

Google summer of code 2018 project proposal.

Project Name: Attentive Migration of wiki activity pages to git.

Name: Ore-Aruwaji Oloruntola

Email: temitopetola@gmail.com

Sugarlabs wiki username: Tolatemitope

IRC nickname on irc.freenode.net: tolatemitope

Facebook: Tola temitope

Github: Aruwajiore

Linkedin: tola temitope

Twitter: 21ST_CEO

Languages: English

Where am I located? and what hours(UTC) do I tend to work?

I am located at Port-Harcourt, Nigeria (GMT+1)

Working Hours: Flexible (whatever works for my mentor and I)

Past experiences with Open Source Organizations:

I have been contributing to open source since this year 2018, I haven't worked with any Organizations on any project. Most of my projects were personal contributions to open source and the community. I worked on microcontrollers(Arduino) and embedded systems.

I believe that in the 21st century technological tools are the right instruments to change the world.

My project contributions to Open source are seen at:

<https://github.com/Aruwajiore/Robotics-master->

Why I want to be part of open source this summer?

I want to work on an open- source project because it will improve my coding skills, it would make me be a creative thinker through this I would be able to solve problems and impact my society. Also, this would make me to be more friendly and build extensively the sugarlabs developers community.

How my project will have impact on children learning?

In the 21st century Education has gone beyond just theory, we are in the Era where children need to learn the required skills to be part of this evolution. So through my project children will be know how to migrate wiki activities to git, how to use Github, Better usage of sugarlabs wiki site.

About project

Project Name: Attentive migration of wiki activities to git

Description:

1. At present, the [Activities#Sugar_Activities](#) section in Sugar Labs wiki lists 345 pages.

2. These pages individually serve as kind of homepages (containing all relevant information), for different Sugar Activities.

example: [Activities/MakeyMakey](#) is the homepage for [MakeyMakey](#) activity.

Whereas, its source-code is hosted at <https://github.com/sugarlabs/makeymakey> as Sugar Labs is moving towards GitHub style of development (see [discussion](#)) for any change to an activity, it gets cumbersome for the developer to update both the

GitHub repository and its corresponding wiki-page documentation

thus, it would be beneficial (and more maintainable) in the long run if these 345 wiki pages were embedded only in their corresponding GitHub repositories.

Objective:

Write a program (or script) to migrate all of the above-mentioned wiki-content to their appropriate GitHub repositories in Markdown (or restructured Text) format, with detailed attention to quality.

Tools used:

APIs: [MediaWiki API](#)

Tools: [git](#), [pandoc](#)

Programming Languages: Python 3.6

overview of the Migration Process:

This contains the step by step process for the migration

For each page to migrate

Step 0: Determine to which GitHub repository, it will be added

Step 1: from wiki.sugarlabs.org/activities/<activity_page>, Get source file(wikitext) which is to be converted (to Markdown/reStructuredText)

Step 2: Get associated extra files (images etc) used in the wiki-page

Step 3: Convert wikitext content to Markdown/reStructuredText format

Step 4: Add converted files to GitHub repository mentioned in Step 0

Step 5: Update all other pages in the wiki, which links to this to-be-deprecated page with the new GitHub link

Step 6: Deprecate wiki-page and associated extra files from wiki.sugarlabs.org

Circumstantial Technical description of Migration Process

Step 1: using API, Mediawiki query wiki.sugarlabs.org to get list of all pages that would be converted

Step 2: For each page, explore (or talk through as needed with mentor/community) where to place them in GitHub.

Most of the pages and git repositories are not corresponding.

for example:

- in the section [Activities#Sugar_Activities](#), there are at least 20 pages as [Activities/Turtle Art/Tutorials/<wiki-page-name>](#) , which I believe should be in the same GitHub repository
- Some git repositories already has a README.md file, which contains information not available in the corresponding wiki-page (See [activity-git-repo](#) : [activity-wiki-page](#))
- Some wikipages have already been moved to GitHub and thus repeating the work would result in duplication
- Some wikipages contain user documentation which should ideally be moved to the [help-activity'](#)
- The changes are a lot more, which I plan to extensively figure out and discuss as needed, before the coding-period starts.

