

Zulip's overlays for managing streams and groups

Google Summer of Code Proposal 2024- Zulip

Basic Information

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About Me

I am a sophomore in Electrical Engineering at IIT(BHU), Varanasi. I have a keen interest in programming and have been doing it since 10th grade. I am primarily interested in Web Development and have also explored other areas such as App Development, low-level programming, interpreter design, etc.

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 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 club projects. 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.

I have good fluency in the MERN stack, and I also know Django as a result of working in the club.

Projects

- **A toy programming language ([source code](#))**

he++ is an interpreted general-purpose programming language built on top of Golang. It supports conditionals, loops, and functions. There is also support for arrays and structs. The purpose of this project is to learn more about how interpreters work.

- **A full-stack chess application**

It consists of a [NextJS frontend](#), a [NodeJS backend](#) to handle authentication, game creation, etc, and a [Rust backend](#) which exposes a self-made chess engine. It also integrates with the Stockfish chess engine. This project is still a work in progress.

- **Technex'24 Website**

Technex is a Techno-management Fest organized by IIT BHU, India. Being a part of its Tech Team, I've worked in various areas of the website, most notably the Campus Ambassador portal. The [frontend](#) is built using NextJS and the [backend](#) is built using Django.

Why Zulip?

There are a few reasons why I chose Zulip as my possible mentor open-source organization. The documentation is very well-maintained, the development community is active, and the tech stack is familiar to me. It was intriguing to see that Zulip doesn't use any fancy frontend frameworks and sticks to JQuery.

I had begun my open source journey by contributing to Zulip, and although I was a little late in discovering this organization, I have been working zealously for the past two months to make Zulip better. In this process, I've learned a lot from maintainer reviews and reading and exploring the codebase. I wish to continue learning and contributing at this pace. It is due to this tremendous amount of learning and my zeal to contribute that Zulip is the only organization I am applying for this GSOC.

Contributions to Zulip

[All pull requests opened by me](#)

[All pull requests with status:open](#)

All pull requests opened by me

S.No	Title	Status
1	Make it possible to automatically split long messages	Open
2	Go to newly created stream	Open
3	Compose Box: Implement formatting of stream and topics on paste	Open
4	popovers: Convert invite modal to tabbed format	Open
5	Compose Box: Unresolve empty topics	Merged
6	compose: Unresolve empty topics followup	Open
7	templates: Add internationalization	Merged
8	password: Add debounce to password validation	Open
9	settings: add tooltip to clarify invalid Jitsi URL - completion	Open
10	[WIP] import slack posts	Draft
11	[WIP] stream: add join/leave notifications in private streams	Draft

All issues reported by me

S.No	Title
1	Bug in resolving topics
2	Internationalization in .hbs files
3	Minor bug in deleting messages

Proposal Description

Overview

My main objective would be to work on **improving the framework and UI in Zulip's overlays for managing streams and groups**. I have been familiarizing myself with the working of streams and user groups and have taken up a few issues regarding the same.

Proposed Work

1. Add a stream setting for mandatory email notifications [#19664](#)

In some cases, administrators may want to require users to receive email notifications for a stream, e.g. when that stream is used for important announcements.

We should therefore add an option to require email notifications for a stream.

2. Allow "resolve topic" permissions to be managed independently [#21811](#)

At present, permissions to resolve a topic are managed together with topic editing permissions. However, resolving topics is quite different from editing topic names from a user perspective, and permissions for doing so should be managed independently.

3. Create per-stream setting for whether "resolve topic" is enabled [#19955](#)

Some organizations may prefer not to use the "resolve topic" feature or only use it in certain streams, and it can be hard to communicate these norms to users. We should therefore make it possible for organizations to specify whether "resolve topic" is enabled in any given stream. This will be done as a follow-up to [#21811](#).

4. Add support for a per-stream version of the "Default code block programming language" [#17454](#)

For any software project that has multiple languages involved, it would be useful for each stream to have its own default code block language since different streams talk about different parts of the project, which might use different languages.

5. [WIP] New UI for group-based permissions management [#28808](#)

We should implement a new, pill-based UI for permissions management with user groups. Making it possible to assign a permission to multiple groups on the backend is a blocker for this issue.

6. Add Permissions panel to group management UI [#28806](#)

We should add a "Permissions" panel that shows what permissions a group has in the group management UI. Exact design will be discussed on CZO

Apart from these issues, I would be happy to take up new issues if time permits.

Project Timeline

Period	Objective
Community Bonding Period (May 1-26)	
May 1 - May 26	<ul style="list-style-type: none">• Work on getting my existing PRs merged.• Initiate discussions on CZO regarding the above mentioned issues.• Initiate design discussions for #28806.
Phase-1 (May 27-July 8)	
May 27 - June 15	<ul style="list-style-type: none">• Starting the work on #21811

	<p>and making the necessary backend changes and migrations. Try to make considerable progress on it so that we can start with #19955.</p> <ul style="list-style-type: none"> Starting the work on #19664 and #28806.
June 15 - July 8	<ul style="list-style-type: none"> Address feedbacks and implement suggestions on the two issues. Starting the work on #17454. Clearing the blockers for #28808.
<p>Mid-Term evaluation (July 8 - July 12)</p>	
<p>Phase-2 (July 12 - August 19)</p>	
July 12- August 1	<ul style="list-style-type: none"> Starting the work on #19955. Engage in discussions on CZO on existing PRs.
August 2 - August 26	<ul style="list-style-type: none"> Make final amendments to all the PRs and make them ready to be merged.

Availability

I will have my end semester exams in the last week of April and it will be over by 10th May. After that I will be having my summer break for around 2.5 months. I do not have any other commitments during this period, So I can easily devote around 30-35 hours per week. So I wish to apply for a 350 hours long project.

I would also inform about any sudden engagements (if any) and will make sure to cover up by working more in preceding and succeeding weeks.

Post GSoC

I really appreciate the things I have learned while contributing to Zulip and wish to continue the same even after GSoC is over. In case some of the PRs need more work, I would be happy to work on them after GSoC and will remain active on CZO. Zulip has a great developer community and I would be happy to be a part of it.