Fragments

Fragments

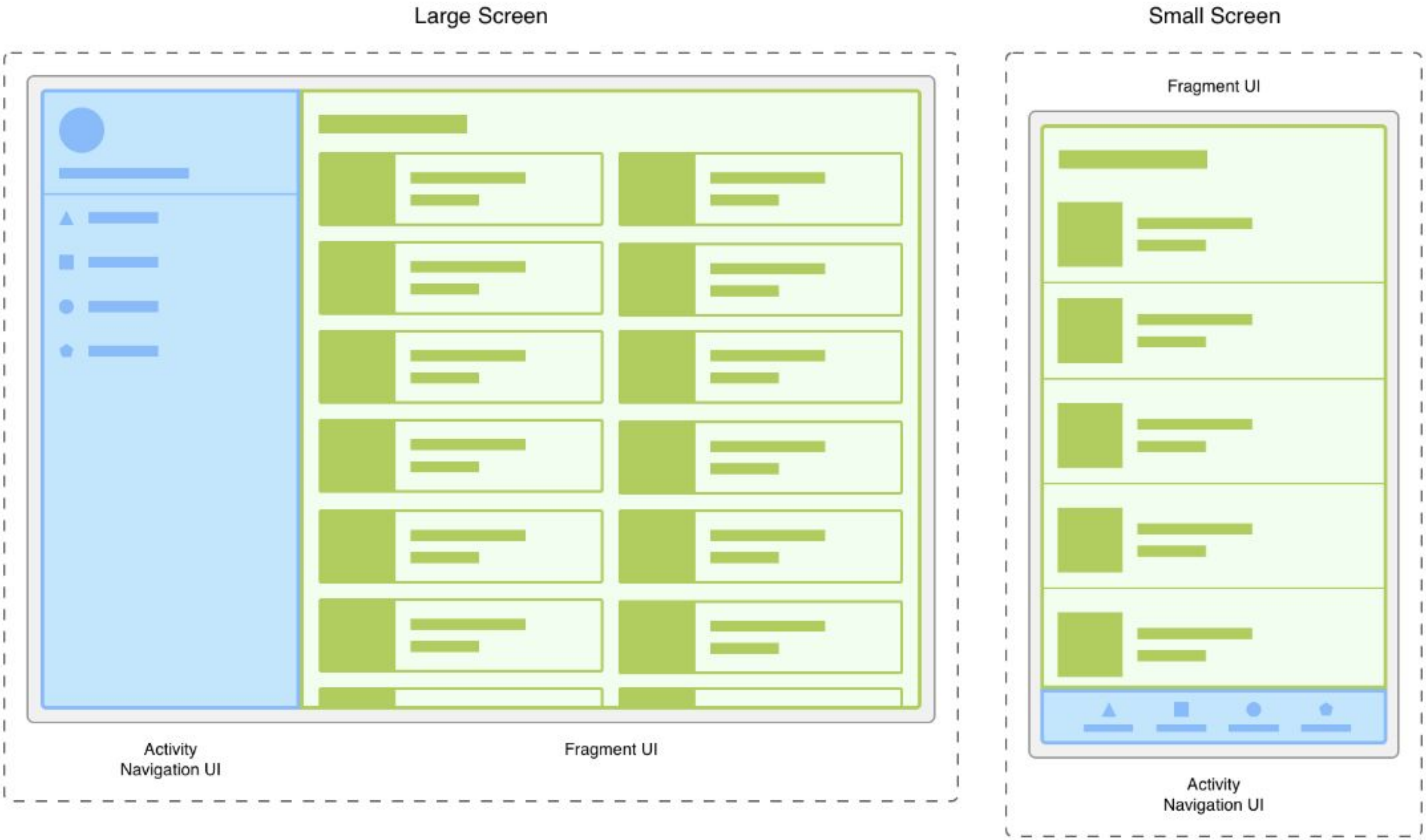
- A reusable portion of your app's UI.
- A fragment defines and manages its own layout, has its own lifecycle, and can handle its own input events.
- Fragments can't live on their own.
- They must be hosted by an activity or another fragment.
- The fragment’s view hierarchy becomes part of, or attaches to, the host’s view hierarchy.
- Introduce modularity and reusability into your activity’s UI by letting you divide the UI into discrete chunks.

