Project Report

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Overview

Android app that can send an OTP to a list of contacts using online services Fast2SMS. OPT is delivery through Four steps.

1. The android app generates OTP and sends using HTTP request to PHP WebServer.
2. PHP Server Call Fast2SMS API.
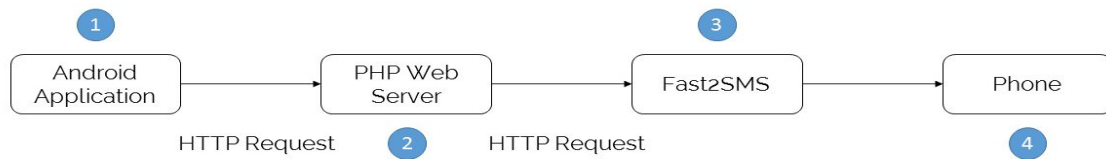3. Fast2SMS send OTP to Phone
4. User verify OTP

Fig 1.0 OTP send Process high level abstract

Project Modules and Config

1. Android app
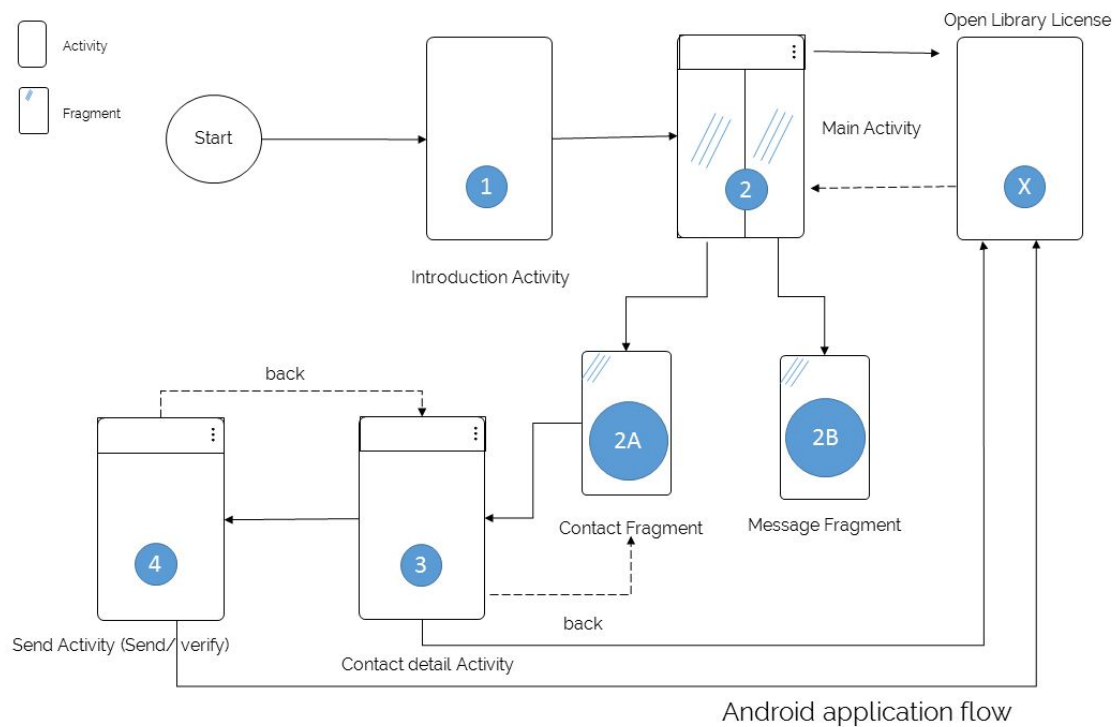2. PHP Server
3. Fast2sms
4. Phone

Minimum SDK Version 21
Target SDK Version 28

Android app

Simple and small android app design base on google material design principle. the app has five part

