# Работа с фрагментами

```
"name": "Captain America",
        "realname": "Steve Rogers".
        "team": "Avengers",
        "firstappearance": "1941",
        "createdby": "Joe Simon".
        "publisher": "Marvel Comics",
        "imageurl": "https:\/\/www.simplifiedcoding.net\/demos\/marvel\/captainamerica.ipg".
        "bio": "\r\n\t\tSteven Rogers was born in the Lower East Side of Manhattan, New York City, in 19
    before America's entry into World War II, Rogers is a tall, scrawny fine arts student specializing :
        "name": "Iron Man",
        "realname": "Tony Stark",
        "team": "Avengers",
        "firstappearance": "1963",
        "createdby": "Stan Lee",
        "publisher": "Marvel Comics",
        "imageurl": "https:\/\/www.simplifiedcoding.net\/demos\/marvel\/ironman.jpg",
        "bio": "\r\n\t\tAnthony Edward Stark, the son of wealthy industrialist and head of Stark Industrialist
    engineering and physics. After his parents are killed in a car accident, he inherits his father's co
        "name": "Wolvarine",
        "realname": "James Howlett",
        "team": "X-Men".
       "firstappearance": "1974",
        "createdby": "Len Wein",
        "publisher": "Marvel Comics",
        "imageurl": "https:///www.simplifiedcoding.net//demos//marvel//logan.jpg",
        "bio": "\r\n\t\tWolverine was born James Howlett in northern Alberta, Canada, during the late 18
    After Thomas is thrown off the Howletts' property for an attempted rape perpetrated by his other son
est; hands, as his mutation manifests.[29] He flees with his childhood companion, Rose, and grows into manifests.
    wilderness among wolves.[31] until he is captured and placed in a circus.[32] Saul Creed, brother of
drc residing with the Blackfoot people. Following the death of his Blackfoot lover, Silver Fox, at the ?
    Japan, where he marries Itsu and has a son, Daken. Logan is unaware of his son for many years.\r\n\t
+ja\
m.e
        "name": "Spiderman",
        "realname": "Peter Parker",
ad
       "team": "Avengers",
        "firstappearance": "1962",
cla
       "createdby": "Stan Lee",
        "publisher": "Marvel Comics",
        "imageurl": "https:\/\/www.simplifiedcoding.net\/demos\/marvel\/spiderman.jpg",
        "bio": "\r\n\t\tIn Forest Hills, Queens, New York, [43] Midtown High School student Peter Parker
    classified as an insect in the panel) at a science exhibit and \"acquires the agility and proportion
da develops a gadget that lets him fire adhesive webbing of his own design through small, wrist-mounted
    blithely ignores the chance to stop a fleeing thief, [and] his indifference ironically catches up w:
Ma great power there must also come-great responsibility!\"[45]\r\n\t\t"
ret
        "name": "Thor",
m.e
       "realname": "Thor Odinson",
        "team": "Avengers",
       "firstappearance": "1962",
        "createdby": "Stan Lee",
        "publisher": "Marvel Comics".
        "imageurl": "https:\/\/www.simplifiedcoding.net\/demos\/marvel\/thor.jpg",
SWE
        "bio": "\r\n\t\tThor's father Odin decides his son needed to be taught humility and consequently
out doctor and on vacation in Norway, Blake witnesses the arrival of an alien scouting party. Blake flee
   god.[53] Later, in Thor #159, Blake is revealed to have always been Thor, Odin's enchantment having
act
```

mg

Фрагменты позволяют разделить экран приложения на несколько областей. На одной активити могут располагаться несколько фрагментов, при смене фрагмента активити не меняется, меняется только отображаемый фрагмент

Фрагмент — модульная часть activity, у которой свой жизненный цикл и свои обработчики различных событий. Фрагмент содержится внутри activity. Одна activity может отображать одновременно несколько фрагментов.

Два основных подхода в работе с фрагментами.

- Замещение родительского контейнера. В разметке activity контейнер (чаще, FrameLayout). В коде в контейнер помещается фрагмент.
- Фрагмент помещается в разметку через тег fragment.

