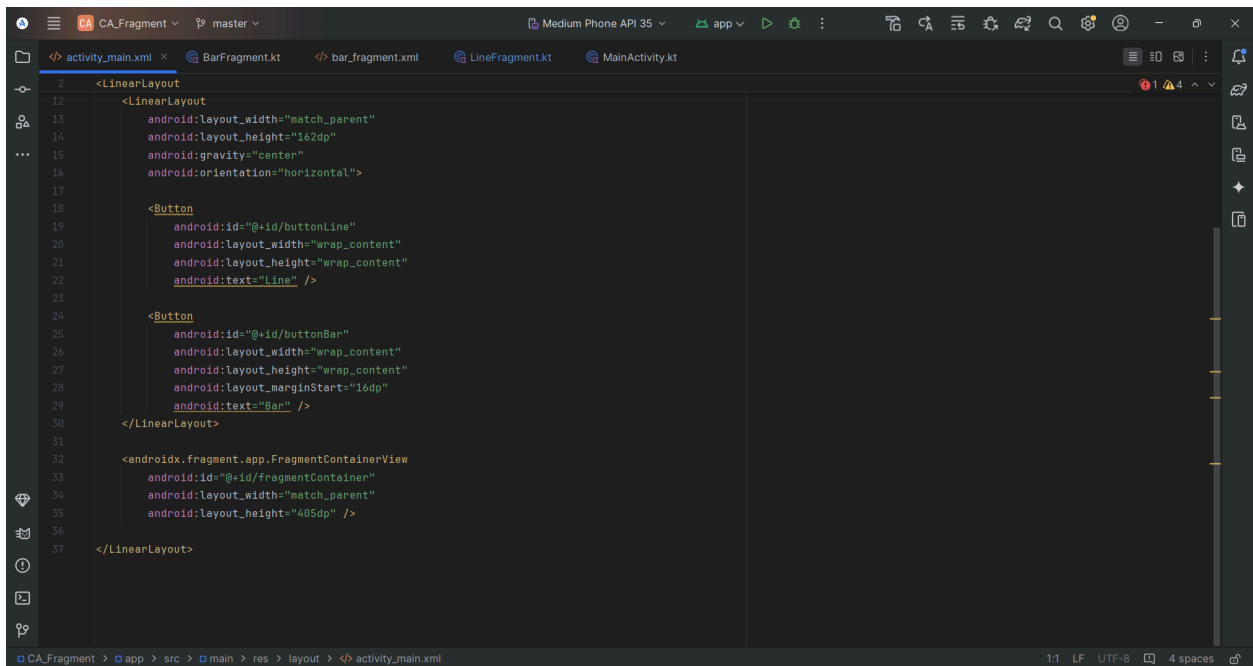
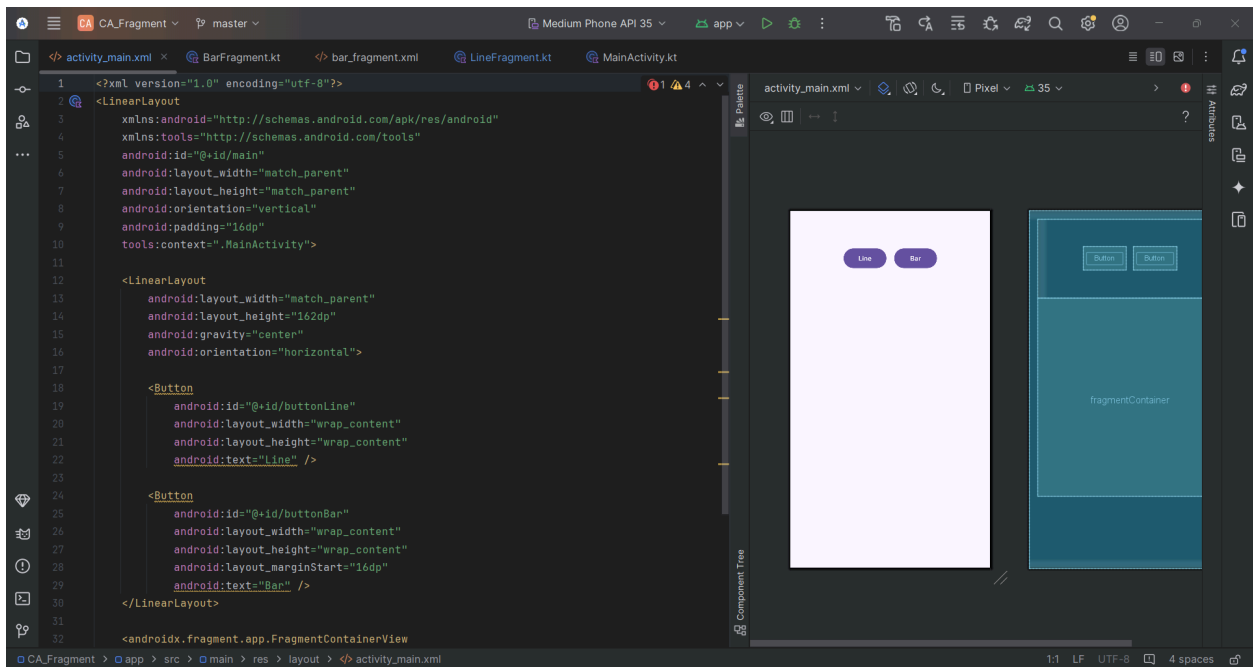


Catherine Yabut, Katie Trinh



```
CA_Fragment master Medium Phone API 35 app
activity_main.xml BarFragment.kt bar_fragment.xml LineFragment.kt MainActivity.kt
1 package com.example.ca_fragment
2
3 import android.graphics.Color
4 import android.os.Bundle
5 import android.util.Log
6 import android.view.LayoutInflater
7 import android.view.View
8 import android.view.ViewGroup
9 import androidx.fragment.app.Fragment
10 import com.androidplot.util.PixelUtils
11 import com.androidplot.xy.*
12
13 class BarFragment : Fragment() {
14
15     private lateinit var plot: XYPlot
16
17     override fun onCreateView(
18         inflater: LayoutInflater, container: ViewGroup?,
19         savedInstanceState: Bundle?
20     ): View {
21         val rootView = inflater.inflate(R.layout.bar_fragment, container, attachToRoot: false)
22         plot = rootView.findViewById(R.id.plot) // Find the plot in XML
23         return rootView
24     }
25
26     override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
27         super.onViewCreated(view, savedInstanceState)
28
29         if (!::plot.isInitialized) {
30             Log.e(tag, "BarFragment", msg, "plot is not initialized!")
31             return
32         }
33     }
34 }
```

```
CA_Fragment master Medium Phone API 35 app
activity_main.xml BarFragment.kt bar_fragment.xml LineFragment.kt MainActivity.kt
13 class BarFragment : Fragment() {
26     override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
33
34         // Initialize PixelUtils (required for dpToPix())
35         PixelUtils.init(context)
36
37         // Shared X-Values (All bars share the same x-points)
38         val xValues = listOf(1, 2, 3, 4)
39
40         // Y-Values for Each Bar
41         val yValuesA = listOf(4.3, 2.5, 3.5, 4.5)
42         val yValuesB = listOf(2.4, 4.4, 1.8, 1.8)