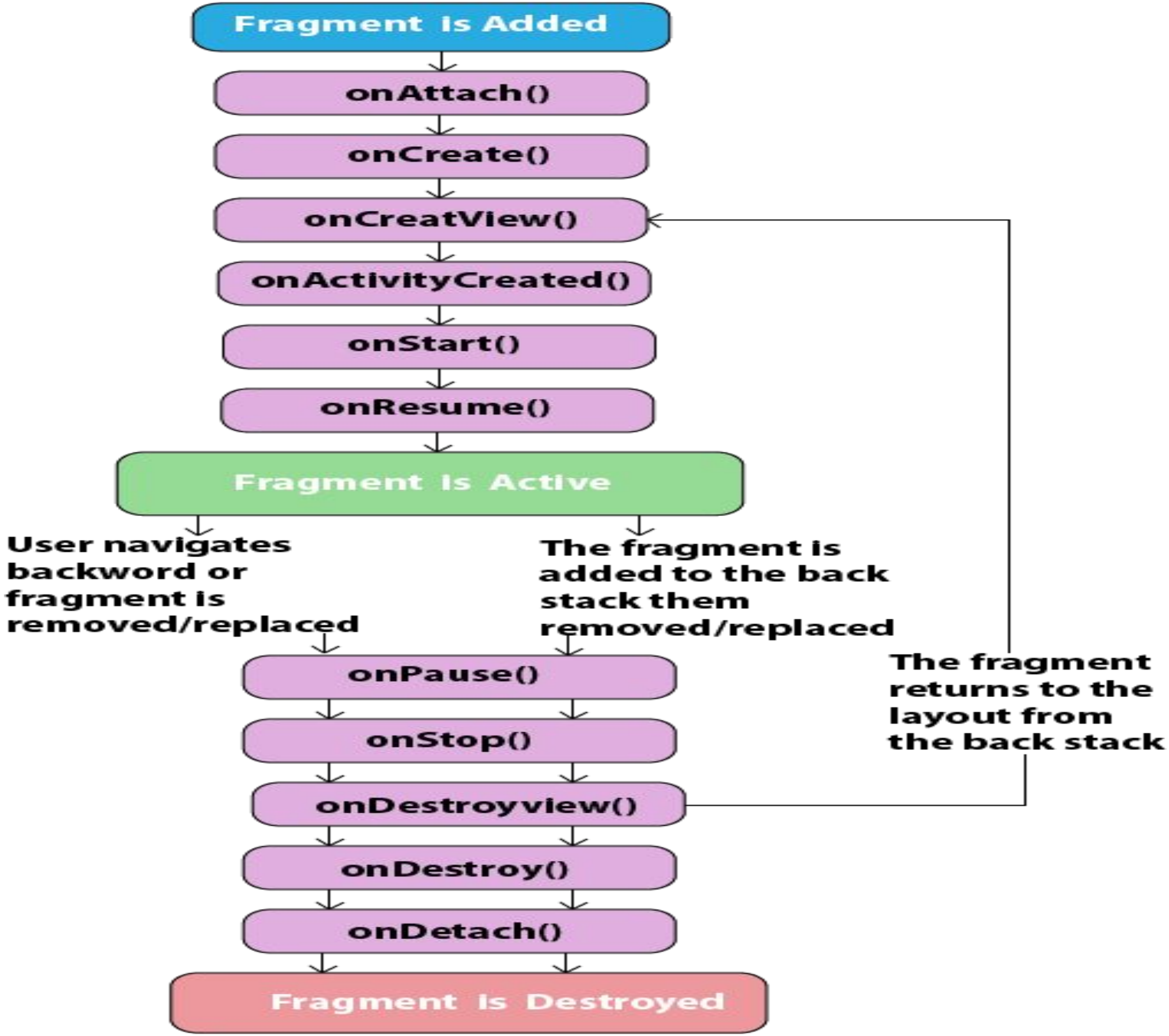
Fragments

- Android Fragment is the part of activity, it is also known as sub-activity.
- There can be more than one fragment in an activity.
- Fragments represent multiple screen inside one activity.
- The **FragmentManager** class is responsible to make interaction between fragment objects.

