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**CIS 634 Object-Oriented Software Engr**

**Group 11**

**Secure Chat App Software Design Specification**

   
 

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**1.0 Introduction**

Hush Android chat app, which is a chat application used for personal and office purposes. A friend or office colleague can share any kind of private data through this application. It will help to chat with friends and office colleagues. Mainly, it will help people who want to hide their conversation. Privacy is the top priority of this application. Languages that have been used are Java and XML, developed in Android. Android studio is the tool that is used for this chat application development.

**1.1 Goals and objectives**

The main goal of Hush is a secure messaging app featuring end-to-end encryption as well as the ability to encrypt your messages so no one can read them. You can safely text a friend or family member your personal details like banking info, phone numbers, health information, and much more

* Sign in or Sign up using your phone number
* One to One chat
* Encrypt and decrypt messages
* Preventing screenshots during chatting
* Firebase Real-Time Chat Integration
* Group chat
* Status Updating Feature
* Beautiful Material Design
* Sweet and Clean animations
* Image Sharing

**1.2 Statement of scope**

Hush is an Android chat app, focused on individuals who have trouble following safely texting with loved ones and want to hide their conversation. It is developed in a Java and XML environment, The Main Features of the application.

* Dashboard
* Chat
* Profile
* Contacts
* Settings

**1.3 Software context**

The software is placed in a business or product line context. Strategic issues relevant to context are discussed. The intent is for the reader to understand the 'big picture.

This application is based on privacy and secure chatting among friends, family, and office colleagues. Different kinds of functionalities have been implemented to make sure the high ratio success of this chat app. Functions like encryption and decryption, Group chatting with security and easy use of the application are the important factors of this developed application.

**1.4 Major constraints**

* All database maintenance will be handled by the users, and it is available when the user needs it.
* Data is secure enough that no user can see the personal information of the other user.
* Data must be restored in any case of loss of data.

**2.0 Data design**

A description of all data structures and databases.

**2.1 Data structures**

Data structured that are available to major portions of the architecture are described.

**2.2 Database description**

Database(s) created as part of the application is(are) described.

**3.0 Architectural and component-level design**

A description of the software architecture is presented.

**3.1 Architecture diagrams**

Various views (logical, process, physical, development) of architecture are presented with descriptions.

**3.2 Description for Components**

A description of major software components contained within the architecture is presented. Section 3.2.1 is repeated for each of n components.

**3.2.1 Component n description**

**3.2.1.1 Interface description**

Input, output, exceptions, etc.

**3.2.3.2 Static models**

Class diagrams, composite structure diagram, etc.

**3.2.3.3 Dynamic models**

Activity diagrams, sequential diagrams, state diagrams, etc,

**3.3 External Interface Description**

The software's interface(s) to the outside world (other software or hardware systems) are described.

**4.0 User interface design**

A description of the user interface design of the software is presented.

**4.1 Description of the user interface**

A description of user interface including screen images or prototype is presented.

**4.2 Interface design rules**

Conventions and standards used for designing/implementing the user interface are stated.

**5.0 Restrictions, limitations, and constraints**

**5.0.1 Restrictions**

* Unauthorized users do not use this system.
* To use this system users will be registered first.

**5.0.2 Limitations**

* Android-based application
* Only firebase implemented specifications are usable
* Do not support cross-platform working

**5.0.5 Constraints**

* All database maintenance will be handled by the users and it is available when the user needs it.
* Data is secure enough that no user can see the personal information of the other user.
* Data must be restored in any case of loss of data.
* The Internet should be available to use this system.
* All the records of the User stored in Database.

**6.0 Appendices**

Presents information that supplements the design specification.

**6.1 Requirements traceability matrix**

A matrix that traces stated components and data structures to software requirements is developed.

**6.2 Implementation issues**