Три основных класса при работе со фрагментами:

- Fragment
- FragmentManager взаимодействие между фрагментами и activity.
- FragmentTransaction

```
private val fraglist= listOf(Fragment3(), Fragment4(), Fragment5())
override fun onCreate(savedInstanceState: Bundle?) {
            super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main_activity6nav)
    bn=findViewById(R.id.botnav)
    supportFragmentManager.beginTransaction().replace(R.id.framefr, fraglist[2]).commit()
    bn.setOnItemSelectedListener{ it: Menultem
        when (it.itemId)
            R.id.ichome->{
                supportFragmentManager.beginTransaction().replace(R.id.framefr, fraglist[0]).commit()
                Toast.makeText( context: this, text: "Poboraer 1", Toast.LENGTH_SHORT).show()}
            R.id.icfav->{
                supportFragmentManager.beginTransaction().replace(R.id.framefr, fraglist[1]).commit()
                Toast.makeText(context: this, text: "Poboraer 2", Toast.LENGTH_SHORT).show()}
            R.id.icset->{
                supportFragmentManager.beginTransaction().replace(R.id.framefr, fraglist[2]).commit()
                Toast.makeText( context: this, text: "Po6oTaeT 3", Toast.LENGTH_SHORT).show()}
        true ^setOnltemSelectedListener
```

```
class MainActivity2 : AppCompatActivity() {
                                                           override fun onCreate(savedInstanceState: Bundle?) {
                                                                                      super.onCreate(savedInstanceState)
                                                                                      setContentView(R.layout.activity_main2)
                                                                                     supportFragmentManager.beginTransaction().replace(R.id.container_fragment,BlankFragment()).commit()
                                     connexumpressurusour (ununorumest)
                                                                                                                                                                                                                                                                                tools:context=".MainActivity2">
             com.example.statusbar (test)
                                                                                                                                                                                                                                                          FrameLayout
∨ I res
             > drawable
                                                                                                                                                                                                                                                                                android:layout_width="match_parent"
                                                                                                                                                                                                                     9

✓ Image: Value of the large of the larg
                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                 android:layout_height="match_parent"
                                    activity_main.xml
                                                                                                                                                                                                                                                                                 android:id="@+id/container_fragment"/>
                                                                                                                                                                                                                 11
                                      activity_main2.xml
                                                                                                                                                                                                                                                           </androidx.constraintlayout.widget.ConstraintLayout>
                                   fragment blank.xml
            > mipmap
                                                                                                                                                                                                                                                             <!-- TODO: Update blank fragment layout -->

✓ Image: res

                > Im drawable
                                                                                                                                                                                                                                                            <TextView

✓ Image: Value of the Valu
                                                                                                                                                                                                                                                                                android:layout_width="match_parent"
                                       activity_main.xml
                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                               android:layout_height="match_parent"
                                       activity main2.xml
                                                                                                                                                                                                                                                                                android:text="Hello blank fragment" />
                                       fragment_blank.xml
                > mipmap
                values
                                                                                                                                                                                                                                         </FrameLayout>
                                                                                                                                                                                                 14
                                       a colors yml
```

- add добавление фрагмента в layout(если несколько вызовов наложение фрагментов друг на друга)
- replace добавление фрагмента и удаление предыдущего фрагмента
- remove удаление фрагмента

#### Настройка фрагмента, если нужно выполнить функцию **findViewByld()** см.21 строку:

```
🏭 fr1.xml × 🦸 dataf1.kt × 🕝 adapterf1.kt × 🥷 MainActivity.kt × 🦣 Fragment2.kt × 🧓 Fragment1.kt × 🐧 viewadapter.kt × 🧸 MainActivity3.kt × 🦂 Fragment3.kt ×
        package com.example.myapplication
 3
       import android.os.Bundle
       import androidx.fragment.app.Fragment
       import android.view.LayoutInflater
 5
       import android.view.View
       import android.view.ViewGroup
       import androidx.recyclerview.widget.RecyclerView
 9
       import com.example.myapplicationtablayout.adapterf1
       import com.example.myapplicationtablayout.imlist
11
12
13
       class Fragment1 : Fragment() {
14
       lateinit var <u>ra</u>:RecyclerView
15
16 01
            override fun onCreateView(
17
                inflater: LayoutInflater, container: ViewGroup?,
18
                savedInstanceState: Bundle?
            ): View? {
19
                // Inflate the layout for this fragment
21
                val root =inflater.inflate(R.layout.fragment_1, container, attachToRoot: false)
                ra=root.findViewBvId(R.id.res1)
23
24
                ra.adapter=adapterf1(requireContext(), imlist().list)
                return root
```

