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# Streamalog

Streamalog is a smartphone app used by organizations to facilitate user interactions. Users can be employees, members, or customers. The interactions include text-based chat sessions involving 2 or more users, with optional speech-to-text enabled (or text-to-speech the other way). The user interface and functionality specific to any given organization is built with Jyalog and Jyatags code. Jyalog is somewhat similar to Python and Jyatags is a text markup language.

## Business Model

The organization pays a subscription fee of $0.25 per user per day, for each day in a month the user logs in to the app, up to a maximum of $1 per user per month. Users which make use of significantly more than the usual amount of server resources in a given month cost the organization $5 or a maximum of $10 for that month. After an organization has spent at least $200, it has the option of paying a setup fee of $100 and self-hosting, by downloading the APK file from the Streamalog.com website. (Note that iOS is also supported.) Self-hosted organizations and registered charities pay no fees to Streamalog.

Whenever a self-hosted organization wishes to modify any of the Jyalog or Jyatags code, a security code is emailed to the organization. This code must be entered into the code editor before any edits are accepted, and it lasts for 90 days. Only 3 types of email addresses are accepted: <user>@<domain>.<tld>, <domain>@gmail.com, and <some-user>@gmail.com. The <domain>, <tld>, and <some-user> values can never be changed.

## Local Mode

In local mode, 2 or more users are in the same room, communicating with Bluetooth. Each user runs either Windows, Linux, or a smartphone. Local mode is handy for teaching math. The student(s) usually run Windows or Linux, and the teacher/tutor runs a smartphone (or sometimes Windows/Linux). Local mode is known as Boardalog, and is implemented before Streamalog. After speech-to-text and text-to-speech are implemented for Streamalog, they are both implemented for Boardalog as well.

## Server-Side Jyalog

Since Jyalog is implemented using Java, and Java can be used as a server-side web programming language, so can Jyalog. Jetty is used as a local web server (as opposed to Flask, which works with Python, not Java). Jyalog is used to write server-side code, both locally and on the Streamalog server. This scheme is used to support an image sharing application. Images are stored on a local Windows/Linux computer, or on the remote server, and displayed on a tablet running a web browser.

## Document Display

To display documents such as Word or Excel files, they must first be converted into PDF/RTF, or directly into RTF format. RTF and HTML files are automatically converted into Jyatags format. To display a web page, use Select All, Copy, and then Paste into an empty document window. The Jyatags version of a given document supports rich text, but only in a sans serif font in multiple sizes, along with bold, underline and italics. Monospaced text is also supported, useful for viewing program code. The user holds their phone in landscape orientation, and a single-line horizontally scrolling chat window is displayed at the bottom of the screen. To display the cursor, tap on the document text, or press and drag to highlight. Click on the edit mode icon at lower right to toggle between chat mode and edit mode.

## Image Collections

This sample application makes use of server-side Jyalog code: a web-based tool used for organizing image collections, running on a tablet. Each image has an optional name consisting of one or more name parts, and zero or more features. Each feature has one or more mutually exclusive categories.

## Main Menu

The main menu consists of 3 columns of buttons. The left column includes all the different commands: Grid, Search, Feature, Clear, Edit, Settings, Quit. The middle column includes all the different categories of the primary feature, plus All. The right column is for the secondary feature. An example of a primary feature is hair color. An example of a secondary feature is clothing color. The maximum number of features is 255, and the maximum number of categories per feature is 255.

## Grid View

Images are displayed in rows and columns. Clicking on an image takes you to image view. Both grid view and image view include at the bottom a navigation row of 4 low-height buttons: yellow, red, green, blue. Yellow is Left, blue is Right, red is Up, and green is Mode. Left and Right display previous and next screen. Up takes you to main menu. Mode toggles between all images and all images having a given name. Images appear in random order by default. Clicking on Grid in main menu takes you to grid view.

## Image View

Image size of subject is maximized. Left and Right display previous and next image. Up takes you to grid view. Mode changes from all images to all images having a given name, taking you to grid view. Mode is grayed out if already in single-name mode. Clicking on an image "likes" it. Most-liked images are more likely to appear near the beginning of random image lists, although that effect decays over time.

## Search

Displays a keyboard: letters, space and asterisk, with or without digits, no shift key. Typing letters narrows down the list of 1st name parts, displaying matches above the keyboard. Clicking on a match or typing space displays matching 2nd name parts, and typing letters then narrows down the list of 2nd name parts (along with the 1st name part). Typing asterisk (*) matches any name part. Clicking on a partial name displays matching complete names, and user then clicks on a matching name or continues typing. Clicking on a complete name takes you to grid view. Each image has zero or more name parts.

## Feature

Displays feature list in middle column. Clicking again toggles between displaying feature list in middle and right columns. Clicking on a feature list displays categories in selected feature.

## Clear

Set all feature settings to All Categories.

## Edit

Toggle edit mode, enabling adding/deleting images, features and categories, or reordering images.

## Settings

Show/hide digits on keyboard. Change row and column counts. Toggle random/fixed order for lists of images in a given category or having a given name, for ordered lists. More advanced features include adding/deleting images, features and categories.

## Image Sharing

Only premium users (who pay a conversion fee of $18) are allowed to share their images with other users. Other users can only share posts and comments consisting of plain text or Jyatags code. Users can choose to share only images having a given name, and/or belonging to one or more categories. Users can also make image metadata public (names and categories), and browsable by other users. The user downloads the image database belonging to another user from the Streamalog.com website. Instead of downloading all the images, only the file names are downloaded, each consisting of 16 hex digits.

## Jyberland

Jyberland.org is a mental health organization which has no physical offices in small cities and branch offices in larger cities. It is made possible through the Streamalog smartphone app. Jyberland provides entry-level minimum wage jobs to individuals (called members) living with serious mental illness. Volunteers are recruited to train the members, and employers are recruited to provide the job opportunities. Every volunteer must be on call at least 3 days a month. Whenever a member calls in sick, a volunteer who is on call is expected to fill in for that member. A notifier on the member's phone is activated 60 minutes prior to the beginning of their shift. The member is expected to click on yes or no, depending on whether the member intends to work that shift or call in sick. Clicking on no gives the member the option to chat with the volunteer on call. At the beginning of each calendar month, a work schedule for that month is created for all the members and volunteers. Streamalog (based on Jyalog and Jyatags) is used to coordinate the activities of the volunteers and members. Apart from the volunteers, Jyberland is staffed entirely by individuals living with serious or not-so-serious mental illness.

## About Us

I am Mike Hahn, the founder of Streamalog.com. I was previously employed at Brooklyn Computer Systems as a Delphi Programmer and a Technical Writer (I worked there between 1996 and 2013). At the end of 2014 I quit my job as a volunteer tutor at Fred Victor on Tuesday afternoons, where for 5 years I taught math, computers, and literacy, and became a volunteer math/computer tutor at West Neighbourhood House. I quit that job in mid-2019. I have a part-time job working for a perfume store. My hobbies are reading and I often go for walks. I don't read books very often, but on March 19, 2021 I started reading a biography of Steve Jobs which my brother gave me. I read the CBC news website, news/tech articles on my Flipboard app, and miscellaneous articles on my phone (same screen as my Google web page). I visit my brother once a month or more. For almost 30 years I was depressed on and off (I'm a rapid cycler), but it largely vanished after I ramped up development of my previous Aljegrid project in early March 2021.