



Fragment, Tablayout và Viewpager2 trong Android



- Bước 1: Cấu hình thư viện, thêm vào build.gradle (module app)

```
buildFeatures {
    viewBinding true
}
```

□ Bước 2: Thiết kế giao diện MainActivity

Fraqment and ViewPager2

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <androidx.coordinatorlayout.widget.CoordinatorLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        tools:context=".activity.MainActivity">

        <com.google.android.material.appbar.AppBarLayout
            android:id="@+id/appBar"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:theme="@style/Theme.AppCompat.DayNight">

            <androidx.appcompat.widget.Toolbar
                android:id="@+id/toolBar"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:gravity="center"
                android:minHeight="?actionBarSize"
                android:padding="16dp"
                app:title="Fragment and ViewPager2"
                android:textAppearance="@style/TextAppearance.Widget.AppCompat.Toolbar.Title" />
            </androidx.appcompat.widget.Toolbar>
        </com.google.android.material.appbar.AppBarLayout>
    </androidx.coordinatorlayout.widget.CoordinatorLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

AppBarLayout và
toolbar



□ Bước 2: Thiết kế giao diện MainActivity

Fragment and ViewPager2

```
<com.google.android.material.tabs.TabLayout
    android:id="@+id/tabLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:background="@color/purple_500"/>
</com.google.android.material.appbar.AppBarLayout>
```

TabLayout

```
<androidx.viewpager2.widget.ViewPager2
    android:id="@+id/viewPager2"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_behavior="com.google.android.material.appbar.AppBarLayout$Scrolli..." />
```

ViewPager2

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/fabAction"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="bottom|end"
    android:layout_marginEnd="16dp"
    android:layout_marginBottom="16dp"
    app:srcCompat="@android:drawable/ic_dialog_email" />
```

FloatingActionButton ở góc phải

```
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```



□ Bước 3: Thiết kế giao diện Fragment NewOrder

```

fragment_neworder.xml x
1 |<?xml version="1.0" encoding="utf-8"?>
2 |<LinearLayout
3 |    xmlns:android="http://schemas.android.com/apk/res/android"
4 |    xmlns:tools="http://schemas.android.com/tools"
5 |    xmlns:app="http://schemas.android.com/apk/res-auto"
6 |    android:layout_width="match_parent"
7 |    android:layout_height="match_parent"
8 |    android:orientation="vertical">
9 |    <TextView
10 |        android:layout_margin="50dp"
11 |        android:layout_width="wrap_content"
12 |        android:layout_height="wrap_content"
13 |        android:textSize="16dp"
14 |        android:textStyle="bold"
15 |        android:text="New Order" />
16 |</LinearLayout>
    
```

□ Bước 4: Viết code cho ViewPager2 Adapter

```

14
15
16 public class ViewPager2Adapter extends FragmentStateAdapter {
17
18     public ViewPager2Adapter(@NonNull FragmentManager fragmentManager, @NonNull Lifecycle lifecycle) {
19         super(fragmentManager, lifecycle);
20     }
21     @NonNull
22     @Override
23     public Fragment createFragment(int position) {
24         switch (position){
25             case 0:
26                 return new NewOrderFragment();
27             case 1:
28                 return new PickupFragment();
29             case 2:
30                 return new DeliveryFragment();
31             case 3:
32                 return new DanhGiaFragment();
33             case 4:
34                 return new CancelFragment();
35             default:
36                 return new NewOrderFragment();
37         }
38     }
39
40     @Override
41     public int getItemCount() { return 5; }
42
43 }

```

Các Tab trong
viewpager2

Thay đổi số Tab
tương ứng Tab ở
trên

□ Bước 4: Viết code cho MainActivity

```

MainActivity.java x
1 package vn.iotstar.fragmentandviewpager2;
2
3 import ...
21
22 public class MainActivity extends AppCompatActivity {
23     private ActivityMainBinding binding;
24     private ViewPager2Adapter viewPager2Adapter;
25     @Override
26     protected void onCreate(Bundle savedInstanceState) {
27         super.onCreate(savedInstanceState);
28         //viewBinding
29         binding = ActivityMainBinding.inflate(getLayoutInflater());
30         setContentView(binding.getRoot());
31
32         //toolbar
33         setSupportActionBar(binding.toolbar);
34
35         FloatingActionButton fab = binding.fabAction;
36         fab.setOnClickListener(new View.OnClickListener() {
37             @Override
38             public void onClick(View view) {
39                 Snackbar.make(view, text: "Replace with your own action", Snackbar.LENGTH_LONG)
40                     .setAction(text: "Action", listener: null).show();
41             }
42         });
43
44         binding.tabLayout.addTab(binding.tabLayout.newTab().setText("Xác nhận"));
45         binding.tabLayout.addTab(binding.tabLayout.newTab().setText("Lấy hàng"));
46         binding.tabLayout.addTab(binding.tabLayout.newTab().setText("Đang giao"));
47         binding.tabLayout.addTab(binding.tabLayout.newTab().setText("Đánh giá"));
48         binding.tabLayout.addTab(binding.tabLayout.newTab().setText("Hủy"));

