

Improve user-group and stream management settings

Google Summer of Code proposal 2022 - Zulip

Basic Information

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About Me

I am a third year student enrolled in Computer science and Engineering department of Indian Institute of Technology, (BHU) Varanasi. I have a keen interest in web development and it has increased since I started contributing to open source. I am always open to learning new technologies in any field related to computer science and try to apply my learnings in efficient ways to achieve good results.

I have worked on several projects, and working on them gave me practical experience and knowledge in frontend development frameworks like Vue.js, React.js, and backend frameworks like Django, Django Rest Framework, Express, Nodejs. I have experience in programming with various languages like Python, C, CPP, Javascript, Dart, and Bash.

Why Zulip?

Zulip is where I have learned true disciplines of open source contribution and I want to learn more by getting involved in bigger projects in order to make Zulip even better. I have been part of the community for over a year and have found amazing help from the community for whatever problems I faced. I never felt myself confused about where to ask for my doubts(thanks to the awesome chat.zulip.org community). Zulip also has great documentation and that helps a lot whenever I feel stuck.

Contributions to Zulip

- ❖ [All pull requests opened by me](#)
- ❖ [All pull requests by me \(status: open\)](#)
- ❖ [All issues opened by me](#)
- ❖ [Contributions during GSoC'21](#)

Apart from the code contributions I was involved with reviewing PRs and participating in discussions in the community regarding various features.

Proposal Description

Overview

My overall aim while working as a GSoC student for zulip, would be to improve the zulip web app so that its permission system, user-group management, message viewing becomes easier and efficient which would be beneficial for both small and large organizations using Zulip. For this I would like to work on various issues in areas like user-group settings, stream settings, left-sidebar.

1. Redesigning User Group settings UI

This is a precursor project that would help towards smoother development of a more complex project. Make [Zulip's permissions model much more flexible using groups](#). The aim of this project is to revamp the traditional /#groups overlay so that it looks similar to the new stream settings modals, and provides freedom for adding new settings to user groups in future.

Issue: [#19526](#)

This issue is explained in great detail by Tim on the issue thread itself, and step by step details given in the issue thread would help me in starting off with the issue. As I progress on it I will actively discuss it thoroughly with the community.

2. Make Zulip's permissions model much more flexible using groups

This project aims at making Zulip's permission model super flexible using groups as modes of granting various permissions.

Issue: [#19525](#)

This project has various components that are actively being worked on by other community members. I wish to collaborate with them so that I can contribute towards API, Permissions, and User Group UI Part. Detailed issue description and discussions on [#design > New permissions model](#) would help me in getting involved with the issue easily. I'll also actively discuss the details with the community as I progress on this issue.

3. Make it easier to reset stream to default notifications settings

Current stream settings interface provides ways for customizing notifications settings for any stream but once custom settings are applied it is not easy to go back to the default settings, and it becomes even more difficult when default settings are changed. We should provide options for users to set the notifications setting to default easily.

Issue: [#19860](#)

As is already mentioned in the issue description on github we can add a reset button for this in the Notifications and Personal settings section of the stream.

4. Custom badges for user groups

This feature would allow organizing users' lists in the right sidebar according to different roles of users in the organization and thus make the right sidebar more informative.

Issue: [#19751](#)

In my opinion this issue would require more discussions on the particulars like how we will represent it, in the right sidebar and how we will make this feature distinguishable from status emoji. I have a bit of initial UI idea, about implementing it like a user list in Discord. I'll discuss the ideas for this in detail before jumping into this issue.

5. Working on issues related to URL Previews:

There are no settings on both user as well organization level about the URL previews, and default behavior may not be suitable for everyone. This fact is stressed in various issues mentioned below:

Issue: [#19466](#), [#21766](#), [#21767](#), [#11773](#)

I think I can tackle these issues one by one as they are all related around the nearly same theme of controlling link preview behavior on messages. I think I can start on this with [#19466](#),

[#21766](#) as they mostly have more clear description and plan for what needs to be done, and then move over to resolve [#21767](#) and [#11773](#).

Apart from the above mentioned issues I would help with fixing follow-ups and improvements in any of my previous works like stream settings sections and user profile modal, and any other issues in general.

