



HYPHEN

MESSAGING

A solution that allows 2 users to send encrypted messages to each other.

DEVELOPED BY

Λ FROM IN Λ
DEV-GROUP

Introduction

Basic introduction about Hyphen Messaging Platform and other necessary information to know about the platform.

Glance at the platform

This is a solution that allows 2 users to send encrypted messages to each other. The system is blazingly fast and extremely secure.

The system aims to bring the best user experience possible for the end-user. With precisely crafted user interface the end-user have a seamless user experience while using the system.

The integration of this system to an existing system is very easy. As long as the developers follow the integration instructions provided in this documentation correctly they won't encounter any integration problems at all.

Development Tools & Frameworks

Back-End Frameworks



Firebase

- Firebase is used as a back-end development tool. It serves real-time database, user management, storage management, real-time communication with the front-end and more.
- We've used this framework because of its reliability, security, ease of use with extreme performance.

Front-End Frameworks



Android

- We've used Android platform to showcase the Hyphen Messaging Platform. The reason we've choose to work on android is the amount of uses that it has.



Dependencies Used

- We've used plenty of 3rd party tools and frameworks for the front-end development. You can found all used dependencies used for the front-end development in the `build.gradle` file which is located in the `/front-end source-code directory/app/build.gradle`

Features List

Notice

The platform has the following major features. The features listed here are only major features that are in the platform. Aside to this there are plenty of minor features embedded in the system. For detailed features that are included in the system you can examine the source code of the platform.

Major features of the platform



User Registration

- Allows users to register to the system. But if the existing system has its own user management system this feature could be omitted. The developers have to integrate this messaging platform with the existing user base though.



User Login

- Allows users to sign in to the system and get valid firebase authentication token to be stored in their device.



List Users

- Allows end-users to list and view users that are registered in the Hyphen platform. This is very important to initiate a chat with the Hyphen user.



Search Users

- Allows end-users to list and view users that are registered in the Hyphen platform. This is very important to initiate a chat with the Hyphen user.



View Chats

- Allows end-users to list chats (conversations) that are currently in progress.



Send Message

- Allows end-users to send encrypted messages to other Hyphen user.



View Message

- Allows end-users to view messages that are sent from other Hyphen users.

Integration Manual

Integration manual which guides developers to integrate Hyphen messaging platform with the existing system.

Requirements for the Integration

Back-End Requirements



Firebase

- Make sure you have a valid firebase account. If you don't have one you can go to <https://firebase.com/> to create a free Firebase Account.

Front-End Requirements



Android Studio

- Make sure you've installed Android Studio IDE in your system so that you can work with the project. You can download for free at the official Android Studio download website.

Integration Guide

Introduction

Once you have fulfilled all the requirements that are mentioned above you can integrate the messaging platform with the existing system by following the following instruction correctly.

- **Note:** Please follow the following guide correctly so that you won't encounter any issues while integrating the platform.

Configure Firebase



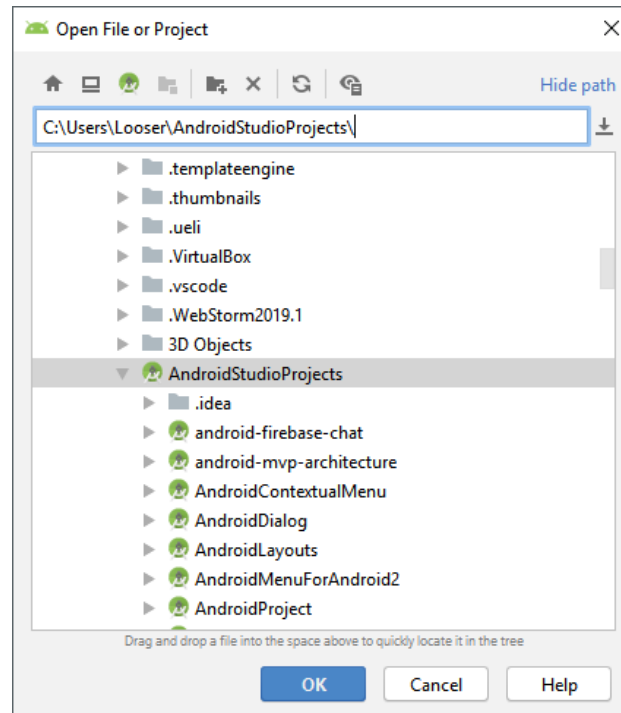
Firebase

- Go to firebase console in your browser and create a new firebase project. (Follow the Firebase new project wizard properly).
- Download [google-services.json](#) file from firebase console.
- Put the downloaded json [google-services.json](#) file in [/front-end source-code directory/app/](#) directory.
- Nice! you're now done with Firebase.