43         val yValuesC = listOf(2.0, 2.0, 3.0, 5.0)
44
45         // Offsets to make bars appear side by side
46         val offsetA = 0.01 // Shift A slightly left
47         val offsetB = 0.01 // Keep B in center
48         val offsetC = 0.01 // Shift C slightly right
49
50         // Adjusted X-Values for each series
51         val xValuesA = xValues.map { it + offsetA }
52         val xValuesB = xValues.map { it + offsetB }
53         val xValuesC = xValues.map { it + offsetC }
54
55         // Creating Bar Series
56         val seriesA = SimpleXYSeries(xValuesA, yValuesA, title = "A")
57         val formatA = BarFormatter(Color.RED, Color.BLACK)
58
59         val seriesB = SimpleXYSeries(xValuesB, yValuesB, title = "B")
60         val formatB = BarFormatter(Color.GREEN, Color.BLACK)
61
62         val seriesC = SimpleXYSeries(xValuesC, yValuesC, title = "C")
63     }
64 }
```

```
CA_Fragment  master  Medium Phone API 35  app  bar_fragment.xml  LineFragment.kt  MainActivity.kt

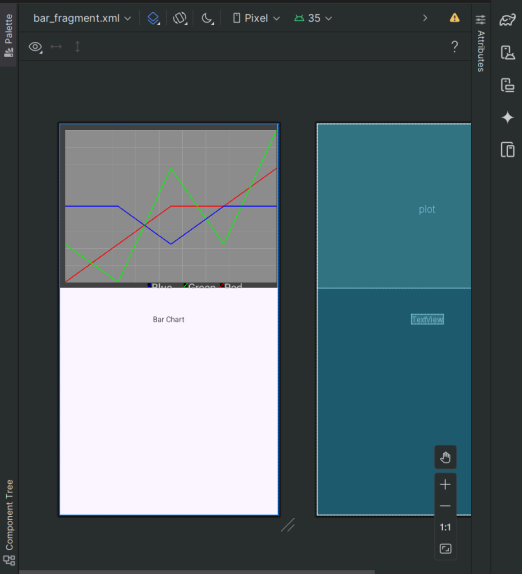
13 class BarFragment : Fragment() {
26     override fun onCreateView(view: View, savedInstanceState: Bundle?) {
58         val seriesB = SimpleXYSeries(xValuesB, yValuesB, title="B")
59         val formatB = BarFormatter(Color.GREEN, Color.BLACK)
61
62         val seriesC = SimpleXYSeries(xValuesC, yValuesC, title="C")
63         val formatC = BarFormatter(Color.BLUE, Color.BLACK)
64
65         // Adding series to plot
66         plot.addSeries(seriesA, formatA)
67         plot.addSeries(seriesB, formatB)
68         plot.addSeries(seriesC, formatC)
69
70         // Set bar orientation to SIDE_BY_SIDE (prevents stacking)
71         val renderer = plot.getRenderer(BarRenderer::class.java)
72         renderer?.setBarOrientation(BarRenderer.BarOrientation.SIDE_BY_SIDE)
73
74         // Set the bar group width with a small gap
75         renderer?.setBarGroupWidth(
