

Assignment 03

Guess my Number App Enhancements

In this assignment, we will add additional functionality to the “Guess my Number” App we built in the last assignments.

This includes adding notifications, as well as converting the plain Activity layouts into ones that use Fragments.

Convert history Activity to make use of Fragments

Until now, the Activities all use their own layout and the functionality is tied to the Activity itself. In order to provide different behavior based on different screen orientations or sizes, you will now convert the existing history Activity to a more generic implementation using a dedicated Fragment for displaying the history list and its items.

In the end, you will still end up with the same activity, but rather than adding the list view to the layout, the list view fragment is added to the Activity’s layout.

It will probably take you a minute or two to realize what this switch means for reusability but we will come back later to this point and build up on the advancements you just implemented. The Android developer pages provide a good introduction into the use of Fragments.

(<https://developer.android.com/training/basics/fragments/index.html>,
<http://developer.android.com/guide/components/fragments.html>)

Post a Notification once a Game ended

Back in the Main Activity, we’ll add functionality to post Notifications once a game ended. In order to do this, create an appropriate notification layout

(<http://developer.android.com/design/patterns/notifications.html>,
<http://developer.android.com/guide/topics/ui/notifiers/notifications.html>)

and post one each time a game ended (When the user guessed the number or exceeded 5 tries). The notification does not have to provide additional functionality like expanding or interaction (but it can ☺), but should display the random number, the number of tries the person needed and if he/she won or lost.

Master Students: Add a new Activity displaying more details about a game
This applies to master students only!

For now, the app only displayed the past games history in a list format. In the last assignment we also saved the individual tries in the database but didn't display them. Therefore, we are now adding a new history detail view that displays a single item that was previously selected in the list. This should be displaying not only the random number, the number of tries and the time but each individual try as well.

The behavior should be as follows:

1. A click on a list item in the history list Fragment should notify the underlying Activity that an item was selected using a dedicated callback (e.g. create your own interface).
2. The underlying activity receives this callback and starts the newly created history details Activity.
3. In order for the details view Activity to know which Game it should display, you will have to provide either a reference (ID) or every information about that game (random number, tries etc.) in the starting Intent.
4. The back button on the new activity behaves as expected and brings you back to the history list



The Android resources provide a nice introduction to the Fragment communication:

<http://developer.android.com/training/basics/fragments/communicating.html>.

Submission

Please zip (rar is not zip!) up your complete Android project and a text file, that contains your name and if you are a Master or Bachelor Student, and hand it in via Uniworx. Projects that do not compile due to errors will not be accepted.