Configure Android Studio

Android Studio

- Open Android Studio
- Go to **File > Open** to open a project.



This dialog will appear after you clicked **Open**. After this dialog opens go to the directory where you put the front-end source code.

- Select the project and click **OK** to open the project.
- Done! The project will automatically sync and once its done with syncing you can press the **run**  button in Android Studio.

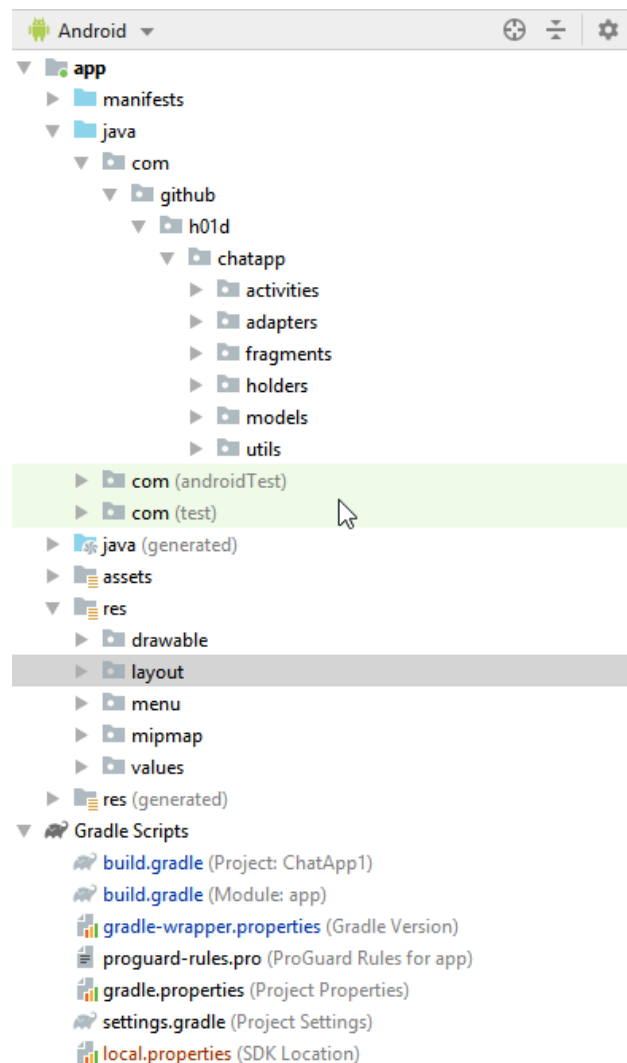
Project Structure

Introduction

In this section you can found the project structure of the Hyphen Messaging Platform. This section will briefly discuss every project elements so that you can understand the project in deeper level.

- **Note:** Its recommended that you refer this section for advanced integration purpose.

Project Files



app

The **app** directory contains all project files.

manifests

The **manifests** directory contains android project configuration file **AndroidManifests.xml**.

java > com > github > h01d > chatapp

The **java** directory contains core java source code files which are essential for the proper functioning of the platform.

res

The **res** directory contains core UI elements like **drawables**, **layouts**, **menus**, **mipmaps**, **values**, that are mandatory for the Hyphen Messaging Platform.

Gradle Scripts

This directory contains two very important **gradle** files i.e. project level **build.gradle** file and app level **build.gradle** file.

Modifying Files

If you want to modify project files make sure you maintain the project structure as it is or if you don't want to keep this project structure make sure you refactored everything accordingly.

Usage Manual

Usage manual which guides end-users and/or developers how to use Hyphen messaging platform.

