

CSc 317

Fragments



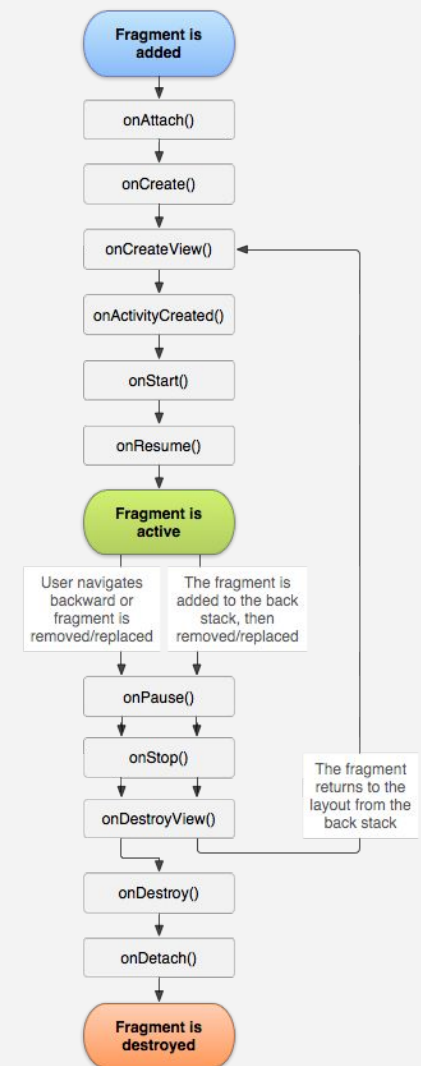
Fragments

“You can think of a fragment as a modular section of an activity, which has its own lifecycle, receives its own input events, and which you can add or remove while the activity is running (sort of like a "sub activity" that you can reuse in different activities).”

Fragments

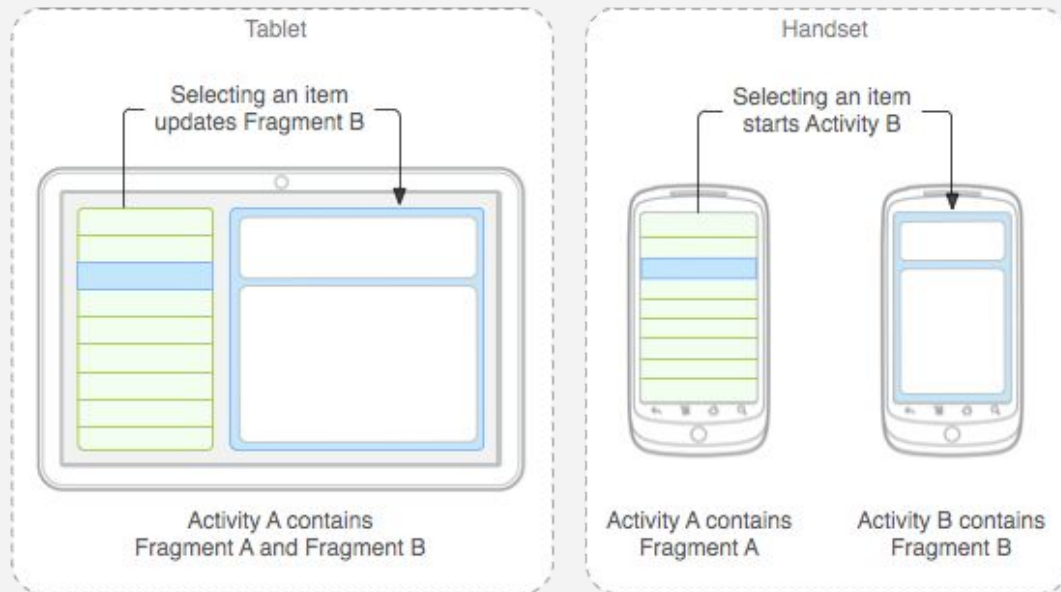
Fragments allow for

- Enhanced application component re-usability
- Enhanced lifecycle control of UI components



Fragments

- Introduced in API 11
- Designed to support more flexible UI design
 - For instance, tablet vs phone



A Basic Fragment

ExampleFragment.java

```
public static class ExampleFragment extends Fragment {  
    @Override  
    public View onCreateView(LayoutInflater inflater,  
                             ViewGroup container,  
                             Bundle savedInstanceState) {  
        return inflater.inflate(  
            R.layout.example_fragment,  
            container, false);  
    }  
}
```

fragment_example.xml

```
<?xml version="1.0" encoding="utf-8"?>  
  
<LinearLayout  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:orientation="vertical"  
    tools:context=".ArticleContentFragment">  
  
    <TextView  
        android:id="@+id/article_content"  
        . . .  
        android:text="News Reader"/>  
  
    <Button  
        android:id="@+id/go_to_article_webpage"  
        . . .  
        android:text="Read on . . ." />  
  
</LinearLayout>
```

Add Fragment to Activity

From somewhere in MainActivity.java

```
someFragment = new ExampleFragment();
Bundle args = new Bundle();
// Add argument to the bundle, if necessary
someFragment.setArguments(args);
FragmentManager transaction =
    getSupportFragmentManager().beginTransaction();

transaction.replace(R.id.main_layout_container,
    someFragment);
transaction.addToBackStack(null);
transaction.commit();
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout . . .
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:id="@+id/main_layout_container"
    tools:context=".MainActivity">

</LinearLayout>
```

Update VideoGameCharacters

- Change the application to use two Fragments
 - One for the good characters, the other for the bad
- Fragment classes and XML files already created
 - Add code/xml to the fragments
 - Update onCreate in MainActivity