### Обращение к SharedPreferences:

```
💮 🖺 💢 — 🏭 activity_main.xml × 🦸 MainActivity.kt × 👼 activity_main3.xml × 👼 fragment_blank.xml
                                                                         PlankFragment.kt ×
                                                                                       C MainActivity3.kt × tableOne.xml
app
                          package com.example.myapplication
                                                                                                                                      A1 ^ v
> manifests
kotlin+iava
 com.example.myapp
                          import android.content.Context
     BlankFragment
                          import android.content.SharedPreferences
      MainActivity.kt
     MainActivity2
                          import android.os.Bundle
     MainActivity3
 > com.example.myapp
                          import androidx.fragment.app.Fragment
 com.example.myapp
                          import android.view.LayoutInflater
 > Image: drawable
                          import android.view.View
 lavout
                          import android.view.ViewGroup
     activity_main.xml 9
     activity_main2.xn
                          class BlankFragment : Fragment() {
     activity_main3.xn 10
     # fragment_blank.x 11
                               var a:SharedPreferences?=null
 mipmap
                               override fun onCreateView(
                  12 0
 > Im values
 > 🖿 xml
                  13
                                   inflater: LayoutInflater, container: ViewGroup?,
  res (generated)
                                   savedInstanceState: Bundle?
@ Gradle Scripts
                  14
                  15
                               ): View? {
                                   a=this.activity?.getSharedPreferences(TA, Context.MODE_PRIVATE)
                  16
                  17
                                   // Inflate the layout for this fragment
                  18
                                   return inflater.inflate(R.layout.fragment blank, container, attachToRoot: false)
                  19
                               }
                  20
                  21
                  22
```

#### Появление всплывающего сообщения Toast:

```
⊕ <u>∓</u> ‡

    Android 

    ▼

                                            @ BlankFragment.kt
∨ 📭 app
                                                    package com.example.statusbar
  ∨ manifests
       AndroidManifest.xml
                                                    import android.os.Bundle
  ∨ iava
                                                    import androidx.fragment.app.Fragment

✓ ☐ com.example.statusbar

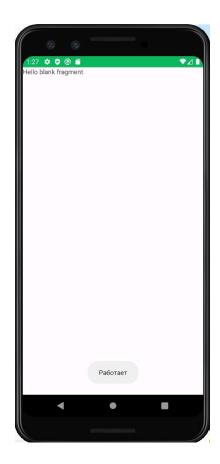
                                                    import android.view.LayoutInflater
          BlankFragment
         MainActivity
                                                    import android.view.View
         @ MainActivity2
                                                    import android.view.ViewGroup
    > com.example.statusbar (androidTest)
                                                    import android.widget.Toast
    > com.example.statusbar (test)
  ∨ Ires
                                                    class BlankFragment : Fragment() {
    > I drawable

✓ I lavout

         activity_main.xml
                                            12 01
                                                        override fun onCreateView(
         activity main2.xml
                                                            inflater: LayoutInflater, container: ViewGroup?,
         and fragment_blank.xml
                                            14
                                                             savedInstanceState: Bundle?
    > mipmap
                                                        ): View? {

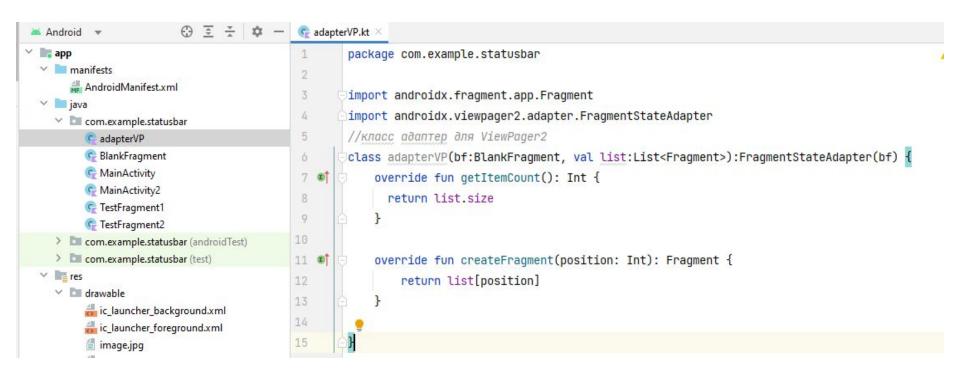
∨ I values

         a colors.xml
                                                            // Inflate the layout for this fragment
         strings.xml
                                                            Toast.makeText(getActivity(), text: "PaGoTaeT", Toast.LENGTH_LONG).show() //getActivity()
         themes,xml
                                            18
                                                                                                                         // прописывается вместо this
    > mxml
                                           19
                                                            return inflater.inflate(R.layout.fragment_blank, container, attachToRoot: false)
    res (generated)
> @ Gradle Scripts
```



