

Modul Pemrograman Mobile

Aplikasi Anadroid Sederhana dengan Menggunakan Fragment

A. Tujuan

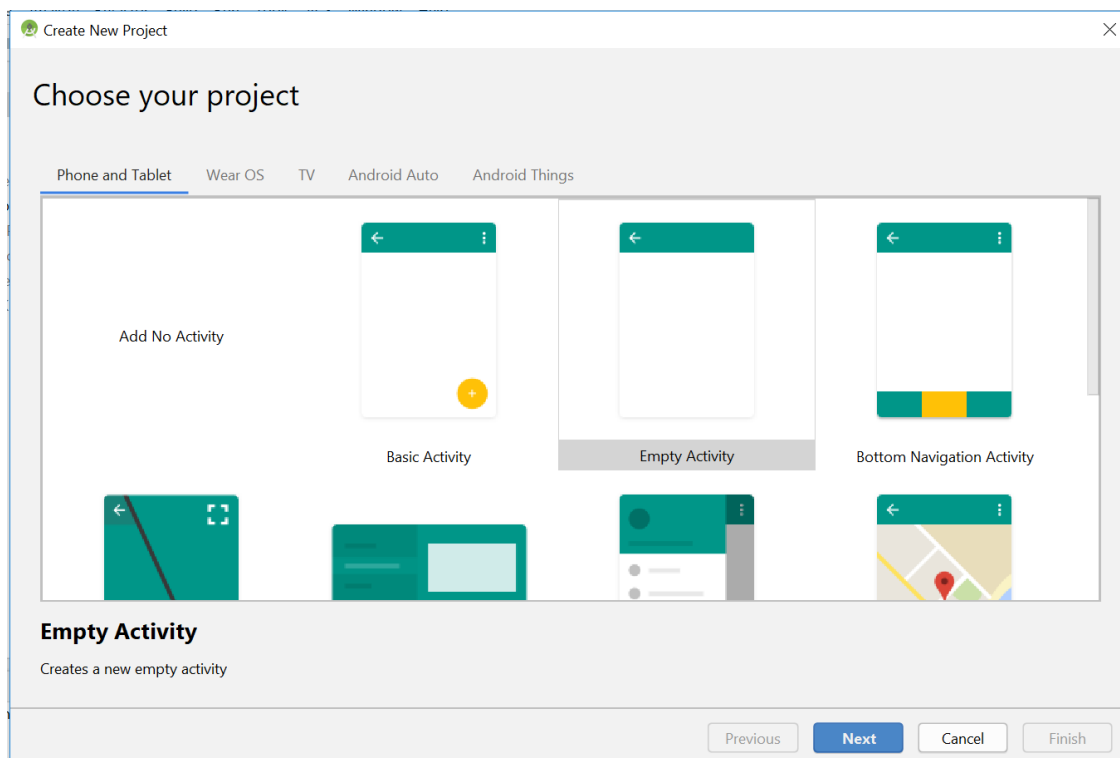
1. Mampu memahami cara membangun Aplikasi menggunakan Fragment
2. Mampu membuat menampilkan Berbagai macam penggunaan Fragment pada Android

B. Teori Dasar

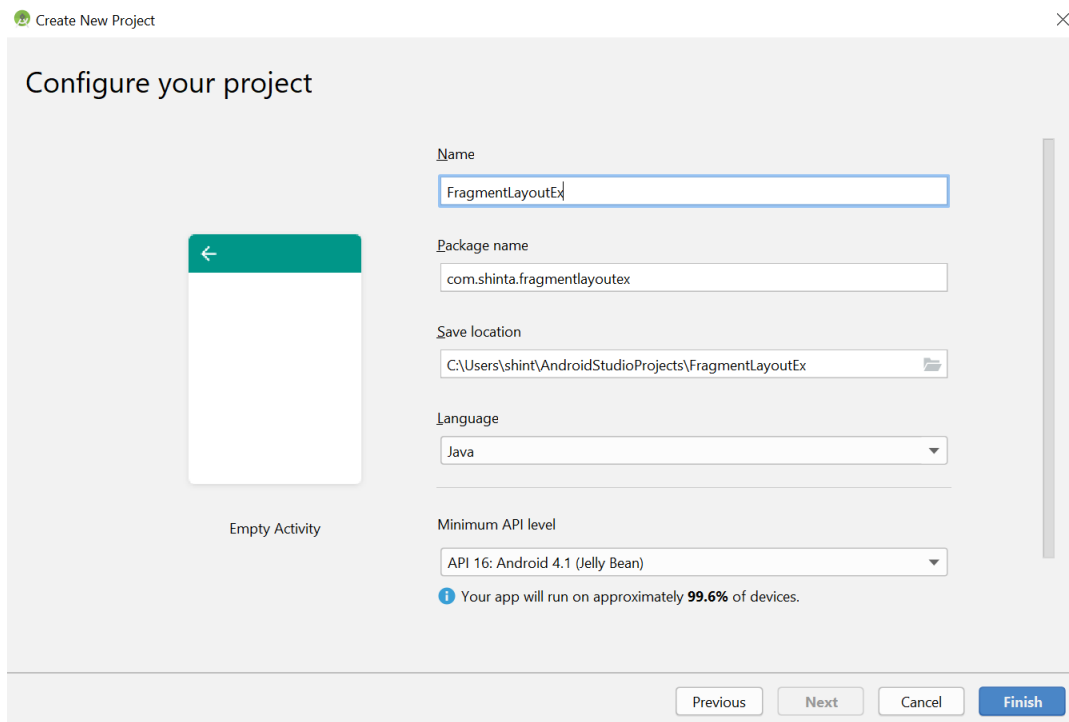
Fragment mewakili perilaku atau bagian dari antarmuka pengguna dalam Activity. Anda bisa mengombinasikan beberapa fragmen dalam satu aktivitas untuk membangun UI multipanel dan menggunakan kembali sebuah fragmen dalam beberapa aktivitas. Anda bisa menganggap fragmen sebagai bagian modular dari aktivitas, yang memiliki daur hidup sendiri, menerima kejadian masukan sendiri, dan yang bisa Anda tambahkan atau hapus saat aktivitas berjalan (semacam "sub aktivitas" yang bisa digunakan kembali dalam aktivitas berbeda).