Fragments

- Dividing your UI into fragments makes it easier to modify your activity's appearance at runtime.
- While your activity is in the STARTED lifecycle state or higher, fragments can be added, replaced, or removed.
- Can keep a record of these changes in a back stack that is managed by the activity, so that the changes can be reversed.
- Can use multiple instances of the same fragment class within the same activity, in multiple activities, or even as a child of another fragment.


Large Screen
Small Screen
Fragment UI
Activity
Navigation UI
Fragment UI
Activity
Navigation UI



Fragment is Added

onAttach()

onCreate()

onCreatView()

onActivityCreated()

onStart()

onResume()

Fragment is Active

User navigates backword or fragment is removed/replaced

The fragment is added to the back stack them removed/replaced

onPause()

onStop()

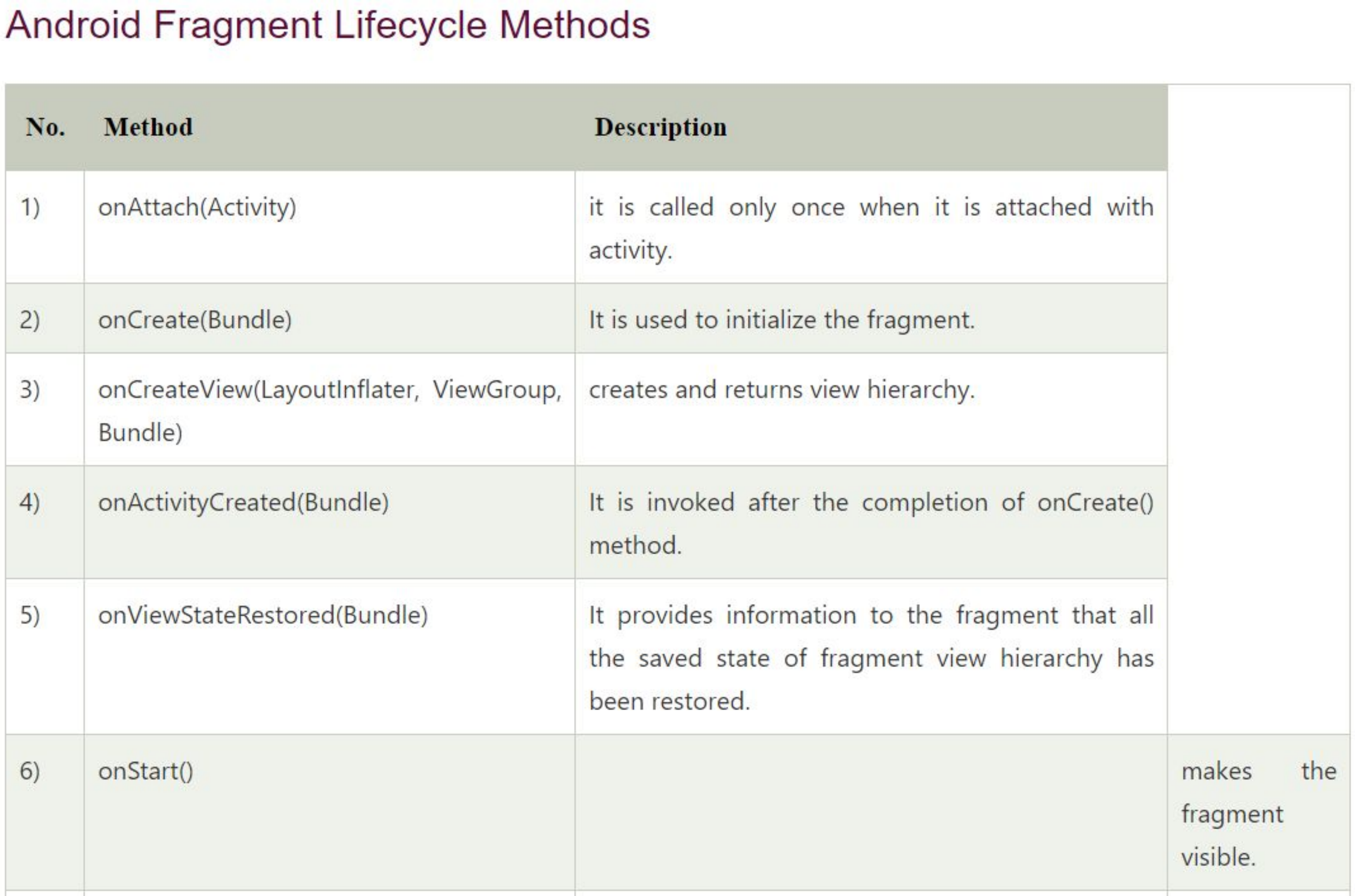
onDestroyview()

onDestroy()

onDetach()