```

Khai báo binding
và viewPager2

Xác lập tiêu đề cho
Tab

□ Bước 4: Viết code cho MainActivity

```

50 FragmentManager fragmentManager = getSupportFragmentManager();
51 viewPager2Adapter = new ViewPager2Adapter(fragmentManager , getLifecycle());
52 binding.viewPager2.setAdapter(viewPager2Adapter);
53
54 binding.tabLayout.addOnTabSelectedListener(new TabLayout.OnTabSelectedListener() {
55     @Override
56     public void onTabSelected(TabLayout.Tab tab) {
57         binding.viewPager2.setCurrentItem(tab.getPosition());
58         changeFabIcon(tab.getPosition());
59     }
60
61     @Override
62     public void onTabUnselected(TabLayout.Tab tab) {
63
64     }
65
66     @Override
67     public void onTabReselected(TabLayout.Tab tab) {
68
69     }
70 });
71
72 binding.viewPager2.registerOnPageChangeCallback(new ViewPager2.OnPageChangeCallback() {
73     @Override
74     public void onPageSelected(int position) {
75         binding.tabLayout.selectTab(binding.tabLayout.getTabAt(position));
76     }
77 });
    
```

setAdapter cho
ViewPager2

Chuyển Tab

□ Bước 4: Viết code cho MainActivity

```

81 private void changeFabIcon(final int index){
82     binding.fabAction.hide();
83     new Handler().postDelayed(new Runnable() {
84         @Override
85         public void run() {
86             switch(index){
87                 case 0: binding.fabAction.setImageDrawable(getDrawable(R.drawable.ic_baseline_chat_24));break;
88                 case 1: binding.fabAction.setImageDrawable(getDrawable(R.drawable.ic_baseline_camera_alt_24));break;
89                 case 2: binding.fabAction.setImageDrawable(getDrawable(R.drawable.ic_baseline_call_24));break;
90             }
91             binding.fabAction.show();
92         }
93     }, delayMillis: 2000);
94 }
    
```

Thay đổi Icon cho
FloatingActionButton

□ Bước 4: Viết code cho MainActivity

```

96  @Override
97  public boolean onCreateOptionsMenu(Menu menu) {
98      getMenuInflater().inflate(R.menu.menu_main, menu);
99      return true;
100 }

101
102  @Override
103  public boolean onOptionsItemSelected(@NonNull MenuItem item) {
104      int id = item.getItemId();
105      switch (id){
106          case R.id.menuSearch: Toast.makeText( context: this, text: "Bạn đang chọn search", Toast.LENGTH_SHORT).show();break;
107          case R.id.menuNewGroup: Toast.makeText( context: this, text: "Bạn đang chọn more", Toast.LENGTH_SHORT).show(); break;
108          case R.id.menuBroadcast: Toast.makeText( context: this, text: "Bạn đang chọn more", Toast.LENGTH_SHORT).show(); break;
109          case R.id.menuWeb: Toast.makeText( context: this, text: "Bạn đang chọn more", Toast.LENGTH_SHORT).show(); break;
110          case R.id.menuMessage: Toast.makeText( context: this, text: "Bạn đang chọn more", Toast.LENGTH_SHORT).show(); break;
111          case R.id.menuSetting:
112              Toast.makeText( context: this, text: "Bạn đang chọn Setting", Toast.LENGTH_SHORT).show();;
113              break;
114      }
115      return super.onOptionsItemSelected(item);
116  }
117
118  }
    
```

Xử lý menu
Các em tạo 01 menu.xml
tương ứng nhé

□ Bước 5: Giao diện Menu

```

1 |<?xml version="1.0" encoding="utf-8"?>
2 |<menu xmlns:android="http://schemas.android.com/apk/res/android"
3 |    xmlns:app="http://schemas.android.com/apk/res-auto">
4 |    <item android:id="@+id/menuSearch"
5 |        android:icon="@android:drawable/ic_menu_search"
6 |        android:title="Search"
7 |        app:showAsAction="always"/>
8 |    <group
9 |        android:id="@+id/menu_More">
10 |
11 |        <item android:id="@+id/menuNewGroup"
12 |            android:title="New group" />
13 |        <item android:id="@+id/menuBroadcast"
14 |            android:title="New Broadcast" />
15 |        <item android:id="@+id/menuWeb"
16 |            android:title="WhatsApp web" />
17 |        <item android:id="@+id/menuMessage"
18 |            android:title="Started Messages" />
19 |        <item android:id="@+id/menuSetting"
20 |            android:title="Settings" />
21 |    </group>
22 |
23 |</menu>

```

□ Bước 6: Viết code cho NewOrderFragment

```

NewOrderFragment.java
3  import ...
15
16
17  public class NewOrderFragment extends Fragment {
18
19      FragmentNeworderBinding binding;
20
21      public NewOrderFragment() {
22      }
23
24      @Override
25      public void onCreate(Bundle savedInstanceState) {
26          super.onCreate(savedInstanceState);
27
28      }
29
30      @Nullable
31      @Override
32      public View onCreateView(@NonNull LayoutInflater inflater
33                              , @Nullable ViewGroup container, @Nullable Bundle savedInstanceState) {
34
35          // Inflate the layout for this fragment
36          binding = FragmentNeworderBinding.inflate(inflater, container, attachToParent: false);
37
38          //recyclerView
39
40          return binding.getRoot();
41      }
42  }
    
```

Sử dụng binding trong
Fragment

Các Fragment khác làm
tương tự nhé

Vị trí load dữ liệu:
Adapter,
RecyclerView,...

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