C. Praktikum

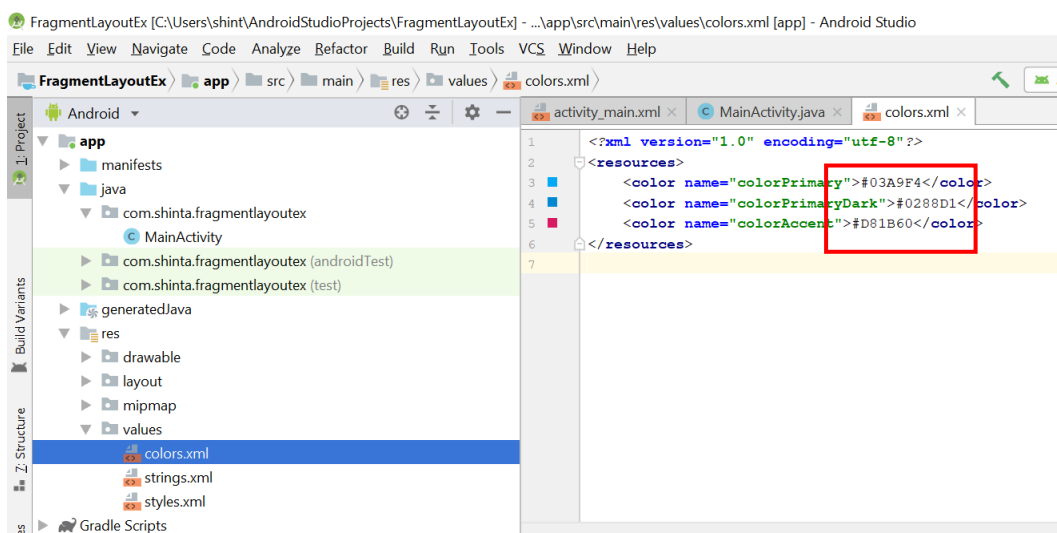
New Project – Empty Activity



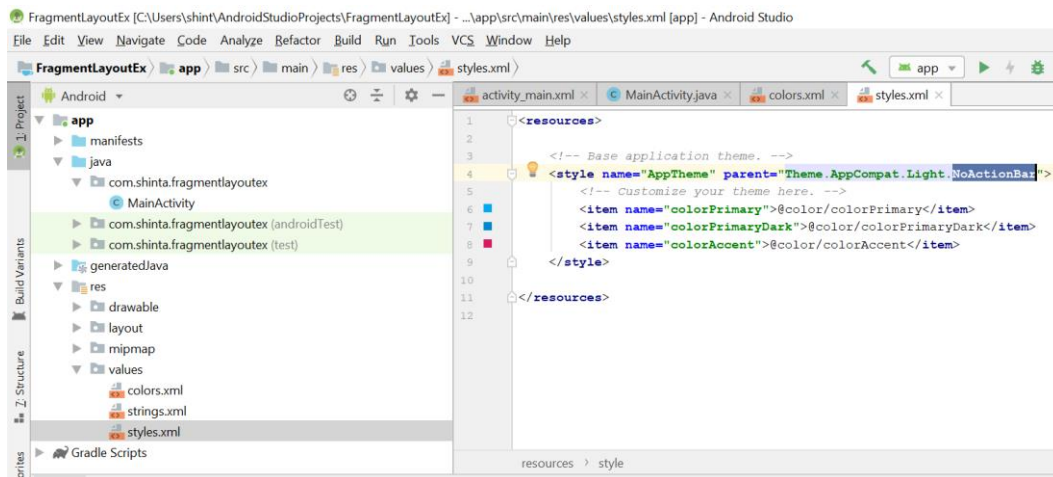
Beri nama Project Android kalian,



Bisa ubah background layout sesuai dengan warna yg kalian inginkan di tempat yang ditandai kotak merah.