76             BarRenderer.BarGroupWidthMode.FIXED_GAP,
77             PixelUtils.dpToPix(100f)
78         )
79
80         // Adjust X-axis range to fit the bars properly
81         plot.setDomainBoundaries(lowerBoundary: 0.5, upperBoundary: 4.5, BoundaryMode.FIXED)
82         plot.setRangeBoundaries(lowerBoundary: 0, upperBoundary: 5.5, BoundaryMode.FIXED)
83
84         // Redraw to apply changes
85         plot.redraw()
86     }
87 }
```

CA_Fragment > app > src > main > java > com > example > ca_fragment > BarFragment > onCreateView 53:14 CRLF UTF-8 4 spaces

```
CA_Fragment  master  Medium Phone API 35  app  bar_fragment.xml  LineFragment.kt  MainActivity.kt

1 <?xml version="1.0" encoding="utf-8"?>
2 <FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:tools="http://schemas.android.com/tools"
4     android:layout_width="match_parent"
5     android:layout_height="match_parent"
6     tools:context=".BarFragment">
7
8     <!-- Bar Chart Title -->
9     <TextView
10         android:id="@+id/textViewBar"
11         android:layout_width="wrap_content"
12         android:layout_height="wrap_content"
13         android:text="Bar Chart"
14         android:layout_gravity="center" />
15
16     <!-- XYPlot for Bar Chart -->
17     <com.androidplot.xy.XYPlot
18         android:id="@+id/plot"
19         android:layout_width="wrap_content"
20         android:layout_height="300dp"
21         android:layout_gravity="center_horizontal"
22         tools:ignore="MissingConstraints" />
23 </FrameLayout>
24
```

bar_fragment.xml Palette Attributes Component Tree

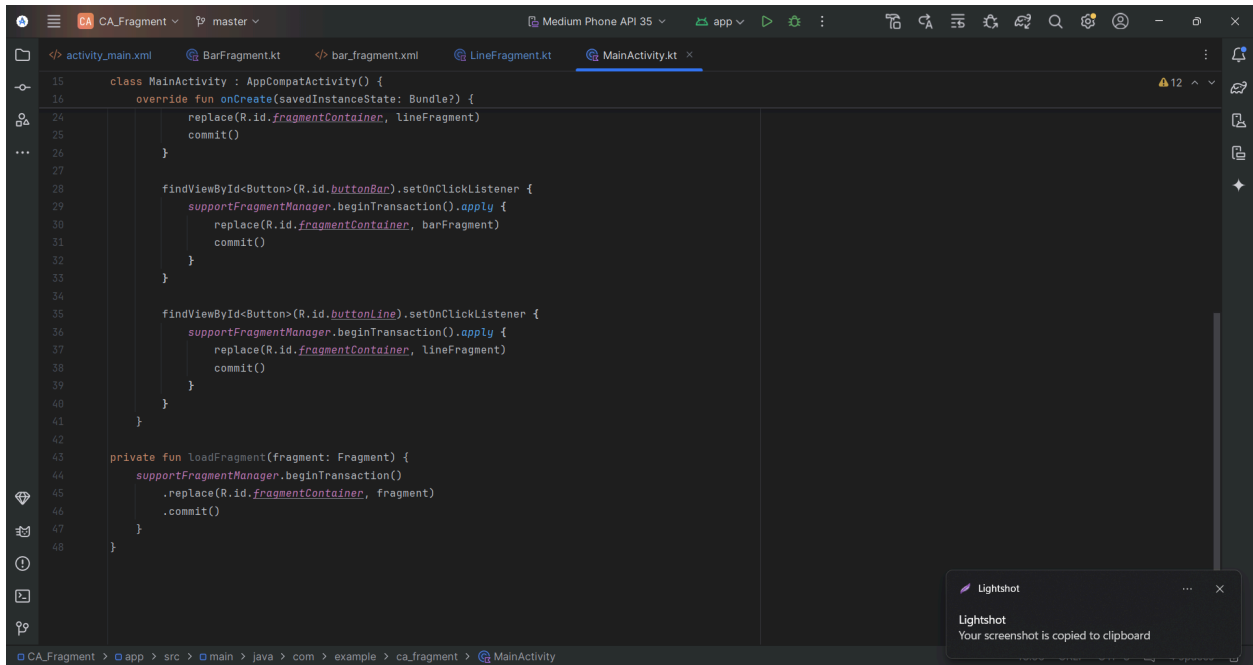


```
CA_Fragment master Medium Phone API 35 app
activity_main.xml BarFragment.kt bar_fragment.xml LineFragment.kt MainActivity.kt
1 package com.example.ca_fragment
2
3 import android.graphics.Color
4 import android.os.Bundle
5 import android.util.Log
6 import androidx.fragment.app.Fragment
