

User Guide for Message Passing in Android:

Activity to Activity, Fragment to Activity and Fragment to Fragment

Author: Tenzin Nyima

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Tool set:

1. java 16
2. Android Studio 4.2.1

Topics covered:

3. Fragment
4. New Activity
5. Sending message via intent
6. Sending message with interface (call back method with interface)

INTRODUCTION

In android app, message passing among the activities and in between the fragments is an important topic to learn as a new developer. This user guide explains how the app was built. The message (data) passing is achieved using the concept of intent and the callback method via interface.

The Figure No. 0.1 shows the file system of the App. The app has four *java* files and four *xml* files.

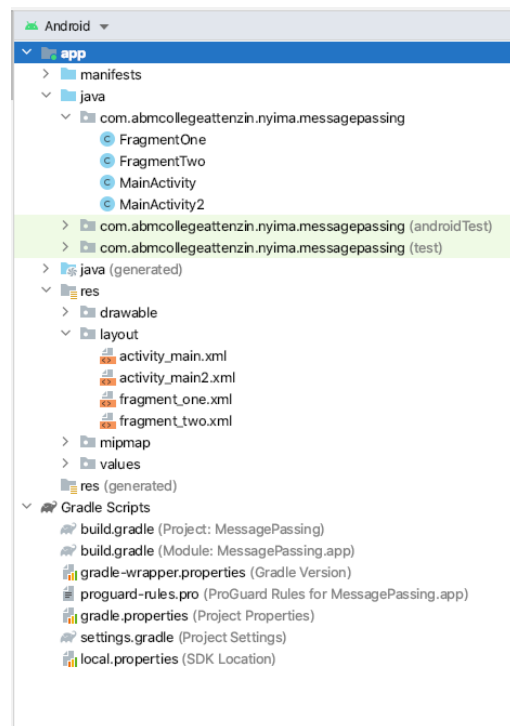


Figure No. 0.1

USER-INTERFACE

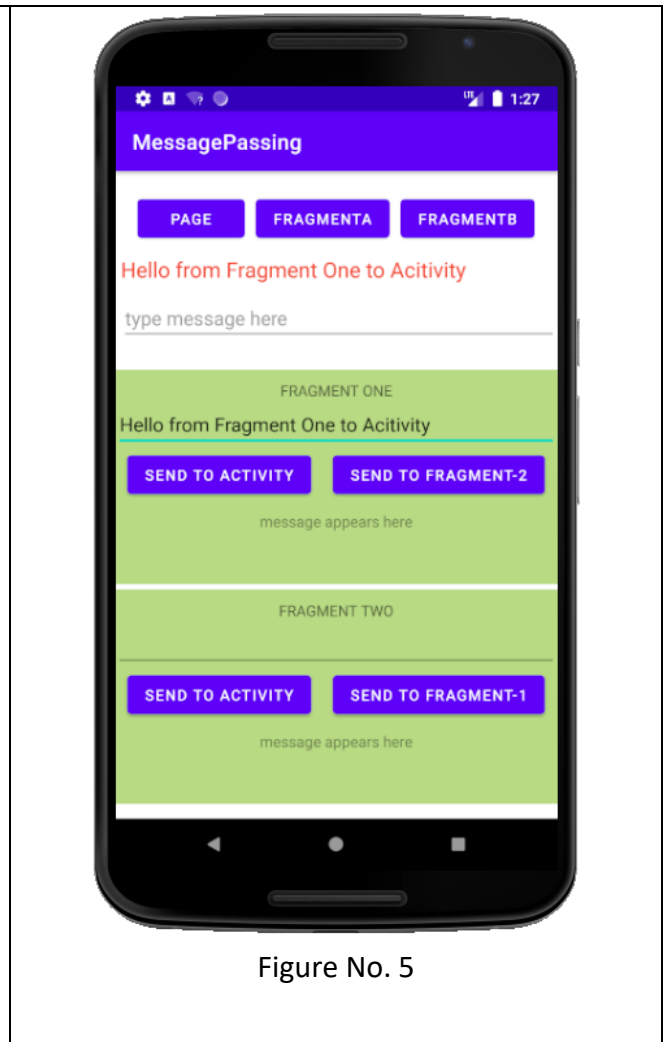
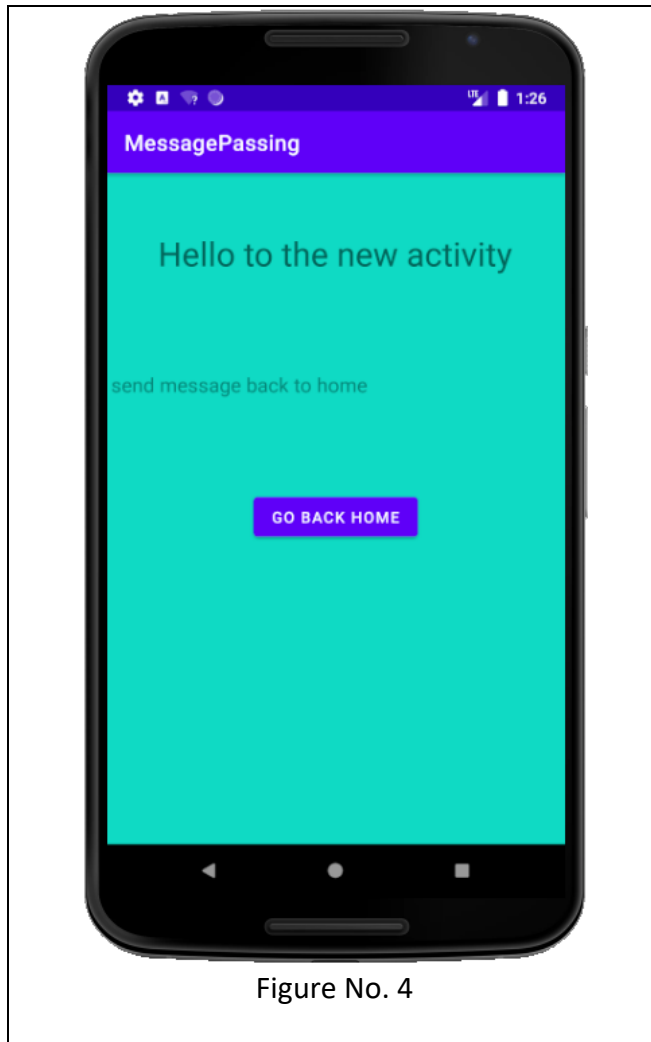


