PROJECT PROPOSAL – chat in code

**Jamie Braaksma**

**Overview**  
 Chat in Code is an android application that uses simple techniques to create fun coded messages to send to friends. The user will select from (at least 3) different classic encryption techniques such as “Pig Latin” or a “Caesar Shift”. The app will then present a textbox where the user can enter the plaintext to be converted. After the text is converted, the user will have the option to copy it to the clipboard, share it to a separate application, or save it for future use. The application will work in reverse as well, decrypting cipher-text that was created with the application. This will allow users to send coded messages to one another (outside of the application) and decrypt them within the application. This app is not meant to secure messages to modern cryptographic standards, as most of the methods are elementary and easily decrypted. It is meant as a fun and educational application targeted for kids (and curious adults). The application aims to present a fun opportunity to introduce and teach early cryptographic techniques.

**Key Features**

* Account Creation / Login
* Encryption/Decryption of messages through different processes
* Copy encrypted messages directly to the clipboard
* Save encrypted messages for future use

**User Stories**

* As a user, I want to create an account so I can login in the future to access saved ciphers.
* As a user, I want to send an encrypted message to my friend that he can decrypt on his own account.
* As a user, I want to learn about the earlier cryptographic methods that influenced modern encryption methods.
* As a user, I want to easily share my generated ciphers through various messaging applications on my device.

**Proposed API Usages**

* Android Sharesheet – Share message content with other applications without needing to copy/paste.
* Firebase Cloud Storage – Backend remote server to store saved messages, user data etc.
* Firebase Authentication Service – Manages user login, password encryption, and account creation.

**Team Members**

Jamie Braaksma will individually develop this project.

**Version Control**

All code will be hosted locally with Git and remotely on GitHub at <https://github.com/Student8877/ChatInCode1>

**Proposed Project Schedule (subject to change)**

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Start Date | End Date | Duration |
| Proposal / Design | February 7, 2022 | February 11, 2022 | 4 days |
| User Interface | February 12, 2022 | February 19, 2022 | 7 days |
| Business Logic | February 20, 2022 | March 6, 2022 | 14 days |
| Backend / API | March 7, 2022 | March 21, 2022 | 14 days |
| Testing / Debugging | March 22, 2022 | April 18, 2022 | 20 days |

**Wireframes**

Graphical user interface, application

Description automatically generatedGraphical user interface, application

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Graphical user interface, application

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**Planned Resources**

Java Official Documentation - <https://docs.oracle.com/en/java/>

Lectures & Course Material – SODV 3203 – Mahbub Murshed

Android Developer Documentation - <https://developer.android.com/docs>

Firebase Documentation - <https://firebase.google.com/docs>

Whimsical (Prototyping) - <https://whimsical.com/wireframes>

Head First Android Development 2nd Edition – David Griffiths & Dawn Griffiths