# ProLife ~ Chat Application

# **What is Testing:**

Testing, in software engineering context, is the process of executing a program with the intent of finding errors and bugs.

This report explains the various activities performed as a part of testing of this software.

# **Testing Objectives:**

Software testing has many objectives. The major objectives are:

**Finding defect:**

Testing is use to find out defect in the program which is created by the programmer during the development.

**Quality:**

Testing ensures the end result meet the user and business requirements.

**SRS:**

How well does the software map on the requirements specifies in the SRS document.

# **Application overview:**

ProLife is basically a communication application that requires an active Internet connection to function. After installing the Android application, it connects with Firebase framework by Google to identify users and manage chat history. All contacts on the mobile device, pre-registered on the platform can communicate with each other and their data is stored partially on their phones and the database on the backend.

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# **Testing specification:**

* Sign Up
* Log in
* Adding new Contact to Contacts-list
* Recover data

**Sign Up:**

In order to sign up, a user is required to enter a valid phone number. Upon the precious step, users are prompted to update their profile i.e. user name, status or profile picture. In case of wrong input (Phone number) an error message will be displayed. User will also be notified whether the entered password is weak, medium or strong based on number of characters/alphabets used.

**Log In:**

It is observed whether only registered users can log in to application. An error message will pop out if user enters an invalid phone number or erroneous password.

**Adding New Contact to Contacts-List:**

We will test that when user logs into the application, he will be able to see his contacts-list. He will also be allowed to add new contact by entering a valid phone number of a registered user.

## **Recover Data:**

It will be made sure that our Firebase database, which is hosted online, will keep the record of all data including messages, current status updates and profile pictures for a reasonable amount of time. In case a user loses their data for any reason (e.g. logging in on some other device), they will have a choice to recover the data. For recovering the data it just sends a request to firebase server that finds out all communication of this person with every person in his contact list.

# **Type of testing performed:**

* Logical testing
* Functional testing
* System testing

**Logical testing:** This will be used to check every aspect of our program. During this type of testing, valid or non-valid data is entered in each category and returning result is compared with expected result. Sufficient data will be used, at least one entry to each category. Afterwards, all extra data added for the purpose of testing is later retracted after the test cases have been satisfied.

**Functional testing:** This part checks whether every function is properly working or not. Basically it is used for checking smooth running of the project.

**System testing:** This is done after completion of system, all the queries are brought forward and once again checked to ensure no error. This is the final testing before giving the complete version of software to the client.

# **Tools:**

**Android Studio**

Android studio is the official IDE for building an android app. It is used to accelerate android development. We use this for building our online chat application.

**Firebase (Online Database)**

Store and sync data with our NoSQL cloud **database**. Data is synced across all clients in real-time, and remains available when your app goes offline. The **Firebase**Realtime **Database** is a cloud-hosted **database**. Data is stored as JSON and synchronized in real-time to every connected client.