User Registration

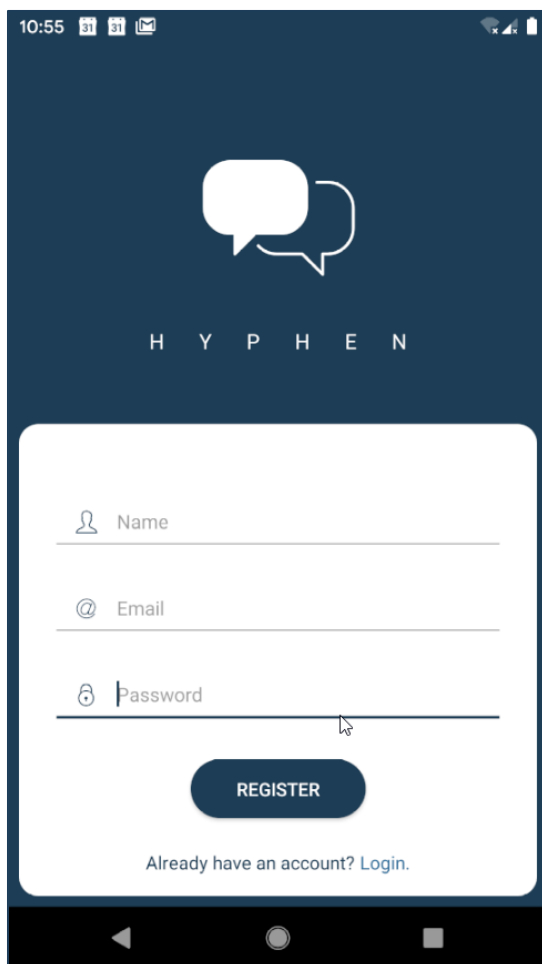
Description

- Allows users to register to the system. But if the existing system has its own user management system this feature could be omitted. But the developers have to integrate this messaging platform with the existing user base.

Required Fields

- Full Name
- E-Mail
- Password

User Interface



The screenshot displays a mobile application interface for user registration. At the top, the status bar shows the time as 10:55 and various icons. Below this, a dark blue header features a white speech bubble icon and the word "HYPHEN" in white capital letters. The main content area is a white rounded rectangle containing three input fields: "Name" with a person icon, "Email" with an @ icon, and "Password" with a lock icon. A dark blue "REGISTER" button is positioned below the fields. At the bottom of the white area, a link reads "Already have an account? Login." The device's navigation bar is visible at the very bottom.

User Login

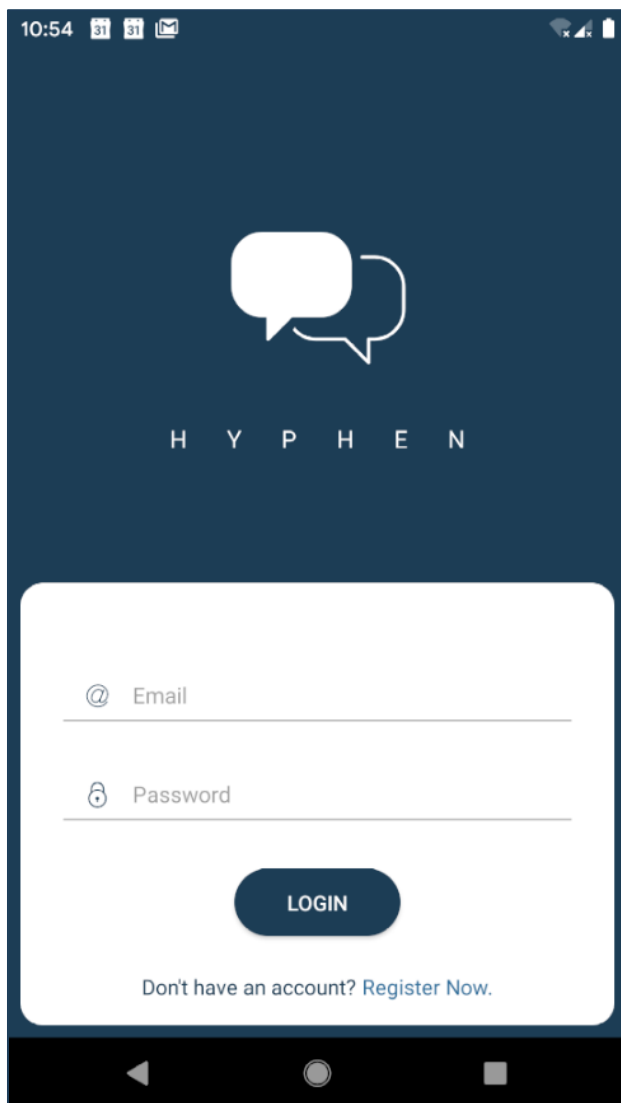
Description

- Allows users to sign in to the system and get valid firebase authentication token to be stored in their device.

