

# ANDROID FRAGMENTS

# Introduction

- Piece of an application's user interface or behavior that can be placed in a Activity
- Distinct lifecycle but intertwined with Activity lifecycle

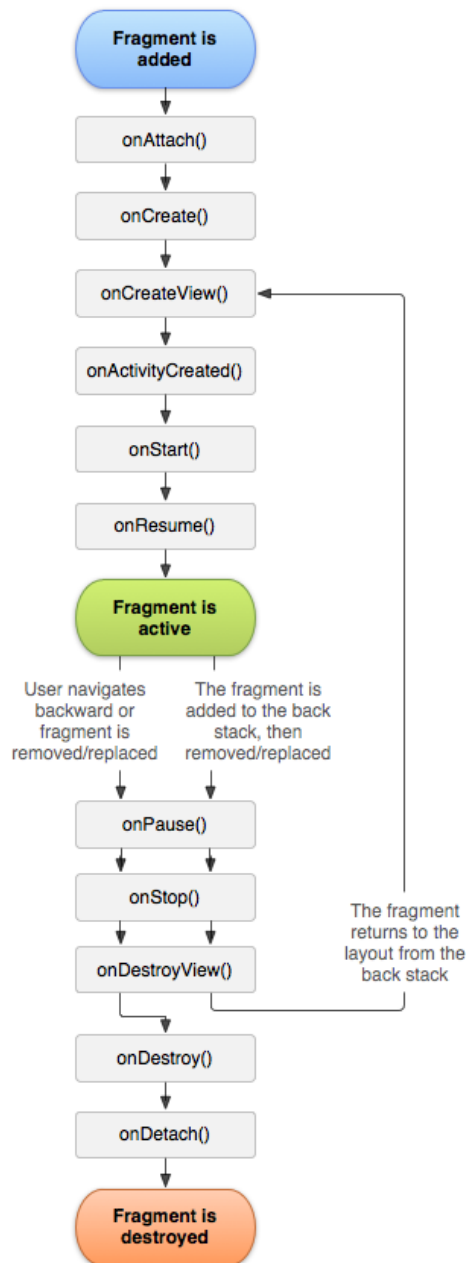
# Life cycle

## onCreate()

The system calls this when creating the fragment. Within your implementation, you should initialize essential components of the fragment that you want to retain when the fragment is paused or stopped, then resumed.

## onCreateView()

The system calls this when it's time for the fragment to draw its user interface for the first time. To draw a UI for your fragment, you must return a View from this method that is the root of your fragment's layout. You can return null if the fragment does not provide a UI.



# Application component

- Managed by the Fragment Manager
- An API to perform a set of Fragment operations : `FragmentManager`
  - add, replace, remove, commit...

# Use programmatically

- Use FragmentManager and Fragment transactions

```
class MainActivity : AppCompatActivity() {  
  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        // Set content view  
        setContentView(R.layout.activity_main)  
  
        // Use the Fragment manager to create a Fragment transaction  
        val fragmentTransaction = supportFragmentManager.beginTransaction()  
  
        // Create a new fragment instance  
        val helloFragment = HelloFragment()  
  
        // Add fragment actions in the transaction  
        fragmentTransaction.add(R.id.main_container, helloFragment)  
  
        // Commit transaction  
        fragmentTransaction.commit()  
    }  
}
```