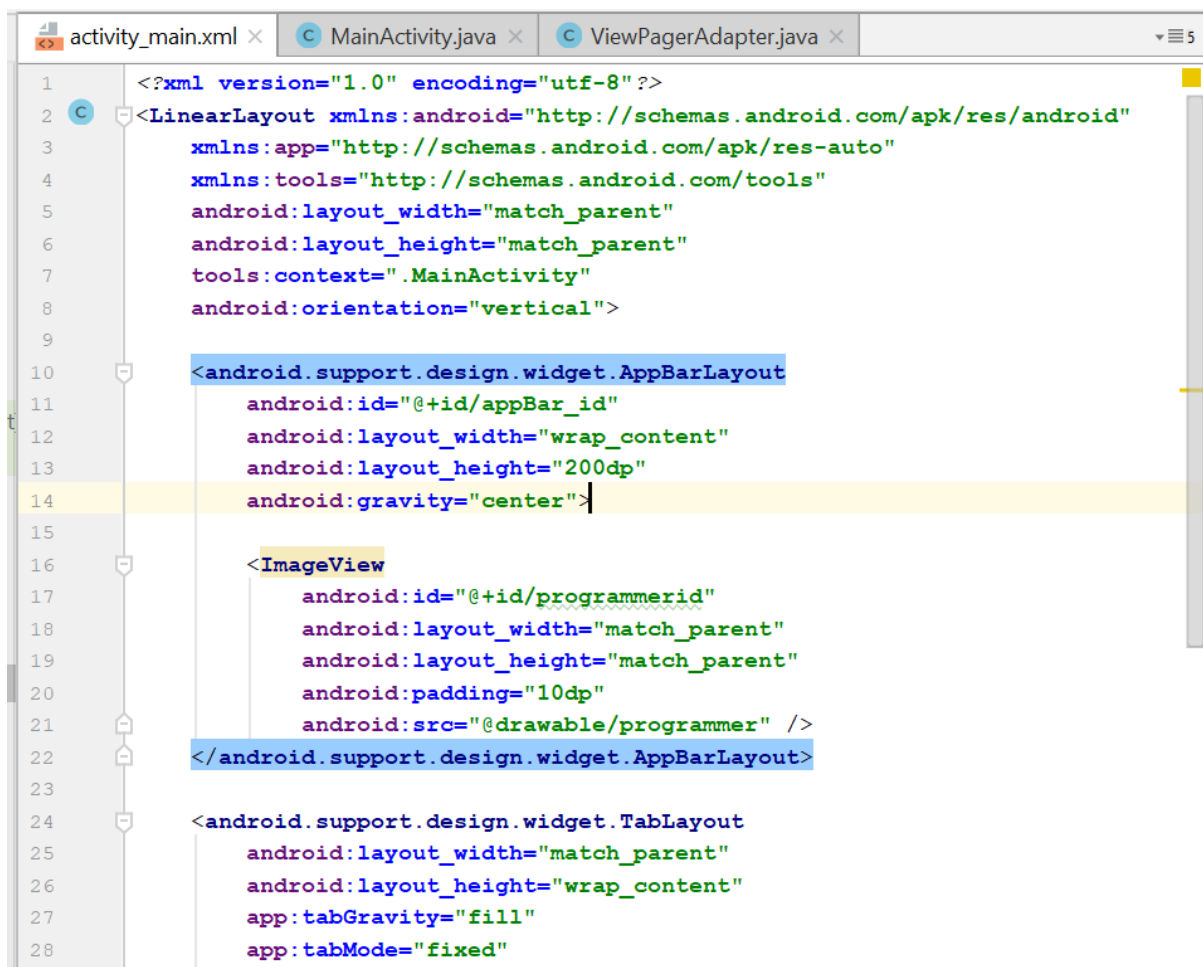


Ubah style jadi No Action Bar



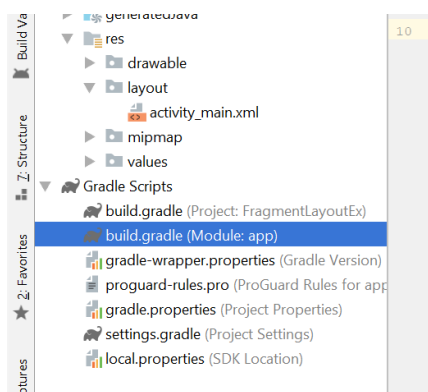
Hapus Text View “Hello World”

Tambahkan Android Orientation vertical pada activity_main.xml jadi seperti berikut