Required Fields

- E-Mail
- Password

User Interface

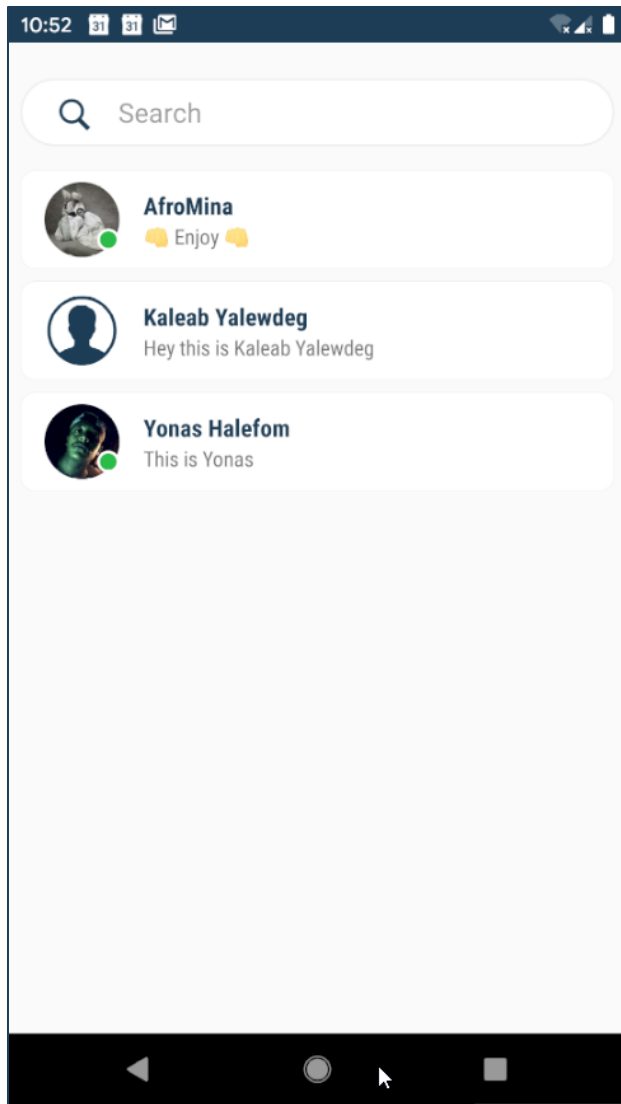


List Users

Description

- Allows end-users to list and view users that are registered in the Hyphen platform. This is very important to initiate a chat with the Hyphen user.

User Interface

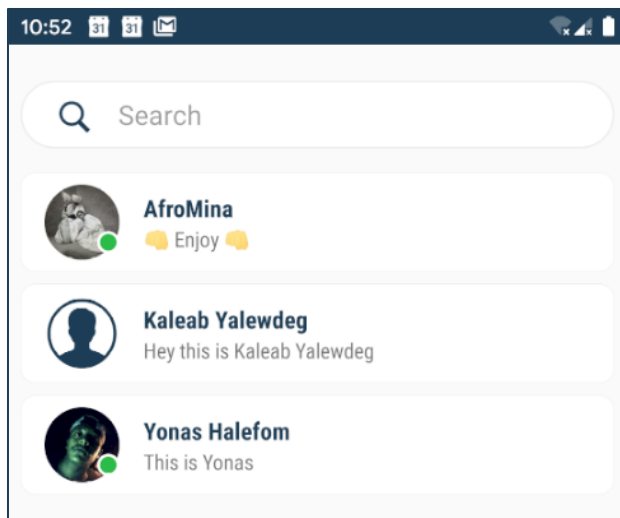


Search Users

Description

- Allows end-users to list and view users that are registered in the Hyphen platform. This is very important to initiate a chat with the Hyphen user.