7 import android.view.LayoutInflater
8 import android.view.View
9 import android.view.ViewGroup
10 import com.androidplot.xy.BoundaryMode
11 import com.androidplot.xy.LineAndPointFormatter
12 import com.androidplot.xy.SimpleXYSeries
13 import com.androidplot.xy.StepMode
14 import com.androidplot.xy.XYPlot
15 import com.example.ca_fragment.databinding.LineFragmentBinding
16 import java.util.Arrays
17
18 class LineFragment : Fragment() {
19     private var _binding: LineFragmentBinding? = null
20     private val binding get() = _binding!!
21
22     override fun onCreateView(
23         inflater: LayoutInflater, container: ViewGroup?,
24         savedInstanceState: Bundle?
25     ): View {
26         _binding = LineFragmentBinding.inflate(inflater, container, attachToParent: false)
27         return binding.root
28     }
29
30     override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
31         super.onViewCreated(view, savedInstanceState)
32     }
33 }
CA_Fragment > app > src > main > java > com > example > ca_fragment > LineFragment > onViewCreated 76:13 CRLF UTF-8 4 spaces
```

```
CA_Fragment master Medium Phone API 35 app
activity_main.xml BarFragment.kt bar_fragment.xml LineFragment.kt MainActivity.kt
18 class LineFragment : Fragment() {
19
20     override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
21         super.onViewCreated(view, savedInstanceState)
22
23         // Now safely access binding.plot after view is created
24         val plot = binding.plot
25
26         // Check if plot is not null before using it
27
28         if (plot != null) {
29             // Line A (original)
30             val seriesA = SimpleXYSeries(
31                 listOf<Number>(1, 2, 3, 4), // X-axis
32                 listOf<Number>(4.3, 2.5, 3.5, 4.5), // Y-axis
33                 title: "A"
34             )