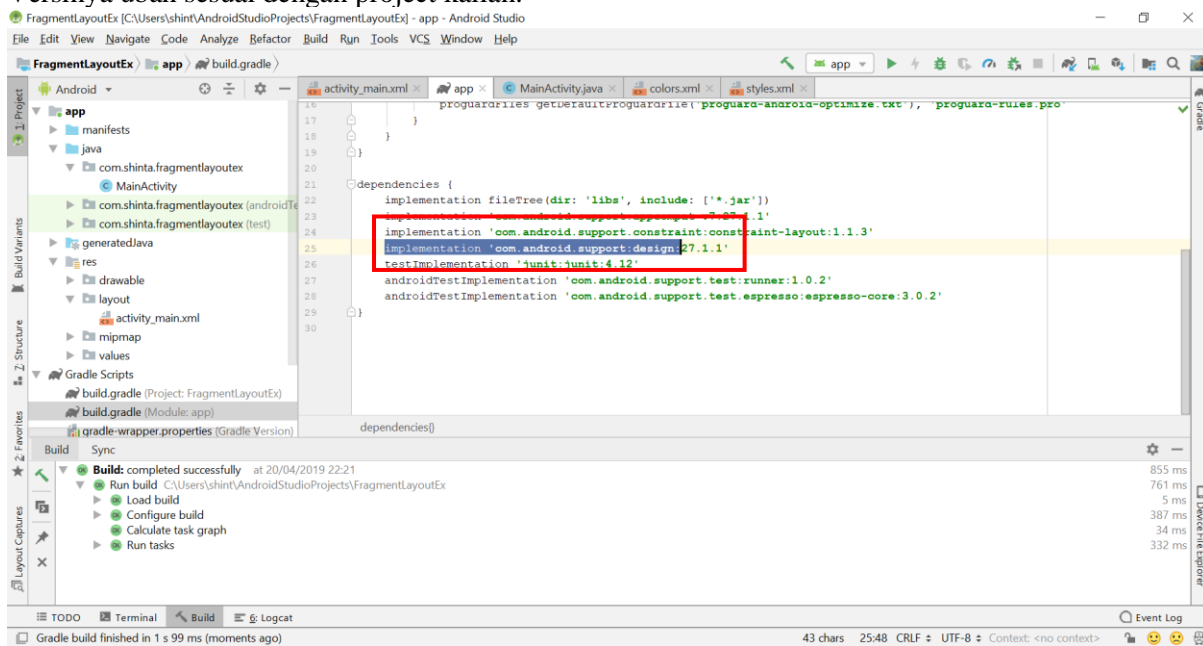


Buka Build Gradle berikut

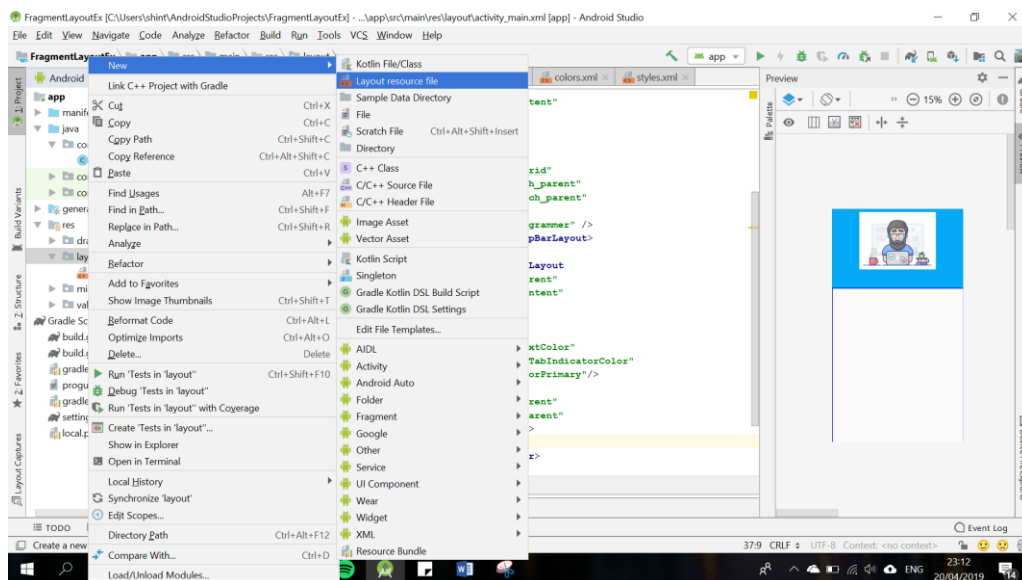


Tambahkan implementation 'com.android.support:design:

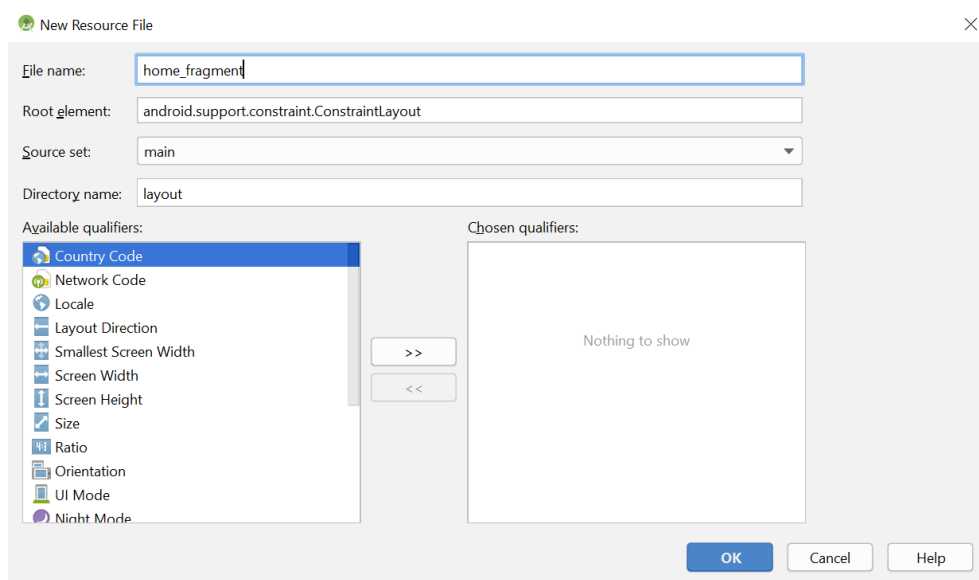
Versinya ubah sesuai dengan project kalian.