Fragment is Destroyed

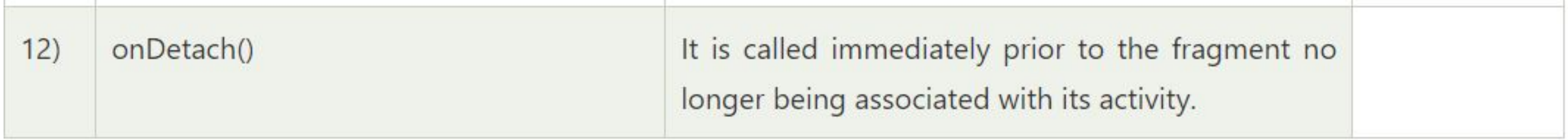
The fragment returns to the layout from the back stack



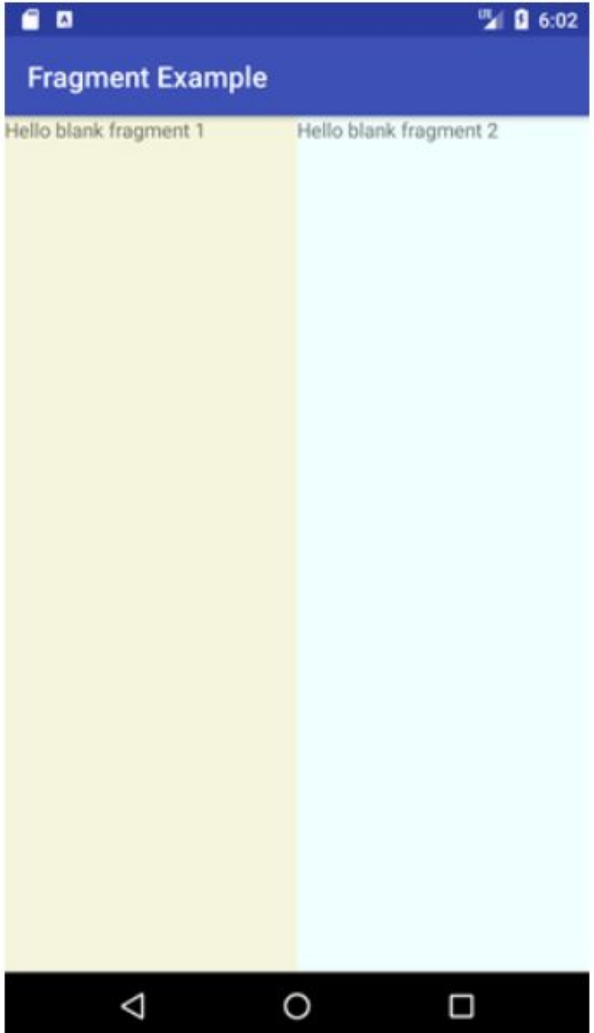
Android Fragment Lifecycle Methods

No.	Method	Description	
1)	onAttach(Activity)	it is called only once when it is attached with activity.	
2)	onCreate(Bundle)	It is used to initialize the fragment.	
3)	onCreateView(LayoutInflater, ViewGroup, Bundle)	creates and returns view hierarchy.	
4)	onActivityCreated(Bundle)	It is invoked after the completion of onCreate() method.	
5)	onViewStateRestored(Bundle)	It provides information to the fragment that all the saved state of fragment view hierarchy has been restored.	
6)	onStart()		makes the fragment visible.

7)		onResume()	makes the fragment interactive.
8)		onPause()	is called when fragment is no longer interactive.
9)		onStop()	is called when fragment is no longer visible.
10)		onDestroyView()	allows the fragment to clean up resources.
11)		onDestroy()	allows the fragment to do final clean up of fragment state.



12)	onDetach()	It is called immediately prior to the fragment no longer being associated with its activity.	



Hello blank fragment 1

Hello blank fragment 2