Fragments

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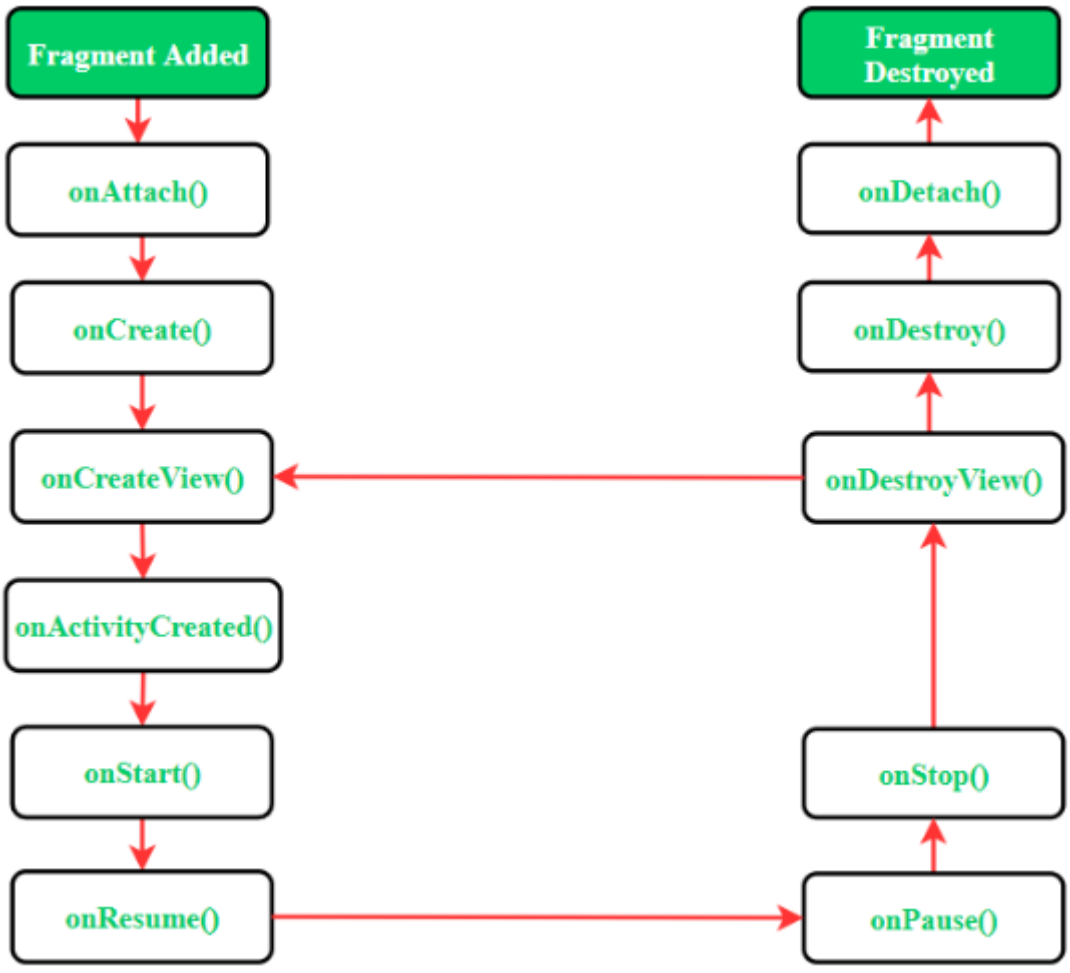
Introduction

1. Fragments are the part of activity which adds its own UI to the Activity and also called as sub activity
2. Fragments life cycle is dependent on activity life cycle
3. We can add multiple fragment in one activity

Lifecycle of Fragments

1. Fragment has its own life cycle like activity and has 11 lifecycle methods onAttach(), onCreate(), onCreateView(), onActivityCreated(), onStart(), onResume(), onPause(), onStop(), onDestroyView(), onDestroy(), onDetach()
2. onActivityCreated is deprected



➢ Implementation

1. Create an activity and the layout of that activity which holds fragment container
2. Create a fragment and the layout for that fragment and inflate this layout in onCreateView using layoutInflator.inflate()
3. Inflate function take three arguments
   a. fragment layout
   b. view group
   c. Boolean to attach to root

```
override fun onCreateView(inflater: LayoutInflater, container: ViewGroup?,
                          savedInstanceState: Bundle?): View? {
    val view = layoutInflater.inflate(R.layout.fragment_two, container, attachToRoot: false)
```

➢ Fragment Transaction

1. Create Fragment manager using support fragment manager
2. Create Fragment Transaction from fragment manager using begin transaction method
3. Create an object of Fragment and add this object to transaction using add() or replace() methods
4. Add the transaction to back stack and commit the transaction

```
val fragmentManager : FragmentManager? = activity?.supportFragmentManager
val fragmentTransaction : FragmentTransaction? = fragmentManager?.beginTransaction()
val fragmentOne = FragmentOne()
fragmentTransaction?.add(R.id.fragmentContainer,fragmentOne, tag: "fragment_two")
fragmentTransaction?.addToBackStack( name: "fragment_two_to_one_transaction")
fragmentTransaction?.commit()
```

➢ Difference between add() and replace()

	Add()	Replace()
1	Add is used to add one fragment on top of other fragment	Replace is used to replace top fragment and add new one
2	In add transaction previous fragment view will not be recreated	In replace transaction previous fragment view will be recreated
3	In Transition from fragment A to B fragment A's onPause() Will not called	In Transition from fragment A to B fragment A's onDestroyView() will get called
4	Fragment A will be visible to user below the fragment B	Fragment A will not be visible to the user below the fragment B

➢ Difference between activity and fragment

	Activity	Fragment
1	Activity is a single screen which has its own UI	Fragment adds its UI to the Activity
2	Activity is Single Screen	Fragment can be multiple screen
3	Activity is independent component	Fragment is dependent on activity
4	Activity must be declared in manifest file	Fragment no need to be declared in manifest file
5	Activity takes lot of memory	Fragments are light weighted components

➢ Cross Questions

1. If we start fragment from activity buttons of the activity will overlapped on fragment container view, activity buttons get higher priority than other view.
2. To avoid overlapping of button on fragment container view wrap buttons in any of the view group ex constraint layouts