Buat New layout Resource



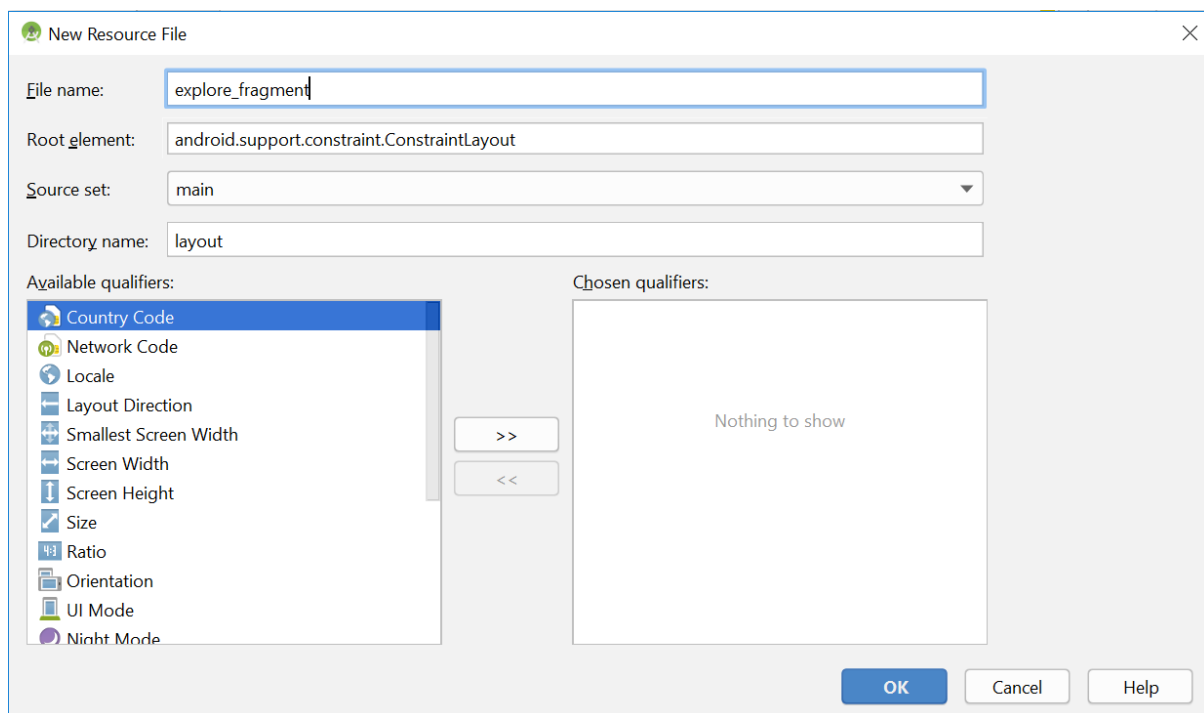
Beri nama layout home_fragment.



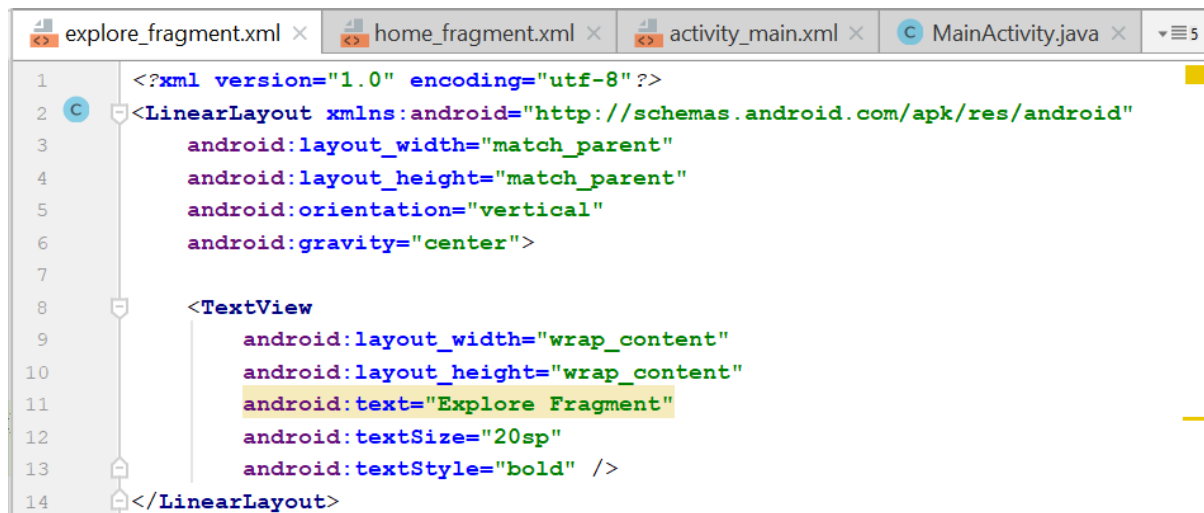
Berikut isikan kode dari home_fragment.



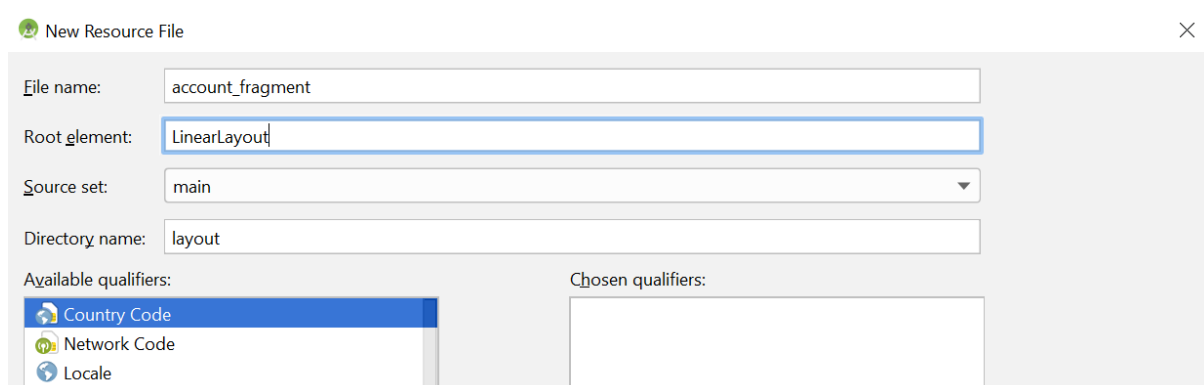
Buat Layout baru explore_fragment.