Step 3: For each GitHub repository to push converted files:

3.1:Fork the repository (create a copy of the original repository into my-GitHub-account)

- 3.2: Pull the forked repository (get a local copy of it, in my development machine)
 - 3.3: Checkout a new branch for changes
 - 3.4: For each file to be pushed into the repository:
 - Using MediaWiki API, query a specific wiki-page, to get its raw source text(in wikitext format), and all associated files(images etc) used
 - create a safe backup of the original raw wikitext
 - generate one temporary duplicate file(containing raw wikitext), for conversion
 - using pandoc, convert
 - while the conversion is not perfect (it is difficult or sometimes not-possible, to generate the exact functionalities of a wiki-page into a markdown file. For example, image-galleries)
- modify the temporary wikitext file, with attention to every small detail and convert again

3.5: Test all changes

- 3.6: Commit all newly generated files (also the safe wikitext backup; in-case the community decides to keep it for future reference)
- 3.7: git push to Forked Repository
- 3.8: Send a Pull Request to original Repository
- 3.9: After Pull Request gets merged

Update all other pages in the wiki, which links to these to-be-deprecated pages with the new GitHub link

using MediaWiki API, delete/move contents of original wiki-page.

Prime:

Adding documentation to the activity repositories, may sometimes unnecessarily enlarge the activity bundle size;

in such cases, a custom setup.py will be written which excludes the documentation folder.

Project Deliverables:

3 clearly measurable goals to determine project success status which will help in evaluation

- Month 01: Complete high-quality end-to-end migration of 100 pages
- Month 02: Complete high-quality end-to-end migration of 300 pages
- Month 03: Complete high-quality end-to-end migration of 345 pages

Project Timeline:

I will work 40-46 hours a week and I have appointed the goals accordingly:

Week	Date(2018)	Period	Task

	Today- April 22		<ol style="list-style-type: none"> 1. Research about the variety of content in different wiki-pages to be converted 2. Learn more about syntax of wikitext, different functionalities of MediaWiki API 3. Involvement with the community about anything useful which comes up
	April 23-May 13	Community Engagement	<ol style="list-style-type: none"> 1. Deep insight into the codebase of help-activity, and other important areas of the project 2. Learn how to write a custom setup.py to keep the size of activity bundle in check 3. Set up a dedicated blog for GSOC 2018 4. Set up Development environment (Install necessary software, packages, libraries) 5. Blog post about my plans for Coding Month 1.
	May 14 – June 10	Coding Month	
1	May 14 th - May 20		<ol style="list-style-type: none"> 1. Write code 2. Test Code extensively
2	May 21 st - May 27 th		<ol style="list-style-type: none"> 1. Complete end-to-end migration of 30 pages

3	Mat 28 th – June 3 rd		1. Complete end-to-end migration of 65 pages
4	June 4 th –June 10 th		1. Complete end to end migration of 100 pages 2. Write a BlogSpot about my plans for coding month 2
	June 11th- July 8th	Coding month 2	
5	June 11 th – June 17 th	First check/Evaluations	1. Quality Check of all pages migrated during Coding Month 1 2. Submit Evaluations 3. Complete end-to-end migration of 150 Pages
6	June 18 th – June 24 th		1. Complete end-to-end migration of 200 pages
7	June 25 th –July 1 st		1. Complete end-to-end migration of 250 pages.
8	July 2 nd – July 8 th		1. Complete end-to-end migration of 300 pages 2. Write a Blog post about my plans for coding month 3
	July 9th – August 5th	Coding month 3	
9	July 9 th –July 15 th	Second Evaluations / Analysis	1. Quality check of all pages migrated during coding month 2 2. Submit evaluations 3. Complete end-to-end migration of 345 pages.

10	July 16 th – July 22 nd		<ol style="list-style-type: none"> 1. Final Quality check of all migrated pages 2. Detailed Documentation about this Project
11	July 23 rd – July 29 th		<ol style="list-style-type: none"> 1. Extra time for any extra work
12	July 30 th – August 5 th		<ol style="list-style-type: none"> 1. Extra time for any extra work
	August 6th – August 14th	Final Evaluations	<ol style="list-style-type: none"> 1. Submit Final Evaluations 2. Vote of thanks to everyone for the Opportunity to impact.

Convince us, in 5-15 sentences, that you will be able to successfully complete your project in the timeline you have described. Link to prior work or other resources as relevant

Find the beta version of proposed script **here**

<https://github.com/Aruwajiore/beta-migration-script>

I implemented some basic features of the script, which

given any Sugar Activity pagename and forked_repo_url, migrates the page(without any manual supervision) and commits all generated files into the local copy of forked-repository

The script is commented to explain what each part is doing

The script follows, roughly the same workflow stated in *Detailed Technical description of Migration Process* above

I tried the script on 3 different pages of Activities.