## Hастройка TabLayout+ViewPager2:

#### Настройка класса адаптера для VP2



#### Подключение:

```
🔺 A... 😲 🗵 🛨 💠 — 🗽 BlankFragment.kt
∨ III app
                                   package com.example.statusbar

✓ ■ manifests

       AndroidManifest.xml
                                   import android.os.Bundle

✓ Image java

                                   import androidx.fragment.app.Fragment
     Com.example.statusbai
                                   import android.view.LayoutInflater
         adapterVP
         @ BlankFragment
                           6
                                   import android.view.View
         C MainActivity
                                   import android.view.ViewGroup
          MainActivity2
                                   import android.widget.TableLayout
         C TestFragment1
                                   import android.widget.Toast
         TestFragment2
                                   import androidx.viewpager2.widget.ViewPager2
    > com.example.statusbar 10
    > com.example.statusbar 11
                                   import com.google.android.material.tabs.TabLayout
  ∨ III res
                                   import com.google.android.material.tabs.TabLayoutMediator

✓ I drawable

         aic launcher backgro
         ic_launcher_foregro 14
                                   class BlankFragment : Fragment() {
          image.jpg
          image1.jpg
                          16 0
                                       override fun onCreateView(
          image2.jpg
                                           inflater: LayoutInflater, container: ViewGroup?,
     layout
                                           savedInstanceState: Bundle?
         activity main.xml
                                       ): View? {
         activity_main2.xml
                                           // Inflate the layout for this fragment
         fragment_blank.xm 20
          fragment test1.xml 21
                                           val viewfragment=inflater.inflate(R.layout.fragment_blank, container, attachToRoot: false)
          fragment_test2.xml
                                           Toast.makeText(getActivity(), text: "Pa6oTaet", Toast.LENGTH_LONG).show()
    > mipmap
                                          val fl= list0f(TestFragment1(), TestFragment2())

∨ I values

                                           val titlelist= listOf("Test1", "Test2")
         a colors.xml
                                           val tl: TabLayout =viewfragment.findViewById(R.id.tabFrag)
         strings.xml
          themes.xml
                                           val vp: ViewPager2 =viewfragment.findViewById(R.id.vp2)
    > D xml
                                           val adapterforviewpager2=adapterVP( bf: this,fl)
     res (generated)
                                           vp.adapter=adapterforviewpager2
> A Gradle Scripts
                          29
                                           TabLayoutMediator(tl, vp){
                                               tab,pos->tab.<u>text</u>=titlelist[pos]
                                           }.attach()
                                           return viewfragment
```