35             val formatA = LineAndPointFormatter(Color.RED, Color.RED, fillColor: null, ptf: null)
36
37             // Line B
38             val seriesB = SimpleXYSeries(
39                 listOf<Number>(1, 2, 3, 4),
40                 listOf<Number>(2.4, 4.4, 1.8, 2.8),
41                 title: "B"
42             )
43             val formatB = LineAndPointFormatter(Color.GREEN, Color.GREEN, fillColor: null, ptf: null)
44
45             // Line C
46             val seriesC = SimpleXYSeries(
47                 listOf<Number>(1, 2, 3, 4),
48                 listOf<Number>(2, 2, 3, 5),
49                 title: "C"
50             )
51         }
52     }
53 }
CA_Fragment > app > src > main > java > com > example > ca_fragment > LineFragment > onViewCreated 76:13 CRLF UTF-8 4 spaces
```

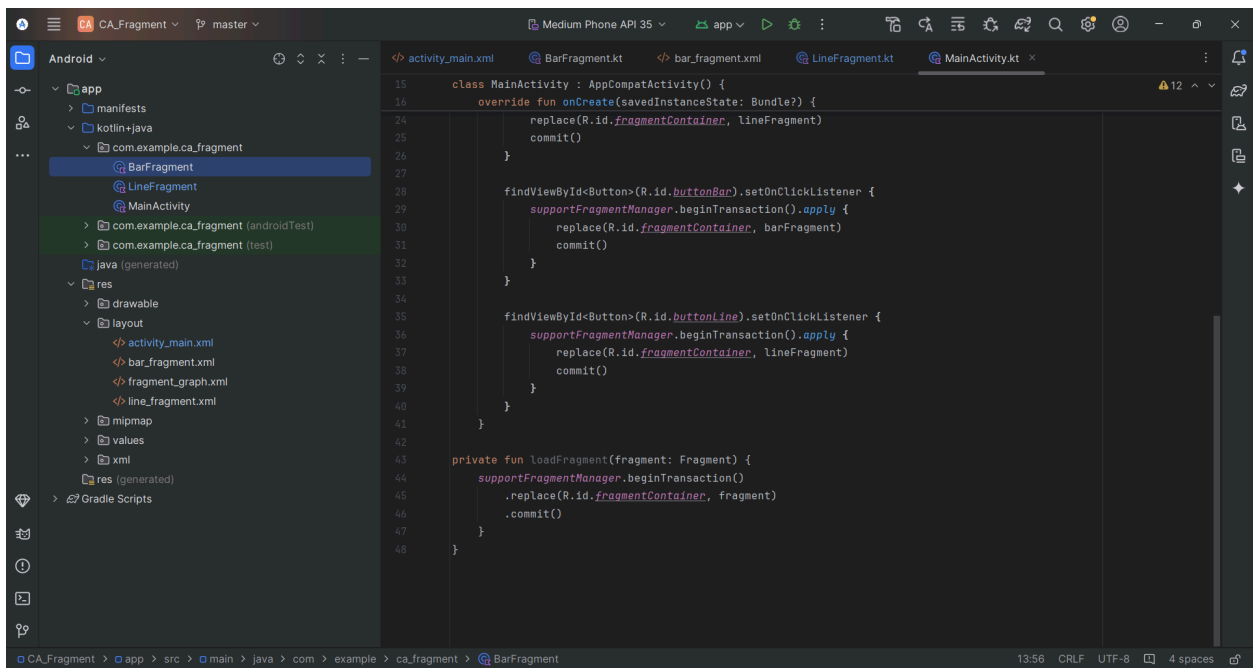
```
CA_Fragment master Medium Phone API 35 app
activity_main.xml BarFragment.kt bar_fragment.xml LineFragment.kt MainActivity.kt
18 class LineFragment : Fragment() {
19     override fun onCreateView(view: View, savedInstanceState: Bundle?) {
20         //
21         val formatC = LineAndPointFormatter(Color.MAGENTA, Color.MAGENTA, fillColors: null, ptf: null)
22
23         // Add all series to the plot
24         plot.addSeries(seriesA, formatA)
25         plot.addSeries(seriesB, formatB)
26         plot.addSeries(seriesC, formatC)
27
28         // Configure Y-axis range and steps
29         plot.setRangeBoundaries(lowerBoundary: 0, upperBoundary: 10, BoundaryMode.FIXED) // Y-axis Limits
30         plot.setRangeStep(StepMode.INCREMENT_BY_VAL, value: 2.0) // Steps of 2 (0,2,4,...14)
31
32         //Configure X-axis range and steps
33         plot.setDomainBoundaries(lowerBoundary: 0, upperBoundary: 4, BoundaryMode.FIXED) // Set domain (X-axis) from 0 to 4
34         plot.setDomainStep(StepMode.INCREMENT_BY_VAL, value: 1.0) // X-axis step
35
36         // Redraw plot
37         plot.redraw()
