

## 19. Develop a program to send SMS.

Android devices can send and receive messages to or from any other phone that supports Short Message Service (SMS). Android offers the Messenger application that can send and receive SMS messages.

A host of third-party apps for sending and receiving SMS messages are also available in Google Play. The SMS protocol was primarily designed for user-to-user communication and is not well-suited for apps that want to transfer data. Do not use SMS to send data messages from a web server to your app on a user device. SMS is neither encrypted nor strongly authenticated on either the network or the device.

Access to the SMS features of an Android device is protected by user permissions. Just as your app needs the user's permission to use phone features, so also does an app need the user's permission to directly use SMS features.

Two choices for sending SMS messages:

- Use an implicit Intent to launch a messaging app such as Messenger, with the ACTION\_SENDTO action.
- Send the SMS message using the `sendTextMessage()` method or other methods of the `SmsManager` class.

To receive SMS messages, the best practice is to use the `onReceive()` method of the Broadcast Receiver class. The Android framework sends out system broadcasts of events such as receiving an SMS message, containing intents that are meant to be received using a Broadcast Receiver. An app receives SMS messages by listening for the `SMS_RECEIVED_ACTION` broadcast.

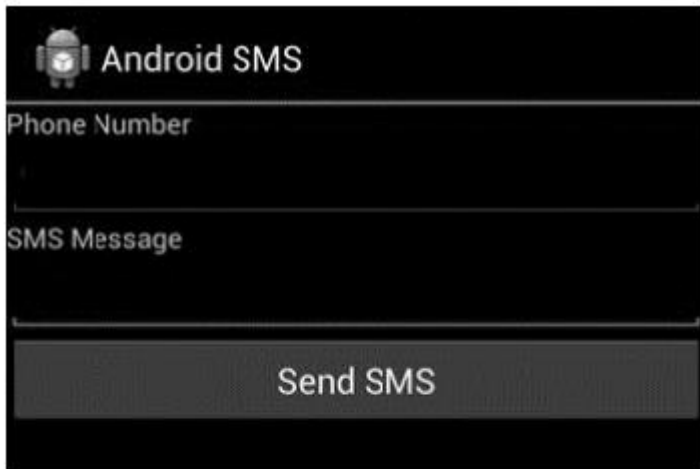
Methods :

- 1 `ArrayList divideMessage(String text)` :- This method divides a message text into several fragments, none bigger than the maximum SMS message size.
- 2 `static SmsManager getDefault()` :- This method is used to get the default instance of the Sms Manager.
- 3 `void sendDataMessage(String destination Address, String scAddress, short destinationPort, byte[] data, PendingIntent sentIntent, PendingIntent deliveryIntent)`:- This method is used to send a data based SMS to a specific application port.
- 4 `void sendTextMessage(String destinationAddress, String scAddress, String text, PendingIntent sentIntent, PendingIntent deliveryIntent)` :- Send a text based SMS.

Q.1. Explain the use of `SmsManager` Class.

Q.2. List changes that are need to be done in `AndroidManifest.XML` file to send and receive messages.

Write a program to send and receive SMS. Make use of the following GUI.



For implementation details –

<https://www.tutlane.com/tutorial/android/android-send-sms-with-examples>

[https://www.tutorialspoint.com/android/android\\_sending\\_sms.htm](https://www.tutorialspoint.com/android/android_sending_sms.htm)