainer notes

- Explain what user scripts are. You could refer to the following two tutorials that cover a high-level overview of user scripts:
https://en.wikipedia.org/wiki/Wikipedia:User_scripts,
https://www.mediawiki.org/wiki/Gadget_kitchen.
- Remember to ask workshop participants if they have programmed in Javascript before. If not, give a high-level overview of Javascript language:
 - Scripting language; executes instructions directly instead of compiling them into a machine language.
 - Adds interaction/ functionality to web pages.

Gadgets

- Promoted version of a user script
- Customized experience of the MediaWiki Software
- Available to all users of a wiki site
- Site administrator makes a Gadget available to users



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Trainer notes

- Explain what Gadgets are. You could refer to the following tutorial that covers a high-level overview: https://www.mediawiki.org/wiki/Gadget_kitchen.
- Talk about how Gadgets are similar or different from User Scripts and Extensions.

Interesting use cases

Enhanced reading experience



Displays average reading time of an article as calculated by a user script

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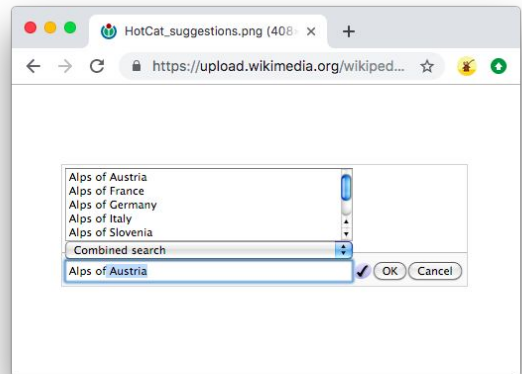


Trainer notes

- Share briefly this simple example of a user script that helps calculate reading time of an article and displays it on the page. For your reference, this example is taken from https://www.mediawiki.org/wiki/ChickTech_High_School_Kickoff_2017/Tasks#Write_a_user_script_to_calculate_the_estimated_reading_time_of_an_article.

Interesting use cases

Enhanced **editing** experience



Input box of Gadget:HotCat

File:HotCat_suggestions.png - PD

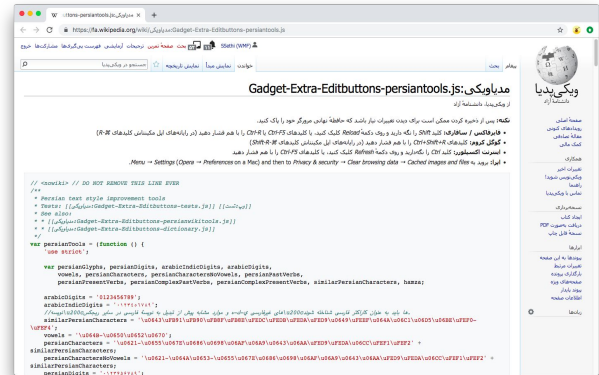


Trainer notes

- Share briefly about the HotCat Gadget:
<https://en.wikipedia.org/wiki/Wikipedia:HotCat>.

Interesting use cases

Enhanced content moderation experience



Gadget for fixing arabic letters, grammar, numbers, etc.

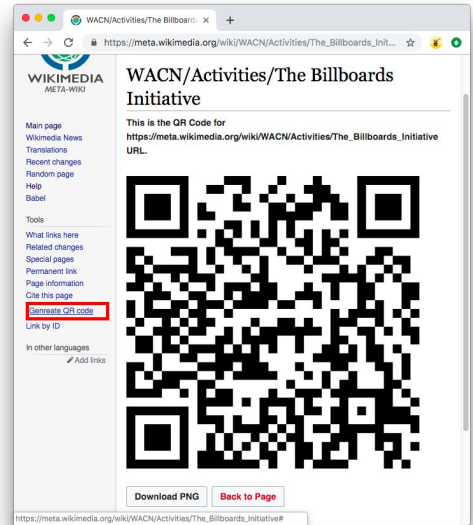


Trainer notes

- Share this example of a Gadget that is deployed on persian wiki to help content moderators fix arabic letters, grammars, numbers, URLs, article structure, sections, duplicate letters, symbols, etc.
- For your reference the script is here:
<https://fa.wikipedia.org/wiki/%D9%85%D8%AF%DB%8C%D8%A7%D9%88%DB%8C%DA%A9%DB%8C:Gadget-Extra-Editbuttons-persiantools.js>.
(Sidenote: I couldn't get the actual screenshot of the Gadget in action on the wiki, as that would require me learning some Arabic :))

