**SYNOPSIS**

**Project Name=Encrypted Chatting Application using Firebase in Android**

**Aim:** This application will serve as a platform that will let us chat to other android using Firebase database. The chatting will be secured as we are using cryptography.

**Concept:** The main concept behind it is to develop a application where 2 android user can chat without any fear of getting their data hacked in middle of the communication.

It will also provide the information about the cipher used to encrypt and decrypt.

It will give information what is cryptography and cipher, what is encryption and decryption.

It will give us the benefit of using cryptography, it’s advantages and disadvantages.

**Modules:**

1. **INTRODUCTION:** In this the introduction to cryptography will be given and some information will be given cipher, encryption, decryption, key.
2. **ENCRYPTION:** In this module there will be encryption of the message send will take place based on the cipher. And the explanation will be given.
3. **DECRYPTION:** In this module there will be decryption of the message send will take place based on the cipher. And the explanation will be given.
4. **COMMUNICATION:** In this module communication will take place between 2 devices on Firebase server.

**Flow:**

1. Introduction to cryptography.
2. Chatting Application.
3. User sends a message.
4. Encrypt
5. Decrypt
6. Other user gets the message.
7. Working of the cipher.

**Software:**

* Android Studio
* Firebase
* Java