In the user-interface, there are two activities and two fragments (Figure No. 1, 2, 3). On the main page shown in Figure No. 1, there are three buttons that navigate to the new activity or to the fragments.

FUNCTIONALITIES

The “page” button click event invokes transitioning to a new page shown in Figure no. 4. For the demo, the message “Hello to the new activity” is passed from the main activity to the second activity as shown on the screen.

Figure No. 5, depicts the message passing between a fragment and an activity. The message “Hello from Fragment one to Activity” is passed from fragment One to the under lying activity.



The Figure no. 6 and 7, shows the communication between the fragments (One and Two). In Figure No. 6, a message is passed from Fragment One to Fragment Two. Similarly, in Figure No. 7, the message is sent from Fragment Two to Fragment One.

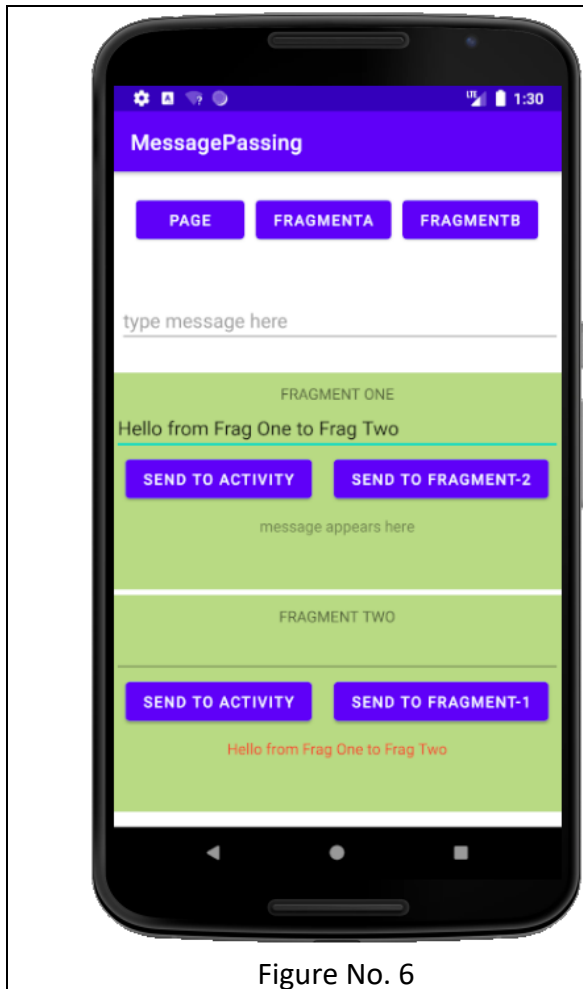


Figure No. 6

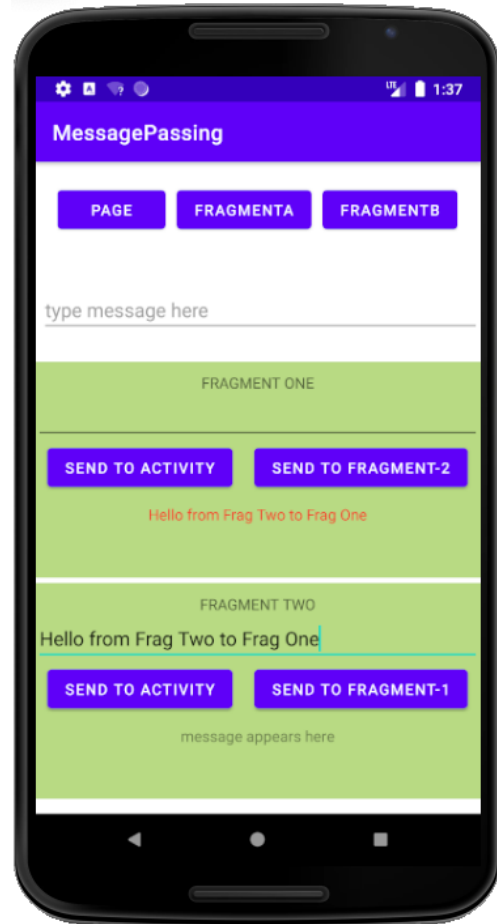


Figure No. 7

CONCLUSION

The app is working just as it is intended. This is a small demo that captures communication both between an activity and a fragment, and between fragments as well. There are many examples online on the same topic covering only a part of this app, but here it is a compact demo that encompasses all the features of: activity to activity communication; activity to fragment communication; and fragment to fragment communication.

FUTURE IMPROVMENT

1. Navigation class is not used in sending message, so messaging through such class can be added. (here Intent class and interface are used for passing data)
2. The buttons ("send to activity" and "send to fragment-1" or "send to fragment-2") calls the same method when sending message only to the underlying activity, it also sends to the fragment as well. So, their individual actions of the buttons must have a dedicated logic.