- Introduction
- Main Navigation
- OTP Sender
- Message Recorder
- DataBase

.Fig 2.0 Application Control flow

Introduction

This is application introduction page. This appears when the app is launching first time after onward this part is skipped and directly show the main Navigation page. But if user press back the show introduction page then exit.
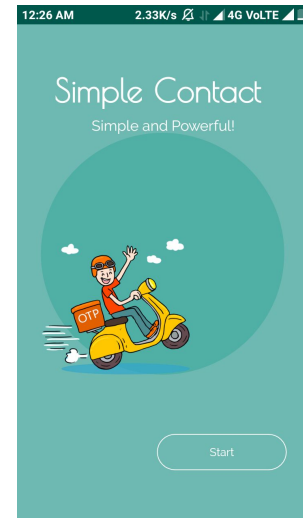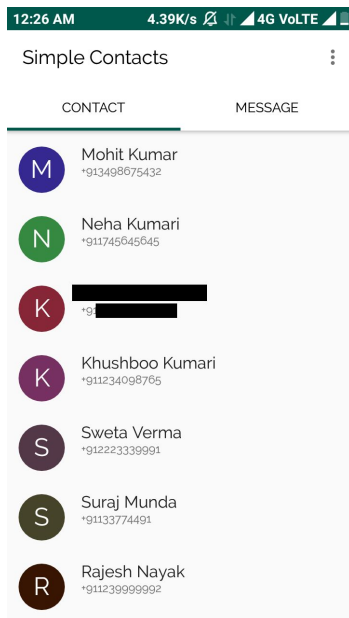

Fig 3.0 Introduction screen

Main Navigation

The function of Main Navigation

- Navigation between Contact and Message
- Give access to Open library License activity.

Fig 4.0 Main Navigation Screen

OTP sender

The function of OTP Sender

- Manage List of contacts
- Generation of 6 digit OTP
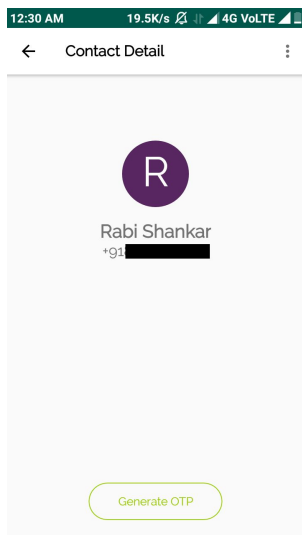- Check internet connection before sending OTP and
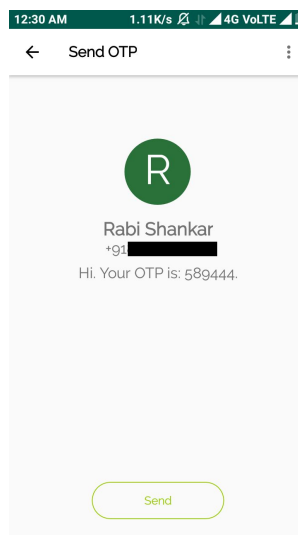- Verify OTP

Fig 5.0 Contact detail Screen
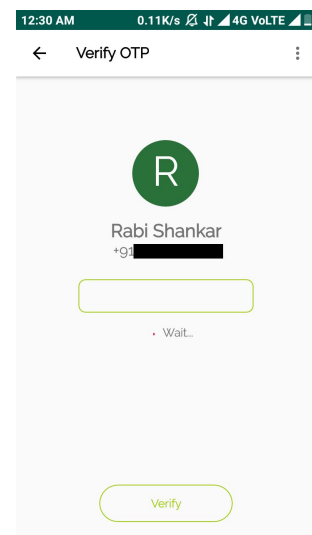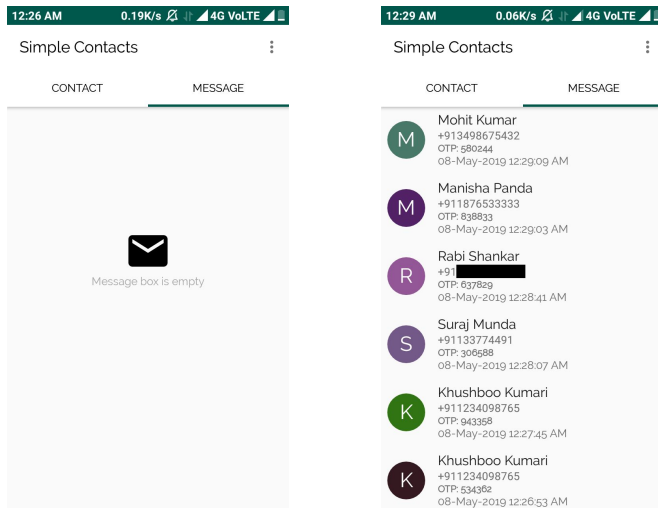
Fig 5.1 Send OTP Screen