User Interface

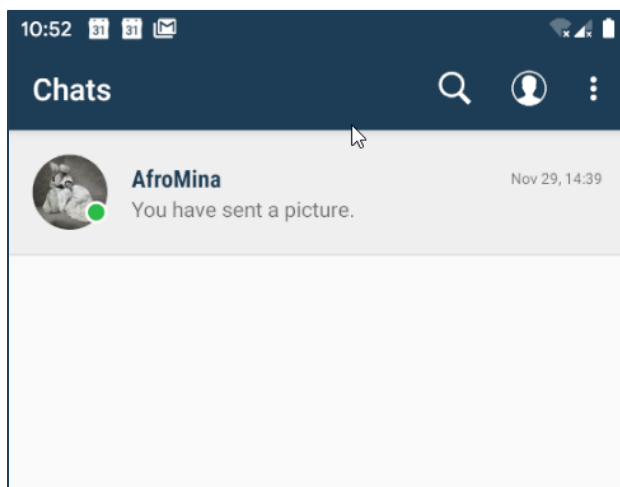


View Chats

Description

- Allows end-users to list chats (conversations) that are currently in progress

User Interface

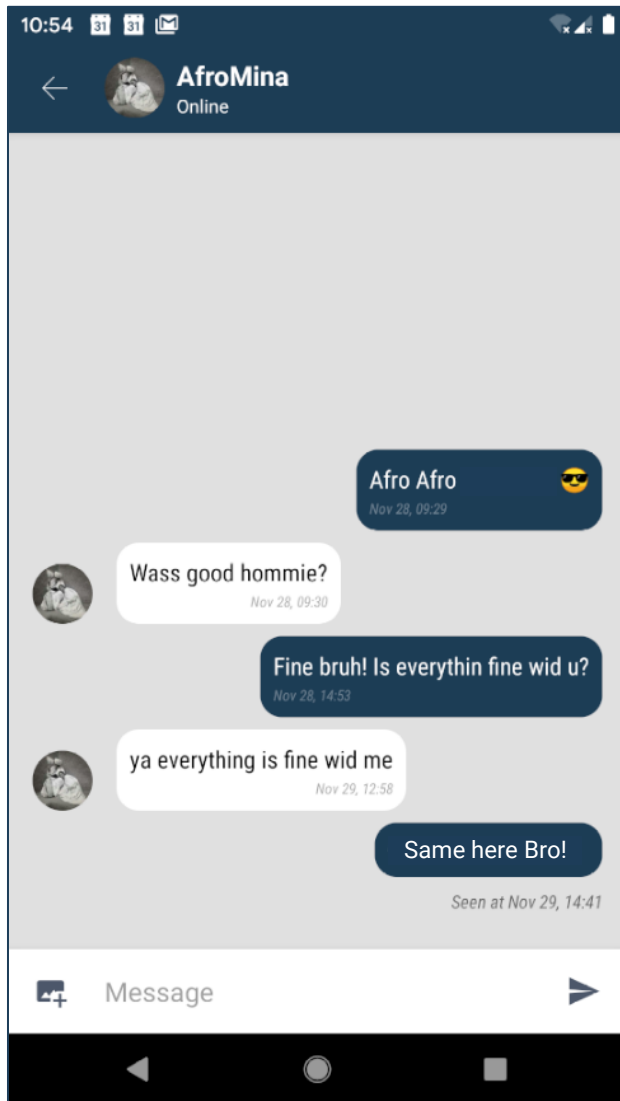


Send Message

Description

- Allows end-users to send encrypted messages to other Hyphen user.

User Interface

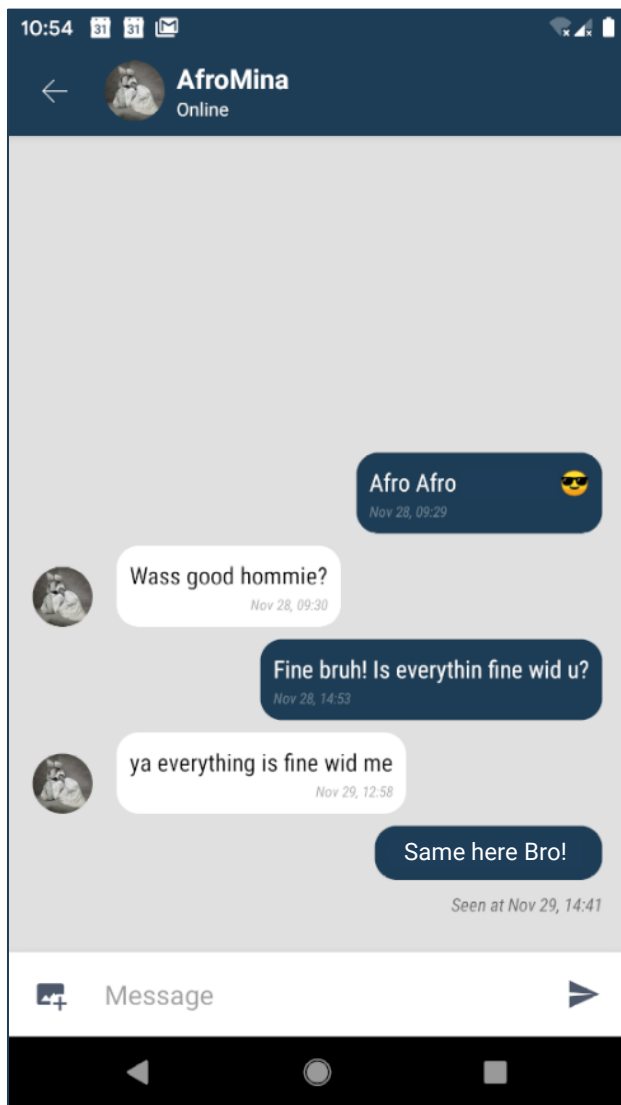


Send Message

Description

- Allows end-users to view messages that are sent from other Hyphen users

User Interface



THANK YOU!