Interesting use cases

Outreach



QR code for a wiki site URL generated by a user script

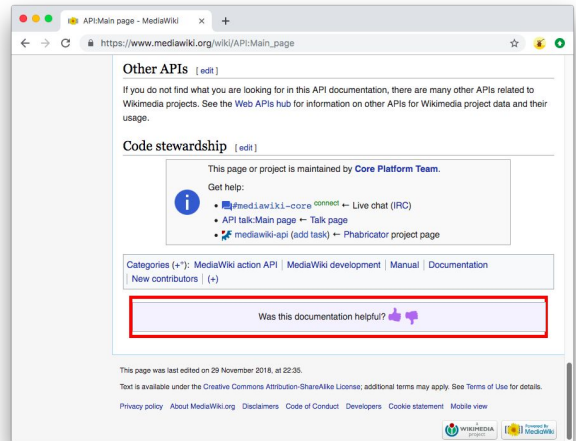


Trainer notes

- Share this example of a user script that helps Indic communities generate QR code for a wiki site URL. For your reference this example is taken from <https://meta.wikimedia.org/wiki/Indic-TechCom/Tools/grCodeGenerator>. You could also add how a script like this can help with the outreach of not just Wikimedia projects, but also of a specific topic (e.g., an event on a wiki site).

Interesting use cases

Research



User feedback form of a Gadget asking for documentation feedback



Trainer notes

- Share this example of a Gadget that is currently deployed in the API namespace on MediaWiki.org to gather feedback on the ongoing documentation improvements. For your reference the script is here: <https://wikitech.wikimedia.org/wiki/MediaWiki:Gadget-userfeedback.js>.

Interesting use cases

Prototyping ideas



Trainer notes

- Share how Gadgets and user scripts are a great means to test ideas/early prototypes/proofs-of-concept for features to be integrated with the MediaWiki software.

Pain points of developing them

- No code review or security process
- Process for making a Gadget available to everyone in their Preferences on a wiki is not streamlined
 - ◆ Requires a series of steps including recruiting an interface administrator and providing deployment instructions to them
- Development environment for writing Gadgets is not super friendly :-/
- Lack of systematic process for re-using, modifying and contributing to existing scripts & gadgets

Trainer notes

- Talk about some pain points of developing Gadgets and User Scripts. There can be some pros for some of these points as well. For example, as there is no code-review or security process, this saves you some time. But then it is not a good practice: <https://phabricator.wikimedia.org/T71445>.
- To explain the point about re-using scripts and gadgets, refer to this section as an example: [https://www.mediawiki.org/wiki/ResourceLoader/Migration_guide_\(users\)#Keep_gadgets_central](https://www.mediawiki.org/wiki/ResourceLoader/Migration_guide_(users)#Keep_gadgets_central).

Recipes for Development



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Here are some but not all...

- \$wgAllowUserJs is True
- Gadgets & CodeEditor extensions
- Resource loader core modules
- Guide to Visual Editor gadgets
- Using OOUI library
- MediaWiki Action API
- Javascript coding conventions



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Trainer notes

- Share that for user scripts to work, `$wgAllowUser` variable in the configuration file needs to be set as true. Only this would allow user scripts on a wiki to work. On Wikimedia Foundation sites, this setting is already enabled: [https://www.mediawiki.org/wiki/Manual:\\$wgAllowUserJs](https://www.mediawiki.org/wiki/Manual:$wgAllowUserJs).
- Share that the Gadgets & CodeEditor extension needs to be installed as well: <https://www.mediawiki.org/wiki/Extension:Gadgets>, <https://www.mediawiki.org/wiki/Extension:CodeEditor>
- Give an overview of Resource Loader (<https://www.mediawiki.org/wiki/ResourceLoader>) and some of its popular core modules (https://www.mediawiki.org/wiki/ResourceLoader/Core_modules).
- Quickly point to the Visual Editor guide that one might use if they are developing related gadgets: <https://www.mediawiki.org/wiki/VisualEditor/Gadgets>.
- Also point to the OOUI (library used in MediaWiki core) guide, helpful in developing the user interface of the Gadget: https://www.mediawiki.org/wiki/OOUI/Using_OOUI_in_MediaWiki#Gadgets.
- Action API guide: https://www.mediawiki.org/wiki/API:Main_page
- Javascript coding conventions: https://www.mediawiki.org/wiki/Manual:Coding_conventions/JavaScript

Let the fun begin!



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Writing **simple** user scripts



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Trainer notes

- Demo of the getting started steps: ensuring the recipes are in place, creating the script from preferences, demo of the code editor and developer tools for testing, etc.
- Live coding demo of writing simple user scripts like the one here: [https://www.mediawiki.org/wiki/User:SSethi_\(WMF\)/Sandbox/SimpleUserScriptExamples.js](https://www.mediawiki.org/wiki/User:SSethi_(WMF)/Sandbox/SimpleUserScriptExamples.js)

Try it yourself time!