Project Timeline

<u>Period</u>	<u>Timeline</u>
Community Bonding Period (20 th May- 12 th June)	<ol style="list-style-type: none">1. Coordinate to get pending PRs merged and complete any immediate follow up needed for them.2. Discuss implementation details and ask relevant doubts about projects I work in near future.3. Working on any follow ups on stream settings overlay.
Phase-1 (13 th June- 29 th July)	<ol style="list-style-type: none">1. Make necessary changes so that current user-group settings related code is marked as legacy during development of the new User Group Settings interface.2. Work on Redesign User group settings overlay.3. Discussing and implementing, reset stream to default notifications settings.4. Working on the first pair of link-previews issues, and have related discussion for this.
First Evaluation (25 th - 29 th July)	
Phase-2 (29 th July - 19 th September)	<ol style="list-style-type: none">1. Working on any follow ups and feedbacks Redesigning User-group settings overlay and getting work on Reset stream to default notification settings merged.2. Collaborate on Make Zulip's permissions model much more flexible using groups to complete its user group management and stream settings UI part.3. Working on Custom badges for user groups,

	and getting it merged. 4. Working on the second pair of link preview issues to resolve this bundle.
<p style="text-align: center;">Final Evaluation 12th September - 19th September</p>	

Past Experience

I am a member of the [Club of Programmers \(COPS\), IIT\(BHU\)](#). COPS is a group of students in our college where students share their knowledge about different technologies in order to learn from each other, it also organizes various hackathons and coding events to enrich programming culture. I joined the club in my first year and learned a lot from my seniors by working and contributing to various projects of the club. It is through the seniors of this club that I came to know about open source contributions as well as about Google Summer of Code.

Working with various personal as well as projects of the club (some of which I maintain now), I have got very good experience in working with Django, Express, and frontend frameworks like Reactjs and Vuejs. I currently maintain the projects in the club for which I was a core developer, and try to pass whatever I learn to my juniors in the club while continuing my learnings at the same time.

Projects

I have worked on various projects, some of which are made individually and others are made in groups.

1. Shopify ([Source code](#))

This project uses Django at its core. It was developed as part of the CSE-205N (ITW-2) course taught in the third semester at our college. It is an e-commerce website that uses django in backend and Django templates in frontend. In order to address responsiveness and design issues it uses MD Bootstrap. The purpose of this application was to demonstrate efficient database querying using Django ORM. At the time of final submission it supported following noticeable features:

- ❖ Cart and order summary before checkout.
- ❖ Saving both delivery and billing information for future use.
- ❖ Adding coupons for special purchases.
- ❖ Suggestions for items of similar category.

- ❖ Payment simulation using stripe test cards
(As stripe does not offer these services in India.)

It is this project that gave me a broad understanding of how Django ORM works, how templating systems can be utilized efficiently for dry code. Also it was praised to be one of the best submissions for the lab of the course, both in terms of design and implementation.

2. Peer IO ([Source code](#))

This project heavily uses Javascript as it is built using (MongoDb + Express) at backend and Vuejs at frontend. It was built during a 24 hour hackathon I recently participated into. The idea behind developing the application was to have some way of increasing peer learning among students even during online semesters.

It does so by enabling students to anonymously review and provide feedback on work of their peers. Reviewing can be done only after submissions deadlines are over. Reviews remain anonymous meaning that neither reviewer comes to know whose work he/she is reviewing nor the reviewee comes to know about who has reviewed his/her work. This is done to prevent students from putting comments based on personal grudges and abuse cases.

It was an amazing experience working on such a project with really tight deadlines. We managed to finish as second runner ups for the hackathon.

3. Hackalog

- ❖ [Frontend source code](#)
- ❖ [Backend source code](#)

I developed this project as a member of [COPS, IIT\(BHU\)](#). It is a web application that supports hosting of hackathons and dev sprints. Actually COPS organizes such events with an aim of testing whatever is taught to the new members of the club. For such an event we required a platform to organize events in a fair manner. So we decided to build our own platform for this.

This project gave me a huge learning opportunity and practical experience on working with Django Rest Framework for backend and Reactjs for frontend. We also successfully organized a dev sprint for new members of the club after launching it in February. In the next release for this we are planning to improve the admin interface so that anyone can host such events.

Availability

I will be having my end semester exams in the first week of May and will be over by 12th of May well before the community bonding period. So I will be completely free during most of the GSOC period. Therefore I can easily give around 30-35 hrs per week.

I'll be having some exams/interviews in the second half of July as part of college curriculum because of that I may not be available in the last week of July. I'll inform the community members regarding this and will make over for this time by working actively in succeeding weeks.

Post GSoC

I wish to contribute to Zulip even after GSoC, I'll try to keep making PRs on the areas I've worked so far and will try to help with discussions as much as possible, and will surely try to engage myself as a long term contributor for the community.