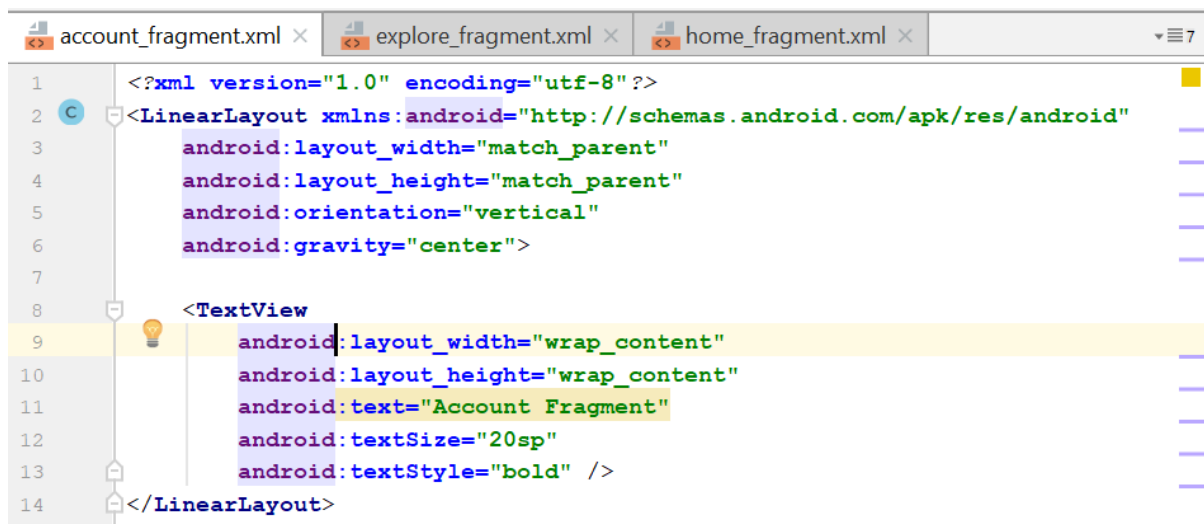
Berikut isi layout explore_fragment.



Buat Layout baru, beri nama account_fragment

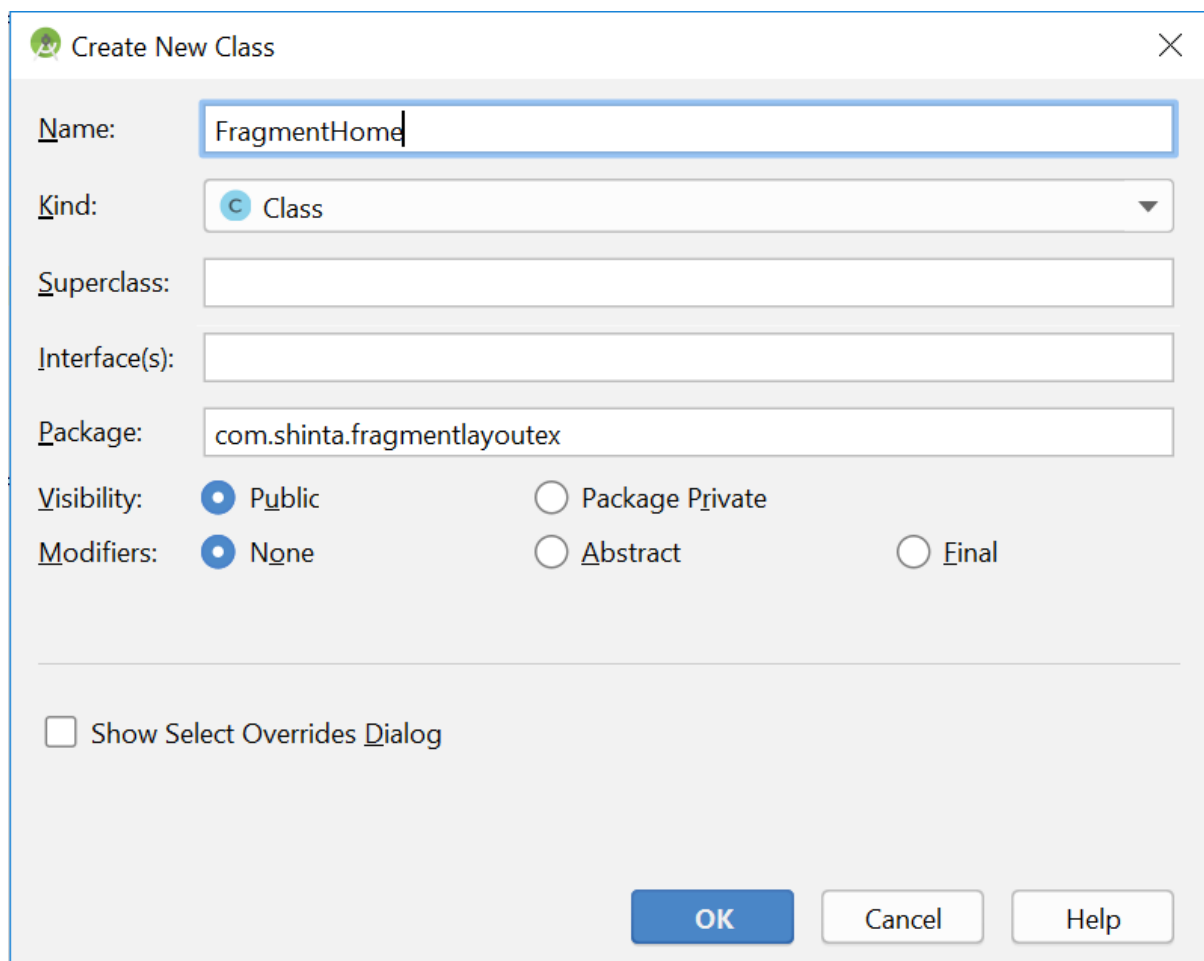


Berikut isi dari layout account_fragment



```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     android:layout_width="match_parent"
4     android:layout_height="match_parent"
5     android:orientation="vertical"
6     android:gravity="center">
7
8     <TextView
9         android:layout_width="wrap_content"
10        android:layout_height="wrap_content"
11        android:text="Account Fragment"
12        android:textSize="20sp"
13        android:textStyle="bold" />
14 </LinearLayout>
```

Buat Public Class Baru FragmentHome merupakan activity dari layout home_fragment.