- Log in to MediaWiki.org or any wiki to try this.
- Visit <Special:MyPage/common.js>. This file holds your personal JavaScript that is loaded on every page view.
- Copy and paste the content from [https://www.mediawiki.org/wiki/User:Ssethi_\(WMF\)/Sandbox/SimpleUserScriptExamples.js](https://www.mediawiki.org/wiki/User:Ssethi_(WMF)/Sandbox/SimpleUserScriptExamples.js) to your common.js file.
- Make changes to the script, save, observe the changes in action and repeat!

Trainer notes

- Give some time (~5 min) to participants to get comfortable with these steps.

Writing **complex** user scripts



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Trainer notes

- Live coding demo of writing a slightly complex script using the MediaWiki Action API, OOU, etc:
[https://www.mediawiki.org/wiki/User:Ssethi_\(WMF\)/Sandbox/MyEditCount.js](https://www.mediawiki.org/wiki/User:Ssethi_(WMF)/Sandbox/MyEditCount.js). This script shows in a pop-up widget, no of edits you made to MediaWiki in the last one year time period.

Using the MediaWiki Action API

```
<>  [Icons]  [Icons]  [Icons]  [Icons]  [Icons]
1  $( function () {
2      var api = new mw.Api();
3
4      api.get( {
5          action: 'query',
6          list: 'usercontribs',
7          ucuser: 'Admin',
8          uclimit: 10,
9          ucend: '2018-07-02T00:00:00Z'
10     } ).done( function ( data ) {
11         totalEdits = data.query.usercontribs.length;
12         console.log(totalEdits);
13     } );
14 });
15
```

Using OOUI

```
<>  ☰  ☰  ¶  ⇨  1/3  ←  🔍
1  mw.loader.using( 'oojs-ui-core' ).done( function () {
2      var button = new OO.ui.PopupButtonWidget( {
3          icon: 'menu',
4          label: 'Your contributions to MediaWiki in the last year',
5          popup: {
6              $content: $( '<p>You made 100 edits last year!</p>' ),
7              padded: true,
8              anchor: false,
9              align: 'forwards'
10         }
11     } );
12
13     $( '#mw-content-text' ).prepend( button.$element );
14 } );
15
```

Try it yourself time!

- Log in to MediaWiki.org or any wiki to try this.
- Visit <Special:MyPage/common.js>. This file holds your personal JavaScript that is loaded on every page view.
- Copy and paste the content below to your common.js file:

```
mw.loader.load("//www.mediawiki.org/w/index.php?title=User:SSethi_(WMF)/Sandbox/MyEditCount.js&action=raw&ctype=text/javascript");
```

- Save and observe the changes in action on any wiki page!

Trainer notes

- Give some time (~5 min) to participants to get comfortable with these steps.

Deploying or enabling Gadgets



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Your steps

- Recruit an experienced developer to review your Gadget code. There is no formal process to do so!
- Check with community members if there aren't any concerns with enabling the gadget on a wiki. For MediaWiki, post here: https://www.mediawiki.org/wiki/Project:Current_issues.
- Recruit a site administrator with interface rights. For MediaWiki, the list is here: <https://www.mediawiki.org/wiki/Special:ListUsers/interface-admin>.

Trainer notes

For recruiting an experienced developer who could review your Gadget code, a couple additional venues to reach out to for help:

- https://www.mediawiki.org/wiki/Talk:Gadget_kitchen
- <https://discourse-mediawiki.wmflabs.org/>

Interface administrator steps

- Copy your JS & CSS files in the MediaWiki namespace on a wiki; create file names with a prefix “Gadget-” (e.g., MediaWiki:Gadget-userfeedback.js).
- Define the gadget in the [MediaWiki:Gadgets-definition](#) that includes modules used, dependencies, JS, and CSS file names, etc. This would allow users to enable the gadget on a wiki from their preferences (see example below).
`userfeedback[ResourceLoader|default|dependencies=ext.eventLogging]]userfeedback.js|userfeedback.css`
- Create a page for Gadget with prefix “Gadget-” (e.g., MediaWiki:Gadget-userfeedback). This would generate a label for the Gadget under [Special:Preferences](#) page.

Resources

Gadget Kitchen

https://www.mediawiki.org/wiki/Gadget_kitchen

Trainer notes

- Gadget Kitchen page covers everything. More documentation, list of user scripts and Gadgets, resource loader documentation, ideas for next steps, etc.

Hands-on activity



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- You could run an open-ended hands-on activity for ~10-30 minutes. Some idea(s):
 - Ask participants to work in groups on existing user script/gadget requests on MediaWiki.
 - Ask participants to propose topics on which they might need from you or their peers.

THANK YOU

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