Fig 5.3 verify OTP Screen

Message Recorder

The function of Send Recorder module

- Display the list of OTP send Messages

Fig 6.0 send Message record Screen

Database

The function of the Database module

- Save send a message with OTP in SQLite
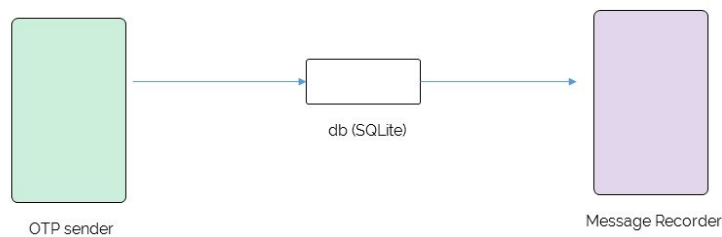- Communication of data between OTP sender and Message Recorder

Fig 7.0 Database connection diagram

PHP Server

This intermediate server running in apache server provide by 000webhost (powered by Hostinger). The script is written in PHP (single file script size approx: 50 lines of code)
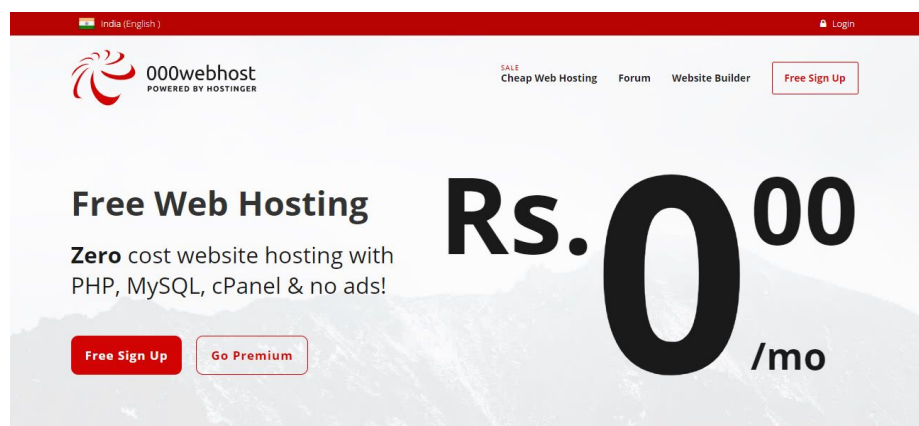
- [https://in.000webhost.com/]

Fig 7.0 000webhost website

Fast2SMS

SMS Gateway API. Our Bulk SMS API work with PHP, JAVA, C#, C, Python, Ruby, Javascript, NodeJS, etc. Secure, robust and easy to integrate APIs to send Promotional, Transactional & Quick Transactional SMS via REST API.

[https://docs.fast2sms.com/]

Phone

Get SMS from AX-FSTSMS content OTP.

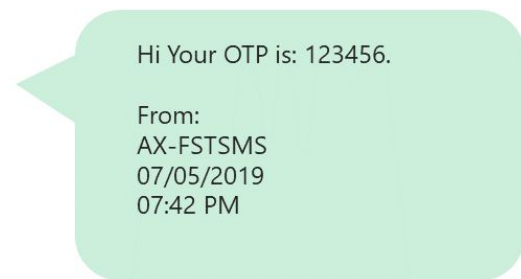Hi Your OTP is: 123456.

From:
AX-FSTSMS
07/05/2019
07:42 PM

Fig 8.0 receive message format

Tools use

- Android Studio 3.4
- Photoshop CS6 (Graphics Design)
- PowerPoint 2013 (Diagram Design)

Reference

- https://www.freepik.com
- https://docs.fast2sms.com/?php#get-method
- https://stackoverflow.com/questions/8654876/http-get-using-android-httpurlconnection
- https://medium.com/@jokatavr/how-to-use-android-open-source-notices-299a0635b5c2
- https://stackoverflow.com/questions/17823451/set-android-shape-color-programmatically