Create New Class

Name:

Kind: ☐ Class

Superclass:

Interface(s):

Package:

Visibility: ☒ Public ☐ Package Private

Modifiers: ☒ None ☐ Abstract ☐ Final


☐ Show Select Overrides Dialog

OK Cancel Help

Beriku isi kode FragmentHome.java

```
e_fragment.xml × explore_fragment.xml × account_fragment.xml × FragmentHome.java × FragmentExplore.java × FragmentAccount.java ×
1 package com.shinta.fragmentlayoutex;
2
3 import android.support.v4.app.Fragment;
4 import android.os.Bundle;
5 import android.support.annotation.Nullable;
6 import android.view.LayoutInflater;
7 import android.view.View;
8 import android.view.ViewGroup;
9
10 public class FragmentHome extends Fragment {
11     View view;
12     public FragmentHome() {
13     }
14
15     @Nullable
16     @Override
17     public View onCreateView(LayoutInflater inflater, @Nullable ViewGroup container, Bundle savedInstanceState) {
18         view = inflater.inflate(R.layout.home_fragment, container, attachToRoot: false);
19         return view;
20     }
21 }
22
```

Buat Public Class Baru FragmentExplore merupakan activity dari layout explore_fragment.

 Create New Class ✕

Name:

FragmentExplore

Kind:

Class

Superclass:

Interface(s):

Package:

com.shinta.fragmentlayoutex

Visibility:

☒ Public ☐ Package Private

Modifiers:

☒ None ☐ Abstract ☐ Final

☐ Show Select Overrides Dialog

OK

Cancel

Help

Berikut isi kode dari dari FragmentExplore.java

```
e_fragment.xml × explore_fragment.xml × account_fragment.xml × FragmentHome.java × FragmentExplore.java × FragmentAccount.java
1 package com.shinta.fragmentlayoutex;
2
3 import android.support.v4.app.Fragment;
4 import android.os.Bundle;
5 import android.support.annotation.Nullable;
6 import android.view.LayoutInflater;
7 import android.view.View;
8 import android.view.ViewGroup;
9
10 public class FragmentExplore extends Fragment {
11     View view;
12     public FragmentExplore() {
13     }
14
15     @Nullable
16     @Override
17     public View onCreateView(LayoutInflater inflater, @Nullable ViewGroup container, Bundle savedInstanceState) {
18         view = inflater.inflate(R.layout.explore_fragment, container, attachToRoot: false);
19         return view;
20     }
21 }
22
```

Buat Public Class Baru FragmentAccount merupakan activity dari layout account_fragment.

Create New Class

Name:

FragmentAccount

Kind:

Class

Superclass:

Interface(s):

Package:

com.shinta.fragmentlayoutex

Visibility:

☒ Public☐ Package Private

Modifiers:

☒ None☐ Abstract☐ Final

☐ Show Select Overrides Dialog

OK

Cancel

Help

Berikut isi kode dari activity FragmentAccount.java

```
e_fragment.xml x explore_fragment.xml x account_fragment.xml x FragmentHome.java x FragmentExplore.java x FragmentAccount.java
1 package com.shinta.fragmentlayoutex;
2
3 import android.support.v4.app.Fragment;
4 import android.os.Bundle;
5 import android.support.annotation.Nullable;
6 import android.view.LayoutInflater;
7 import android.view.View;
8 import android.view.ViewGroup;
9
10 public class FragmentAccount extends Fragment {
11     View view;
12     public FragmentAccount() {
13     }
14
15     @Nullable
16     @Override
17     public View onCreateView(LayoutInflater inflater, @Nullable ViewGroup container, Bundle savedInstanceState) {
18         view = inflater.inflate(R.layout.account_fragment, container, attachToRoot: false);
19         return view;
20     }
21 }
22
```

Buat Activity baru dengan nama ViewPagerAdapter. Activity ini dibuat untuk mengatur ketiga layout Fragment yang telah kita buat sebelumnya kedalam array.