# Обработчик нажатия на кнопку

```
import androidx.viewpager2.widget.ViewPager2
       import com.google.android.material.tabs.TabLayout
       import com.google.android.material.tabs.TabLayoutMediator
        class BlankFragment : Fragment() {
18 01
            override fun onCreateView(
               inflater: LayoutInflater, container: ViewGroup?,
                savedInstanceState: Bundle?
           ): View? {
               // Inflate the layout for this fragment
                val viewfragment=inflater.inflate(R.layout.fragment_blank, container, attachToRoot: false)
              val fl= listOf(TestFragment1(), TestFragment2())
               val titlelist= listOf("Test1", "Test2")
               val tl: TabLayout =viewfragment.findViewById(R.id.tabFrag)
                val vp: ViewPager2 = viewfragment.findViewById(R.id.vp2)
                val adapterforviewpager2=adapterVP( bf: this,fl)
                vp. adapter = adapter for viewpager 2
                TabLayoutMediator(tl, vp){
                   tab,pos->tab.text=titlelist[pos]
               }.attach()
                val button_Click:Button=viewfragment.findViewById(R.id.button)
               button_Click.setOnClickListener{ it: View!
                   Toast.makeText(getActivity(), text: "Pa6oraer", Toast.LENGTH_LONG).show()
               return viewfragment
```



# Переход на другую активити из фрагмента

```
🛖 BlankFragment.kt 🗡 🍰 fragment_blank.xml
       import androidx.viewpager2.widget.ViewPager2
       import com.google.android.material.tabs.TabLayout
       import com.google.android.material.tabs.TabLayoutMediator
       class BlankFragment : Fragment() {
           override fun onCreateView(
               inflater: LayoutInflater, container: ViewGroup?,
               savedInstanceState: Bundle?
           ): View? {
               // Inflate the layout for this fragment
               val viewfragment=inflater.inflate(R.layout.fragment_blank, container, attachToRoot: false)
              val fl= list0f(TestFragment1(), TestFragment2())
               val titlelist= listOf("Test1", "Test2")
               val tl: TabLayout =viewfragment.findViewById(R.id.tabFrag)
               val vp: ViewPager2 =viewfragment.findViewById(R.id.vp2)
               val adapterforviewpager2=adapterVP( bf: this,fl)
               vp.adapter=adapterforviewpager2
               TabLayoutMediator(tl, vp){
                   tab,pos->tab.text=titlelist[pos]
               1.attach()
               val button_Click:Button=viewfragment.findViewById(R.id.button)
               button_Click.setOnClickListener{ it: View!
                   Toast.makeText(getActivity(), text: "Pa6oTaeT", Toast.LENGTH_LONG).show()
              val intent = Intent(activity, MainActivity::class.java)
                   startActivity(intent)
               return viewfragment
```





первым аргументом интента должен быть контекст

this вместо контекста можно указывать только для активити, так как этот класс наследуется от контекста Для фрагмента первым аргументом можно указать метод getActivity() или getContext()

# Если на панели нижней навигации используются фрагменты, в одном из которых есть VP2 (обязательно прописать 33 строку)

```
👼 activity_main3.xml 🗡 🕝 MainActivity2.kt 🗡 🙀 AndroidManifest.xml 🗡 🕞 MainActivity3.kt 🗡 👼 bnm.xml 🗡 👼 fragment_blank:
class BlankFragment : Fragment() {
18 0
           override fun onCreateView(
                inflater: LayoutInflater, container: ViewGroup?,
                savedInstanceState: Bundle?
           ): View? {
               // Inflate the layout for this fragment
               val viewfragment=inflater.inflate(R.layout.fragment_blank, container, attachToRoot: false)
              val fl= list0f(TestFragment1(), TestFragment2())
               val titlelist= listOf("Test1", "Test2")
               val tl: TabLayout =viewfragment.findViewById(R.id.tabFrag)
               val vp: ViewPager2 =viewfragment.findViewById(R.id.vp2)
               val adapterforviewpager2=adapterVP( bf: this,fl)
                vp.adapter=adapterforviewpager2
               TabLayoutMediator(tl, vp){
                   tab,pos->tab.text=titlelist[pos]
               }.attach()
               vp.isSaveEnabled=false //Boзвращает true, если включено сохранение состояния просмотра, в противном случае false.
               //Указывает, сохранит ли это представление свое состояние (то есть будет ли вызван его #onSaveInstanceState метод).
               //устанавливать если есть вкладки
               val button_Click:Button=viewfragment.findViewById(R.id.button)
               button_Click.setOnClickListener{ it: View!
                   Toast.makeText(getActivity(), text: "Pa6oTaeT", Toast.LENGTH_LONG).show()
              val intent = Intent(activity, MainActivity::class.java)
                    startActivity(intent)
               return viewfragment
```