38     } else {
39         Log.e(tag: "LineFragment", msg: "plot is null!")
40     }
41 }
42
43 override fun onDestroyView() {
44     super.onDestroyView()
45     _binding = null // Avoid memory leaks
46 }
47
48 }
49
CA_Fragment > app > src > main > java > com > example > ca_fragment > LineFragment > onCreateView 76:13 CRLF UTF-8 4 spaces
```

```
CA_Fragment master Medium Phone API 35 app
activity_main.xml BarFragment.kt bar_fragment.xml LineFragment.kt MainActivity.kt
1 package com.example.ca_fragment
2
3 import android.os.Bundle
4 import android.os.Bundle
5 import androidx.appcompat.app.AppCompatActivity
6 import androidx.appcompat.app.AppCompatActivity
7 import androidx.appcompat.app.AppCompatActivity
8 import androidx.appcompat.app.AppCompatActivity
9 import androidx.appcompat.app.AppCompatActivity
10 import androidx.appcompat.app.AppCompatActivity
11 import androidx.appcompat.app.AppCompatActivity
12 import androidx.appcompat.app.AppCompatActivity
13 //import kotlinx.android.synthetic.main.activity_main.*
14
15 class MainActivity : AppCompatActivity() {
16     override fun onCreate(savedInstanceState: Bundle?) {
17         super.onCreate(savedInstanceState)
18         //enableEdgeToEdge()
19         setContentView(R.layout.activity_main)
20         val barFragment = BarFragment()
21         val lineFragment = LineFragment()
22
23         supportFragmentManager.beginTransaction().apply {
24             replace(R.id.fragment_container, lineFragment)
25             commit()
26         }
27
28         findViewById<Button>(R.id.button_bar).setOnClickListener {
29             supportFragmentManager.beginTransaction().apply {
30                 replace(R.id.fragment_container, barFragment)
31                 commit()
32             }
33         }
34     }
35 }
36
CA_Fragment > app > src > main > java > com > example > ca_fragment > MainActivity 13:56 CRLF UTF-8 4 spaces
```



```
15 class MainActivity : AppCompatActivity() {
16     override fun onCreate(savedInstanceState: Bundle?) {
24         replace(R.id.fragmentContainer, lineFragment)
25         commit()
26     }
27
28     findViewById<Button>(R.id.buttonBar).setOnClickListener {
29         supportFragmentManager.beginTransaction().apply {
30             replace(R.id.fragmentContainer, barFragment)
31             commit()
32         }
33     }
34
35     findViewById<Button>(R.id.buttonLine).setOnClickListener {
36         supportFragmentManager.beginTransaction().apply {
37             replace(R.id.fragmentContainer, lineFragment)
38             commit()
39         }
40     }
41 }
42
43 private fun loadFragment(fragment: Fragment) {
44     supportFragmentManager.beginTransaction()
45         .replace(R.id.fragmentContainer, fragment)
46         .commit()
47 }
48 }
```

Lightshot
Your screenshot is copied to clipboard



```
15 class MainActivity : AppCompatActivity() {
16     override fun onCreate(savedInstanceState: Bundle?) {
24         replace(R.id.fragmentContainer, lineFragment)
25         commit()
26     }
27
28     findViewById<Button>(R.id.buttonBar).setOnClickListener {
29         supportFragmentManager.beginTransaction().apply {
30             replace(R.id.fragmentContainer, barFragment)
31             commit()
32         }
33     }
34
35     findViewById<Button>(R.id.buttonLine).setOnClickListener {
36         supportFragmentManager.beginTransaction().apply {
37             replace(R.id.fragmentContainer, lineFragment)
38             commit()
39         }
40     }
41 }
42
43 private fun loadFragment(fragment: Fragment) {
44     supportFragmentManager.beginTransaction()
45         .replace(R.id.fragmentContainer, fragment)
46         .commit()
47 }
48 }
```

CA_Fragment > app > src > main > java > com > example > ca_fragment > BarFragment