Create New Class

Name:

ViewPagerAdapter

Kind:

Class

Superclass:

Interface(s):

Package:

com.shinta.fragmentlayoutex

Visibility:

☒ Public☐ Package Private

Modifiers:

☒ None☐ Abstract☐ Final

☐ Show Select Overrides Dialog

OK

Cancel

Help

Berikut kode dari Activity ViewPagerAdapter.java

```
ViewPagerAdapter.java × home_fragment.xml × FragmentHome.java × FragmentExplore.java × FragmentAccount.java
1 package com.shinta.fragmentlayoutex;
2
3 import android.support.annotation.Nullable;
4 import android.support.v4.app.Fragment;
5 import android.support.v4.app.FragmentManager;
6 import android.support.v4.app.FragmentPagerAdapter;
7
8 import java.util.ArrayList;
9 import java.util.List;
10
11 public class ViewPagerAdapter extends FragmentPagerAdapter {
12
13     private final List<Fragment> fragmentList = new ArrayList<>();
14     private final List<String> FragmentListTitles = new ArrayList<>();
15
16     public ViewPagerAdapter(FragmentManager fm) {
17         super(fm);
18     }
19
20     @Override
21     public int getCount() {
22         return FragmentListTitles.size();
23     }
24
25     @Override
26     public Fragment getItem(int position) {
27         return fragmentList.get(position);
28     }
29
30     @Nullable
31     @Override
32     public CharSequence getPageTitle(int position) {
33         return FragmentListTitles.get(position);
34     }
35
36     public void AddFragment(Fragment fragment, String Title){
37         fragmentList.add(fragment);
38         FragmentListTitles.add(Title);
39     }
40 }
41
```

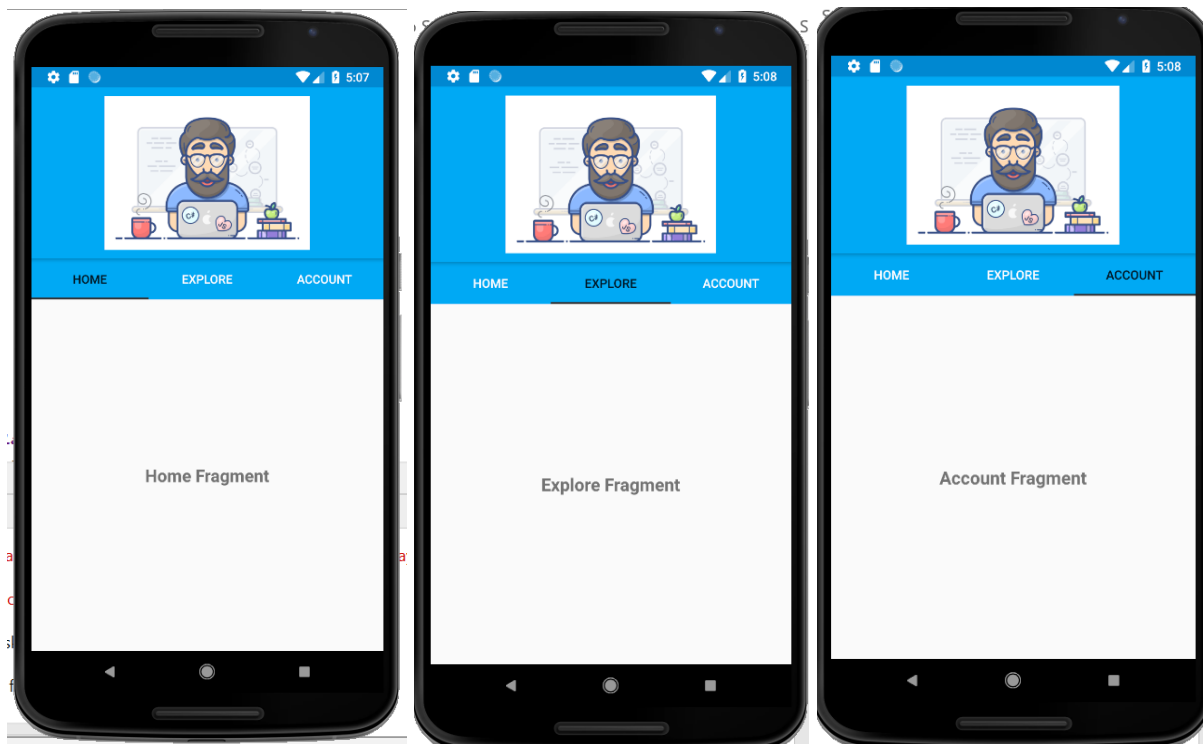
ViewPagerAdapter

Setelah itu ubah kode yang ada didalam MainActivity.java menjadi seperti berikut:

```
MainActivity.java × home_fragment.xml × explore_fragment.xml × account_fragment.xml × FragmentHome.java ×
1 package com.shinta.fragmentlayoutex;
2
3 import android.support.design.widget.AppBarLayout;
4 import android.support.design.widget.TabLayout;
5 import android.support.v4.view.ViewPager;
6 import android.support.v7.app.AppCompatActivity;
7 import android.os.Bundle;
8
9 public class MainActivity extends AppCompatActivity {
10
11     private TabLayout tabLayout;
12     private AppBarLayout appBarLayout;
13     private ViewPager viewPager;
14
15     @Override
16     protected void onCreate(Bundle savedInstanceState) {
17         super.onCreate(savedInstanceState);
18         setContentView(R.layout.activity_main);
19         tabLayout = (TabLayout) findViewById(R.id.tablayout_id);
20         appBarLayout = (AppBarLayout) findViewById(R.id.appBar_id);
21         viewPager = (ViewPager) findViewById(R.id.viewpager_id);
22         ViewPagerAdapter adapter = new ViewPagerAdapter(getSupportFragmentManager());
23         // Adding Fragment
24         adapter.AddFragment(new FragmentHome(), Title: "Home");
25         adapter.AddFragment(new FragmentExplore(), Title: "Explore");
26         adapter.AddFragment(new FragmentAccount(), Title: "Account");
27         //Adding Adapter
28         viewPager.setAdapter(adapter);
29         tabLayout.setupWithViewPager(viewPager);
30     }
31 }
```

MainActivity > onCreate()

Berikut adalah tampilan dari aplikasi android sederhana yang menggunakan fragment.



Selesai

Selamat Mencoba