Here are the results:

- [Activities/AEIOU](https://github.com/Aruwajiore/language-game) -> <https://github.com/Aruwajiore/language-game>
- [Activities/Portfolio](https://github.com/Aruwajiore/Portfolio-activities) -> <https://github.com/Aruwajiore/Portfolio-activities>
- [Activities/Cookie_Search](https://github.com/Aruwajiore/cookie-search) -> <https://github.com/Aruwajiore/cookie-search>

I do not have any other commitments during the summer, and will be able to devote complete time & energy to implement this project at the best of its quality. Moreover, I'm excited to learn and willing to push myself.

Project and the Community

If the project is successfully completed, what will be its impact on the Sugar Labs community?

Answer 1: Ore-Aruwaji Oloruntola

- All information about 1 particular Sugar Activity, will live inside its GitHub Repository, which will help
 - Activity Maintainers
 - New members of the community
 - Users
 - and ultimately everyone :)

GitHub is the world's leading software development platform, ([check](#) Stack Overflow 2018 developer survey)

thus hosting a complete repository with all the documentation, will provide greater exposure and surely help to attract more developers and traffic to the community

Answer 2: James Cameron (quozl@laptop.org)

As stated in [this GitHub conversation](#)

"Migration is needed because Wiki is not being used now that GitHub is being used. Maintaining the Wiki in addition to GitHub is not sustainable. So we want documentation to move from Wiki to GitHub.

So that when an activity is updated in GitHub, the documentation can be updated in the same place at the same time."

.

As stated in [this thread](#)

"Originally documentation was separate because we had non-coding developers and tool chains that varied by type of developer. Now we use GitHub the tool chains are combined.

With the project as described, documentation will be concentrated in the source code repository for an activity, reducing ongoing maintenance.

We have less active Wiki contributors than we ever did, and in the current threat environment a Wiki requires significant monitoring and administration; we recently lost some system administrators and gained new ones; using GitHub allows us to outsource system administration."

Answer 3: SL Community Member-2:

- Please share your views

What will I do if I get stuck on the project and my mentor isn't around?

- I know where to get information, or ask for help (*google, stackoverflow.com, quora etc*)
- Read documentation of related tools
- Ask other Sugar Labs members via IRC, developer mailing lists

- Ask help from Sugar Labs GSOC coordinator

How do I propose to keep the community informed of my progress and any problems or questions I might have over the course of the project?

- daily updates on IRC
- weekly blog post:
 - about what I did the previous week
 - what I plan to do the next week
- communication via mailing-lists (as and when needed)
- all the code I write and every Pull-Requests/Issues I open
 - will be thoroughly commented in an easy to understand format
- Live Record of Activity migration status for all the 345 pages.
 - I intend to create a wiki-page/git-repo which at any time will reflect the current migration status of all the 345 pages.

Miscellaneous

Send us a link to a pull request or merge request you have made on a Sugar or Sugar activity bug

I went ahead and migrated 4 pages out of the 345 listed. Find the pull request at <https://github.com/godiard/help-activity/pull/38>

Describe a great learning experience you had as a child?

During my childhood I have always been a learner, I have failed a quite number of times, but there is always a lesson to be learnt behind the failure it is either it makes you stronger or weaker the choice is yours. I always strive to be better at what am doing.

Is there anything else we should have asked you or anything else that we should know that might make us like you or your project more?

Yes,

I did learn a lot in the last 6 weeks. From wikitext markup to Mediawiki API, pandoc, sphinx, restructuredText and a bunch of other stuff. I had not even heard about most of these technologies before coming across this project. So, **thank you** for the opportunity

I've always tried to prove my worth by action. The script is completely working and maybe just needs some refinement.

Proof: 4 of the 345 pages have already been migrated and thus I know the intricate difficulties a lot better than my competitors (why? because well, I actually did the work)

Personally, the field of education is very close to my heart. I help out local middle school students to learn basic Computer Science and embedded systems concepts using simple drag and drop programs. Micro controllers and other intuitive stuff, in my hometown (a small town with inadequate quality learning options)

and thus for the common goal, **I believe I'll continue to work with the Sugar Labs organization, keep contributing to the development and enhancement of the sugar labs community and you all in the coming future.**

Thanks, Ore-Aruwaji Oloruntola